



---

---

**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

---

**AMENDMENT NO. 2**

**TO**  
**FORM S-1**  
**REGISTRATION STATEMENT**  
**Under**  
**THE SECURITIES ACT OF 1933**

---

**FORMFACTOR, INC.**

(Exact name of Registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

3825  
(Primary standard industrial  
classification code number)

13-3711155  
(I.R.S. employer  
identification no.)

FormFactor, Inc.

2140 Research Drive  
Livermore, California 94550  
(925) 294-4300

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Jens Meyerhoff

Senior Vice President, Chief Financial Officer and Secretary

FormFactor, Inc.  
2140 Research Drive  
Livermore, California 94550  
(925) 294-4300

(Name, address, including zip code, and telephone number, including area code, of agent for service)

---

*Copies to:*

Gordon K. Davidson, Esq.  
Mark A. Leahy, Esq.  
Jeffrey R. Vetter, Esq.  
Katherine Tallman Schuda, Esq.  
Fenwick & West LLP  
Two Palo Alto Square  
Palo Alto, California 94306  
(650) 494-0600

Gregory M. Gallo, Esq.  
Peter M. Astiz, Esq.  
Gray Cary Ware & Freidenrich LLP  
400 Hamilton Avenue  
Palo Alto, California 94301  
(650) 833-2000

**Approximate date of commencement of proposed sale to the public:**

As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.  \_\_\_\_\_

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  \_\_\_\_\_

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  \_\_\_\_\_

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  \_\_\_\_\_

If delivery of the prospectus is expected to be made pursuant to Rule 434 under the Securities Act of 1933, please check the following box.  \_\_\_\_\_

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay the effective date of this Registration Statement until the Registrant shall file a further amendment that specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

---

---

---

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PROSPECTUS (Subject to Completion)

Issued May 24, 2002

## Shares

[FormFactor LOGO]

### COMMON STOCK

FormFactor, Inc. is offering \_\_\_\_\_ shares of its common stock. This is our initial public offering and no public market currently exists for our shares. We anticipate that the initial public offering price will be between \$ \_\_\_\_\_ and \$ \_\_\_\_\_ per share.

We have applied to list our common stock for quotation on the Nasdaq National Market under the symbol "FORM."

Investing in our common stock involves risks. See "Risk Factors" beginning on page 9.

PRICE \$ A SHARE

	Price to Public	Underwriting Discounts and Commissions	Proceeds to FormFactor
Per Share	\$	\$	\$
Total	\$	\$	\$

FormFactor, Inc. has granted the underwriters the right to purchase up to an additional \_\_\_\_\_ shares to cover over-allotments.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Morgan Stanley & Co. Incorporated expects to deliver the shares to purchasers on \_\_\_\_\_, 2002.

MORGAN STANLEY  
LEHMAN BROTHERS  
BANC OF AMERICA SECURITIES LLC  
THOMAS WEISEL PARTNERS LLC

, 2002

## INSIDE FRONT COVER PAGE

This page has a picture that covers the left two-thirds of the page and a column of text that covers the right one-third of the page. In the background of the picture, a part of a wafer probe card manufactured by FormFactor is depicted. Appearing at the bottom of the image of the wafer probe card are enlarged images of the geometrically precise tip structures of the MicroSpring contacts. Sets of MicroSpring contacts that blend into the wafer probe card and the tip structures of the MicroSpring contacts are in the lower center of the picture. The column of text has four blocks of text. The headings of the blocks of text from top to bottom are as follows: "Proprietary Technology," "Market Leadership," "High Value Solutions" and "Industry Leading Customers." The following sentence appears below the heading "Proprietary Technology": "Our patented MicroSpring interconnect technology replaces conventional wafer probe card technologies to improve the performance and lower the cost of semiconductor test" and projected behind that sentence is shadow text repeating the heading of "Proprietary Technology" in a larger font. The following sentence appears below the heading "Market Leadership": "In 2001, we were the leader in the advanced wafer probe card market in terms of revenues" and projected behind that sentence is shadow text repeating the heading of "Market Leadership" in a larger font. The following sentence appears below the heading "High Value Solutions": "Our advanced wafer test solutions are optimized for the testing requirements of the Dynamic Random Access Memory, or DRAM, Flash, Microprocessor and Logic markets" and projected behind that sentence is shadow text repeating the heading of "High Value Solutions" in a larger font. The following sentence appears below the heading "Industry Leading Customers": "In 2001, our products were used in the wafer fabrication facilities of leading semiconductor companies such as Samsung, Infineon and the world's largest microprocessor manufacturer" and projected behind that sentence is shadow text repeating the heading of "Industry Leading Customers" in a larger font. The FormFactor logo trademark is in the bottom right corner of the page next to the company's name, "FORMFACTOR", at the bottom of the column of text.

## GATEFOLD

This page is dominated by a picture entitled "Wafer Test Solutions." The heading "Wafer Test Solutions" has a shadow of text that repeats the heading in a font twice the size of the heading. On the left edge of the page, the following text runs from the bottom left corner of the page to the top left corner of the page, parallel to the edge of the page: "FormFactor's wafer test solutions enable integration of the semiconductor pipeline from design to system." That sentence has a shadow of text that repeats the sentence in a larger font. To the immediate right of that sentence is a column depicting the design to system pipeline in the chip manufacturing process. From the top of the page to the bottom of the page, the column contains the word "Design" followed by a triangular arrow pointing to the words "Wafer Fab (Deposition, Litho, Etch, Metrology)," followed by a triangular arrow pointing to the words "Wafer Probe Test," followed by a triangular arrow pointing to the words "Wafer Cut," followed by a triangular arrow pointing to the words "Assembly and Packaging," followed by a triangular arrow pointing to the words "Final Test," followed by a triangular arrow pointing to the words "System," followed by a triangular arrow pointing downwards. In that column, behind the words "Design," "Wafer Fab (Deposition, Litho, Etch, Metrology)," and "Wafer Probe Test" appears a section of a wafer. In that column, behind and below the words "Wafer Cut" are eleven rectangular chips, and between the words "Assembly and Packaging" and "Final Test" are two completed chips. In that column, below the words "Final Test" and behind the word "System" is the faded image of two computers, a cellular telephone, a headset and various computer accessories. From the words "Wafer Probe Test" in that column, rays of light create a cone shape pointing to the right of the page and fading toward the center of the page. This cone of light opens up into the picture of a wafer probe card manufactured by FormFactor, which is directly above a picture of a wafer. This wafer probe card is approximately 1/5th of the size of the page and dominates the left half of the page. A cone of light originating from the middle of the wafer probe card that contains the MicroSpring contact elements opens up into a circle containing a picture of the MicroSpring contact elements, which are housed in the wafer probe card. Parallel to the bottom of the page are pictures of four types of wafer probe cards manufactured by FormFactor. The wafer probe cards have the following labels, which correspond to the chip applications for such wafer probe cards, reading from left to right: "DRAM," "Microprocessor," "Flash" and "Logic." On the right hand side of each wafer probe card is an enlarged image of the MicroSpring contact elements used in the particular wafer probe card. On the far right side of the page, another column of text appears. At the top, there is the FormFactor logo trademark next to the company's name "FormFactor." Below the FormFactor logo trademark and the name of the company, there are five blocks of text. At the top, the first block of text reads as follows: "Improve throughput and reduce test cost by testing more die at the same time through High Parallelism" and the words "High Parallelism" appear as a shadow of text in a larger font immediately behind this block of text. The next block of text reads as follows: "Increase yields and achieve higher test frequencies with Signal Integrity" and the words "Signal Integrity" appear as a shadow of text in a larger font immediately behind this block of text. The next block of text reads as follows: "Precision Contacts to test shrinking die sizes and scale with front-end processes" and the words "Precision Contacts" appear as a shadow of text in a larger font immediately behind this block of text. The next block of text reads as follows: "Test with high positional accuracy over a wide range of temperatures with Thermal Compensation" and the words "Thermal Compensation" appear as a shadow of text in a larger font immediately behind this block of text. The final block of text, which is at the bottom of the column of text, reads as follows: "Low Contact Force to reduce structural damage to bond pads and next generation materials as compared to most conventional wafer probe cards" and the words "Low Contact Force" appear as a shadow of text in a larger font immediately behind this block of text.

---

## TABLE OF CONTENTS

[PROSPECTUS SUMMARY](#)

[RISK FACTORS](#)

[SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS](#)

[USE OF PROCEEDS](#)

[DIVIDEND POLICY](#)

[CAPITALIZATION](#)

[DILUTION](#)

[SELECTED CONSOLIDATED FINANCIAL DATA](#)

[MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS](#)

[BUSINESS](#)

[MANAGEMENT](#)

[RELATED PARTY TRANSACTIONS](#)

[PRINCIPAL STOCKHOLDERS](#)

[DESCRIPTION OF CAPITAL STOCK](#)

[SHARES ELIGIBLE FOR FUTURE SALE](#)

[UNDERWRITERS](#)

[LEGAL MATTERS](#)

[EXPERTS](#)

[WHERE YOU CAN FIND ADDITIONAL INFORMATION](#)

[REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULE](#)

[SIGNATURES](#)

[EXHIBIT INDEX](#)

[EXHIBIT-3.02](#)

[EXHIBIT-3.04](#)

[EXHIBIT 4.01](#)

[EXHIBIT-5.01](#)

[EXHIBIT-10.01](#)

[EXHIBIT-10.06](#)

[EXHIBIT-10.07](#)

[EXHIBIT-10.26](#)

[EXHIBIT-23.02](#)

---

## TABLE OF CONTENTS

	<u>Page</u>
Prospectus Summary	5
Risk Factors	9
Special Note Regarding Forward-Looking Statements	22
Use of Proceeds	23
Dividend Policy	23
Capitalization	24
Dilution	25
Selected Consolidated Financial Data	26
Management's Discussion and Analysis of Financial Condition and Results of Operations	27
Business	41
Management	55
Related Party Transactions	66
Principal Stockholders	68
Description of Capital Stock	70
Shares Eligible for Future Sale	74
Underwriters	76
Legal Matters	78
Experts	79
Where You Can Find Additional Information	79
Index to Consolidated Financial Statements	F-1

---

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock. Unless otherwise indicated, all information in this prospectus:

- assumes that the underwriters do not exercise their over-allotment option; and
- assumes the automatic conversion of all outstanding shares of our preferred stock into shares of our common stock.

Until \_\_\_\_\_, 2002 (25 days after the commencement of this offering), all dealers that buy, sell or trade our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

For investors outside the United States: Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

(This page intentionally left blank)

---

## PROSPECTUS SUMMARY

*You should read the following summary together with the entire prospectus, including the more detailed information in our consolidated financial statements and related notes appearing elsewhere in this prospectus. You should carefully consider, among other things, the matters discussed in “Risk Factors.”*

### FORMFACTOR, INC.

We design, develop, manufacture, sell and support precision, high performance advanced semiconductor wafer probe cards. In 2001, we were the leader in the advanced wafer probe card market in terms of revenues. Our products are based on our proprietary MicroSpring™ interconnect technology, which includes resilient spring-like contacts that we manufacture using precision micro-machining and scalable semiconductor-like wafer fabrication processes. Our technology enables us to produce wafer probe cards for test applications that require reliability, speed, precision and signal integrity.

The semiconductor industry has historically separated the manufacture of chips into two distinct parts: the front-end wafer fabrication process and the back-end assembly, packaging and final test process. Test is a critical and expensive part of semiconductor manufacturing and is performed in both the front-end and back-end processes. In the front-end, wafer probe test is performed on the whole wafer using wafer probe cards, and in the back-end, final test is performed on the individual packaged chip.

The semiconductor industry is experiencing a critical technology evolution driven by movement to smaller chip geometries, migration to 300 mm wafers, transition to copper interconnects and introduction of new insulating materials such as low-k dielectrics. This evolution is pushing conventional wafer probe card technologies to their practical performance limits due to one or more factors, including: the inability to test in parallel many chips on a wafer; poor signal integrity; the inability to make precise contact with shrinking bond pad sizes and pitches; the inability to test accurately over a wide range of temperatures; and the inability to contact the wafer without damaging it. While conventional wafer probe cards address some of these performance limitations, no conventional technology solves all of them.

Our MicroSpring interconnect technology and our proprietary design tools and technologies solve the limitations of conventional wafer probe cards by providing:

- a high degree of parallelism that enables our customers to test a significant number of chips at the same time in a single touchdown, which reduces total test time and the overall cost of test;
- superior signal integrity, enabling customers to improve yields;
- micro-machining and semiconductor-like wafer fabrication processes that enable us to scale our products to shrinking semiconductor geometries;
- thermal compensation to permit wafer probe testing over a wide range of temperatures; and
- low contact force to permit testing without damage to the chips, particularly those incorporating fragile next-generation materials.

The current evolution of the semiconductor manufacturing process is driving a substantial increase in the cost of building new manufacturing capacity, with the cost of a leading edge 300 mm wafer manufacturing facility now approaching or exceeding \$3.0 billion. With ever increasing capital investments, semiconductor manufacturers are focusing on ways to accelerate their return on investment by increasing volumes and yields, decreasing the overall costs of manufacturing and improving the time to market of their products. One area of focus is test because it provides vital feedback to the design and wafer fabrication processes.

In addition to addressing the shortcomings of conventional wafer probe cards, we believe that our customers will be able to use our technology to perform more advanced test functions on devices at the wafer-level front-end, rather than on individual devices in the back-end. This will enable them to optimize their manufacturing pipeline, from initial device design and fabrication through assembly, packaging and final test. As a result,



## [Table of Contents](#)

manufacturers will be able to accelerate their return on investment by improving time to market, yield and volume.

Our objectives are to enhance our position as the leading supplier of advanced wafer probe card solutions and to apply our core MicroSpring interconnect technology to drive wafer-level economies of scale in semiconductor test. The principal elements of our strategy include: enhancing our market leadership in the dynamic random access memory, or DRAM, industry; expanding our presence in the flash memory market; increasing our penetration into the logic market; enabling migration of elements of final test to the wafer level; extending our technology leadership position; and continuing to build on our strategic relationships.

We introduced our first wafer probe card based on our MicroSpring interconnect technology in 1995, and, by the end of 2000, we were the leading supplier of advanced wafer probe cards, based on revenues. Our customers include the top 10 DRAM manufacturers, the world's largest microprocessor company, and three of the top 10 flash memory manufacturers, and, combined, these identified groups of our customers account for substantially all of our revenues. We focus our research and development activities on expanding our products into new markets and expanding applications for our MicroSpring interconnect technology. We manufacture our wafer probe cards in Livermore, California, and sell and support our products worldwide through our direct sales force, a distributor and independent sales representatives.

We were incorporated in Delaware in April 1993. Our principal executive offices are located at 2140 Research Drive, Livermore, California 94550, and our telephone number at that address is (925) 294-4300. Our Web site address is [formfactor.com](http://formfactor.com). The information on our Web site does not constitute part of this prospectus.

**THE OFFERING**

Common stock offered by FormFactor shares

Common stock to be outstanding after this offering shares

Use of proceeds We anticipate using the net proceeds from this offering for general corporate purposes, including leasehold improvements at our new corporate headquarters and manufacturing facility and working capital requirements. We may also use a portion of the net proceeds to fund possible investments in, or acquisitions of, complementary businesses, products or technologies or establishing joint ventures. See "Use of Proceeds."

Proposed Nasdaq National Market symbol FORM

The number of shares of our common stock to be outstanding immediately after this offering is based on 27,595,225 shares of our common stock outstanding on March 30, 2002, and assumes the automatic conversion of all of our outstanding shares of preferred stock into 22,994,543 shares of our common stock upon the closing of this offering.

The number of shares of our common stock that will be outstanding immediately after this offering excludes:

- 4,015,604 shares of common stock issuable upon exercise of options outstanding at March 30, 2002 with a weighted average exercise price of \$5.10 per share;
- 132,439 shares of common stock issuable upon exercise of warrants outstanding at March 30, 2002 with a weighted average exercise price of \$5.06 per share;
- 4,994,291 shares of common stock available for issuance under our stock option plans at March 30, 2002;
- 500,000 shares of common stock to be available for issuance under our stock option plan effective upon the completion of this offering; and
- 1,500,000 shares of common stock to be available for issuance under our employee stock purchase plan effective upon the completion of this offering.

FormFactor, the FormFactor logo, MicroSpring and MOST are trademarks of FormFactor in the United States and other countries. All other trademarks, trade names or service marks appearing in this prospectus are the property of their respective owners.

**SUMMARY CONSOLIDATED FINANCIAL DATA**

The following tables provide summary consolidated financial data and should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes appearing elsewhere in this prospectus.

	Fiscal Year Ended					Three Months Ended	
	Dec. 31, 1997	Dec. 26, 1998	Dec. 25, 1999	Dec. 30, 2000	Dec. 29, 2001	Mar. 31, 2001	Mar. 30, 2002
	(in thousands, except per share data)					(unaudited)	
<b>Consolidated Statement of Operations Data:</b>							
Revenues	\$ 6,680	\$19,329	\$35,722	\$56,406	\$73,433	\$19,849	\$17,288
Cost of revenues	5,190	10,763	20,420	28,243	38,385	10,410	8,859
Gross margin	1,490	8,566	15,302	28,163	35,048	9,439	8,429
Total operating expenses	7,518	14,698	20,827	27,688	34,968	8,861	7,406
Operating income (loss)	(6,028)	(6,132)	(5,525)	475	80	578	1,023
Interest and other income (expense), net	465	157	(119)	1,719	477	(74)	155
Net income (loss)	\$(5,563)	\$(5,975)	\$(5,644)	\$ 2,079	\$ 250	\$ 297	\$ 846
Net income (loss) per share:							
Basic	\$ (6.17)	\$ (3.60)	\$ (2.16)	\$ .61	\$ .06	\$ .08	\$ .19
Diluted	\$ (6.17)	\$ (3.60)	\$ (2.16)	\$ .08	\$ .01	\$ .01	\$ .03
Weighted-average number of shares used in per share calculations:							
Basic	902	1,659	2,609	3,408	4,029	3,790	4,381
Diluted	902	1,659	2,609	26,821	28,994	27,924	29,813
Pro forma net income per share (unaudited):							
Basic					\$ .01		\$ .03
Diluted					\$ .01		\$ .03
Weighted-average number of shares used in pro forma per share calculations (unaudited):							
Basic					27,024		27,376
Diluted					28,994		29,813

The pro forma consolidated balance sheet data below reflects the automatic conversion of all of our outstanding shares of preferred stock into 22,994,543 shares of our common stock upon the closing of this offering. The pro forma as adjusted column of the consolidated balance sheet data also reflects the sale of \_\_\_\_\_ shares of our common stock offered by us at an assumed initial public offering price of \$ \_\_\_\_\_ per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	March 30, 2002		
	Actual	Pro Forma	Pro Forma As Adjusted
	(unaudited) (in thousands)		
<b>Consolidated Balance Sheet Data:</b>			
Cash, cash equivalents and short-term investments	\$ 30,009	\$30,009	\$
Working capital	33,492	33,492	
Total assets	64,792	64,792	
Long-term debt, less current portion	1,000	1,000	
Deferred stock-based compensation, net	(5,357)	(5,357)	
Redeemable convertible preferred stock and warrants	65,201	—	
Total stockholders’ equity (deficit)	(15,753)	49,448	

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. You should carefully consider the following risk factors, as well as the other information in this prospectus, before deciding whether to invest in shares of our common stock. If any of the following risks actually occurs, our business, financial condition and results of operations would suffer. In this case, the trading price of our common stock would likely decline and you might lose all or part of your investment in our common stock. The risks described below are not the only ones we face. Additional risks that we currently do not know about or that we currently believe to be immaterial may also impair our business operations.*

### Risks Related to Our Business and Industry

***Our operating results are likely to fluctuate, which could cause us to miss expectations about these results and cause the trading price of our common stock to decline.***

Our operating results are likely to fluctuate. As a result, we believe that you should not rely on period-to-period comparisons of our financial results as an indication of our future performance. Factors that are likely to cause our revenues and operating results to fluctuate include those discussed in the risk factors below. If our revenues or operating results fall below the expectations of market analysts or investors, the market price of our common stock could decline substantially.

***Cyclical in the semiconductor industry historically has affected our sales and might do so in the future, and as a result we could experience reduced revenues or operating results.***

The semiconductor industry has historically been cyclical and is characterized by wide fluctuations in product supply and demand. From time to time, this industry has experienced significant downturns, often in connection with, or in anticipation of, maturing product cycles, excess inventories and declines in general economic conditions. This cyclical nature could cause our operating results to decline dramatically from one period to the next. For example, as a result of the recent downturn, our revenues in the three months ended September 29, 2001 declined by 25.5% compared to our revenues in the three months ended June 30, 2001. Our business depends heavily upon the development of new semiconductors and semiconductor designs, the volume of production by semiconductor manufacturers and the overall financial strength of our customers, which, in turn, depend upon the current and anticipated market demand for semiconductors and products that use semiconductors. Semiconductor manufacturers generally sharply curtail their spending during industry downturns and historically have lowered their spending disproportionately more than the decline in their revenues. As a result, if we are unable to adjust levels of manufacturing and human resources and manage costs and deliveries of supplies in response to lower spending by semiconductor manufacturers, our gross margin might decline and cause us to experience operating losses.

***If we do not keep pace with technological developments in the semiconductor industry, our products might not be competitive and our revenues and operating results could suffer.***

We must continue to invest in research and development to improve our competitive position and to meet the needs of our customers. Our future growth depends, in significant part, upon our ability to work effectively with and anticipate the testing needs of our customers, and on our ability to develop and support new products and product enhancements to meet these needs on a timely and cost-effective basis. Our customers' testing needs are becoming more challenging as the semiconductor industry continues to experience rapid technological change driven by the demand for complex circuits that are shrinking in size and at the same time are increasing in speed and functionality and becoming less expensive to produce. Our customers expect that they will be able to integrate our wafer probe cards into any manufacturing process as soon as it is deployed. Therefore, to meet these expectations and remain competitive, we must continually design, develop and introduce on a timely basis new products and product enhancements with improved features. Successful product development and introduction on a timely basis requires that we:

- design innovative and performance-enhancing features that differentiate our products from those of our competitors;

## [Table of Contents](#)

- transition our products to new manufacturing technologies;
- identify emerging technological trends in our target markets;
- maintain effective marketing strategies;
- respond effectively to technological changes or product announcements by others; and
- adjust to changing market conditions quickly and cost-effectively.

We must devote significant research and development resources to keep up with the rapidly evolving technologies used in the semiconductor manufacturing processes. Not only do we need the technical expertise to implement the changes necessary to keep our technologies current, but we must also rely heavily on the judgment of our management to anticipate future market trends. If we are unable to timely predict industry changes, or if we are unable to modify our products on a timely basis, we might lose customers or market share. In addition, we might not be able to recover our research and development expenditures, which could harm our operating results.

***If semiconductor memory device manufacturers do not convert to 300 mm wafers, our growth could be impeded.***

The growth of our business for the foreseeable future depends in large part upon sales of our wafer probe cards to manufacturers of dynamic random access memory, or DRAM, and flash memory devices. We have invested significant resources to develop technology that addresses the market for 300 mm wafers. If manufacturers of memory devices do not transition to 300 mm wafers, or make the transition more slowly than we currently expect, our growth and profitability could be impeded. In addition, any delay in large-scale adoption of manufacturing based upon 300 mm wafers would provide time for other companies to develop and market products that compete with ours, which could harm our competitive position.

***We are subject to general economic and market conditions.***

Our business is subject to the effects of general economic conditions in the United States and worldwide, and to market conditions in the semiconductor industry in particular. In fiscal 2001, our operating results were adversely affected by unfavorable global economic conditions and reduced capital spending by semiconductor manufacturers. These adverse conditions resulted in a decrease in the demand for semiconductors and products using semiconductors, and in a sharp reduction in the development of new semiconductors and semiconductor designs. As a result, we experienced a decrease in the demand for our wafer probe cards. If the economic conditions in the United States and worldwide do not improve, or if they worsen from current levels, we could continue to experience material negative effects on our business.

***We depend upon the sale of our wafer probe cards for substantially all of our revenues, and a downturn in demand for our products could have a more disproportionate impact on our revenues than if we derived revenues from a more diversified product offering.***

Historically, we have derived substantially all of our revenues from the sale of our wafer probe cards. We anticipate that sales of our wafer probe cards will represent a substantial majority of our revenues for the foreseeable future. Our business depends in large part upon continued demand in current markets for, and adoption in new markets of, current and future generations of our wafer probe cards. Large-scale market adoption depends upon our ability to increase customer awareness of the benefits of our wafer probe cards and to prove their reliability, ability to increase yields and cost effectiveness. We may be unable to sell our wafer probe cards to certain potential customers unless those customers change their device test strategies, change their wafer probe card and capital equipment buying strategies, or change or upgrade their existing test equipment. We might not be able to sustain or increase our revenues from sales of our wafer probe cards, particularly if the current downturn in the semiconductor market continues or if the market enters into another downturn in the future. Any decrease in revenues from sales of our wafer probe cards could harm our business more than it would if we offered a more diversified line of products.

***If demand for our products in the memory device and microprocessor markets declines or fails to grow as we anticipate, our revenues could decline.***

We derive substantially all of our revenues from wafer probe cards that we sell to manufacturers of memory devices and microprocessors. In fiscal 2001, sales to manufacturers of DRAMs accounted for 76.8% of our revenues, sales to manufacturers of microprocessors accounted for 12.4% of our revenues, and sales to manufacturers of flash memory devices accounted for 7.5% of our revenues. Therefore, our success depends in part upon the continued acceptance of our products within these markets and our ability to continue to develop and introduce new products on a timely basis for these markets. For example, the market might not accept an increasingly high parallelism wafer test solution.

A substantial portion of these semiconductor devices is sold to manufacturers of personal computers and computer-related products. The personal computer market has historically been characterized by significant fluctuations in demand and continuous efforts to reduce costs, which in turn have affected the demand for and price of DRAM devices and microprocessors. The personal computer market might not grow in the future at historical rates or at all and design activity in the personal computer market might decrease, which could negatively affect our revenues and operating results.

***The markets in which we participate are intensely competitive, and if we do not compete effectively, our operating results could be harmed.***

The wafer probe card market is highly competitive. With the introduction of new technologies and market entrants, we expect competition to intensify in the future. In the past, increased competition has resulted in price reductions, reduced gross margins or loss of market share, and could do so in the future. Competitors might introduce new competitive products for the same markets that our products currently serve. These products may have better performance, lower prices and broader acceptance than our products. In addition, for products such as wafer probe cards, semiconductor manufacturers typically qualify more than one source, to avoid dependence on a single source of supply. As a result, our customers will likely purchase products from our competitors. Current and potential competitors include Cascade Microtech, Inc., ESJ Corporation, Feinmetall GmbH, Japan Electronic Materials Corporation, Kulicke and Soffa Industries, Inc., Micronics Japan Co., Ltd., MicroProbe, Inc., Tokyo Cathode Laboratory Co., Ltd. and Wentworth Laboratories, Inc., among others. Many of our current and potential competitors have greater name recognition, larger customer bases, more established customer relationships and greater financial, technical, manufacturing, marketing and other resources than we do. As a result, they might be able to respond more quickly to new or emerging technologies and changes in customer requirements, devote greater resources to the development, promotion, sale and support of their products, and reduce prices to increase market share. Some of our competitors also supply other types of test equipment, or offer both advanced wafer probe cards and needle probe cards. It is possible that existing or new competitors, including test equipment manufacturers, may offer new technologies that reduce the value of our wafer probe cards. The wafer probe card market has historically been fragmented with many local suppliers serving individual customers. However, recent consolidation has reduced the number of competitors. For example, in late 2000, Kulicke and Soffa Industries, Inc. acquired Probe Technology Corporation and Cerprobe Corporation. These and other combinations might result in a competitor gaining a significant advantage over us by enabling it to expand its product offerings and service capabilities to meet a broader range of customer needs.

***We derive a substantial portion of our revenues from a small number of customers, and our revenues would decline significantly if any major customer cancels, reduces or delays a purchase of our products.***

A relatively small number of customers has accounted for a significant portion of our revenues in any particular period. In fiscal 2001, four customers accounted for 75.1% of our revenues. In the three months ended March 30, 2002, four customers accounted for 79.2% of our revenues. Our ten largest customers accounted for 97.8% of our revenues in fiscal 2001 and 99.9% of our revenues in the three months ended March 30, 2002. We anticipate that sales of our products to a relatively small number of customers will continue to account for a significant portion of our revenues. The cancellation or deferral of even a small number of purchases of our products could cause our revenues to decline in any particular quarter. A number of factors could cause customers to cancel or defer orders, including manufacturing delays, interruptions to our customers' facilities due to fire,

natural disasters or other events or a downturn in the semiconductor industry. Our agreements with our customers do not contain minimum purchase commitments, and our customers could cease purchasing our products with short or no notice to us or fail to pay all or part of an invoice. In some situations, our customers might be able to cancel orders without significant penalty. In addition, the continuing trend toward consolidation in the semiconductor industry, particularly among manufacturers of DRAM, could reduce our customer base and lead to lost or delayed sales and reduced demand for our wafer probe cards. Industry consolidation also could result in pricing pressures as larger DRAM manufacturers could have sufficient bargaining power to demand reduced prices and favorable nonstandard terms.

***If our relationships with our customers and companies that manufacture semiconductor test equipment deteriorate, our product development activities could be harmed.***

The success of our product development efforts depends upon our ability to anticipate market trends and to collaborate closely with our customers and companies that manufacture semiconductor test equipment. Our relationships with these customers and companies provide us with access to valuable information regarding manufacturing and process technology trends in the semiconductor industry, which enables us to better plan our product development activities. These relationships also provide us with opportunities to understand the performance and functionality requirements of our customers, which improve our ability to customize our products to fulfill their needs. Our relationships with test equipment companies are important to us because test equipment companies can design our wafer probe cards into their equipment and provide us with the insight into their product plans that allows us to offer wafer probe cards for use with their products when they are introduced to the market. Our relationships with our customers and test equipment companies could deteriorate if they:

- become concerned about our ability to protect their intellectual property;
- develop their own solutions to address the need for testing improvement;
- regard us as a competitor;
- establish relationships with others in our industry; or
- attempt to restrict our ability to enter into relationships with their competitors.

Many of our customers and the test equipment companies we work with are large companies. The consequences of deterioration in our relationship with any of these companies could be exacerbated due to the significant influence these companies can exert in our markets. If our current relationships with our customers and test equipment companies deteriorate, or if we are unable to develop similar collaborative relationships with important customers and test equipment companies in the future, our long-term ability to produce commercially successful products could be impaired.

***Because we generally do not have a material backlog of unfilled orders, revenues in any quarter are substantially dependent upon customer orders received and fulfilled in that quarter.***

Our revenues are difficult to forecast because we generally do not have a material backlog of unfilled orders at the beginning of a quarter. Rather, a majority of our revenues in any quarter depends upon customer orders for our wafer probe cards that we receive and fulfill in that quarter. Because our expense levels are based in part on our expectations as to future revenues and to a large extent are fixed in the short term, we might be unable to adjust spending in time to compensate for any unexpected shortfall in revenues. Accordingly, any significant shortfall of revenues in relation to our expectations would hurt our operating results.

***We rely upon a distributor for a substantial portion of our revenues, and a disruption in our relationship with our distributor could have a negative impact on our revenues.***

We rely on Spirox Corporation, our distributor in Taiwan, Singapore and China, for a substantial portion of our revenues. Sales to Spirox accounted for 26.4% of our revenues in fiscal 2001 and 12.8% of our revenues in the three months ended March 30, 2002. Spirox also provides customer support. A reduction in the sales or service efforts or financial viability of our distributor, or deterioration in, or termination of, our relationship with

our distributor could harm our revenues, our operating results and our ability to support our customers in the distributor's territory. In addition, establishing alternative sales channels in the region could consume substantial time and resources, decrease our revenues and increase our expenses.

***If our transition from indirect to direct sales in Japan is not successful, we could lose customers.***

Until March 31, 2002, we relied upon a distributor to sell our products in Japan. In the three months ended March 30, 2002, our sales to our distributor in Japan were 4.9% of our revenues, compared with 7.9% of our revenues in the three months ended March 31, 2001. Our sales to our distributor in Japan were 6.9% of our revenues in fiscal 2001, 8.2% of our revenues in fiscal 2000 and 2.4% of our revenues in fiscal 1999. We have hired sales personnel in Japan and intend to rely upon our direct sales force in the future. If we are unable to successfully transition to the direct sales model or if the transition takes longer than we anticipate, we could lose customers and fail to obtain new customers in Japan. Any difficulties as a result of this transition could hurt our reputation and sales in Japan, which is an important market for us.

***If semiconductor manufacturers do not migrate elements of final test to wafer probe test, market acceptance of other applications of our technology could be delayed.***

We intend to work with our customers to migrate elements of final test from the device level to the wafer level. This migration will involve a change in semiconductor test strategies from concentrating final test at the individual device level to increasing the amount of test at the wafer level. Semiconductor manufacturers typically take time to qualify new strategies that affect their testing operations. As a result, general acceptance of wafer-level final test might not occur in the near term or at all. In addition, semiconductor manufacturers might not accept and use wafer-level final test in a way that uses our technology. If the migration of elements of final test to wafer probe test does not grow as we anticipate, or if semiconductor manufacturers do not adopt our technology for their wafer probe test requirements, market acceptance of other applications for our technology could be delayed.

***Changes in test strategies, equipment and processes could cause us to lose revenues.***

The demand for wafer probe cards depends in large part upon the number of semiconductor designs and the overall semiconductor unit volume. The time it takes to test a wafer depends upon the number of devices being tested, the complexity of these devices, the test software program and the test equipment itself. As test programs become increasingly effective and test throughput increases, the number of wafer probe cards required to test a given volume of devices declines. Therefore, advances in the test process could cause us to lose sales.

If semiconductor manufacturers implement chip designs that include built-in self-test capabilities, or similar functions or methodologies that increase test throughput, it could negatively impact our sales or the migration of elements of final test to the wafer level. Additionally, if new chip designs or types of chips are implemented that require less, or even no, test using wafer probe cards, our revenues could be impacted.

We incur significant research and development expenses in conjunction with the introduction of new product platforms. Often, we time our product introductions to the introduction of new test equipment platforms. Because our customers require both test equipment and wafer probe cards, any delay or disruption of the introduction of new test equipment platforms would negatively affect our growth.

***We manufacture all of our products at a single facility, and any disruption in the operations of that facility could adversely impact our business and operating results.***

Our processes for manufacturing our wafer probe cards require sophisticated and costly equipment and a specially designed facility, including a semiconductor clean room. We manufacture all of our wafer probe cards at one facility located in Livermore, California. Any disruption in the operation of that facility, whether due to technical or labor difficulties, destruction or damage from fire or earthquake, infrastructure failures such as power or water shortage or any other reason, could interrupt our manufacturing operations, impair critical systems, disrupt communications with our customers and suppliers and cause us to write off inventory and to lose sales. In addition, if the recent energy crises in California that resulted in disruptions in power supply and increases in



utility costs were to recur, we might experience power interruptions and shortages, which could disrupt our manufacturing operations. This could subject us to loss of revenues as well as significantly higher costs of energy. Further, current and potential customers might not purchase our products if they perceive our lack of an alternate manufacturing facility to be a risk to their continuing source of supply.

***The transition to our new manufacturing facilities could cause a decline in our operating results.***

We expect to move all of our manufacturing operations into a new facility in Livermore late in 2002 or early in 2003. The costs of starting up our new manufacturing facility, including capital costs such as equipment and fixed costs such as rent, will be substantial. We might not be able to shift from our current production facility to the new production facility efficiently or effectively. The transition might lead to manufacturing interruptions, which could mean delayed deliveries or lost sales. Some or all of our customers could require a full qualification of our new facility. Any qualification process could take longer than we anticipate. Any difficulties with the transition or with bringing the new manufacturing facility to full capacity and volume production could increase our costs, disrupt our production process and cause delays in product delivery and lost sales.

***If we are unable to manufacture our products efficiently, our operating results could suffer.***

We must continuously modify our manufacturing processes in an effort to improve yields and product performance, lower our costs and reduce the time it takes us to design and produce our products. We will incur significant start-up costs associated with implementing new manufacturing technologies, methods and processes and purchasing new equipment, which could negatively impact our gross margin. We could experience manufacturing delays and inefficiencies as we refine new manufacturing technologies, methods and processes, implement them in volume production and qualify them with customers, which could cause our operating results to decline. The risk of encountering delays or difficulties increases as we manufacture more complex products. In addition, if demand for our products increases, we will need to expand our operations to manufacture sufficient quantities of products without increasing our production times or our unit costs. As a result of such expansion, we could be required to purchase new equipment, upgrade existing equipment, develop and implement new manufacturing processes and hire additional technical personnel. Further, new or expanded manufacturing facilities could be subject to qualification by our customers. In the past, we have experienced difficulties in expanding our operations to manufacture our products in volume on time and at acceptable cost. Any difficulties in expanding our manufacturing operations could cause product delivery delays and lost sales. If demand for our products decreases, we could have excess manufacturing capacity. The fixed costs associated with excess manufacturing capacity could cause our operating results to decline. If we are unable to achieve further manufacturing efficiencies and cost reductions, particularly if we are experiencing pricing pressures in the marketplace, our operating results could suffer.

***If we are unable to continue to reduce the time it takes for us to design and produce a wafer probe card, our growth could be impeded.***

Our customers continuously seek to reduce the time it takes them to introduce new products to market. The cyclical nature of the semiconductor industry, coupled with changing demands for semiconductor devices, requires our customers to be flexible and highly adaptable to changes in the volume and mix of products they must produce. Each of those changes requires a new design and each new design requires a new wafer probe card. If we are unable to reduce the time it takes for us to design, manufacture and ship our products in response to the needs of our customers, our competitive position could be harmed. If we are unable to meet a customer's schedule for wafer probe cards for a particular design, our customer might purchase wafer probe cards from a competitor and we might lose sales.

***We obtain some of the components and materials we use in our products from a single or sole source or a limited group of suppliers, and the partial or complete loss of one of these suppliers could cause production delays and a substantial loss of revenues.***

We obtain some of the components and materials used in our products, such as printed circuit board assemblies, plating materials and ceramic substrates, from a single or sole source or a limited group of suppliers.

## [Table of Contents](#)

Alternative sources are not currently available for sole source components and materials. Because we rely on purchase orders rather than long-term contracts with our suppliers, we cannot predict with certainty our ability to obtain components and materials in the longer term. A sole or limited source supplier could increase prices, which could lead to a decline in our gross margin. Our dependence upon sole or limited source suppliers exposes us to several other risks, including a potential inability to obtain an adequate supply of materials, late deliveries and poor component quality. Disruption or termination of the supply of components or materials could delay shipments of our products, damage our customer relationships and reduce our revenues. For example, if we were unable to obtain an adequate supply of a component or material, we might have to use a substitute component or material, which could require us to make changes in our manufacturing process. From time to time in the past, we have experienced difficulties in receiving shipments from one or more of our suppliers, especially during periods of high demand for our products. If we cannot obtain an adequate supply of the components and materials we require, or do not receive them in a timely manner, we might be required to identify new suppliers. We might not be able to identify new suppliers on a timely basis or at all. Our customers and we would also need to qualify any new suppliers. The lead-time required to identify and qualify new suppliers could affect our ability to timely ship our products. Further, a sole or limited source supplier could require us to enter into non-cancelable purchase commitments or pay in advance to ensure our source of supply. In an industry downturn, commitments of this type could result in charges for excess inventory of parts. If we are unable to predict our component and materials needs accurately, or if our supply is disrupted, we might miss market opportunities by not being able to meet the demand for our products.

***Wafer probe cards that do not meet specifications or that contain defects could damage our reputation, decrease market acceptance of our technology, cause us to lose customers and revenues, and result in liability to us.***

The complexity and ongoing development of our wafer probe card manufacturing process, combined with increases in wafer probe card production volumes, have in the past and could in the future lead to design or manufacturing problems. For example, in the past, the presence of contaminants in our plating baths have caused a decrease in our manufacturing yields. Another example is that in the past, manufacturing design errors such as the miswiring of a wafer probe card or the incorrect placement of probe contact elements have caused us to repeat manufacturing design steps. In addition to these examples, problems might result from a number of factors, including design defects, materials failures, contamination in the manufacturing environment, impurities in the materials used, unknown sensitivities to process conditions, such as temperature and humidity, and equipment failures. As a result, our products have in the past contained and might in the future contain undetected errors or defects. Any errors or defects could:

- cause lower than anticipated yields and lengthening of delivery schedules;
- cause delays in product shipments;
- cause delays in new product introductions;
- cause us to incur warranty expenses;
- result in increased costs and diversion of development resources;
- cause us to incur increased charges due to unusable inventory;
- require design modifications; or
- decrease market acceptance or customer satisfaction with these products.

The occurrence of any one or more of these events could hurt our operating results.

In addition, if any of our products fails to meet specifications or has reliability, quality or compatibility problems, our reputation could be damaged significantly and customers might be reluctant to buy our products, which could result in a decline in revenues, an increase in product returns or warranty costs and the loss of existing customers or the failure to attract new customers. Our customers use our products with test equipment and software in their manufacturing facilities. Our products must be compatible with the customer's equipment and software to form an integrated system. If the system does not function properly, we could be required to provide field application engineers to locate the problem, which can take time and resources. If the problem

relates to our wafer probe cards, we might have to invest significant capital, manufacturing capacity and other resources to correct it. Our current or potential customers also might seek to recover from us any losses resulting from defects or failures in our products. Liability claims could require us to spend significant time and money in litigation or to pay significant damages.

***If we fail to forecast demand for our products accurately, we could incur inventory losses.***

Each semiconductor chip design requires a custom wafer probe card. Because our products are design-specific, demand for our products is difficult to forecast. Due to our customers' short delivery time requirements, we often design, and at times produce, our products in anticipation of demand for our products rather than in response to an order. Due to the uncertainty inherent in forecasts, we are and expect to continue to be subject to inventory risk. If we do not obtain orders as we anticipate, we could have excess inventory for a specific customer design that we would not be able to sell to any other customer, which would likely result in inventory write-offs.

***If we do not effectively manage changes in our business, these changes could place a significant strain on our management and operations and, as a result, our business might not succeed.***

Our ability to grow successfully requires an effective planning and management process. We plan to increase the scope of our operations and the size of our direct sales force domestically and internationally. For example, we have leased a new facility in Livermore, California and plan to move our corporate headquarters and manufacturing operations into this facility late in 2002 or early in 2003. Our growth could place a significant strain on our management systems, infrastructure and other resources. To manage our growth effectively, we must invest the necessary capital and continue to improve and expand our systems and infrastructure in a timely and efficient manner. Those resources might not be available when we need them, which would limit our growth. Our officers have limited experience in managing large or rapidly growing businesses. In addition, the majority of our management has no experience in managing a public company or communicating with securities analysts and public company investors. Our controls, systems and procedures might not be adequate to support a growing public company. If our management fails to respond effectively to changes in our business, our business might not succeed.

***If we fail to attract and retain qualified personnel, our business might be harmed.***

Our future success depends largely upon the continued service of our key management, technical, and sales and marketing personnel, and on our continued ability to hire, integrate and retain qualified individuals, particularly engineers and sales and marketing personnel in order to increase market awareness of our products and to increase revenues. For example, in the future, we might need technical personnel experienced in competencies that we do not currently require. Competition for these employees may be intense, and we might not be successful in attracting or retaining these personnel. The loss of any key employee, the failure of any key employee to perform in his or her current position or our inability to attract and retain skilled employees as needed could impair our ability to meet customer and technological demands. All of our key personnel in the United States are employees at-will. We have no employment contracts with any of our personnel in the United States.

***We may make acquisitions, which could put a strain on our resources, cause ownership dilution to our stockholders and adversely affect our financial results.***

While we have made no acquisitions of businesses, products or technologies in the past, we may make acquisitions of complementary businesses, products or technologies in the future. Integrating newly acquired businesses, products or technologies into our company could put a strain on our resources, could be expensive and time consuming, and might not be successful. Future acquisitions could divert our management's attention from other business concerns and expose our business to unforeseen liabilities or risks associated with entering new markets. In addition, we might lose key employees while integrating new organizations. Consequently, we might not be successful in integrating any acquired businesses, products or technologies, and might not achieve anticipated revenues and cost benefits. In addition, future acquisitions could result in customer dissatisfaction, performance problems with an acquired company, potentially dilutive issuances of equity securities or the

incurrence of debt, contingent liabilities, possible impairment charges related to goodwill or other intangible assets or other unanticipated events or circumstances, any of which could harm our business.

***As part of our sales process, we could incur substantial sales and engineering expenses that do not result in revenues, which would harm our operating results.***

Our customers generally expend significant efforts evaluating and qualifying our products prior to placing an order. The time that our customers require to evaluate and qualify our wafer probe cards is typically between three and 12 months and sometimes longer. While our customers are evaluating our products, we might incur substantial sales, marketing, and research and development expenses. For example, we typically expend significant resources educating our prospective customers regarding the uses and benefits of our wafer probe cards and developing wafer probe cards customized to the potential customer's needs, for which we might not be reimbursed. Although we commit substantial resources to our sales efforts, we might never receive any revenues from a customer. For example, many semiconductor designs never reach production, including designs for which we have expended design effort and expense. In addition, prospective customers might decide not to use our wafer probe cards. The length of time that it takes for the evaluation process and for us to make a sale depends upon many factors including:

- the efforts of our sales force and our distributor and independent sales representatives;
- the complexity of the customer's fabrication processes;
- the internal technical capabilities of the customer; and
- the customer's budgetary constraints and, in particular, the customer's ability to devote resources to the evaluation process.

In addition, product purchases are frequently subject to delays, particularly with respect to large customers for which our products may represent a small percentage of their overall purchases. As a result, our sales cycles are unpredictable. If we incur substantial sales and engineering expenses without generating revenues, our operating results could be harmed.

***From time to time, we might be subject to claims of infringement of other parties' proprietary rights, or to claims that our intellectual property rights are invalid or unenforceable, which could result in significant expense and loss of intellectual property rights.***

In the future, we might receive claims that we are infringing intellectual property rights of others, or claims that our patents or other intellectual property rights are invalid or unenforceable. We have received in the past, and may receive in the future, communications from third parties inquiring about our interest in licensing certain of their intellectual property. For example, we received such a communication from Microelectronics and Computer Technology Corporation in October 2001, with a follow-up letter in January 2002, inquiring about our interest in acquiring a license to certain of their patents and technology, and from IBM Corporation in February 2002 inquiring about our interest in acquiring a license to IBM patents and technology related to high density integrated probes. For the inquiries we have received to date, we do not believe we infringe any of the identified patents and technology. The semiconductor industry is characterized by uncertain and conflicting intellectual property claims and vigorous protection and pursuit of these rights. The resolution of any claims of this nature, with or without merit, could be time consuming, result in costly litigation or cause product shipment delays. In the event of an adverse ruling, we might be required to pay substantial damages, cease the use or sale of infringing products, spend significant resources to develop non-infringing technology, discontinue the use of certain technology or enter into license agreements. License agreements, if required, might not be available on terms acceptable to us or at all. The loss of access to any of our intellectual property or the ability to use any of our technology could harm our business.

***If we fail to protect our proprietary rights, our competitors might gain access to our technology, which could adversely affect our ability to compete successfully in our markets and harm our operating results.***

If we fail to protect our proprietary rights adequately, our competitors might gain access to our technology. Unauthorized parties might attempt to copy aspects of our products or to obtain and use information that we regard as proprietary. Others might independently develop similar or competing technologies or methods or design around our patents. In addition, the laws of many foreign countries in which we or our customers do business do not protect our intellectual property rights to the same extent as the laws of the United States. As a result, our competitors might offer similar products and we might not be able to compete successfully. We also cannot assure that:

- our means of protecting our proprietary rights will be adequate;
- patents will be issued from our currently pending or future applications;
- our existing patents or any new patents will be sufficient in scope or strength to provide any meaningful protection or commercial advantage to us;
- any patent, trademark or other intellectual property right that we own will not be invalidated, circumvented or challenged in the United States or foreign countries; or
- others will not misappropriate our proprietary technologies or independently develop similar technology, duplicate our products or design around any patent or other intellectual property rights that we own.

We might be required to spend significant resources to monitor and protect our intellectual property rights. We may initiate claims or litigation against third parties for infringement of our proprietary rights or to establish the validity of our proprietary rights. Any litigation, whether or not it is resolved in our favor, could result in significant expense to us and divert the efforts of our technical and management personnel. In addition, many of our customer contracts contain provisions that require us to indemnify our customers for third party intellectual property infringement claims, which would increase the cost to us of an adverse ruling in such a claim. An adverse determination could also prevent us from licensing our technologies and methods to others.

***Our failure to comply with environmental laws and regulations could subject us to significant fines and liabilities, and new laws and regulations or changes in regulatory interpretation or enforcement could make compliance more difficult and costly.***

We are subject to various and frequently changing U.S. federal and state, and foreign governmental laws and regulations relating to the protection of the environment, including those governing the discharge of pollutants into the air and water, the management and disposal of hazardous substances and wastes, the cleanup of contaminated sites and the maintenance of a safe workplace. We could incur substantial costs, including cleanup costs, civil or criminal fines or sanctions and third-party claims for property damage or personal injury, as a result of violations of or liabilities under environmental laws and regulations or non-compliance with the environmental permits required at our facilities.

These laws, regulations and permits also could require the installation of costly pollution control equipment or operational changes to limit pollution emissions or decrease the likelihood of accidental releases of hazardous substances. In addition, new laws and regulations, stricter enforcement of existing laws and regulations, the discovery of previously unknown contamination at our or others' sites or the imposition of new cleanup requirements could require us to curtail our operations, restrict our future expansion, subject us to liability and cause us to incur future costs that would have a negative effect on our operating results and cash flow.

***Because we conduct some of our business internationally, we are subject to operational, financial and political risks abroad.***

Sales of our products to customers outside the United States have accounted for an important part of our revenues. Our international sales as a percentage of our revenues were 47.3% for fiscal 2001 and 33.6% for the three months ended March 30, 2002. In the future, we expect international sales, particularly into Europe, Japan,

## [Table of Contents](#)

Korea and Taiwan, to continue to account for a significant percentage of our revenues. Accordingly, we will be subject to risks and challenges that we would not otherwise face if we conducted our business only in the United States. These risks and challenges include:

- compliance with a wide variety of foreign laws and regulations;
- legal uncertainties regarding taxes, tariffs, quotas, export controls, export licenses and other trade barriers;
- political and economic instability in, or foreign conflicts that involve or affect, the countries of our customers;
- difficulties in collecting accounts receivable and longer accounts receivable payment cycles;
- difficulties in staffing and managing personnel, distributors and representatives;
- reduced protection for intellectual property rights in some countries;
- currency exchange rate fluctuations, which could affect the value of our assets denominated in local currency, as well as the price of our products relative to locally produced products;
- seasonal fluctuations in purchasing patterns in other countries; and
- fluctuations in freight rates and transportation disruptions.

Any of these factors could harm our existing international operations and business or impair our ability to continue expanding into international markets.

***We might require additional capital to support business growth, and such capital might not be available.***

We intend to continue to make investments to support business growth and may require additional funds to respond to business challenges, which include the need to develop new products or enhance existing products, enhance our operating infrastructure and acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financing to secure additional funds. Equity and debt financing, however, might not be available when needed or, if available, might not be available on terms satisfactory to us. If we are unable to obtain adequate financing or financing on terms satisfactory to us, our ability to continue to support our business growth and to respond to business challenges could be significantly limited.

***Our reported financial results may be adversely affected by changes in accounting principles generally accepted in the United States.***

We prepare our financial statements in conformity with accounting principles generally accepted in the United States. These accounting principles are subject to interpretation by the Financial Accounting Standards Board, the American Institute of Certified Public Accountants, the Securities and Exchange Commission and various bodies formed to interpret and create appropriate accounting policies. A change in these policies or interpretations could have a significant effect on our reported financial results, and could affect the reporting of transactions completed before the announcement of a change.

### **Risks Related to this Offering**

***The trading price of our common stock is likely to be volatile, and you might not be able to sell your shares at or above the initial public offering price.***

The trading prices of the securities of technology companies have been highly volatile. Accordingly, the trading price of our common stock is likely to be subject to wide fluctuations. Factors affecting the trading price of our common stock include:

- variations in our operating results;
- announcements of technological innovations, new products or product enhancements, strategic alliances or significant agreements by us or by our competitors;

## [Table of Contents](#)

- recruitment or departure of key personnel;
- the gain or loss of significant orders or customers;
- changes in the estimates of our operating results or changes in recommendations by any securities analysts that elect to follow our common stock; and
- market conditions in our industry, the industries of our customers and the economy as a whole.

In addition, if the market for technology stocks or the stock market in general experiences continued or greater loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, operating results or financial condition. The trading price of our common stock also might decline in reaction to events that affect other companies in our industry even if these events do not directly affect us.

***If securities analysts do not publish research or reports about our business, our stock price could decline.***

The trading market for our common stock will rely in part on the research and reports that industry or financial analysts publish about us or our business. We do not control these analysts. If one or more of the analysts who cover us downgrade our stock, our stock price would likely decline rapidly. If one or more of these analysts cease coverage of our company, we could lose visibility in the market, which in turn could cause our stock price to decline.

***The concentration of our capital stock ownership with insiders upon the completion of this offering will likely limit your ability to influence corporate matters.***

We anticipate that our executive officers, directors, current 5% or greater stockholders and entities affiliated with any of them will together beneficially own approximately % of our common stock outstanding after this offering. As a result, these stockholders, acting together, will have significant influence over all matters that require approval by our stockholders, including the election of directors and approval of significant corporate transactions. As a result, corporate actions might be taken even if other stockholders, including those who purchase shares in this offering, oppose them. This concentration of ownership might also have the effect of delaying or preventing a change of control of our company that other stockholders may view as beneficial.

***Our management will have broad discretion over the use of the proceeds from this offering and might not apply the proceeds of this offering in ways that increase the value of your investment.***

Our management will have broad discretion to use the net proceeds from this offering, and you will be relying on the judgment of our management regarding the application of these proceeds. We intend to use a portion of the net proceeds from this offering for leasehold improvements at our new corporate headquarters and manufacturing facility. Although we expect our management to use the remaining net proceeds from this offering for general corporate purposes, including working capital and for potential strategic investments or acquisitions, we have not allocated the net proceeds for specific purposes. Our management might not be able to yield a significant return, if any, on any investment of the net proceeds.

***Future sales of shares by existing stockholders could cause our stock price to decline.***

If our existing stockholders sell, or are perceived to sell, substantial amounts of our common stock in the public market after this offering, the trading price of our common stock could decline. Based on shares outstanding as of March 30, 2002, upon completion of this offering, we will have outstanding approximately shares of common stock, assuming no exercise of the underwriters' over-allotment option. Of these shares, only shares of common stock sold in this offering will be freely tradable, without restriction, in the public market. After the lock-up agreements pertaining to this offering expire 180 days from the date of this prospectus, an additional shares will be eligible for sale in the public market, of which are held by directors, executive officers and other affiliates, and are subject to volume limitations under Rule 144 of the Securities Act and various vesting agreements. In addition, the shares subject to outstanding warrants and the shares subject to outstanding options and reserved for future issuance under our stock option and purchase plans will become eligible for sale in the public market to the extent permitted by the provisions of

## [Table of Contents](#)

various vesting agreements, the lock-up agreements and Rules 144 and 701 under the Securities Act. Morgan Stanley & Co. Incorporated may, in its sole discretion, permit our officers, directors and current stockholders to sell shares prior to the expiration of the lock-up agreements. See “Shares Eligible for Future Sale” for more information regarding shares of our common stock that existing stockholders may sell after this offering.

***You will experience immediate and substantial dilution in the net tangible book value of the shares you purchase in this offering.***

The initial public offering price of our common stock will be substantially higher than the book value per share of the outstanding common stock after this offering. Therefore, based on an assumed initial public offering price of \$        per share, if you purchase our common stock in this offering, you will suffer immediate and substantial dilution of approximately \$        per share. If the underwriters exercise their over-allotment option, or if outstanding options and warrants to purchase our common stock are exercised, you will experience additional dilution.

***Provisions of our certificate of incorporation and bylaws or Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, therefore, depress the trading price of our common stock.***

Delaware corporate law and our certificate of incorporation and bylaws contain provisions that could discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions:

- establish a classified board of directors so that not all members of our board are elected at one time;
- provide that directors may only be removed “for cause” and only with the approval of 66 2/3% of our stockholders;
- require super-majority voting to amend some provisions in our certificate of incorporation and bylaws;
- authorize the issuance of “blank check” preferred stock that our board could issue to increase the number of outstanding shares and to discourage a takeover attempt;
- limit the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- provide that the board of directors is expressly authorized to make, alter or repeal our bylaws; and
- establish advance notice requirements for nominations for election to our board or for proposing matters that can be acted upon by stockholders at stockholder meetings.

In addition, Section 203 of the Delaware General Corporation Law may discourage, delay or prevent a change in control of our company.



**SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

We have made statements under the captions “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business” and in other sections of this prospectus that are forward-looking statements. In some cases, you can identify these statements by forward-looking words such as “may,” “might,” “will,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “potential” or “continue,” the negative or plural of these words and other comparable terminology. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, include, among other things, our anticipated growth strategies and anticipated trends in our business and the markets in which we operate. These statements are only predictions based on our current expectations and projections about future events. Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Because these forward-looking statements involve risks and uncertainties, there are important factors that could cause our actual results, levels of activity, performance or achievements to differ materially from those expressed or implied by the forward-looking statements, including those factors discussed under the caption entitled “Risk Factors.” You should specifically consider the numerous risks outlined under “Risk Factors.”

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement on Form S-1, of which this prospectus is a part, that we have filed with the Securities and Exchange Commission, completely and with the understanding that our actual future results, levels of activity, performance and achievements may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

## USE OF PROCEEDS

We estimate that the net proceeds we will receive from this offering will be approximately \$            million, at an assumed initial public offering price of \$            per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses. If the underwriters exercise their over-allotment option in full, we estimate that our net proceeds will be approximately \$            million.

The principal purposes of this offering are to obtain additional capital, establish a public market for our common stock and facilitate our future access to public capital markets. We intend to use the net proceeds from this offering for general corporate purposes and working capital requirements. We may use a portion of the net proceeds for leasehold improvements at our new corporate headquarters and manufacturing facility, which improvements we expect will total approximately \$25.0 million through the first quarter of 2003. We may also use a portion of the net proceeds to fund possible investments in, or acquisitions of, complementary businesses, products or technologies or establishing joint ventures. We have no current agreements or commitments with respect to any investment, acquisition or joint venture, and we currently are not engaged in negotiations with respect to any investment, acquisition or joint venture. Pending their ultimate use, we intend to invest the net proceeds from this offering in short-term, interest-bearing, investment grade securities.

The amount and timing of what we actually spend for these purposes may vary significantly and will depend on a number of factors, including our future revenue and cash generated by operations and the other factors described in "Risk Factors." Therefore, we will have broad discretion in the way we use the net proceeds.

## DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We currently expect to retain all available funds and any future earnings for use in the operation and development of our business. Accordingly, we do not anticipate declaring or paying cash dividends on our common stock in the foreseeable future. In addition, the terms of our loan and security agreement prohibit us from paying cash dividends without the prior consent of the bank.

**CAPITALIZATION**

The following table shows our capitalization as of March 30, 2002. Our capitalization is presented (1) on an actual basis, (2) on a pro forma basis to reflect the automatic conversion of our outstanding shares of preferred stock into 22,994,543 shares of our common stock upon the closing of this offering, and (3) on a pro forma as adjusted basis to reflect the sale of shares of our common stock offered by us at an assumed initial public offering price of \$ per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	March 30, 2002		
	Actual	Pro Forma	Pro Forma As Adjusted
		(unaudited) (in thousands, except share and per share data)	
Long-term obligations, less current portion	\$ 1,000	\$ 1,000	\$
Redeemable convertible preferred stock, \$.001 par value; 24,679,840 shares authorized, 22,994,543 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	64,895	—	—
Redeemable convertible preferred stock warrants	306	—	—
Stockholders' equity (deficit):			
Preferred stock \$.001 par value; no shares authorized, issued or outstanding, actual; 10,000,000 shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, \$.001 par value; 37,000,000 shares authorized, 4,600,682 shares issued and outstanding, actual; 37,000,000 shares authorized, 27,595,225 shares issued and outstanding, pro forma; and 250,000,000 shares authorized, shares issued and outstanding, pro forma as adjusted	5	28	—
Additional paid-in capital	11,942	77,120	—
Notes receivable from stockholders	(3,465)	(3,465)	—
Deferred stock-based compensation, net	(5,357)	(5,357)	—
Accumulated deficit	(18,878)	(18,878)	—
<b>Total stockholders' equity (deficit)</b>	<b>(15,753)</b>	<b>49,448</b>	<b>—</b>
<b>Total capitalization</b>	<b>\$ 50,448</b>	<b>\$ 50,448</b>	<b>\$</b>

The number of shares of our common stock shown as issued and outstanding in the table above excludes:

- 4,015,604 shares of common stock issuable upon exercise of options outstanding at March 30, 2002 with a weighted average exercise price of \$5.10 per share;
- 132,439 shares of common stock issuable upon exercise of warrants outstanding at March 30, 2002 with a weighted average exercise price of \$5.06 per share;
- 4,994,291 shares of common stock available for issuance under our stock option plans at March 30, 2002;
- 500,000 shares of common stock to be available for issuance under our stock option plan effective upon the completion of this offering; and
- 1,500,000 shares of common stock to be available for issuance under our employee stock purchase plan effective upon the completion of this offering.

This capitalization table should be read together with "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus.

**DILUTION**

Our pro forma net tangible book value as of March 30, 2002 was approximately \$49.4 million, or \$1.79 per share of our common stock. Our pro forma net tangible book value per share represents our total tangible assets less total liabilities divided by the number of shares of our common stock outstanding on March 30, 2002 and assumes the automatic conversion of our outstanding shares of preferred stock into 22,994,543 shares of our common stock upon the closing of this offering.

Without taking into account any changes in pro forma net tangible book value after March 30, 2002, other than to give effect to the sale of \_\_\_\_\_ shares of our common stock offered by us at an assumed initial public offering price of \$ \_\_\_\_\_ per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma net tangible book value as of March 30, 2002 would have been approximately \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share of our common stock. This amount represents an immediate increase in pro forma net tangible book value of \$ \_\_\_\_\_ per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of \$ \_\_\_\_\_ per share to new investors purchasing shares in this offering. The following table illustrates the dilution in pro forma net tangible book value per share to new investors.

Assumed initial public offering price per share	\$
Pro forma net tangible book value per share as of March 30, 2002	1.79
Increase per share attributable to new investors	—
Pro forma net tangible book value per share after this offering	—
Dilution in pro forma net tangible book value per share to new investors	\$
	—

If all of the outstanding options and warrants were exercised, the pro forma net tangible book value as of March 30, 2002 would have been \$ \_\_\_\_\_ million and the pro forma net tangible book value would have been \$ \_\_\_\_\_ per share, causing dilution to new investors of \$ \_\_\_\_\_.

The following table summarizes, as of March 30, 2002 on the pro forma basis described above, the number of shares of our common stock purchased from us, the total consideration paid to us, and the average price per share paid to us by existing stockholders and to be paid by new investors purchasing shares of our common stock in this offering at an assumed initial public offering price of \$ \_\_\_\_\_ per share, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	27,595,225	%	\$70,118,434	%	\$2.54
New investors					
<b>Total</b>		<b>100.0%</b>		<b>100.0%</b>	

The above information excludes:

- 4,015,604 shares of common stock issuable upon exercise of options outstanding at March 30, 2002 with a weighted average exercise price of \$5.10 per share;
- 132,439 shares of common stock issuable upon exercise of warrants outstanding at March 30, 2002 with a weighted average exercise price of \$5.06 per share;
- 4,994,291 shares of common stock available for issuance under our stock option plans at March 30, 2002;
- 500,000 shares of common stock to be available for issuance under our stock option plan effective upon the completion of this offering; and
- 1,500,000 shares of common stock to be available for issuance under our employee stock purchase plan effective upon the completion of this offering.

**SELECTED CONSOLIDATED FINANCIAL DATA**

The selected consolidated financial data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes appearing elsewhere in this prospectus. The consolidated statement of operations data for the fiscal years ended December 25, 1999, December 30, 2000 and December 29, 2001, and the consolidated balance sheet data as of December 30, 2000 and December 29, 2001, are derived from our audited consolidated financial statements appearing elsewhere in this prospectus. The consolidated statement of operations data for the fiscal years ended December 31, 1997 and December 26, 1998, and the consolidated balance sheet data as of December 31, 1997, December 26, 1998 and December 25, 1999, are derived from our audited consolidated financial statements that are not included in this prospectus. The consolidated statement of operations data for the three months ended March 31, 2001 and March 30, 2002, and the consolidated balance sheet data as of March 30, 2002, are derived from our unaudited consolidated financial statements appearing elsewhere in this prospectus. We have prepared the unaudited information on the same basis as the audited consolidated financial statements and have included, in our opinion, all adjustments, consisting only of normal and recurring adjustments, that we consider necessary for a fair presentation of the financial information set forth in those statements. The historical results are not necessarily indicative of the results to be expected in any future period, and the results for the three months ended March 30, 2002 are not necessarily indicative of results to be expected for the full fiscal year or any other period.

	Fiscal Year Ended					Three Months Ended		
	Dec. 31, 1997	Dec. 26, 1998	Dec. 25, 1999	Dec. 30, 2000	Dec. 29, 2001	Mar. 31, 2001	Mar. 30, 2002	
	(in thousands, except per share data)					(unaudited)		
<b>Consolidated Statement of Operations Data:</b>								
Revenues	\$ 6,680	\$ 19,329	\$ 35,722	\$ 56,406	\$ 73,433	\$ 19,849	\$ 17,288	
Cost of revenues	5,190	10,763	20,420	28,243	38,385	10,410	8,859	
Gross margin	1,490	8,566	15,302	28,163	35,048	9,439	8,429	
Operating expenses:								
Research and development	3,446	7,486	9,466	11,995	14,619	4,073	3,249	
Selling, general and administrative	4,072	7,212	11,020	15,434	18,500	4,730	3,992	
Stock-based compensation	—	—	341	259	469	58	165	
Restructuring charges	—	—	—	—	1,380	—	—	
Total operating expenses	7,518	14,698	20,827	27,688	34,968	8,861	7,406	
Operating income (loss)	(6,028)	(6,132)	(5,525)	475	80	578	1,023	
Interest and other income (expense), net	465	157	(119)	1,719	477	(74)	155	
Income (loss) before income taxes	(5,563)	(5,975)	(5,644)	2,194	557	504	1,178	
Benefit (provision) for income taxes	—	—	—	(115)	(307)	(207)	(332)	
Net income (loss)	\$ (5,563)	\$ (5,975)	\$ (5,644)	\$ 2,079	\$ 250	\$ 297	\$ 846	
Net income (loss) per share:								
Basic	\$ (6.17)	\$ (3.60)	\$ (2.16)	\$ .61	\$ .06	\$ .08	\$ .19	
Diluted	\$ (6.17)	\$ (3.60)	\$ (2.16)	\$ .08	\$ .01	\$ .01	\$ .03	
Weighted-average number of shares used in per share calculations:								
Basic	902	1,659	2,609	3,408	4,029	3,790	4,381	
Diluted	902	1,659	2,609	26,821	28,994	27,924	29,813	
Pro forma net income per share (unaudited):								
Basic					\$ .01		\$ .03	
Diluted					\$ .01		\$ .03	
Weighted-average number of shares used in pro forma per share calculations (unaudited):								
Basic					27,024		27,376	
Diluted					28,994		29,813	
	As of							
	Dec. 31, 1997	Dec. 26, 1998	Dec. 25, 1999	Dec. 30, 2000	Dec. 29, 2001	Mar. 30, 2002		
	(in thousands)						(unaudited)	
<b>Consolidated Balance Sheet Data:</b>								
Cash, cash equivalents and short-term investments	\$ 16,093	\$ 10,449	\$ 19,248	\$ 16,897	\$ 27,576	\$ 30,009		
Working capital	15,408	8,032	17,694	23,391	31,074	33,492		
Total assets	22,743	22,532	38,332	47,499	62,264	64,792		
Long-term debt, less current portion	1,592	2,834	2,183	521	1,167	1,000		
Redeemable convertible preferred stock and warrants	27,613	27,963	47,913	55,129	65,201	65,201		
Deferred stock-based compensation, net	—	—	(184)	(184)	(4,071)	(5,357)		
Total stockholders’ deficit	(10,126)	(15,889)	(21,286)	(18,586)	(17,582)	(15,753)		

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF  
FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with "Selected Consolidated Financial Data" and our consolidated financial statements and the related notes included elsewhere in this prospectus. In addition to historical consolidated financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results could differ materially from those anticipated by these forward-looking statements as a result of many factors, including those discussed under "Risk Factors" and elsewhere in this prospectus.*

**Overview**

We design, develop, manufacture, sell and support precision, high performance advanced semiconductor wafer probe cards. In 2001, we were the leader in the advanced wafer probe card market in terms of revenues. At the core of our product offering is our proprietary MicroSpring interconnect technology. Our MicroSpring interconnect technology includes a resilient contact element manufactured at our production facilities in Livermore, California. To date, we have derived our revenues primarily from the sale of wafer probe cards incorporating our MicroSpring interconnect technology.

We were formed in 1993 and in 1995 introduced our first commercial product. During 1996, we introduced the industry's first memory wafer probe card capable of testing up to 32 devices in parallel. Our revenues increased from \$1.1 million in fiscal 1995 to \$73.4 million in fiscal 2001.

We work closely with our customers to design, develop and manufacture custom wafer probe cards. Each wafer probe card is a custom product that is specific to the chip design of the customer. As a result, our revenue growth is driven by both the number of new semiconductor designs and increased semiconductor production volumes.

While the majority of our sales are directly to semiconductor manufacturers, we also have significant sales to our distributor in Taiwan. Sales to our distributors were 40.6% of revenues in fiscal 2000 and 32.9% of revenues in fiscal 2001. We sold our products in Japan to a distributor until March 31, 2002, when we began to sell directly in Japan. Currently, we have one distributor, Spirox Corporation, which serves Taiwan, Singapore and China. We also have the ability to sell our products directly to customers in that region.

Because our products serve the highly cyclical semiconductor industry, our business is subject to demand fluctuations that have resulted in significant variations of revenues, expenses and results of operations in the periods presented. Fluctuations are likely to continue in future periods. Due to a high concentration of large customers in the semiconductor industry, we believe that sales to a limited number of customers will continue to account for a substantial part of our business. We generally have limited backlog and therefore we rely upon orders that are booked and shipped in the same quarter for a majority of our revenues.

*Fiscal Year.* Our fiscal year ends on the last Saturday in December. Fiscal 2000, which ended December 30, 2000, had 53 weeks. The fiscal years ended December 25, 1999 and December 29, 2001 each had 52 weeks. Fiscal 2002 will end on December 28, 2002 and will have 52 weeks.

*Revenues.* We derive our revenues from product sales, license and development fees and royalties. To date, wafer probe card sales have comprised substantially all of our revenues. Wafer probe card sales accounted for 99.7% of our revenues in the three months ended March 30, 2002, 99.2% of our revenues in fiscal 2001, 97.8% of our revenues in fiscal 2000, and 97.1% of our revenues in fiscal 1999. Revenues from license and development fees and royalties have historically not been significant. Increases in revenues have resulted from increased demand for our existing products, the introduction of new, more complex products and the acceptance of new applications. We expect that revenues from the sale of wafer probe cards will continue to account for substantially all of our revenues for the foreseeable future.

*Cost of Revenues.* Cost of revenues consists primarily of manufacturing materials, payroll and manufacturing-related overhead. Our manufacturing operations rely upon a limited number of suppliers to provide key

## [Table of Contents](#)

components of our products, some of which are sole source. We order materials and supplies based on backlog and forecasted customer orders. Tooling and setup costs related to changing manufacturing lots at our suppliers are also included in the cost of revenues. We expense all warranty costs and inventory reserves or write-downs as cost of revenues.

We design, manufacture and sell a fully custom product into a market that has been subject to cyclical and significant demand fluctuations. Probe cards are complex products, custom to a specific chip design and have to be delivered on lead-times shorter than most manufacturers' cycle times. It is therefore common to start production and to acquire production materials ahead of the receipt of an actual purchase order. Probe cards are manufactured in low volumes, therefore, material purchases are often subject to minimum purchase order quantities in excess of the actual demand. These factors make inventory valuation adjustments part of the normally occurring cost of revenue.

*Research and Development.* Research and development expenses include expenses related to product development, engineering and material costs. All research and development costs are expensed as incurred. Research and development expenses have increased in absolute dollars year-to-year over the past five fiscal years. We plan to invest a significant amount in research and development activities to develop new technologies for current and new markets and new applications in the future. We expect research and development expenses to increase in absolute dollars, but to decline as a percentage of revenues.

*Selling, General and Administrative.* Selling, general and administrative expenses include expenses related to sales, marketing, and administrative personnel; internal and outside sales representatives' commissions, market research and consulting; and other marketing and sales activities. We expect that selling expenses will increase as revenues increase, and we expect that general and administrative expenses will increase in absolute dollars to support future operations, as well as from the additional costs of being a publicly traded company. We expect selling, general and administrative expenses to decline as a percentage of revenues.

*Stock-Based Compensation.* In connection with the grant of stock options to employees in fiscal 2001 and the three months ended March 30, 2002, we recorded an aggregate of \$5.7 million in deferred stock-based compensation. These options are considered compensatory because the fair value of our stock determined for financial reporting purposes is greater than the fair value determined by the board of directors on the date of the grant. As of March 30, 2002, we had an aggregate of \$5.4 million of deferred stock-based compensation remaining to be amortized. This deferred stock-based compensation balance will be amortized as follows: \$600,000 during the remainder of fiscal 2002; \$800,000 during fiscal 2003; \$1.8 million during fiscal 2004; \$2.1 million during fiscal 2005; and \$100,000 during fiscal 2006. We anticipate that we will record additional stock-based compensation expense related to options granted after March 30, 2002. We are amortizing the deferred stock-based compensation on a straight line basis over the vesting period of the related options, which is generally four years. The amount of stock-based compensation amortization actually recognized in future periods could decrease if options for which accrued but unvested compensation has been recorded are forfeited.

*Provision for Income Taxes.* We utilized our tax loss carryforwards to eliminate our provision for income taxes through fiscal 1999 and to minimize it in fiscal 2000 and 2001. Provisions for fiscal 2000 and 2001 primarily relate to income taxes owed outside of the United States. As of December 29, 2001, we had federal and state net operating loss carryforwards of approximately \$3.6 million. We also had research and development tax credit carryforwards of approximately \$3.5 million. The net operating loss and credit carryforwards will expire at various dates from 2010 through 2021. We maintain a full valuation allowance against our deferred tax asset, because based on available evidence, it is more likely than not that our deferred tax asset will not be realized.

Under the Internal Revenue Code, as amended, and similar state provisions, certain substantial changes in our ownership could result in an annual limitation on the amount of net operating loss and credit carryforwards that can be utilized in future years to offset future taxable income. Annual limitations may result in the expiration of net operating loss and credit carryforwards before they are used.

*Use of Estimates.* Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to

## [Table of Contents](#)

make estimates and judgments that affect the reported amount of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to uncollectible receivables, inventories, investments, intangible assets, income taxes, financing operations, warranty obligations, excess component and order cancellation costs, restructuring, and contingencies and litigation. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. For excess component costs, the estimates are dependent on our expected use of the excess components and the size of the minimum order quantity imposed by the vendor in relation to our inventory requirements. Because this can vary in each situation, actual results may differ from these estimates under different assumptions or conditions.

### Results of Operations

The following table presents our historical operating results for the periods indicated as a percentage of revenues:

	Fiscal Year Ended			Three Months Ended	
	Dec. 25, 1999	Dec. 30, 2000	Dec. 29 2001	Mar. 31, 2001	Mar. 30, 2002
Revenues	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues	57.2	50.1	52.3	52.4	51.2
Gross margin	42.8	49.9	47.7	47.6	48.8
Operating expenses:					
Research and development	26.5	21.3	19.9	20.5	18.8
Selling, general and administrative	30.8	27.4	25.2	23.9	23.1
Stock-based compensation	1.0	0.4	0.6	0.3	1.0
Restructuring charges	—	—	1.9	—	—
Total operating expenses	58.3	49.1	47.6	44.7	42.9
Operating income (loss)	(15.5)	0.8	0.1	2.9	5.9
Interest and other income (expense), net	(0.3)	3.1	0.6	(0.4)	0.9
Income (loss) before income taxes	(15.8)	3.9	0.7	2.5	6.8
Provision for income taxes	—	(0.2)	(0.4)	(1.0)	(1.9)
Net income (loss)	(15.8)%	3.7%	0.3%	1.5%	4.9%

#### *Three Months Ended March 30, 2002 and March 31, 2001*

**Revenues.** Revenues for the three months ended March 30, 2002 were \$17.3 million compared with \$19.8 million for the three months ended March 31, 2001, a decrease of \$2.6 million. The decrease was due primarily to reduced sales to DRAM manufacturers, particularly in Rambus DRAM, or RDRAM, wafer probe cards, offset in part by revenues from our large area array products and increased revenues from manufacturers of flash memory devices. During the first two quarters of fiscal 2001, the industry adopted RDRAM architecture-based memory devices for higher speed applications. This adoption drove increased design activity and demand for wafer probe cards. During the second half of fiscal 2001, DRAM manufacturers began to adopt lower cost Double Data Rate, or DDR, architecture-based devices. This resulted in declining overall sales due to a significant decline in demand for RDRAM wafer probe cards, which was not offset by the increase in demand for our DDR wafer probe cards. There were no material RDRAM sales during the three months ended March 30, 2002. Sales of RDRAM wafer probe cards were \$4.4 million during the three months ended March 31, 2001.

Revenues by geographic region in the three months ended March 30, 2002 as a percentage of revenues were 66.4% in North America, 15.8% in Europe, 12.9% in Asia Pacific and 4.9% in Japan. Revenues by geographical region in the three months ended March 31, 2001 as a percentage of revenues were 60.8% in North America,



## [Table of Contents](#)

11.8% in Europe, 19.5% in Asia Pacific and 7.9% in Japan. The increase in the percentage of revenues in North America was due primarily to increased sales to a manufacturer of microprocessors and flash memory devices. The increase in percentage of revenues in Europe was due primarily to increased sales of our large area array products in that region.

The following customers accounted for more than 10% of our revenues in the first quarter of fiscal 2001 and fiscal 2002:

	Three Months Ended	
	March 31, 2001	March 30, 2002
Intel Corporation	12.8%	30.1%
Infineon Technologies AG	15.1	21.7
Dominion Semiconductor L.L.C.	N/A	14.6
Spirox Corporation	18.4	12.8
Samsung Electronics Industries Co., Ltd.	34.8	N/A

Aggregate revenues from our largest customers during the first quarter of fiscal 2002 increased due to stronger demand for microprocessor and flash memory wafer probe products. We experienced a decline in revenues from our largest DRAM customers, and our distributor Spirox, with the exception of the early adoption of our large area array products at one customer. The decline in revenues was due to decreased demand for DRAM devices. Revenues from our customers are subject to both quarterly and annual fluctuations due to design cycles, technology adoption rates and the cyclical nature of the different end markets into which our customers' products are sold.

**Gross Margin.** Gross margin as a percentage of revenues was 48.8% for the three months ended March 30, 2002 compared with 47.6% of revenues for the three months ended March 31, 2001. The increase in gross margin percentage was due primarily to the cost reduction actions associated with our restructuring in the third quarter of fiscal 2001 as well as continued reductions in the cost of materials and shipments of high complexity products to certain customers. These cost reduction benefits were partially offset by overall reduced production volumes and a less favorable pricing environment due to the overall decline in demand for wafer probe card products in the industry. We also experienced an increase in warranty expenses caused by an increase in field failures at one of our customers. Gross margin in absolute dollars and as a percentage of revenues will be subject to fluctuations as we continue to introduce new technologies into our manufacturing processes and to experience cyclical nature in our end markets. We expect to continue to invest in new infrastructure, increasing fixed costs, which could have a material adverse impact on our gross margin. We anticipate that increased competition will also continue to impact our pricing, particularly in our lower complexity products sold to certain customers, and negatively impact our gross margin.

**Research and Development.** Research and development expenses decreased to \$3.2 million, or 18.8% of revenues, for the three months ended March 30, 2002 from \$4.1 million, or 20.5% of revenues, for the three months ended March 31, 2001. The decrease was primarily a result of a reduction of approximately \$400,000 in personnel costs associated with the cost reduction actions taken in the second half of fiscal 2001 and a reduction of approximately \$400,000 in material and equipment costs. Of these reductions, approximately \$477,000 was attributable to development of our MicroSpring Contact on Silicon Technology, or MOST technology, which was substantially completed during the three months ended March 31, 2001. We continued our development of new large area array memory products and fine pitch logic products.

**Selling, General and Administrative.** Selling, general and administrative expenses decreased to \$4.0 million, or 23.1% of revenues, for the three months ended March 30, 2002 from \$4.7 million, or 23.9% of revenues, for the three months ended March 31, 2001. The decrease was primarily due to a reduction of approximately \$600,000 in personnel and recruiting costs associated with the cost reduction actions taken in the second half of fiscal 2001.

**Interest and Other Income (Expense), Net.** Interest and other income (expense), net for the three months ended March 30, 2002 was \$155,000 compared with \$(74,000) for the three months ended March 31, 2001,

## [Table of Contents](#)

reflecting lower currency losses from the revaluation and translation of certain receivables and assets denominated in foreign currencies. In addition, the three months ended March 31, 2001 included higher interest expense, bank fees and miscellaneous expenses.

*Provision for Income Taxes.* Provision for income taxes for the three months ended March 30, 2002 was \$332,000 compared with \$207,000 in the three months ended March 31, 2001. The increase was due primarily to the increase in net income.

### **Fiscal Years Ended December 29, 2001 and December 30, 2000**

*Revenues.* Revenues were \$73.4 million for fiscal 2001 compared with \$56.4 million for fiscal 2000, an increase of 30.2%. The increase was due to strong demand for our wafer probe cards used to test DRAM and flash memory devices. The increase in revenues reflected an increase in unit shipments, which was partially offset by a decline in average selling prices.

The increase of DRAM production, in particular RDRAM, at some of our customers impacted revenue growth favorably through the first six months of fiscal 2001. Revenues for this period also benefited from the introduction of our large area array products that enable a higher level of parallelism for test of memory devices. During fiscal 2001, we introduced our products to manufacturers of flash memory, which also contributed to our revenue growth.

During the second six months of fiscal 2001, our revenues declined compared to the first six months of fiscal 2001 as DRAM manufacturers experienced significant price declines for their products. This decline adversely impacted both the volume and pricing of our products. The effects of this decline were offset in part by increased demand for our products due primarily to technological innovations in the semiconductor industry, such as the migration toward smaller feature sizes of ...15 micron and below.

Revenues by geographical region in fiscal 2001 as a percentage of revenues were 52.7% in North America, 13.8% in Europe, 26.6% in Asia Pacific and 6.9% in Japan. Revenues by geographic region in fiscal 2000 as a percentage of revenues were 42.0% in North America, 16.4% in Europe, 33.4% in Asia Pacific and 8.2% in Japan. The year-to-year increase in revenues in North America was primarily due to the increased sales of Rambus devices by one of our major customers.

The following customers accounted for more than 10% of our revenues in fiscal 2000 and fiscal 2001:

	Fiscal 2000	Fiscal 2001
Spirox Corporation	25.4%	26.4%
Samsung Electronics Industries Co., Ltd.	N/A	20.2
Infineon Technologies AG	21.3	16.1
Intel Corporation	16.5	12.4

Revenues to our largest customers during fiscal 2001 increased due to the ramp of RDRAM wafer probe products and the continued penetration of new end customers by our distributor Spirox. Revenue percentages declined for some of our customers due to our overall increased revenues during fiscal 2001, while revenues in absolute dollars to such customers remained flat.

*Gross Margin.* Gross margin as a percentage of revenues was 47.7% for fiscal 2001 compared with 49.9% for fiscal 2000. The decline in gross margin percentage was due to the overall industry downturn in the second half of fiscal 2001, resulting in increased pricing pressure and reduced unit volumes. Furthermore, we continued to incur start-up costs from the transition to a new manufacturing process for our next generation MicroSpring technology during the first six months of fiscal 2001. The start-up costs related to increased materials spending from pre-production lots, as well as reduced yields during the process ramp. Cost of revenues increased in fiscal 2001 due to continued investments in our manufacturing infrastructure, primarily increased personnel expenses, which impacted our gross margin unfavorably.

*Research and Development.* Research and development expenses increased to \$14.6 million, or 19.9% of revenues, for fiscal 2001 from \$12.0 million, or 21.3% of revenues, for fiscal 2000. Of this increase,

## [Table of Contents](#)

approximately \$1.6 million was due to increases in headcount and approximately \$480,000 was due to increased spending on engineering materials. This increased investment resulted in the development of large area array products and process technologies to enhance the manufacturability of various products. We also increased our investment in design capability to address a growing business in Asian markets.

*Selling, General and Administrative.* Selling, general and administrative expenses increased to \$18.5 million, or 25.2% of revenues, for fiscal 2001 from \$15.4 million, or 27.4% of revenues, for fiscal 2000. The increase was due to hiring additional personnel in sales, field applications and administrative capacities as well as increases in commissions due to increased revenues.

During the third quarter of fiscal 2001, we recorded a restructuring charge of \$1.4 million. We implemented the restructuring plan to better align our infrastructure with the market conditions in the semiconductor industry and to further focus the company on the wafer probe card business. The restructuring charge consisted of \$880,000 for headcount reductions covering 14 employees in research and development, 23 employees in operations and 17 employees in selling, general and administrative. The majority of the affected employees were based in Livermore, California. Further, we recorded \$223,000 for the consolidation of excess facilities and \$277,000 for asset write-offs, primarily for property and equipment. The consolidation of excess facilities included the closure of certain corporate facilities that had been vacated. The charge of \$223,000 primarily related to lease termination and noncancelable lease costs. Property and equipment that was disposed of resulted in a charge of \$277,000 and primarily consisted of leasehold improvements for the excess facilities. As a result of our restructuring plan, we expect an annual reduction of employee related costs of \$3.9 million and facility and related expenses of \$266,000. As of December 29, 2001, \$441,000 of the \$1.4 million restructuring charge remained accrued, primarily relating to ongoing scheduled severance payments and pending lease contract cancellations being executed under the restructuring plan. We anticipate that we will substantially complete restructuring payment obligations by the end of the third quarter of fiscal 2002.

*Interest and Other Income (Expense), Net.* Interest and other income (expense), net for fiscal 2001 was \$477,000 compared with \$1.7 million for fiscal 2000. The difference was due to non-recurring other income of \$1.3 million recorded in fiscal 2000 from the settlement of a claim against a licensee for an alleged breach of a license agreement.

*Provision for Income Taxes.* Provision for income taxes was \$307,000 for fiscal 2001 compared with \$115,000 for fiscal 2000. This increase represented the estimated tax liability for fiscal 2001 arising from alternative minimum tax and income and withholding tax on foreign license sales. As of December 29, 2001, our deferred tax asset was \$9.1 million, representing prior years' operating loss carry forwards and unutilized tax credits, and has been reduced in full by a valuation allowance.

### **Fiscal Years Ended December 30, 2000 and December 25, 1999**

*Revenues.* Revenues for fiscal 2000 were \$56.4 million compared with \$35.7 million for fiscal 1999, an increase of 57.9%. Product sales increased \$20.7 million due to strong demand for our products across our customer base and product platforms.

Revenues by geographical region in fiscal 2000 as a percentage of revenues were 42.0% in North America, 16.4% in Europe, 33.4% in Asia Pacific and 8.2% in Japan. Revenues by geographical region in fiscal 1999 as a percentage of revenues were 57.6% in North America, 20.0% in Europe, 20.0% in Asia Pacific and 2.4% in Japan.

The following customers accounted for more than 10% of our revenues in fiscal 1999 and fiscal 2000:

	Fiscal 1999	Fiscal 2000
Spirox Corporation	17.3%	25.4%
Infineon Technologies AG	29.9	21.3
Intel Corporation	N/A	16.5
Dominion Semiconductor L.L.C.	14.7	N/A

## [Table of Contents](#)

Revenues to our largest customers during fiscal 2000 increased in absolute dollars due to continued adoption of our products at those customers.

*Gross Margin.* Gross margin as a percentage of revenues was 49.9% for fiscal 2000 compared with 42.8% for fiscal 1999. The increase resulted primarily from better economies of scale from higher production volumes and the introduction of new products to certain customers and a reduction in material costs due to volume purchase discounts achieved with our key suppliers.

*Research and Development.* Research and development expenses increased to \$12.0 million, or 21.3% of revenues, for fiscal 2000 from \$9.5 million, or 26.5% of revenues, for fiscal 1999. The increase related primarily to additional staffing needs and materials and equipment cost to develop the next generation MicroSpring interconnect technology, which we introduced to manufacturing in the fourth quarter of fiscal 2000, and the continued development of our MOST technology with Shinko Electric Industries Co., Ltd. In fiscal 2000, we also began investing in large area array programs consistent with our strategy for high parallelism probe, and continued to invest in proprietary design tools and methodologies to further reduce design cycle times.

*Selling, General and Administrative.* Selling, general and administrative expenses increased to \$15.4 million, or 27.4% of revenues, for fiscal 2000 from \$11.0 million, or 30.8% of revenues, for fiscal 1999. The increase was due to an increase in the number of our sales personnel and higher sales bonuses and commissions associated with the growth in revenues. General and administrative expenses increased due to additional infrastructure costs needed to support the business growth.

*Interest and Other Income (Expense), Net.* Interest and other income (expense), net was \$1.7 million for fiscal 2000 compared with \$(119,000) for fiscal 1999. The difference was due mainly to higher interest income, as well as non-recurring other income of \$1.3 million recorded in the fiscal year ended December 30, 2000 from the settlement of a claim against a licensee for an alleged breach of a license agreement.

*Provision for Income Taxes.* Our provision for income taxes of \$115,000 for the fiscal year ended December 30, 2000 represented the estimated tax liability arising from alternative minimum tax and income and withholding tax on foreign license sales. There was no such liability in the fiscal year ended December 30, 1999.

**Quarterly Results of Operations**

The following table presents our unaudited quarterly results of operations for the nine quarters in the period ended March 30, 2002. You should read the following table in conjunction with the consolidated financial statements and related notes contained elsewhere in this prospectus. We have prepared the unaudited information on the same basis as our audited consolidated financial statements. This table includes all adjustments, consisting only of normal recurring adjustments, that we consider necessary for a fair presentation of our financial position and operating results for the quarters presented. Operating results for any quarter are not necessarily indicative of results for any future quarters or for a full year.

	Three Months Ended								
	April 1, 2000	July 1, 2000	Sept. 30, 2000	Dec. 30, 2000	Mar. 31, 2001	June 30, 2001	Sept. 29, 2001	Dec. 29, 2001	Mar. 30, 2002
					(unaudited) (in thousands)				
Revenues	\$10,313	\$13,028	\$15,842	\$17,223	\$19,849	\$21,507	\$16,021	\$16,056	\$17,288
Cost of revenues	5,198	6,159	7,808	9,078	10,410	11,269	8,477	8,229	8,859
Gross margin	5,115	6,869	8,034	8,145	9,439	10,238	7,544	7,827	8,429
Operating expenses:									
Research and development	2,516	2,699	3,247	3,533	4,073	4,323	3,054	3,169	3,249
Selling, general and administrative	2,904	3,500	4,431	4,599	4,730	5,230	4,344	4,196	3,992
Stock-based compensation	67	68	63	61	58	102	103	206	165
Restructuring charges	—	—	—	—	—	—	1,380	—	—
Total operating expenses	5,487	6,267	7,741	8,193	8,861	9,655	8,881	7,571	7,406
Operating income (loss)	(372)	602	293	(48)	578	583	(1,337)	256	1,023
Interest and other income (expense), net	1,354	55	157	153	(74)	94	229	228	155
Income (loss) before income taxes	982	657	450	105	504	677	(1,108)	484	1,178
Benefit (provision) for income taxes	(51)	(34)	(24)	(6)	(207)	(291)	426	(235)	(332)
Net income (loss)	\$ 931	\$ 623	\$ 426	\$ 99	\$ 297	\$ 386	\$ (682)	\$ 249	\$ 846
Net income (loss) per share:									
Basic	.29	.19	.12	.03	.08	.10	(.16)	.06	.19
Diluted	.03	.02	.02	—	.01	.01	(.16)	.01	.03
Weighted-average number of shares used in per share calculations:									
Basic	3,181	3,337	3,497	3,611	3,790	3,941	4,137	4,248	4,381
Diluted	26,656	26,582	27,293	27,636	27,924	28,353	4,137	29,038	29,813

## Table of Contents

The following table presents our historical results for the periods indicated as a percentage of revenues:

	Three Months Ended								
	April 1, 2000	July 1, 2000	Sept. 30, 2000	Dec. 30, 2000	Mar. 31, 2001	June 30, 2001	Sept. 29, 2001	Dec. 29, 2001	Mar. 30, 2002
Revenues	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues	50.4	47.3	49.3	52.7	52.4	52.4	52.9	51.3	51.2
Gross margin	49.6	52.7	50.7	47.3	47.6	47.6	47.1	48.7	48.8
Operating expenses:									
Research and development	24.4	20.7	20.5	20.5	20.5	20.1	19.1	19.7	18.8
Selling, general and administrative	28.2	26.9	28.0	26.7	23.9	24.3	27.1	26.1	23.1
Stock-based compensation	0.6	0.5	0.4	0.4	0.3	0.5	0.6	1.3	1.0
Restructuring charges	—	—	—	—	—	—	8.6	—	—
Total operating expenses	53.2	48.1	48.9	47.6	44.7	44.9	55.4	47.1	42.9
Operating income (loss)	(3.6)	4.6	1.8	(0.3)	2.9	2.7	(8.3)	1.6	5.9
Interest and other income (expense), net	13.1	0.4	1.0	0.9	(0.4)	0.4	1.4	1.4	0.9
Income (loss) before income taxes	9.5	5.0	2.8	0.6	2.5	3.1	(6.9)	3.0	6.8
Benefit (provision) for income taxes	(0.5)	(0.2)	(0.1)	—	(1.0)	(1.3)	2.6	(1.5)	(1.9)
Net income (loss)	9.0%	4.8%	2.7%	0.6%	1.5%	1.8%	(4.3)%	1.5%	4.9%

**Revenues.** Revenues increased sequentially in each of the quarters ended April 1, 2000 through June 30, 2001, due to increased demand across all markets for our wafer probe cards. Revenues declined during the three months ended September 29, 2001 due to the overall industry downturn, which resulted in a decline in unit volumes and pricing for our products. Revenues increased sequentially in each of the quarters ended December 29, 2001 and March 30, 2002 as design activity increased, primarily in the DRAM and logic markets.

**Gross Margin.** Gross margin by quarter increased to 52.7% in the three months ended July 1, 2000, due to an increase in sales of higher performance products in that quarter. Gross margin declined between the three months ended July 1, 2000 and the three months ended December 30, 2000, due to the start-up costs associated with a new manufacturing process as well as continued investments in our manufacturing infrastructure, primarily in increased personnel. Gross margin remained relatively stable from the three months ended December 30, 2000 through the three months ended September 29, 2001. Gross margin increased during the three months ended December 29, 2001 as a result of increased higher performance product sales and the benefits of our restructuring as well as other cost reduction programs, such as scheduled plant shutdowns. These benefits were partially offset by the overall industry downturn in the second half of fiscal 2001, resulting in increased pricing pressure and reduced unit volumes.

**Operating Expenses.** Operating expenses increased in absolute dollars in each of the six quarters ended April 1, 2000 through June 30, 2001, reflecting the combination of increased staffing in all departments to support our overall business growth; increased spending on research and development to continue to develop new technologies for current and new applications; increased selling costs related to higher revenue levels; and increased management and infrastructure spending to support our planned growth and penetration into new markets. Operating expenses decreased in the three months ended September 29, 2001 and the three months ended December 29, 2001 as we restructured our operations in response to the overall industry downturn. Operating expenses continued to decline in the three months ended March 30, 2002, due to realization of ongoing benefits of our restructuring plan and further reduction of workforce during the three months ended December 29, 2001, and a scheduled plant shutdown.

Our quarterly operating results are likely to fluctuate, and if we fail to meet or exceed the expectations of securities analysts or investors, the trading price of our common stock could decline. Some of the important factors that could cause our revenues and operating results to fluctuate from period-to-period include:

- customer demand for our products;
- our ability to deliver reliable, cost-effective products in a timely manner;

## [Table of Contents](#)

- the reduction, rescheduling or cancellation of orders by our customers;
- the timing and success of new product introductions and new technologies by our competitors and us;
- our product and customer sales mix and geographical sales mix;
- changes in the level of our operating expenses needed to support our anticipated growth;
- a reduction in the price or the profitability of our products;
- changes in our production capacity or the availability or the cost of components and materials;
- our ability to bring new products into volume production efficiently;
- the timing of and return on our investments in research and development;
- our ability to collect accounts receivable;
- seasonality, principally due to our customers' purchasing cycles, which generally causes our fourth quarter sales to decline compared to our third quarter sales of each fiscal year; and
- market conditions in our industry, the semiconductor industry and the economy as a whole.

The occurrence of one or more of these factors might cause our operating results to vary widely. As such, we believe that period-to-period comparisons of our revenues and operating results are not necessarily meaningful and should not be relied upon as indications of future performance.

### **Critical Accounting Policies and Estimates**

We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

*Revenue Recognition.* We recognize revenue in accordance with SEC Staff Accounting Bulletin No. 101, Revenue Recognition in Financial Statements, as amended by SAB 101A and 101B. SAB 101 requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the fee is fixed and determinable; and (4) collectibility is reasonably assured. Determination of criteria (3) and (4) are based on management's judgments regarding the fixed nature of the fee charged for services rendered and products delivered and the collectibility of those fees. Should changes in conditions cause management to determine these criteria are not met for certain future transactions, revenue recognized for any reporting period could be adversely affected.

Revenues from product sales to customers other than distributors are recognized upon shipment and reserves are provided for estimated allowances. We defer recognition of revenues on sales to distributors until the distributor confirms an order from its customer. Revenues from licensing of our design and manufacturing technology, which has been insignificant to date, are recognized over the term of the license agreement or when the significant contractual obligations have been fulfilled.

*Accounts Receivable.* We perform ongoing credit evaluations of our customers and adjust credit limits based upon payment history and the customer's current credit worthiness, as determined by our review of their current credit information. We continuously monitor collections and payments from our customers and maintain an allowance for doubtful accounts based upon our historical experience and any specific customer collection issues that we have identified. While our credit losses have historically been within our expectations and the allowance established, we might not continue to experience the same credit loss rates that we have in the past. Our accounts receivable are concentrated in a relatively few number of customers. Therefore, a significant change in the liquidity or financial position of any one customer could make it more difficult for us to collect our accounts receivable and require us to increase our allowance for doubtful accounts.

*Warranty Reserve.* We provide for the estimated cost of product warranties at the time revenue is recognized. While we engage in extensive product quality programs and processes, including actively monitoring and evaluating the quality of our component suppliers, our warranty obligation is affected by product failure rates,

## [Table of Contents](#)

material usage and service delivery costs incurred in correcting a product failure. We continuously monitor product returns for warranty and maintain a reserve for the related expenses based upon our historical experience and any specifically identified field failures. As we sell new products to our customers, we must exercise considerable judgment in estimating the expected failure rates. This estimating process is based on historical experience of similar products as well as various other assumptions that we believe to be reasonable under the circumstances. Should actual product failure rates, material usage or service delivery costs differ from our estimates, revisions to the estimated warranty liability would be required.

From time to time, we may be subject to additional costs related to warranty claims from our customers. If and when this occurs, we generally make significant judgments and estimates in establishing the related warranty liability. This estimating process is based on historical experience, communication with our customers, and various assumptions that we believe to be reasonable under the circumstances. This additional warranty would be recorded in the determination of net income in the period in which the additional cost was identified.

*Inventories Reserve.* We state our inventories at the lower of cost, computed on a first in, first out basis, or market. We write down inventories for estimated obsolescence or unmarketable inventories equal to the difference between the cost of inventories and the estimated market value based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those projected by management, additional inventories write-downs may be required.

*Accounting for Income Taxes.* We account for income taxes under the provisions of Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes." Under this method, we determine deferred tax assets and liabilities based upon the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. The tax consequences of most events recognized in the current year's financial statements are included in determining income taxes currently payable. However, because tax laws and financial accounting standards differ in their recognition and measurement of assets, liabilities, equity, revenue, expenses, gains and losses, differences arise between the amount of taxable income and pretax financial income for a year and between the tax bases of assets or liabilities and their reported amounts in the financial statements. Because it is assumed that the reported amounts of assets and liabilities will be recovered and settled, respectively, a difference between the tax basis of an asset or a liability and its reported amount in the balance sheet will result in a taxable or a deductible amount in some future years when the related liabilities are settled or the reported amounts of the assets are recovered, hence giving rise to a deferred tax asset. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income and to the extent we believe that recovery is not likely, we must establish a valuation allowance.

As of December 29, 2001, we have recorded a full valuation allowance of \$9.1 million against our deferred tax assets, due to uncertainties related to our ability to utilize our deferred tax assets, primarily consisting of certain net operating losses carried forward, before they expire.

As part of the process of preparing our consolidated financial statements, we are required to estimate our income taxes. This process involves estimating our actual current tax exposure together with assessing temporary differences that may result in deferred tax assets. Management judgment is required in determining any valuation allowance recorded against our net deferred tax assets. The valuation allowance is based on our estimates of taxable income and the period over which our deferred tax assets will be recoverable. While management has considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance, if we were to determine that we would be able to realize our deferred tax assets in the future, in excess of their net recorded amount, an adjustment to the deferred tax asset would increase income in the period that determination was made.

### **Liquidity and Capital Resources**

Since our inception, we have financed our operations primarily through the sales of equity securities and more recently through sales of equity securities and cash generated from operations. We have received a total of \$64.9 million from private offerings of our equity securities. As of March 30, 2002, we had \$30.0 million in cash,



cash equivalents and short-term investments, compared with \$27.6 million as of December 29, 2001 and \$16.9 million as of December 30, 2000.

Net cash provided by operating activities was \$1.9 million for the three months ended March 30, 2002 compared with net cash used by operating activities of \$1.6 million for the three months ended March 31, 2001. The difference reflected higher net income as well as a decrease in accounts receivable in the three months ended March 30, 2002. Net cash provided by operating activities was \$10.3 million for fiscal 2001 and \$900,000 for fiscal 2000. Net cash used in operating activities was \$3.9 million for fiscal 1999. Net cash provided by operating activities in fiscal 2000 and fiscal 2001 resulted primarily from net income and depreciation and amortization, as well as an overall reduction in working capital. Cash used in operating activities for fiscal 1999 resulted primarily from net losses.

Accounts receivable increased by \$7.9 million in fiscal 2000 due to the increased sales. Accounts receivable decreased by \$501,000 and \$546,000 in fiscal 2001 and the first quarter of fiscal 2002, respectively, reflecting lower days sales outstanding. In fiscal 1999, 2000 and 2001, inventories increased by \$4.4 million, \$3.1 million and \$522,000, respectively, to meet the expected sales growth. For the first three months of fiscal 2002, inventories increased by \$1.1 million due to an increase in raw materials as we started to build products which require more expensive parts. Accrued liabilities increased from \$3.5 million in fiscal 2000 to \$5.8 million in fiscal 2001. The increase was due to the increase in accrued management bonuses and sales commissions as well as an increase in accrued warranty costs reflecting higher revenue levels.

Net cash used in investing activities was \$5.8 million for the three months ended March 30, 2002 compared with net cash provided by investing activities of \$1.0 million for the three months ended March 31, 2001. Net cash used in investing activities was \$11.6 million for fiscal 2001 and \$14.7 million for fiscal 1999. Net cash provided by investing activities was \$4.2 million for fiscal 2000. Capital expenditures were \$496,000 for the three months ended March 30, 2002 and \$1.8 million for the three months ended March 31, 2001. Capital expenditures were \$9.4 million for fiscal 2001, \$6.3 million for fiscal 2000 and \$6.3 million for fiscal 1999. We invested in the expansion of our manufacturing facilities as well as in leasehold improvements to our new headquarters and manufacturing facility. These expenditures were partially offset by the net sale or purchase of short-term investments in each of these periods.

Net cash provided by financing activities was \$1.0 million for the three months ended March 30, 2002, primarily as a result of the issuance of common stock and the proceeds of borrowings under a bank line of credit. Net cash used by financing activities was \$1.0 million for the three months ended March 31, 2001 due to the repayment of notes payable. Net cash provided by financing activities was \$10.0 million for fiscal 2001, \$2.5 million for fiscal 2000 and \$20.1 million for fiscal 1999. For each of these periods, net cash provided by financing activities was primarily due to the sale of our redeemable convertible preferred stock.

In May 2001, we signed a ten-year lease for an additional 119,000 square feet of manufacturing, research and development and office space. The total rent obligation over the term of the lease is \$21.8 million and is accounted for as an operating lease. Our obligations under our operating leases for fiscal 2002 were approximately \$2.7 million as of December 29, 2001. We expect to invest approximately \$25.0 million in leasehold improvements for our new headquarters and manufacturing facility through the first quarter of 2003. Of this amount, approximately \$18.0 million relates to the design and construction of a new manufacturing facility, while the remaining amount relates to the build out and infrastructure of research and development and office space.

[Table of Contents](#)

In March 2001, we entered into a financing agreement with Comerica Bank that provided for total borrowings of up to \$16.0 million. On March 30, 2002, we had the following amounts available and amounts drawn under this agreement to support our ongoing financing requirements:

	Amount Available	Amount Drawn	Balance as of March 30, 2002
Comerica Bank equipment line of credit	\$ 2,000,000	\$ 375,000	\$ 375,000
Comerica Bank term loan	2,000,000	2,000,000	1,500,000
Comerica Bank line of credit	12,000,000	—	—
<b>Total</b>	<b>\$16,000,000</b>	<b>\$2,375,000</b>	<b>\$1,875,000</b>

Borrowings under the agreement accrue interest based on the LIBOR rate plus 2.0%. The term loan is payable in 48 equal monthly payments of principal plus accrued interest. The agreement is renewable annually and expired on April 30, 2002. We have extended the term of the agreement to July 31, 2002. We have no debt obligations that have not been recorded in our consolidated financial statements.

The financial covenants in the agreement require us to maintain cash and cash equivalents of a minimum of \$15.0 million, limit capital expenditures to a maximum of \$25.0 million per fiscal year, and provide specific levels of profitability which we must achieve. As of March 30, 2002, we had complied with these and all other covenants in the agreement. We expect to renew the agreement upon its expiration, with modifications to the covenants, if necessary, as our business needs change.

The following table describes our commitments to settle contractual obligations in cash as of December 29, 2001.

Contractual Obligations	Payments due by period				Total
	Up to 1 year	2-3 years	4-5 years	After 5 years	
			(in thousands)		
Operating leases	\$2,694	\$4,795	\$4,516	\$10,754	\$22,759
Notes payable	560	1,000	167	—	1,727
<b>Total contractual cash obligations</b>	<b>\$3,254</b>	<b>\$5,795</b>	<b>\$4,683</b>	<b>\$10,754</b>	<b>\$24,486</b>

We have loans outstanding in an aggregate principal amount of approximately \$1.5 million at March 30, 2002 to our executive officers in connection with the exercise of options to purchase our common stock. These loans bear interest at rates between 5.51% and 6.29%, compounded semi-annually, and have terms of six years. These loans are evidenced by full recourse promissory notes that are secured by a total of 628,863 shares of our common stock. We also have loans outstanding in an aggregate principal amount of \$180,000 at March 30, 2002 to two of our officers named in the executive compensation table. These loans are evidenced by full recourse promissory notes that bear interest at rates between 5.01% and 5.89%, compounded semi-annually, and have terms of six years. These loans are secured by a total of 188,440 shares of our common stock.

We believe our existing cash balance and credit facilities will be sufficient to meet our anticipated cash needs for at least the next 12 months. Our future capital requirements will depend on many factors, including our rate of revenue growth, the timing and extent of spending to support product development efforts, the expansion of sales and marketing activities, the timing of introductions of new products and enhancement to existing products, the costs to ensure access to adequate manufacturing capacity, and the continuing market acceptance of our products. To the extent that funds generated by this offering, together with existing cash, cash equivalents and short-term investments balances and any cash from operations, are insufficient to fund our future activities, we may need to raise additional funds through public or private equity or debt financing. Although we are currently not a party to any agreement or letter of intent with respect to potential investments in, or acquisitions of, complementary businesses, products or technologies, we may enter into these types of arrangements in the future, which could also require us to seek additional equity or debt financing. Additional funds may not be available on terms favorable to us or at all.

## Recent Accounting Pronouncements

On January 1, 2001, we adopted Statement of Financial Accounting Standards (SFAS) No. 133, "Accounting for Derivative Instruments and Hedging Activities," which establishes accounting and reporting standards for derivative instruments and hedging activities. It requires that an entity recognize all derivatives as either assets or liabilities in the statement of financial position and measure those instruments at fair value. To date, we have not engaged in derivative or hedging activities and therefore, the adoption had no impact on our financial statements.

In October 2001, the Financial Accounting Standards Board (FASB) issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets", which is effective for fiscal years beginning after December 15, 2001 and interim periods within those fiscal periods. SFAS No. 144 supersedes FASB Statement No. 121 "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of" and parts of APB Opinion No. 30 "Reporting the Results of Operations — Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions relating to Extraordinary Items," however, SFAS No. 144 retains the requirement of Opinion 30 to report discontinued operations separately from continuing operations and extends that reporting to a component of an entity that either has been disposed of, by sale, by abandonment, or in a distribution to owners, or is classified as held for sale. SFAS No. 144 addresses financial accounting and reporting for the impairment of certain long-lived assets and for long-lived assets to be disposed of. We do not expect the adoption of SFAS No. 144 to have a material impact on our financial position and results of operations.

In July 2001, the FASB issued SFAS No. 141 "Business Combinations" which establishes financial accounting and reporting for business combinations and supersedes APB Opinion No. 16, "Business Combinations," and FASB Statement No. 38, "Accounting for Preacquisition Contingencies of Purchased Enterprises". SFAS No. 141 requires that all business combinations be accounted for using one method, the purchase method. The provisions of SFAS No. 141 apply to all business combinations initiated after June 30, 2001. We adopted SFAS No. 141 during the first quarter of fiscal 2002, and the adoption of SFAS No. 141 had no material impact on our financial reporting and related disclosures.

## Quantitative and Qualitative Disclosure of Market Risks

*Foreign Currency Exchange Risk.* Our revenues, except in Japan and our expenses, except those expenses related to our Germany, United Kingdom, Japan and Korea operations, are denominated in U.S. dollars. As a result, we have relatively little exposure for currency exchange risks and foreign exchange losses have been minimal to date. We do not currently enter into forward exchange contracts to hedge exposure denominated in foreign currencies or any other derivative financial instruments for trading or speculative purposes. In the future, if we feel our foreign currency exposure has increased, we may consider entering into hedging transactions to help mitigate that risk.

*Interest Rate Risk.* The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive from our investments without significantly increasing risk. Some of the securities in which we invest may be subject to market risk. This means that a change in prevailing interest rates may cause the principal amount of the investment to fluctuate. For example, if we hold a security that was issued with an interest rate fixed at the then-prevailing rate and the prevailing interest rate later rises, the principal amount of our investment will probably decline. To minimize this risk in the future, we intend to maintain our portfolio of cash equivalents and short-term investments in a variety of securities, including commercial paper, money market funds, government and non-government debt securities and certificates of deposit. As of March 30, 2002, all of our investments were in money market accounts, certificates of deposit or high quality commercial paper.

Our exposure to market risk also relates to the increase or decrease in the amount of interest expense we must pay on our outstanding debt instruments, primarily borrowings under a financing agreement we entered into with a financial institution in March 2001. See Note 5 of the notes to our consolidated financial statements. This facility provides for borrowings up to \$16.0 million. At March 30, 2002, we had borrowed approximately \$2.4 million under the loan facilities of which approximately \$1.9 million was outstanding at that date. The loans bear a variable interest rate of LIBOR plus 2.0%. The risk associated with fluctuating interest expense is limited to this debt instrument and we do not believe that a 10% change in the LIBOR rate would have a significant impact on our interest expense.

## BUSINESS

### Overview

We design, develop, manufacture, sell and support precision, high performance advanced semiconductor wafer probe cards. In 2001, we were the leader in the advanced wafer probe card market in terms of revenues. Our products are based on our proprietary MicroSpring interconnect technology. This technology, which includes resilient spring-like contact elements, enables us to produce wafer probe cards for applications that require reliability, speed, precision and signal integrity. We manufacture our MicroSpring contact elements through precision micro-machining and scalable semiconductor-like wafer fabrication processes. We offer our customers high parallelism, large area array wafer probe cards to reduce their overall cost of test. We believe that our customers will be able to use our technology to optimize the semiconductor manufacturing pipeline, from initial device design and fabrication through system assembly and test, by performing more advanced test functions on whole wafers in the front-end of the semiconductor manufacturing process, rather than on individual devices in the back-end.

We introduced our first wafer probe card based on our MicroSpring interconnect technology in 1995, and, by the end of 2000, we were the leading supplier of advanced wafer probe cards, based on revenues, according to VLSI Research, an independent research firm. Our customers include the top 10 dynamic random access memory, or DRAM, manufacturers, the world's largest microprocessor company, and three of the top 10 flash memory manufacturers; and, combined, these identified groups of our customers account for substantially all of our revenues. We focus our research and development activities on expanding our products into new markets and developing new applications for our MicroSpring interconnect technology. We manufacture our wafer probe cards in Livermore, California, and sell and support our products worldwide through our direct sales force, a distributor and independent sales representatives.

### Industry Background

Integrated circuits, also commonly referred to as semiconductors, devices or chips, are complex electronic devices made up of a large number of transistors that are fabricated on wafers, packaged and integrated into systems used in a wide range of electronic products, including personal computers, portable electronics, telecommunication equipment, wireless applications and digital consumer electronics. The World Semiconductor Trade Statistics estimates that over 68.5 billion chips were shipped in 2001.

#### *The Continual Evolution of the Chip — Faster, Smaller, Lower Cost*

The ability to integrate increasing numbers of transistors on a given area of silicon has allowed the semiconductor industry to manufacture faster, smaller and more complex devices at a decreasing cost. Over time, the complexity of semiconductors has increased significantly, with the number of transistors on a chip doubling approximately every 18 months, with an accompanying decrease in the cost per device. This evolutionary phenomenon was first articulated by Dr. Gordon Moore, a co-founder of Intel Corporation, and has come to be known as "Moore's Law."

In order to satisfy the demand for faster, smaller and lower cost chips, the semiconductor industry continually develops manufacturing, process and design improvements, most recently including the following:

- *Smaller Geometries.* The ability to reduce the feature sizes within transistors in a chip to .15 micron and below is enabling manufacturers to produce greater numbers of chips per wafer, or the same number of chips with greater complexity, improve performance and reduce cost.
- *300 mm Wafers.* The transition of the standard wafer form factor from 200 mm to 300 mm will more than double the available area on a wafer, significantly increasing the number of chips per wafer and further reducing the cost at which chips can be manufactured.
- *Copper Interconnect.* Because of copper's higher level of conductivity as compared to aluminum, the transition from aluminum to copper as the preferred wiring material for interconnecting layers within chips is enabling higher speeds and greater performance.

- **Low-K Dielectrics.** The introduction of new insulating materials such as low-k dielectrics will enable improved device performance by reducing signal delay and electrical cross-talk, or interference, between increasingly densely-packed electrical connections on a chip.

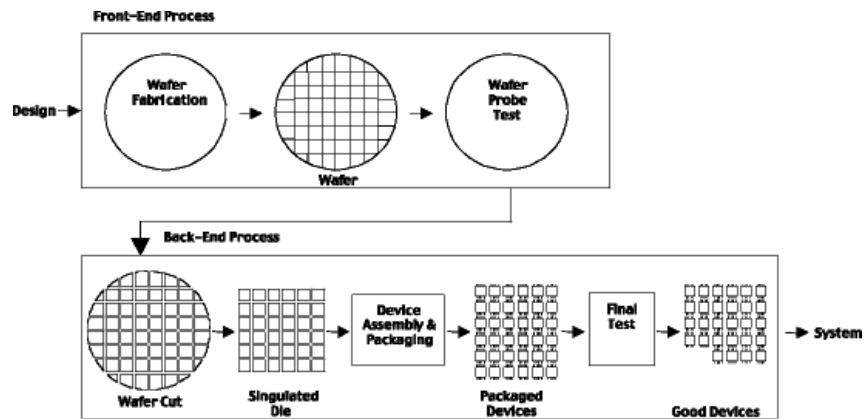
With these changes, the semiconductor industry is currently experiencing a critical technology evolution. This evolution is resulting in a substantial increase in the cost of building new manufacturing capacity, with the cost of a leading edge 300 mm wafer manufacturing facility now approaching or exceeding \$3.0 billion. With ever increasing capital investments, semiconductor manufacturers are focusing on ways to accelerate their return on investment by increasing volumes and yields, decreasing manufacturing costs and improving the time to market of their products.

**The Chip Manufacturing Front-End and Back-End Processes**

The semiconductor industry has historically separated the manufacture of chips into two distinct parts: the front-end wafer fabrication process, and the back-end assembly, packaging and final test process. The front-end process involves numerous complex and repetitive processing steps, including deposition, photolithography, etch and ion implantation, during which hundreds or even thousands of copies of an integrated circuit are formed simultaneously on a single wafer. After fabrication of the wafer is complete, the wafer is subject to wafer probe test. During wafer probe test, a wafer probe card is mounted in a prober, which is in turn connected to a semiconductor tester, sends an electrical signal through each chip on the wafer and verifies whether the chip performs basic functions, such as sending and receiving electrical signals. In some instances, wafer probe test is also used for more in-depth testing of the performance of the chip against design specifications. All of the steps in the front-end process, including wafer probe test, are performed at the “wafer-level,” before the wafer is cut into individual chips.

After wafer probe test, the wafer is transferred to the back-end portion of the manufacturing process. The first step in the back-end process is singulation, in which the wafer is cut into individual die. As a result of this first step, all subsequent back-end process steps must be performed at the individual chip level and, therefore, cannot be performed with the economies of scale afforded by the whole-wafer steps of the front-end process. After singulation, die that failed wafer probe test are discarded and the remaining die are assembled and packaged. The packaged chips are then subjected to final test over a range of operating conditions and temperatures to confirm that the packaged chips perform according to full specifications. Chips are sorted by performance characteristics and those passing final test standards are ready to be incorporated into a system.

The following diagram depicts the design to system semiconductor manufacturing pipeline:



In view of the increasing complexity of semiconductor fabrication, manufacturers have introduced technologies to increase yields and minimize costs. In the front-end process, for example, manufacturers are using metrology and inspection tools to identify, diagnose and minimize fabrication defects. Manufacturers also perform parametric test to verify process uniformity and capability. These tools confirm compliance with some manufacturing criteria, but they cannot test the functional electrical performance of a chip and, therefore, cannot confirm whether chips perform according to specifications.

### *The Significance and Cost of Test*

Test is a critical part of the manufacturing process. In addition to identifying chips that do not function properly, both wafer probe test and final test generate information that may be used to redesign the chip or to implement manufacturing process changes that can result in improved chip yield. Test is the only process step that semiconductor manufacturers perform during both the front-end and back-end processes, and the cost of test is high. According to Infrastructure, Inc., an independent market research firm, the price for a high-end tester for logic chips has increased 25-fold over the last two decades from about \$400,000 per system in the 1980s, to \$3.0 to \$5.0 million in the mid-1990s, to \$6.0 to \$10.0 million today. In addition, according to the International Technology Roadmap for Semiconductors, the cost per pin of testing is expected to remain constant in the near future, while the number of pins per chip is projected to grow by 10% per year, resulting in the cost of test becoming a larger portion of the overall cost of manufacturing a device.

One way to address the high cost of test is to migrate elements of test from the individual chip level of the back-end process to the whole-wafer level of the front-end process. If wafer probe test can be used to provide greater levels of device validation, manufacturers will expend less time and money in the back-end process assembling, packaging and testing defective chips. This test migration will also reduce manufacturers' need to purchase more processing equipment and testers to handle increasingly complex chips and the increasing number of chips per wafer. However, the migration of elements of final test to the front-end process will place significant capability and performance demands on wafer probe test.

### *Wafer Probe Test*

During wafer probe test, wafer probe cards are used as an interface to electrically connect with and test individual chips on a wafer by moving the wafer into contact with the wafer probe card. The contact that occurs between the wafer probe card and the input/output terminals, or bond pads, of the chips on the wafer is commonly called a "touchdown." Some wafer probe cards are capable of contacting the bond pads of more than one chip on the wafer at a time. This capability is known as parallelism. Depending on the number of chips on the wafer, and the testing parallelism capability of the wafer probe card, wafer probe test requires a varying number of touchdowns. For example, in order to test a typical 200 mm DRAM wafer containing approximately 400 to 500 chips, a wafer probe card that tests 32 chips per touchdown could require 15 to 18 touchdowns, depending on the layout of the chips on the wafer. A wafer probe card that tests 16 chips per touchdown could require twice the number of touchdowns to test a whole wafer. An increase in touchdowns means that test requires more time to complete and the cost of test increases.

In order to pass wafer probe test, chips must perform within a range of tolerances established by the manufacturer. A wide range will typically result in a higher yield from the front-end process, but an increased number of failures at final test. A narrow range will typically reduce final test failures and the costs associated with assembling and packaging defective chips, but reduce revenue per wafer because otherwise sellable chips will be discarded after wafer probe test as a result of their being incorrectly identified as failing to meet basic performance requirements — commonly referred to as "false fails."

The accuracy of wafer probe test is a function of the accuracy of the wafer probe test systems, which consist of the semiconductor tester, the prober, and the wafer probe card. The signal integrity of the electrical path in the wafer probe card is a critical element of overall test accuracy. As wafer probe test accuracy increases, manufacturers can reduce the range of tolerance within which a chip must perform and realize an increase in chip yield at final test without suffering an unacceptable loss of yield from false fails at wafer probe test. Accordingly, manufacturers expend considerable time and expense creating test methodologies that optimize wafer probe test systems and wafer probe cards. VLSI Research forecasts that the wafer probe test market, comprised of wafer probe test systems and wafer probe cards, will grow from \$1.4 billion in 2001 to \$2.4 billion in 2005. VLSI Research also projects that the wafer probe card portion of the overall wafer probe test market will grow from \$458.0 million in 2001 to \$779.0 million in 2005.

Wafer probe cards for testing DRAM, flash, logic and microprocessor chips vary in design depending upon the type and design of the chip to be tested, the number of chips on the wafer, and the testing strategy of the chip manufacturer, including the selected semiconductor tester and prober. For example, these factors will affect the

layout of the contact elements, the electrical path design, the presence or absence of additional components, for example capacitors, resistors or active elements, and the tester interface on the wafer probe card.

Wafer probe card purchases are driven by chip design changes and growth in the number of units manufactured. Because every semiconductor design is unique, every new chip design requires the use of a new wafer probe card customized for that design. Design changes result both from implementation of ongoing improvements to the design and manufacturing process of current generation chips and from application of new technologies and processes, such as shrinking geometries and the introduction of copper interconnects and low-k dielectrics. New chip designs will also be required in connection with the transition to 300 mm wafers. During industry upturns when manufacturers are increasing capacity, chip unit growth is the principal driver of wafer probe card demand. However, even in industry downturns, semiconductor manufacturers typically continue to introduce new products or modify the designs of existing products, requiring new wafer probe cards.

### ***Conventional Wafer Probe Card Technologies***

VLSI Research divides current probe card technologies into two categories: needle probe cards and advanced technology wafer probe cards. The manufacture of needle, or epoxy-ring, probe card technology, which has been in existence for over 30 years, involves the gluing of needles with epoxy in a ring and manually bending the needles, typically a few inches long, to the specifications of a wafer probe card design. Advanced technology wafer probe cards are generally used to test chips with a high number of input/output pins, to test a significant number of chips in parallel, and to perform high speed testing. Advanced technology wafer probe cards include vertical or buckling beam, or COBRA, technology and membrane technology. COBRA probe card technology, based upon technology first described in 1966, uses manually-built vertical beam probes, which are long, slightly curved, vertical wires that buckle slightly as they contact a wafer. Membrane technology, which was introduced in the mid-1980s, probes chips by pressing contact tips mounted on flexible membranes to the wafer. We refer to needle probe cards and advanced technology wafer probe cards using the COBRA and membrane technology as “conventional” wafer probe cards or technologies.

### ***The Limitations of Conventional Wafer Probe Card Technologies***

Conventional wafer probe card technologies are starting to face practical performance limits due to one or more of the following factors:

- ***Lack of Parallelism Increases Cost.*** Shrinking geometries and the transition to 300 mm wafers increases the number of chips per wafer. This increase imposes significant challenges for manufacturers of conventional wafer probe cards. Unless the number of chips that a wafer probe card is able to contact in parallel increases in proportion to the increasing number of chips on a wafer, the economies of scale generated during the front-end fabrication process cannot be matched during wafer probe test. To meet the demand for higher parallelism and in order to make uniform contact with the chips on the wafer, wafer probe cards need to be manufactured with large area probe arrays that are precisely engineered in a single level plane, or planarized. Because some conventional wafer probe cards must be manufactured in part by hand, those cards cannot, without great difficulty, if at all, be manufactured with precisely planarized probe arrays that are large enough to meet parallelism demands. As a consequence, those cards cannot match the increasing efficiencies of the front-end fabrication process. The result is that the cost of test increases as a percentage of total manufacturing cost.
- ***Poor Signal Integrity Lowers Yield.*** Due to the limitations of their electrical characteristics, many conventional wafer probe card technologies limit the degree to which the test environment can replicate the environment in which the chip will be packaged and used. These limitations become more pronounced as operating frequency increases. As a result, conventional wafer probe cards may report a significant number of false fails and the engineering effort to prevent chip yield loss per wafer becomes more difficult.
- ***Manual Assembly Impairs Precision.*** The manufacture of certain conventional wafer probe cards requires the manual attachment of the probing contact elements. Needle probe cards require manual

assembly and positioning, which inherently results in less precision and requires continual adjustment at the chip manufacturer's fabrication facility. This limitation is magnified as device geometries shrink and enable more complex chips with an increasing number of input/output pins. With the increasing number of pins, smaller bond pad sizes are needed to provide electrical connections for those pins, and bond pads must also be located closer to each other, which is referred to as reduced pitch. It will become increasingly difficult for some conventional wafer probe cards, such as those using COBRA technology, to provide predictable contact with bond pads under these circumstances.

- *Testing at Extreme Temperature Negatively Affects Performance.* Wafer probe test is often performed both below and above room temperature in order to replicate the operating condition at which the chip is expected to fail. For the flash memory market in particular, manufacturers may need to test at temperature ranges from -40C to +150 C for chips used in some consumer and automotive applications. As temperature ranges increase, the component materials for conventional wafer probe cards are subject to a greater range of expansion and contraction, which significantly increases the complexity of making accurate contact with the bond pad. This problem is exacerbated by increases in the size of the probe array, or the number of probing elements that contact the bond pads of the chips on the wafer, and by increases in the number of chips under test. These challenges have limited many conventional wafer probe cards to smaller probe array sizes.
- *Contact Force Reduces Yield and Tester Uptime.* As new materials such as low-k dielectrics are introduced into the chip manufacturing process, the force with which the wafer probe card contacts the chips on the wafer becomes increasingly important. Many of these new materials are relatively fragile. In order to make contact, conventional wafer probe cards apply significant force on the bond pads, which can damage the underlying structure of the chips. The likelihood of damage increases as the number of touchdowns on the same bond pad increases. As a result, the wafer probe card can cause an otherwise fully-functional chip to become defective. This significant contact force also frequently generates debris and contaminants on the bond pads or probe tips, which can impair the electrical contact. Impaired electrical contact can result in false fails and reduced production yield. In addition, the existence of debris and contaminants requires that manufacturers frequently clean the test equipment, resulting in reduced overall tester uptime and increased test costs.

While some conventional wafer probe cards address various performance limitations, no conventional technology resolves all of the performance issues adequately. In many cases, the features of conventional wafer probe cards that solve one or more of the performance limitations compromise the performance of the wafer probe card in other areas. As a result, conventional wafer probe card technologies fail to meet the industry's need to reduce test cost. These cost inefficiencies will be magnified by new developments in the front-end process, including shrinking geometries and the move to 300 mm wafers. We believe that in order for the cost of test to keep pace with the decreases in front-end process per chip manufacturing costs, not only must the performance limitations of conventional wafer probe card technologies be resolved, but more of the test functions must be performed at the wafer level. The semiconductor industry needs a solution that addresses the performance limitations of conventional wafer probe card technology and also enables the migration of more elements of final test to the front-end manufacturing process. Such a solution will help to better integrate the front-end and back-end processes and provides a scalable solution to the rising cost of test.

### **The FormFactor Solution**

We design, develop, manufacture, sell and support precision, high performance advanced wafer test probe cards based on our proprietary MicroSpring interconnect technology. We believe that our wafer probe cards are the optimal test solution available today for probing chips at the wafer level and offer the potential for our customers to migrate elements of final test to wafer probe test.

Our wafer probe cards address the performance limitations of conventional wafer probe card technologies:

- *Our High Parallelism Advantage Reduces Cost of Test.* Our high parallelism wafer probe cards enable our memory customers to test a significant number of chips in parallel in a single touchdown, reducing the cost of test and improving their time to market. Our wafer probe cards are manufactured



with large probe arrays that are precisely planarized in order to contact uniformly the chips on the wafer. For example, our largest area array wafer probe platform is capable of testing certain 300 mm DRAM wafers with as few as four touchdowns, independent of the number of chips on the wafer. This reduced number of touchdowns can significantly decrease total test time per wafer, resulting in a significant reduction in the cost of test.

- *Our High Signal Integrity Improves Yield.* Due to the proprietary metallurgy and design of our wafer probe cards and our proprietary design processes, our wafer probe cards perform wafer probe test with a high level of signal integrity as compared to conventional needle cards. The signal measured at the tip of the MicroSpring contact element is reported to the wafer probe test system with a high degree of accuracy and with minimal signal loss and distortion. The result is that our wafer probe cards precisely measure the working performance of the chips and can operate with a flat or nearly flat response at higher frequencies. The precision of our measuring capability can improve wafer yields because our wafer probe cards generate fewer false fails during the wafer probe test. Our signal integrity also allows our customers to narrow their range of device test tolerances.
- *Precise MicroSpring Technology Enables Precise Probing.* Our MicroSpring contact elements have geometrically precise contact tips that allow our customers to probe the increasingly small bond pad sizes and reduced pitches that chip manufacturers are implementing. We achieve this contact precision by manufacturing our wafer probe cards using micro-machining and semiconductor-like wafer fabrication processes, including deposition and photolithography. Because we employ some of the same processes used in front-end wafer fabrication, we are able to scale our testing capabilities to the shrinking geometries of semiconductors on a wafer. For example, our latest large area array platform is capable of precisely contacting in parallel 256 chips on a wafer having bond pads that measure 60 microns x 60 microns.
- *Compensation for Extreme Temperatures Improves Performance.* The proprietary design of our wafer probe cards allows us to select materials and provide for precise matching of the thermal expansion characteristics of our wafer probe card with the wafer under test. As a result, our wafer probe cards generally are able to accurately probe over a large range of operating temperatures. Our current operating specification range is 0°C to +120°C. This feature enables our customers to use the same wafer probe card for both low and high temperature testing without a loss of performance. In addition, for those testing situations that require positional accuracy at a specific temperature, we have designed wafer probe cards optimized for testing at such temperatures.
- *Lower Contact Force Increases Yield and Tester Uptime.* Our MicroSpring contact elements have precise contact geometries, enabling the use of relatively low contact force during wafer probe test. Our proprietary technology allows us to implement spring elements having a spring constant of approximately one gram force per one-thousandth of an inch, or 1 gmf/mil, as compared to a range of 2 to 3 gmf/mil of deflection to ensure stable, long-term contact performance. The lower contact force permitted by our technology allows our wafer probe cards to test chips incorporating fragile next-generation materials, such as low-k dielectrics, without damaging the chips. As contact force decreases, our MicroSpring interconnect technology allows us to precisely design our contact tip geometries and materials to enable stable contact with current and future bond pad materials, such as copper. This lower contact force is also an advantage for probing solder bump wafers. With lower contact force, our wafer probe cards generate less debris when contacting the bond pads of the chips on the wafer, reducing false fails and reducing the need to clean our wafer probe cards, increasing uptime. This lower contact force, combined with the robust characteristics of our MicroSpring interconnect technology, provides our customers with a very durable and reliable probing solution. Our wafer probe cards are typically warranted to last for the entire lifetime of a customer's product design.

In addition to solving the limitations of conventional wafer probe cards, our MicroSpring interconnect technology and our other proprietary design tools and technology enable our customers to realize a lower total cost of test. Although we do not sell semiconductor testers or probers, our wafer probe cards can be designed to

## [Table of Contents](#)

work in any manufacturer's wafer probe test system for DRAM, flash, logic and microprocessor devices. We employ a sales model that emphasizes the customer's total cost of ownership as it relates to test costs. We demonstrate how a customer's test costs can be reduced by simulating its test floor environment, including testers and probers, utilizing our products and comparing them to conventional wafer probe cards. We believe that the yield improvement, total cost of ownership and scalability advantages of our wafer probe cards, combined with our efforts to understand and solve our customers' problems, allow us to capture a higher selling price compared to conventional wafer probe cards.

The migration of elements of final test from the packaged chip back-end process to front-end wafer probe test requires a wafer probe card technology that has a flat or nearly flat response at high frequencies along signal transmission lines, a minimal level of electrical cross-talk among signals, or interference, and a high degree of power decoupling, which prevents power supply voltage variations at the chips being tested. We believe that the signal integrity of our wafer probe cards combined with their high parallelism and power decoupling characteristics meet these requirements and will facilitate the migration of elements of final test to front-end wafer probe test. We believe this migration will allow our customers to extend the benefits of wafer-level scaling to elements of final test and thereby enable them to feed back this test information earlier in the design and fabrication process, improving time to market. We believe that this migration will also enable our customers to realize a more cost effective, optimized semiconductor manufacturing pipeline.

### **Strategy**

Our objectives are to enhance our position as the leading supplier of advanced wafer probe card solutions and to apply our MicroSpring interconnect technology to drive economies of scale at the wafer-level in semiconductor test. The principal elements of our strategy include:

*Enhance our Market Leadership in the DRAM Industry.* Our technology and products have enabled the DRAM industry to conduct high parallelism testing at the wafer level, with up to 256 chips under test in parallel. Parallelism is particularly important in the testing of DRAM. As DRAM densities increase, test times also increase, because the time to test each cell within a chip is relatively fixed. Therefore, higher parallelism test is needed in order to maintain or improve the rate of throughput in test. We believe that in the future DRAM test will benefit by transitioning from high parallelism test to full wafer test in a single touchdown. To this end, we intend to work closely with our customers and business partners to deploy our four touchdown 300 mm wafer solution, which is not currently commercially available, and ultimately a single touchdown solution for testing 200 mm and 300 mm DRAM wafers.

*Expand our Presence in the Flash Memory Test Market by Leveraging our MicroSpring Interconnect Technology.* The fundamental MicroSpring interconnect technology and large area array capabilities that enable high parallelism DRAM chip testing are transferable to flash memory testing, and we intend to continue to leverage into the flash memory test market the expertise and capabilities we have developed in the DRAM market. We have successfully introduced the industry's first high parallelism wafer probe cards for flash memory, which allow our customers to test up to 64 chips in parallel. Our existing commercially available technology is designed for flash memory tests up to 64 chips in parallel. We believe that our technology is capable of greater levels of parallelism, up to and beyond testing 128 chips in parallel. We intend to continue penetrating the flash memory test market, as we believe that flash memory will offer us additional growth opportunities outside of the personal computer-centric DRAM and microprocessor markets.

*Increase our Penetration into the Logic Market.* In the logic chip market, time to market is particularly critical, as significant market penetration requires very short lead times. As part of our strategy to address high volume applications, we have entered the microprocessor market. We believe that with increasing pin counts, an increasing number of logic applications will migrate toward large area array packaging, which will create additional opportunities for the use of our products. Our wafer probe cards are also well suited for testing system on a chip, or SOC devices, where leading edge probe capability is required to meet a wide range of electrical, mechanical and temperature requirements. We are working with some of our customers to create custom wafer probe cards for testing SOC devices by addressing the specific pitch, parallelism, signal count, electrical integrity and test frequency requirements of customers' SOC devices.

*Enable Migration of Elements of Final Test to the Wafer Level.* We intend to continue to work with our customers to enable them to migrate elements of final test from the chip level to the wafer level. The benefits of obtaining test results earlier in the manufacturing process will become particularly important as the miniaturization of systems requires manufacturers to deliver fully functioning chips in die form, which increases the importance of having chips validated at the wafer level. For example, in the case of system in a package, or SIP, and small form factor applications, where unpackaged chips are included in a system, an individual chip that is not fully tested at the wafer level might cause the entire system to fail if the chip fails to deliver full performance. An important part of our strategy is to continue working with our customers to identify and implement programs in which our MicroSpring interconnect technology can help to migrate elements of final test to the front-end process.

*Extend our Technology Leadership Position.* With our MicroSpring interconnect technology, we have established a leading position in the advanced wafer probe card market. Wafer probe cards provide a rigorous and taxing environment for interconnection structures because they must touchdown on a wafer hundreds of thousands of times. Based on our success in developing wafer probe cards that can address these requirements, we believe that our MicroSpring interconnect technology can be applied in a broad range of applications where reliability, speed, precision and signal integrity are important, including wafer test, wafer-level packaging, final test, burn-in and socket and connector applications. We plan to continue to engage in research and development activities to extend our MicroSpring interconnect technology and other proprietary technologies to these and other applications.

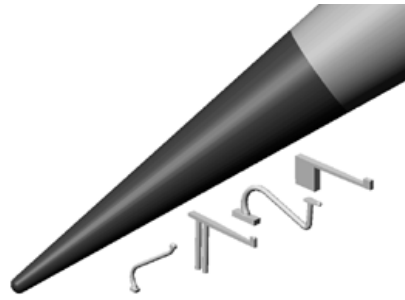
*Continue to Build on our Strategic Relationships.* We have benefited from and plan to continue to rely on relationships with other industry participants. We have developed strategic relationships with leading semiconductor manufacturers and test equipment manufacturers. For example, we have engaged with tester companies, including Advantest Corporation, Agilent Technologies Inc. and Teradyne Inc., to introduce solutions that include wafer probe test systems and wafer probe cards. These engagements are typically informal in nature and are not documented in written agreements. We have also engaged with semiconductor manufacturers to introduce new high parallelism test solutions and high frequency at-speed testing solutions. These engagements typically involve our designing and manufacturing of prototype probe cards for our customers. We believe these strategic relationships will facilitate faster product introduction and market acceptance for our customers and enhance our market position. Our strategic relationships also include licensing arrangements. We select applications for licensing, rather than manufacturing, where the applications are characterized by long adoption cycles, high barriers to entry, or the inclusion of our MicroSpring interconnect technology with one or more technologies that fall outside the area of our core competence.

### **FormFactor's MicroSpring Interconnect Technology and Products**

Our products are based on our proprietary MicroSpring interconnect technology. Our MicroSpring contacts are springs that optimize the relative amounts of vertical contact force on, and horizontal force across, a bond pad during the test process and maintain their shape and position over a range of compression. These characteristics allow us to achieve reliable, electrical contact on either clean or oxidized surfaces, including bond pads on a wafer. Our MicroSpring contacts enable our wafer probe cards to make hundreds of thousands of touchdowns with minimal maintenance. The MicroSpring contact can be attached to many surfaces, or substrates, including printed circuit boards, silicon wafers, ceramics and various metalized surfaces. This flexibility allows the MicroSpring contact to be used in a broad range of other applications, including chip scale packages, sockets and connectors.

Since its original conception, the MicroSpring contact has evolved into a library of spring shapes and technologies. Our designers use this library to design an optimized custom wafer probe card for each application. Since developing this fundamental technology, we have broadened and refined it to respond to the increasing demands of smaller, faster and more complex semiconductors. Our MicroSpring contacts have scaled in size with

the evolution of semiconductors. Depicted in relative scale below are four of our basic spring types compared to a rendering of a standard No. 2 pencil.



Our MicroSpring contacts include geometrically precise tip structures. These tip structures are the parts of our wafer probe cards that contact the chips, and are manufactured using proprietary semiconductor-like processes. These tip structures enable precise contact with small bond pad sizes and pitches. Our technology allows us to specifically design the geometries of the contact tip in order to ensure the most precise and predictable electrical contact is achieved for a customer's particular application. We believe our technology will scale with that of front-end fabrication processes because we use proven semiconductor-like wafer fabrication processes and equipment in our manufacturing processes. As a consequence, we believe we have the ability to shrink wafer probe card contact geometries as necessary to test shrinking chip geometries on the wafer. However, because we do not use costly leading-edge equipment, we are able to manufacture in a less capital-intensive manner.

Our wafer probe cards are custom products that we design to order for our customers' unique wafer designs. Contacting up to 256 chips in parallel requires large area contact array sizes because they must accommodate over 11,000 simultaneous contacts. This requirement poses fundamental challenges that include the planarity of the array, the force needed to make contact and the need to touch all bond pads with equal accuracy. We have developed wafer probe cards that use array sizes ranging from 50 mm x 50 mm to greater than 100 mm x 100 mm, in combination with complex multi-layer printed circuit boards designed by our design team. While leading edge DRAM designs use larger array sizes for highly-parallel applications, smaller array sizes used for DRAM applications a few years ago can be used for today's leading edge applications in the flash memory and logic markets. Our current DRAM contact technology allows our products to contact up to 256 DRAM chips in parallel. Our flash contacting technology allows us to contact up to 128 flash chips in parallel. We believe that these levels of parallelism are one or two generations ahead of those of our competitors.

We have invested and intend to continue to invest considerable resources in our wafer probe card design tools and process. These tools and processes enable automated routing and trace length adjustment within our printed circuit boards and greatly enhance our ability to rapidly design and lay out complex printed circuit board structures. Our proprietary design tools also enable us to design wafer probe cards particularly suited for testing today's low voltage, high power chips. Low voltage, high power chips require superior power supply performance, and our MicroSpring interconnect technology is used to provide a very low inductance, low resistance electrical path between the power source and the chip under test.

Because our customers typically use our wafer probe cards in a wide range of operating temperatures, as opposed to conducting wafer probe test at one predetermined temperature, we have designed complex thermal compensation characteristics into our products. We select our wafer probe card materials after careful consideration of the potential range of test operating temperatures and design our wafer probe cards to provide for a precise match with the thermal expansion characteristics of the wafer under test. As a result, our wafer probe cards generally are able to accurately probe over a large range of operating temperatures. This feature enables our customers to use the same wafer probe card for both low and high temperature testing without a loss of

## [Table of Contents](#)

performance. In addition, for those testing situations that require positional accuracy at a specific temperature, we have designed wafer probe cards optimized for testing at such temperatures.

Our many spring shapes, different geometrically-precise tip structures, various array sizes and diverse printed circuit board layouts enable a wide variety of solutions for our customers. Our designers select the most appropriate of these elements and integrate them with our other technologies to deliver a custom solution optimized for the customer's requirements. We believe that the yield improvement, total cost of ownership and scalability advantages of our wafer probe cards, combined with our efforts to understand and solve our customers' test problems, allow us to capture a higher selling price compared to conventional wafer probe cards.

### Customers

Our customers include manufacturers in the DRAM, flash and logic markets. Our customers use our wafer probe cards to test DRAM chips including RDRAM, SDRAM, EDRAM and basic DRAM chips, DDR chips, static RAM chips, NOR and NAND flash memory chips, Serial Data devices, chipsets, microprocessors and microcontrollers. Our DRAM customers include the 10 largest DRAM manufacturers in the world, and our flash customers include three of the 10 largest flash memory manufacturers in the world. We believe that our products are now used in more than 50 wafer fabrication facilities worldwide. The table below is a representative list of semiconductor manufacturers that use our wafer probe cards:

DRAM Market	Flash Market
Dominion Semiconductor L.L.C. Hynix Semiconductor America, Inc. Infineon Technologies AG The Japanese DRAM Constellation Micron Technology, Inc. Nanya Technology Corporation PowerChip Semiconductor Corp. ProMOS Technologies Inc. Samsung Electronics Industries Co., Ltd. TECH Semiconductor Singapore Pte. Ltd. Toshiba Corporation Winbond Electronics Corporation	Dominion Semiconductor L.L.C. Intel Corporation Samsung Electronics Industries Co., Ltd. Toshiba Corporation
	<b>Logic Market</b>
	Intel Corporation

In fiscal 2001, sales to four customers accounted for approximately 75.1% of our revenues, with 26.4% attributable to Spirox Corporation, one of our distributors, 20.2% attributable to Samsung Electronics Industries Co., Ltd., 16.1% attributable to Infineon Technologies AG and 12.4% attributable to Intel Corporation. For the quarter ended March 30, 2002, sales to four customers accounted for 79.2% of our revenues, with 30.1% attributable to Intel Corporation, 21.7% attributable to Infineon Technologies AG, 14.6% attributable to Dominion Semiconductor L.L.C. and 12.8% attributable to Spirox Corporation.

### Strategic Relationships and Licensees

We work closely with semiconductor tester manufacturers and prober manufacturers to maintain our leadership in advanced wafer probe test and to help our customers achieve faster product introduction and acceptance. For example, we have engaged with tester companies, including Advantest Corporation, Agilent Technologies Inc. and Teradyne Inc., to introduce complete test solutions for semiconductor manufacturers. These engagements are typically informal in nature and are not documented in written agreements. Thus, while we believe they are important to ensure the alignment of our product roadmaps with those of our customers, we have no contractual commitments or guarantees. We have also engaged with semiconductor manufacturers to introduce new high parallelism test solutions and high frequency at-speed testing solutions. These engagements typically involve our designing and manufacturing prototype wafer probe cards for our customers. We believe these relationships also serve to validate our basic test strategies and facilitate an integration of test and manufacturing roadmaps.

## [Table of Contents](#)

In 1998, we introduced a MicroSpring interconnect technology-based wafer level chip scale package using our proprietary MOST technology. MOST technology involves mounting MicroSpring contacts on the die on a wafer to be used both as the temporary connections necessary for test and as the permanent connections necessary to attach the chip to a separate component or module. MOST technology allows wafer level processing at the packaging step, providing customers a high performance, reliable, small footprint packaging solution. If customers combine our MOST technology with a wafer level test contactor, they can integrate the back-end assembly, packaging and final test process steps at the wafer level, allowing significant cost and performance advantages over traditional processing. We have also licensed our MOST technology for specific wafer-level packaging applications and our MicroSpring interconnect technology for incorporation into socket and connector applications.

### **Sales and Marketing**

We sell our products primarily through a sales model that emphasizes the customer's total cost of ownership as it relates to test costs. With this sales model, we strive to demonstrate how test costs can be reduced by simulating the customer's test floor environment, including testers and probers, utilizing our product and comparing the overall cost of test to that of conventional wafer probe cards.

We sell our products worldwide primarily through our direct sales force, a distributor and independent sales representatives. As of March 30, 2002, we had 12 sales professionals. In North America, we sell our products through our direct sales force. In Europe, our local sales team works with independent sales representatives. In South Korea, we sell our products through our direct sales force, while in Taiwan, China and Singapore we sell through Spirox Corporation, our distributor in the region. In Japan, effective April 1, 2002, we converted from a distributor arrangement to a direct sales team that is based in Tokyo, Japan.

Our marketing staff, located in Livermore, California and Tokyo, Japan, works closely with customers to understand their businesses, anticipate trends and define products that will provide significant technical and economic advantages to our customers.

We also utilize a highly skilled team of field application engineers that support our customers as they integrate our products into their manufacturing processes. Through this process, we develop a close understanding of product and customer requirements, speeding our customers' production ramps. We plan to expand our customer support by adding engineering services. We believe this expanded service offering will enable our customers to more fully benefit from our products and technology and create new business opportunities for us.

### **Manufacturing**

Our wafer probe cards are custom products that we design to order for our customers' unique wafer designs. We manufacture our products at our facilities in Livermore, California. We believe that we are the first wafer probe card company to successfully utilize micro-machining and scalable semiconductor-like wafer fabrication processes for the volume production of wafer probe cards. Our proprietary manufacturing processes include wirebonding, photolithography, plating and metallurgical processes, dry and electro-deposition, and complex interconnection system design. The critical steps in our manufacturing process are performed in a Class 100 clean room environment. We also expend considerable resources on the assembly and test of our wafer probe cards and on quality control.

We have deployed state of the art shop floor controls and systems that allow our operators to monitor and optimize manufacturing flows and capacity. We also use statistical process control to further enhance the quality of our production processes.

We depend upon suppliers for some components of our manufacturing process, including ceramic substrates and complex printed circuit boards. Some of these components are supplied by a single vendor. Generally, we rely on purchase orders rather than long-term contracts with our suppliers, which subjects us to risks including price increases and component shortages. We continue to evaluate alternative sources of supply for these components.

## [Table of Contents](#)

We are subject to U.S. federal and state and foreign governmental laws and regulations relating to the protection of the environment. We believe that we comply with all material environmental laws and regulations that apply to us. New laws and regulations, stricter enforcement of existing laws and regulations, the discovery of previously unknown contamination at our or others' sites or the imposition of new cleanup requirements could have a negative effect on our operating results.

Since 2000, we have been providing service and maintenance capabilities in our local service center in Seoul, South Korea. We plan to expand these capabilities in other geographies to provide faster response time to our customers, maximizing the uptime of their wafer probe cards.

### **Research and Development**

The semiconductor industry is subject to rapid technological change and new product introductions and enhancements. We believe that our continued commitment to research and development and timely introduction of new and enhanced wafer probe test solutions and other technologies related to our MicroSpring interconnect technology are integral to maintaining our competitive position. We are investing considerable time and resources in creating structured processes for undertaking, tracking and completing our development projects, and plan to implement those developments into new product or technology offerings. We expect to continue to allocate significant resources to these efforts and to use automation and information technology to provide additional efficiencies in our research and development activities.

We have historically devoted on average approximately 21% of our revenues to research and development programs. Research and development expenses were \$3.2 million for the three months ended March 30, 2002, \$14.6 million for fiscal 2001, \$12.0 million for fiscal 2000 and \$9.5 million for fiscal 1999.

Our research and development and product engineering activities are directed by individuals with significant expertise and industry experience. As of March 30, 2002, we had 69 employees in research and development, of which 62 worked on the design and development of new interconnect and contact technologies related to our core MicroSpring interconnect technology. Of these employees, 41 are engineers and 13 have PhD or MS degrees. The engineering and science disciplines represented in our research and design and product development include: polymer science, chemistry, chemical engineering, electrochemistry, metallurgy, materials science, electrical engineering, mechanical engineering, electronic packaging and computer science.

### **Intellectual Property**

Our success depends in part upon our ability to maintain and protect our proprietary technology and to conduct our business without infringing the proprietary rights of others. We rely on a combination of patents, trade secret laws, trademarks and contractual restrictions on disclosure to protect our intellectual property rights.

As of March 30, 2002, we had 84 issued patents, of which 53 are United States patents and 31 are foreign patents. The expiration dates of these patents range from 2012 to 2020. Our issued patents cover our core interconnect technology, as well as some of our inventions related to wafer probe cards and testing, wafer-level packaging and test, sockets and assemblies and chips. In addition, as of March 30, 2002, we had 286 patent applications pending worldwide, including 117 United States applications, 154 foreign national or regional stage applications and 15 Patent Cooperation Treaty applications. We do not know whether our current patent applications, or any future patent applications that we may file, will result in a patent being issued with the scope of the claims we seek, or at all, or whether any patents we may receive will be challenged or invalidated. Even if additional patents are issued, our patents might not provide sufficiently broad coverage to protect our proprietary rights or to avoid a third party claim against one or more of our products or technologies.

We have both registered and unregistered trademarks, including FormFactor, MicroSpring, MOST and the FormFactor logo.

We routinely require our employees, customers, suppliers and potential business partners to enter into confidentiality and non-disclosure agreements before we disclose to them any sensitive or proprietary information regarding our products, technology or business plans. We require employees to assign to us proprietary information, inventions and other intellectual property they create, modify or improve.

Legal protections afford only limited protection for our proprietary rights. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or to obtain and use information that we regard as proprietary. Others might independently develop similar or competing technologies or methods or design around our patents. In addition, leading companies in the semiconductor industry have extensive patent portfolios and other intellectual property with respect to semiconductor technology. In the future, we might receive claims that we are infringing intellectual property rights of others or that our patents or other intellectual property rights are invalid. We have received in the past, and may receive in the future, communications from third parties inquiring about our interest in licensing certain of their intellectual property. For example, we received such a communication from Microelectronics and Computer Technology Corporation in October 2001, with a follow-up letter in January 2002, inquiring about our interest in acquiring a license to certain of their patents and technology, and from IBM Corporation in February 2002 inquiring about our interest in acquiring a license to IBM patents and technology related to high density integrated probes. Neither the Microelectronics and Computer Technology Corporation communications nor the IBM Corporation communication alleged that we were violating protected proprietary rights or threatened to initiate litigation. We have not engaged in a dialog with either company. For the inquiries we have received to date, we do not believe we infringe any of the identified patents and technology.

We have invested significant time and resources in our technology, and it is possible that we will be required to enforce our intellectual property rights against one or more third parties. Litigation may be necessary to defend against claims of infringement or invalidity, to determine the validity and scope of our proprietary rights or those of others, to enforce our intellectual property rights or to protect our trade secrets. Intellectual property litigation is expensive and time-consuming and could divert management's attention from running our business. If an infringement claim against us resulted in a ruling adverse to us, we could be required to pay substantial damages, cease the use or sale of infringing products, spend significant resources to develop non-infringing technology, discontinue the use of certain technology or obtain a license to the technology. We cannot predict whether a license agreement would be available, or whether the terms and conditions would be acceptable to us. In addition, many of our customer contracts contain provisions that require us to indemnify our customers for third party intellectual property infringement claims, which would increase the cost to us of an adverse ruling in such a claim. An adverse determination could also prevent us from licensing our technologies and methods to others.

## **Competition**

The wafer probe card market is highly competitive, is comprised of many domestic and foreign companies, and has historically been fragmented with many local suppliers servicing individual customers. Recent consolidation has reduced the number of competitors. Current and potential competitors in the wafer probe card market include Cascade Microtech, Inc., ESJ Corporation, Feinmetall GmbH, Japan Electronic Materials Corporation, Kulicke and Soffa Industries, Inc., Micronics Japan Co., Ltd., MicroProbe, Inc., Tokyo Cathode Laboratory Co., Ltd. and Wentworth Laboratories, Inc., among others. While some of these competitors offer wafer probe cards that address various of the performance limitations presented in wafer probe test, we believe none of them resolves all of the performance issues adequately. In many cases a competitor that solves one or more performance limitations compromises other areas of wafer probe card performance. In addition to the ability to address wafer probe card performance issues, the primary competitive factors in our industry include product quality and reliability, price, total cost of ownership, the ability to provide prompt and effective customer service, field applications support and timeliness of delivery. We believe that we compete favorably with respect to these factors.

Some of our competitors are also suppliers of other types of test equipment, or offer both advanced wafer probe cards and needle probe cards, and may have greater financial and other resources than we do. We expect that our competitors will enhance their current wafer probe products and that they may introduce new products that will be competitive with our wafer probe cards. In addition, it is possible that new competitors, including test equipment manufacturers, may offer new technologies that reduce the value of our wafer probe cards.

Additionally, semiconductor manufacturers may implement chip designs that include built-in self-test capabilities or similar functions or methodologies that increase test throughput and eliminate some or all of our current competitive advantages. Our ability to compete favorably is also negatively impacted by low volume



## [Table of Contents](#)

orders that do not meet our present minimum volume requirements, by very short cycle time requirements that we cannot meet because of our design or manufacturing processes, by long-standing relationships between our competitors and certain semiconductor manufacturers, and by semiconductor manufacturer test strategies that include low performance semiconductor testers.

### **Employees**

As of March 30, 2002, we had 289 full-time employees, including 69 in research and development, 41 in sales and marketing, 28 in general and administrative functions, and 151 in operations. By region, 255 of our employees were in North America, 22 in Japan, nine in Korea and three in Europe. None of our employees is covered by a collective bargaining agreement. We believe our relations with our employees are good.

### **Facilities**

Our corporate headquarters and manufacturing facilities are located in six buildings in Livermore, California totaling approximately 73,700 square feet. We lease these facilities under lease agreements expiring between December 2002 and April 2004.

During 2001, we leased additional facilities in Livermore, California totaling approximately 119,000 square feet. The new facility, currently under construction, will be comprised of a campus of three buildings. The lease for this site commences in stages between November 2001 and June 2002 and will expire in 2011, with options to renew through 2031. We intend to relocate our operations to our new facility in late 2002 or early 2003. We believe that the new facility will be adequate for our needs for the foreseeable future.

We also lease office and research and development space totaling approximately 12,000 square feet in Tokyo, Japan; Seoul, South Korea; Munich, Germany; and Budapest, Hungary.

### **Legal Proceedings**

From time to time, we may be subject to legal proceedings and claims in the ordinary course of business. As of the date of this prospectus, we are not involved in any material legal proceedings.

**MANAGEMENT****Executive Officers and Directors**

Our executive officers and directors, and their ages and positions as of April 30, 2002 are as follows:

<b>Name</b>	<b>Age</b>	<b>Position</b>
Dr. Igor Y. Khandros	47	President, Chief Executive Officer and Director
Benjamin N. Eldridge	41	Senior Vice President of Development and Chief Technical Officer
Yoshikazu Hatsukano	63	Senior Vice President and President of FormFactor Asia-Pacific
Jens Meyerhoff	37	Senior Vice President, Chief Financial Officer and Secretary
Mark Brandemuehl	42	Vice President of Marketing
Michael M. Ludwig	40	Vice President of Human Resources and Finance, and Controller
Peter B. Mathews	39	Vice President of Worldwide Sales
Stuart L. Merkadeau	41	Vice President of Intellectual Property
Harrold J. Rust	40	Vice President of Manufacturing
Joseph R. Bronson	53	Director
Dr. William H. Davidow	67	Chairman of the Board of Directors
G. Carl Everett, Jr.	51	Director
Dr. William J. Harding	54	Director
James A. Prestridge	70	Director

*Dr. Igor Y. Khandros* founded FormFactor in April 1993. Dr. Khandros has served as our President and Chief Executive Officer as well as a Director since April 1993. From 1990 to 1992, Dr. Khandros served as the Vice President of Development of Tessera, Inc., a provider of chip scale packaging technology that he co-founded. From 1986 to 1990, he was employed at the Yorktown Research Center of IBM Corporation as a member of the technical staff and a manager. From 1979 to 1985, Dr. Khandros was employed at ABEX Corporation, a casting foundry and composite parts producer, as a research metallurgist and a manager, and he was an engineer from 1977 to 1978 at the Institute of Casting Research in Kiev, Russia. Dr. Khandros holds a M.S. equivalent degree in metallurgical engineering from Kiev Polytechnic Institute in Kiev, Russia, and a Ph.D. in metallurgy from Stevens Institute of Technology.

*Benjamin N. Eldridge* has served as our Senior Vice President of Development and Chief Technical Officer since September 2000. Mr. Eldridge also served as our Vice President of Development from June 1997 to September 2000, as our Director of Development from June 1995 to June 1997 and as our Manager of Development Engineering from November 1994 to May 1995. From 1984 to October 1994, he was employed at the TJ Watson Research Center of IBM Corporation, where he held various engineering positions in the Physical Sciences and Computer Science departments. Mr. Eldridge holds a B.S. in electrical engineering from Union College and a M.S. in physics from Rensselaer Polytechnic Institute.

*Yoshikazu Hatsukano* has served as our Senior Vice President and as the President of FormFactor Asia-Pacific, managing our Asian-Pacific operations, since April 2001. He served as the President of FormFactor K.K., our wholly owned subsidiary, from December 1998 to April 2001. From 1961 to October 1998, Mr. Hatsukano was employed by various companies affiliated with Hitachi, Ltd., where he held several management positions including the President of Hitachi Micro Systems, Inc. from 1991 to October 1998 and the Vice General Manager of the Hitachi Semiconductor Design and Development Center from 1990 to 1991. Mr. Hatsukano holds a B.S. in electronics from Kyoto University in Kyoto, Japan.

*Jens Meyerhoff* has served as our Senior Vice President and Chief Financial Officer since August 2000 and as our Secretary since April 2002. From March 1998 to August 2000, Mr. Meyerhoff served as the Chief Financial Officer and the Senior Vice President, Materials at Siliconix Incorporated, a manufacturer of power and analog semiconductor products. From 1991 to February 1998, Mr. Meyerhoff was employed in various corporate controller and financial positions with the North American subsidiaries as well as the German headquarters of

## [Table of Contents](#)

Daimler-Benz AG. Mr. Meyerhoff holds a German Wirtschaftsinformatiker degree, which is the equivalent of a finance and information technology degree, from Daimler-Benz's Executive Training program.

*Mark Brandemuehl* has served as our Vice President of Marketing since October 1998. From April 1998 to October 1998, Mr. Brandemuehl served as our Director of Marketing. From April 1996 to April 1998, Mr. Brandemuehl was employed at KLA-Tencor Corporation, a manufacturer of monitoring systems for the semiconductor industry, where he held various positions including the Business Unit Director of the Yieldlink Business Group and the Director of Marketing of the Yield Management Software Division. From October 1993 to April 1996, Mr. Brandemuehl served as the Director of Sales, Central and East Region at Tyecin Systems, Inc., a company that provides supply chain software for semiconductor manufacturing. Mr. Brandemuehl holds a B.S. in electrical engineering from the University of Wisconsin at Madison and a M.B.A. from Stanford University.

*Michael M. Ludwig* has served as our Vice President of Human Resources and Finance, and Controller since April 2001. From January 1999 to March 2001, Mr. Ludwig was employed at Elo TouchSystems, Inc., a touch screen manufacturing company, where he most recently served as the Vice President, Systems and Services Group. From 1989 to January 1999, Mr. Ludwig was employed by Beckman Coulter, Inc., a medical diagnostics and life sciences equipment manufacturer, and various of its subsidiaries, holding positions including Finance Director, Clinical Chemistry Division; Director, Strategic Planning and Finance; and Controller. Mr. Ludwig holds a B.S. in business administration from California State Polytechnic University at Pomona.

*Peter B. Mathews* has served as our Vice President of Worldwide Sales since April 1999. From March 1997 to April 1999, Mr. Mathews served as our Director, Worldwide Sales and Business Development. From May 1992 to March 1997, Mr. Mathews was employed at MicroModule Systems, a manufacturer of multichip modules and interconnect test products, where he most recently held the position of Director of Marketing and Business Development. From 1989 to May 1992, he served as the U.S. Sales Manager for the Advanced Packaging Systems Division of Raychem Corporation, a component manufacturer for electronic and energy applications that was acquired by Tyco Electronics Ltd. Mr. Mathews holds a B.S. in chemical engineering from Cornell University.

*Stuart L. Merkadeau* has served as our Vice President of Intellectual Property since July 2000. From 1990 to July 2000, Mr. Merkadeau practiced law as an associate and then a partner with Graham & James LLP, where he specialized in licensing and strategic counseling in intellectual property matters. Mr. Merkadeau is registered to practice before the U.S. Patent and Trademark Office. Mr. Merkadeau holds a B.S. in industrial engineering from Northwestern University and a J.D. from the University of California at Los Angeles.

*Harold J. Rust* has served as our Vice President of Manufacturing since January 2002. From April 2001 to December 2001, Mr. Rust served as our Senior Director of Probe Head Manufacturing. From 1984 to April 2001, Mr. Rust held various positions in the Storage Technology Division at IBM Corporation, including Business Operations and Planning Manager, and Manufacturing and Engineering Manager. Mr. Rust holds a B.S. in mechanical engineering from the University of California, Davis and a M.S. in mechanical engineering from Stanford University.

*Joseph R. Bronson* has served as a Director since April 2002. Mr. Bronson has served as an Executive Vice President of Applied Materials, Inc., a manufacturer of semiconductor wafer fabrication equipment, since December 2000, and a member of the Office of the President and the Chief Financial Officer of Applied Materials since January 1998. Mr. Bronson also served as a Senior Vice President and as the Chief Administrative Officer of Applied Materials from January 1998 to December 2000 and as Group Vice President of Applied Materials from April 1994 to January 1998. Mr. Bronson is a Certified Public Accountant and holds a B.S. in accounting from Fairfield University and a M.B.A. from the University of Connecticut.

*Dr. William H. Davidow* has served as a Director since April 1995 and as Chairman of the Board of Directors since June 1996. Since 1985, Dr. Davidow has been a general partner of Mohr, Davidow Ventures, a venture capital firm. Dr. Davidow serves as Chairman of the Board of Directors of two publicly traded companies, Rambus Inc. and Numerical Technologies, Inc. Dr. Davidow also serves on the board of directors of one privately held company in addition to FormFactor. Dr. Davidow holds an A.B. and a M.S. in electrical

## [Table of Contents](#)

engineering from Dartmouth College, a M.S. in electrical engineering from the California Institute of Technology and a Ph.D. in electrical engineering from Stanford University.

*G. Carl Everett, Jr.* has served as a Director since June 2001. Mr. Everett founded GCE Ventures, a venture advisement firm, in April 2001. From February 1998 to April 2001, Mr. Everett served as Senior Vice President, Personal Systems Group of Dell Computer Corporation. During 1997, Mr. Everett was on a personal sabbatical. From 1978 to December 1996, Mr. Everett held several management positions with Intel Corporation including, Senior Vice President and General Manager of the Microprocessor Products Group and Senior Vice President and General Manager of the Desktop Products Group. Mr. Everett holds a B.A. in business administration from New Mexico State University.

*Dr. William J. Harding* has served as a Director since June 1997. Dr. Harding is a Managing Director of Morgan Stanley & Co. Incorporated and a Managing Member of Morgan Stanley Venture Partners III, L.L.C. Dr. Harding joined Morgan Stanley in October 1994. Prior to joining Morgan Stanley, Dr. Harding was a general partner of several venture capital partnerships affiliated with J.H. Whitney & Co. Dr. Harding currently serves on the board of directors of Commerce One, Inc., InterNAP Network Services Corporation and several private companies. Dr. Harding received a B.S. in engineering mathematics and a M.S. in systems engineering from the University of Arizona, and a Ph.D. in engineering from Arizona State University. Dr. Harding served as an officer in the Military Intelligence Branch of the United States Army Reserve.

*James A. Prestridge* has served as a Director since April 2002. Mr. Prestridge has served as a consultant for Empirix Inc., a provider of test and monitoring solutions for communications applications, since October 2001. From June 2000 to January 2001, Mr. Prestridge served as a consultant to the companies that were amalgamated into Empirix. Mr. Prestridge served as a director of Teradyne Inc., a manufacturer of automated test equipment, from May 1997 until May 2000. Mr. Prestridge was Vice-Chairman of Teradyne from January 1996 until May 2000 and served as Executive Vice President of Teradyne from 1992 until May 2000. Mr. Prestridge currently serves on the board of directors of one privately held company in addition to FormFactor. Mr. Prestridge holds a B.S. in general engineering from the U.S. Naval Academy and a M.B.A. from Harvard University. Mr. Prestridge served as a Captain in the U.S. Marine Corps.

### **Board of Directors**

All of our current directors were elected pursuant to a voting agreement that we entered into with certain holders of our common stock and holders of our preferred stock. The holders of a majority of our common stock and Series A preferred stock, voting together on an as-converted to common stock basis, designated Dr. Khandros and Mr. Everett for election to our board of directors. The holders of a majority of our Series B preferred stock designated Dr. Davidow for election to our board. Morgan Stanley Venture Partners III, L.P., one of the holders of our Series D preferred stock, designated Dr. Harding for election to our board. The two remaining directors, who are Messrs. Bronson and Prestridge, were designated for election to our board by a majority of our common stock and Series A preferred stock, voting together on an as-converted to common stock basis, and a majority of our Series B, Series C, Series D, Series E, Series F and Series G preferred stock, voting together on an as-converted to common stock basis. Upon the closing of this offering, these board representation rights will terminate and none of our stockholders will have any special rights regarding board representation.

Effective upon the closing of this offering, our certificate of incorporation and bylaws will authorize a board of directors of seven members and at that time, our board of directors will consist of six directors, who will be divided into three classes:

- Class I, whose term will expire at the annual meeting of stockholders expected to be held in 2003;
- Class II, whose term will expire at the annual meeting of stockholders expected to be held in 2004; and
- Class III, whose term will expire at the annual meeting of stockholders expected to be held in 2005.

As a result, only one class of directors will be elected at each annual meeting of stockholders, with the other classes continuing on our board of directors for the remainder of their terms. This classification of our board of directors may make it more difficult for a third party to acquire, or may discourage a third party from acquiring,

## [Table of Contents](#)

control of our company. Effective upon the closing of this offering, the following individuals will serve as our directors:

- Dr. Khandros and Dr. Davidow will be our Class I directors;
- Mr. Everett and Dr. Harding will be our Class II directors; and
- Messrs. Bronson and Prestridge will be our Class III directors.

### **Committees of the Board of Directors**

Our board of directors has established two standing committees: the audit committee and the compensation committee.

*Audit Committee.* The audit committee reviews and evaluates our financial statements, accounting practices and our internal audit and control functions, makes recommendations to our board regarding the selection of our independent auditors and reviews the results and scope of the audit and other services provided by our independent auditors. The members of our audit committee are Messrs. Bronson, Everett and Prestridge.

*Compensation Committee.* The compensation committee reviews and makes recommendations to our board concerning the compensation and benefits of our officers and directors, administers our stock option and employee benefits plans and reviews general policy relating to compensation and benefits. The members of our compensation committee are Messrs. Bronson and Everett and Dr. Davidow.

### **Compensation Committee Interlocks and Insider Participation**

None of the members of our compensation committee has at any time been one of our officers or employees. None of our executive officers serves or in the past has served as a member of the board of directors or compensation committee of any entity that has one or more of its executive officers serving on our board of directors or our compensation committee.

### **Director Compensation**

Our directors do not receive cash compensation for their services as directors but they are reimbursed for their reasonable expenses in attending board and board committee meetings. Directors have been eligible to participate in our management incentive option plan and our 1996 stock option plan. The following directors have been granted options to purchase shares of our common stock:

- In June 2001, we granted Mr. Everett an option under the 1996 stock option plan to purchase 50,000 shares of our common stock at an exercise price of \$6.50 per share.
- In December 2001, we granted Dr. Davidow an option under the management incentive option plan to purchase 100,000 shares of our common stock at an exercise price of \$6.50 per share.
- In April 2002, we granted Mr. Bronson an option under the management incentive option plan to purchase 50,000 shares of our common stock at an exercise price of \$6.50 per share.
- In April 2002, we granted Mr. Prestridge an option under the management incentive option plan to purchase 50,000 shares of our common stock at an exercise price of \$6.50 per share.

Each director will be eligible to participate in our 2002 equity incentive plan. Under this plan, option grants to directors who are not our employees, or employees of a parent or subsidiary of ours, will be automatic and non-discretionary. Each non-employee director who is a member of our board of directors before the date of this offering and who has not received a prior option grant will receive an option to purchase 12,500 shares of our common stock effective upon this offering. Each non-employee director who becomes a member of our board of directors on or after the date of this offering will be granted an option to purchase 12,500 shares of our common stock as of the date that director joins the board. Immediately after each annual meeting of our stockholders, each non-employee director will automatically be granted an additional option to purchase 12,500 shares of our common stock, as long as the non-employee director is a member of our board on that date and has served

[Table of Contents](#)

continuously as a member of our board for at least twelve months since the last option grant to that non-employee director. If less than twelve months has passed, then the number of shares subject to the option granted after the annual meeting will be equal to 12,500 multiplied by a fraction, the numerator of which is the number of days that have elapsed since the last option grant to that director and the denominator of which is 365 days.

Each option will have an exercise price equal to the fair market value of our common stock on the date of grant. The options will have ten-year terms and will terminate three months after the date the director ceases to be a director or consultant or twelve months if the termination is due to death or disability. All options granted to non-employee directors who first became members of our board of directors after the date of this offering will vest over a one-year period at a rate of 1/12th of the total shares granted at the end of each full succeeding month, so long as the non-employee director continuously remains our director or consultant. All succeeding option grants to non-employee directors who were members of our board of directors prior to the date of this offering will vest as to 1/12th of the total shares granted at the end of each full succeeding month from the later of the date of grant or the date when all outstanding stock options and all outstanding shares issued upon exercise of any stock options granted to the non-employee director prior to the grant of such succeeding grant have fully vested. In the event of our dissolution or liquidation or a change in control transaction, options granted to our non-employee directors under the plan will become 100% vested and exercisable in full.

Members of our board of directors, who are employees of FormFactor, or any parent or subsidiary of FormFactor and who own our common stock or hold options to purchase our common stock in an amount less than 5% of our total outstanding shares, will be eligible to participate in our 2002 employee stock purchase plan. For additional information, see “— Employee Benefit Plans and Option Grants — 2002 Employee Stock Purchase Plan.”

**Executive Compensation**

The following table presents information regarding the compensation received during fiscal 2001 by our chief executive officer and each of our four other most highly compensated executive officers. The compensation table excludes other compensation in the form of perquisites and other personal benefits to a named executive officer where that compensation constituted less than 10% of his total annual salary and bonus in fiscal 2001.

Name and Principal Position	2001 Annual Compensation			Long-Term Compensation Awards
	Salary	Bonus	Other	Securities Underlying Options
Igor Khandros President and Chief Executive Officer	\$228,923	\$27,943	\$ —	—
Benjamin Eldridge Senior Vice President of Development and Chief Technical Officer	190,769	18,629	—	52,105
Yoshikazu Hatsukano Senior Vice President and President of FormFactor Asia-Pacific	200,495(1)	20,750(1)	29,703(1)(2)	43,770
Jens Meyerhoff Senior Vice President, Chief Financial Officer and Secretary	190,077	15,046	—	102,485
Peter Mathews Vice President of Worldwide Sales	271,565(3)	—	—	35,000

(1) The U.S. dollar equivalent of the salary, bonus and other compensation paid to Mr. Hatsukano is paid in Japanese Yen and is calculated using the exchange rate at December 28, 2001 of one U.S. dollar to 131.3 Japanese Yen.

(2) Represents a housing allowance.

(3) Includes \$121,969 in sales commissions.

[Table of Contents](#)

**Option Grants in Fiscal 2001**

The following table presents information regarding grants of stock options during fiscal 2001 to the executive officers named in the executive compensation table above. We granted these options to the named executive officers under our management incentive option plan. The options granted to Messrs. Eldridge, Hatsukano and Meyerhoff that expire September 6, 2011 are fully vested. The options granted to Messrs. Eldridge, Hatsukano and Mathews that expire on October 30, 2011 vest in 12 equal monthly increments beginning on November 21, 2004, December 1, 2004 and March 6, 2004. The options for 100,000 shares of our common stock granted to Mr. Meyerhoff consist of an option for 70,000 shares that vests in 12 equal monthly increments beginning on August 7, 2004 and an option for 30,000 shares that vests as to 25% of the shares on August 7, 2002 and as to 1/36th of the remaining shares at the end of each full succeeding month. All of the options listed on the following table expire ten years from the date of grant and were granted at an exercise price equal to the fair market value of our common stock as determined by our board of directors on the date of grant. The percentage of total options granted to employees in fiscal 2001 is based on options to purchase a total of 1,952,073 shares of our common stock granted in fiscal 2001.

Name	Individual Grants				Potential Realizable Value At Assumed Annual Rates of Stock Price Appreciation for Option Term	
	Number of Securities Underlying Options Granted	% of Total Options Granted to Employees in Fiscal Year	Exercise Price Per Share	Expiration Date	5%	10%
Igor Khandros	—	—%	\$ —	—	\$ —	\$ —
Benjamin Eldridge	50,000	2.6	6.50	10/30/11		
	2,105	0.1	6.50	9/6/11		
Yoshikazu Hatsukano	42,000	2.2	6.50	10/30/11		
	1,770	0.1	6.50	9/6/11		
Jens Meyerhoff	100,000	5.1	6.50	10/30/11		
	2,485	0.1	6.50	9/6/11		
Peter Mathews	35,000	1.8	6.50	10/30/11		

Potential realizable values are calculated by:

- multiplying the number of shares of our common stock subject to a given option by the assumed initial public offering price of \$ per share;
- assuming that the aggregate stock value derived from that calculation compounds at the annual 5% or 10% rates shown in the table for the entire ten-year term of the option; and
- subtracting from that result the total option exercise price.

The 5% and 10% assumed annual rates of stock price appreciation are required by the rules of the Securities and Exchange Commission and do not represent our estimate or projection of future stock price growth. Actual gains, if any, on stock option exercises will be dependent on the future performance of our common stock.

**Aggregate Option Exercises in Fiscal 2001**

The following table presents the number of shares of our common stock subject to unexercised options held by the executive officers named in the executive compensation table above at December 29, 2001 and the value of the unexercised options that are in-the-money. This value is calculated based on the difference between an assumed initial public offering price of \$ per share and the exercise price for the shares underlying the

[Table of Contents](#)

option, multiplied by the number of shares. None of the named executive officers exercised any options to purchase our common stock in fiscal 2001.

Name	Number of Securities Underlying Unexercised Options at December 29, 2001		Value of Unexercised In-The-Money Options at December 29, 2001	
	Exercisable	Unexercisable	Exercisable	Unexercisable
Igor Khandros	—	—	\$ —	\$ —
Benjamin Eldridge	222,105	—	—	—
Yoshikazu Hatsukano	163,770	—	—	—
Jens Meyerhoff	202,485	—	—	—
Peter Mathews	114,500	—	—	—

### Change of Control and Severance Agreements

In September 2001, our board adopted our key management bonus plan, which provides awards to our chief executive officer, senior vice presidents and vice presidents based upon the target percentage achievement of corporate objectives and personal objectives for these individuals. If a change in control of FormFactor occurs, all bonus awards will be deemed to have been earned at 100% of the bonus target percentage for the current plan year and will be paid to the participants at that time. This plan is administered by the compensation committee of our board of directors. For additional information, see “— Employee Benefit Plans and Option Grants — Key Management Bonus Plan.”

Our current stock option agreements provide for 12 months of accelerated vesting for shares of our common stock granted to our officers upon a change in control of FormFactor where the officer’s employment is terminated without cause within 12 months following the change in control transaction. For additional information, see “— Employee Benefit Plans and Option Grants.”

We have entered into an agreement with Mr. Hatsukano, our Senior Vice President and the President of FormFactor Asia-Pacific, that provides that if his employment is terminated, he will receive a severance payment equal to one month’s base salary for each year of service with us with service for partial years to be prorated. If Mr. Hatsukano’s employment is terminated for reasons other than cause, he will receive an additional lump sum payment equal to one month’s base salary.

### Employee Benefit Plans and Option Grants

#### *Incentive Option Plan*

As of March 30, 2002, options to purchase 959,322 shares of our common stock were outstanding under our incentive option plan and 3,640,595 shares were available for future option grants. The options had a weighted average exercise price of \$4.90 per share. Our employees who have an annual base salary equal to or greater than \$60,000 are eligible to receive awards under the incentive option plan. Awards can be incentive stock options, nonqualified stock options, or any combination of the two. No options will be granted under our incentive option plan after this offering. However, any outstanding options granted under our incentive option plan will remain outstanding and subject to our incentive option plan and related stock option agreements until they are exercised or until they terminate or expire by their terms. Options granted under our incentive option plan are subject to terms substantially similar to those described below with respect to options granted under our 2002 equity incentive plan.

#### *Management Incentive Option Plan*

As of March 30, 2002, options to purchase 886,451 shares of our common stock were outstanding under our management incentive option plan and 653,827 shares were available for future option grants. The options had a weighted average exercise price of \$5.98 per share. Our employees, consultants and directors are eligible to receive awards under the management incentive option plan. Awards can be incentive stock options, nonqualified stock options, or any combination of the two. No options will be granted under our management incentive option



plan after this offering. However, any outstanding options granted under our management incentive option plan will remain outstanding and subject to our management incentive option plan and related stock option agreements until they are exercised or until they terminate or expire by their terms. Options granted under our management incentive option plan are subject to terms substantially similar to those described below with respect to options granted under our 2002 equity incentive plan.

#### ***1995 Stock Plan and 1996 Stock Option Plan***

As of March 30, 2002, options to purchase 34,000 shares of our common stock were outstanding under our 1995 stock plan and no shares were available for future option grants. The options outstanding under the 1995 stock plan had a weighted average exercise price of \$0.12 per share. Our employees and consultants were eligible to receive awards under the 1995 stock plan. As of March 30, 2002, options to purchase 2,135,831 shares of our common stock were outstanding under our 1996 stock option plan and 699,869 shares of our common stock remained available for future option grants. The options outstanding under the 1996 stock option plan had a weighted average exercise price of \$4.91 per share. Our employees, consultants and directors are eligible to receive awards under the 1996 stock option plan. No options will be granted under our 1996 stock option plan after this offering. However, any outstanding options granted under our 1995 stock plan or 1996 stock option plan will remain outstanding and subject to our 1995 stock plan and 1996 stock option plan, as applicable, and related stock option agreements until they are exercised or until they terminate or expire by their terms. Options granted under our 1995 stock plan or 1996 stock option plan are subject to terms substantially similar to those described below with respect to options granted under our 2002 equity incentive plan.

#### ***2002 Equity Incentive Plan***

In April 2002 our board of directors adopted and in May 2002 our stockholders approved our 2002 equity incentive plan. The 2002 equity incentive plan will become effective on the date of this prospectus and will serve as the successor to our previously existing stock option plans. The 2002 equity incentive plan authorizes the award of options, restricted stock and stock bonuses.

Our 2002 equity incentive plan will be administered by the compensation committee of our board of directors, each member of which is an outside director as defined under applicable federal tax laws. Our compensation committee will have the authority to interpret this plan and any agreement entered into under the plan, grant awards and make all other determinations for the administration of the plan.

Our 2002 equity incentive plan provides for the grant of both incentive stock options that qualify under Section 422 of the Internal Revenue Code and nonqualified stock options. The incentive stock options may be granted only to our employees or employees of any of our subsidiaries. The nonqualified stock options, and all awards other than incentive stock options, may be granted to our employees, officers, directors, consultants, independent contractors and advisors and those of any of our subsidiaries. However, consultants, independent contractors and advisors are only eligible to receive awards if they render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction. The exercise price of incentive stock options must be at least equal to the fair market value of our common stock on the date of grant. The exercise price of incentive stock options granted to 10% stockholders must be at least equal to 110% of the fair market value of our common stock on the date of grant.

The maximum term of the options granted under our 2002 equity incentive plan is ten years. The awards granted under this plan may not be transferred in any manner other than by will or by the laws of descent and distribution and may be exercised during the lifetime of the optionee only by the optionee. Our compensation committee may allow exceptions to this restriction for awards that are not incentive stock options. Options granted under our 2002 equity incentive plan expire one month after the termination of the optionee's service to us or to a parent or subsidiary of ours for cause, three months if the termination is for reasons other than death, disability or cause, or 12 months if the termination is due to death or disability. In the event of a liquidation, dissolution or change in control transaction, except for options granted to non-employee directors, the options may be assumed or substituted by the successor company. Except for options granted to non-employee directors, options that are not assumed or substituted will expire on the transaction at the time and on the conditions as our

## [Table of Contents](#)

compensation committee will determine. In the event of a change in control transaction in which an optionee, other than a non-employee director, is terminated without cause within 12 months following the change in control, our current stock option agreements provide for 12 months of accelerated vesting of the optionee's shares of our common stock.

We have reserved 500,000 shares of our common stock for issuance under the 2002 equity incentive plan. The number of shares reserved for issuance under this plan will be increased by:

- the number of shares of our common stock reserved under our incentive option plan, management incentive option plan and 1996 stock option plan that are not issued or subject to outstanding grants on the date of this prospectus;
- the number of shares of our common stock issued under our incentive option plan, management incentive option plan, 1995 option plan or 1996 stock option plan that we repurchase at the original purchase price; and
- the number of shares of our common stock issuable upon exercise of options granted under our incentive option plan, management incentive option plan, 1995 option plan or 1996 stock option plan that expire or become unexercisable at any time after this offering without having been exercised in full.

In addition, under the terms of our 2002 equity incentive plan, the number of shares of our common stock reserved for issuance under the plan will increase automatically on January 1 of each year starting in 2003 by an amount equal to 5% of our total outstanding shares as of the immediately preceding December 31.

Shares available for grant and issuance under our 2002 equity incentive plan include:

- shares of our common stock issuable upon exercise of an option granted under this plan that is terminated or cancelled before the option is exercised;
- shares of our common stock issued upon exercise of any option granted under this plan that we repurchase at the original purchase price;
- shares of our common stock subject to awards granted under this plan that are forfeited or that we repurchase at the original issue price; and
- shares of our common stock subject to stock bonuses granted under this plan that otherwise terminate without shares being issued.

During any calendar year, no person will be eligible to receive more than 1,000,000 shares, or 3,000,000 shares in the case of a new employee, under our 2002 equity incentive plan. Our 2002 equity incentive plan will terminate in 2012, unless it is terminated earlier by our board of directors.

### ***2002 Employee Stock Purchase Plan***

In April 2002 our board of directors adopted and in May 2002 our stockholders approved our 2002 employee stock purchase plan. The 2002 employee stock purchase plan will become effective on the first day on which price quotations are available for our common stock on the Nasdaq National Market. The employee stock purchase plan is designed to enable eligible employees to purchase shares of our common stock at a discount on a periodic basis.

Our compensation committee will administer the 2002 employee stock purchase plan. Our employees generally will be eligible to participate in this plan if they are employed by us, or a subsidiary of ours that we designate, for more than 20 hours per week and more than five months in a calendar year. Our employees are not eligible to participate in our 2002 employee stock purchase plan if they are 5% stockholders or would become 5% stockholders as a result of their participation in the plan. Under the 2002 employee stock purchase plan, eligible employees may acquire shares of our common stock through payroll deductions, or through a single lump sum cash payment in the case of the first offering period. Our eligible employees may select a rate of payroll deduction between 1% and 15% of their cash compensation. For the first offering period, employees will automatically be

## [Table of Contents](#)

granted an option based on 15% of their cash compensation during the first purchase period. An employee's participation in this plan will end automatically upon termination of employment for any reason. In the event of a change in control transaction, this plan will continue with regard to any offering periods that commenced prior to the closing of the proposed transaction and shares will be purchased based on the fair market value of the surviving corporation's stock on each purchase date, unless otherwise provided by our compensation committee.

No participant will be able to purchase shares having a fair market value of more than \$25,000, determined as of the first day of the applicable offering period, for each calendar year in which the employee participates in the 2002 employee stock purchase plan. Except for the first offering period, each offering period will be for two years and will consist of four six-month purchase periods. The first offering period is expected to begin on the first day on which price quotations are available for our common stock on the Nasdaq National Market. The first purchase period may be more or less than six months long. After that, the offering periods will begin on February 1 and August 1. The purchase price for shares of our common stock purchased under the 2002 employee stock purchase plan will be 85% of the lesser of the fair market value of our common stock on the first day of the applicable offering period or the last day of each purchase period. Our compensation committee will have the power to change the starting date of any later offering period, the purchase date of a purchase period and the duration of any offering period or purchase period without stockholder approval if this change is announced before the relevant offering period or purchase period. Our 2002 employee stock purchase plan is intended to qualify as an employee stock purchase plan under Section 423 of the Internal Revenue Code.

We have reserved 1,500,000 shares of our common stock for issuance under the 2002 employee stock purchase plan. The number of shares reserved for issuance under the plan will increase automatically on January 1 of each year, starting in 2003, by an amount equal to 1% of our total outstanding shares as of the immediately preceding December 31. Our board of directors or compensation committee may reduce the amount of the increase in any particular year. The 2002 employee stock purchase plan will terminate in April 2012, unless it is terminated earlier by our board of directors.

### ***Key Management Bonus Plan***

In September 2001, our board adopted our key management bonus plan, which provides awards to our chief executive officer, senior vice presidents, vice presidents and directors based upon the percentage achievement of corporate objectives and personal objectives for these individuals. Bonus target percentages for these awards for each participant level are established for each fiscal year. Corporate objectives are also established for each fiscal year. In fiscal 2002, the corporate objectives are bookings, net sales and operating margin for our company. Personal objectives are determined by the participants in consultation with their immediate supervisors and these objectives are generally critical to the success of the participant in our company and relate to the overall business priorities of FormFactor. For each participant, percentage participation rates are based upon the level of that individual's responsibility and the scope of that individual's work in our organization. In the event of a change of control of FormFactor, all bonus awards will be deemed to have been earned at 100% of the bonus target percentage for the current plan year and will be paid to the participants at that time. This plan is administered by the compensation committee of our board of directors.

### ***Sales Incentive Plan***

We have implemented a sales incentive plan that provides incentive commissions to each member of our sales force who is a vice president, director, area manager or regional manager. These commissions are based upon bookings for the region in which the sales member participates and upon management objectives regarding our revenues, backlog and market share. The commissions of each participating member of our sales force are calculated based upon a percentage of that member's base salary with the commission allocated between the bookings targets and the management buy objectives. These incentive commissions are paid on a quarterly basis.

### ***401(k) Plan***

We sponsor a defined contribution plan intended to qualify under Section 401 of the Internal Revenue Code, or a 401(k) Plan. Employees are generally eligible to participate in this plan. Participants may make pre-tax

## [Table of Contents](#)

contributions to the plan of up to 25% of their eligible earnings, subject to a statutorily prescribed annual limit. Each participant is fully vested in his or her contributions and the investment earnings. We may make matching contributions on a discretionary basis to the 401(k) Plan but had not done so as of March 30, 2002. Contributions by us, if any, would generally be deductible by us when made. Contributions are held in trust as required by law. Individual participants may direct the trustee to invest their accounts in authorized investment alternatives.

### **Indemnification of Directors and Officers and Limitation of Liability**

Our certificate of incorporation eliminates the personal liability of a director for monetary damages resulting from any breach of his fiduciary duty as a director, except for liability:

- for any breach of the director's duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- for unlawful payments of dividends or unlawful stock repurchases, redemptions or other distributions; or
- for any transaction from which the director derived an improper personal benefit.

Our bylaws provide that:

- we are required to indemnify our directors and officers to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions where indemnification is not permitted by applicable law;
- we are required to advance expenses, as incurred, to our directors and officers in connection with a legal proceeding to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions; and
- the rights conferred in the bylaws are not exclusive.

In addition to the indemnification required in our certificate of incorporation and bylaws, we intend to enter into indemnification agreements with each of our current directors and executive officers, which may, in some cases, be broader than the indemnification provisions set forth under Delaware law. These agreements will provide for the indemnification of our directors and executive officers for all expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were our agents. We also intend to obtain directors' and officers' insurance to cover our directors, officers and some of our employees for liabilities, including liabilities under securities laws. We believe that these indemnification provisions and agreements and this insurance are necessary to attract and retain qualified directors and executive officers.

The limitation of liability and indemnification provisions in our certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Furthermore, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees regarding which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the Securities and Exchange Commission this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

**RELATED PARTY TRANSACTIONS**

Since December 26, 1998, we have not been a party to, and we have no plans to be a party to, any transaction or series of similar transactions in which the amount involved exceeded or will exceed \$60,000 and in which any current director, executive officer, holder of more than 5% of our common stock or entities affiliated with them had or will have an interest, other than as described under “Management” and in the transactions described below.

**Stock Sales to Insiders**

The following table summarizes purchases of our common stock since December 26, 1998 by our executive officers, directors and holders of more than 5% of our common stock.

Purchaser	Shares of Common Stock	Total Purchase Price	Date of Purchase
Igor Khandros President, Chief Executive Officer and Director	100,000	\$600,000	11/14/00
Jens Meyerhoff Senior Vice President, Chief Financial Officer and Secretary	100,000	550,000	10/17/00
Stuart Merkadeau Vice President of Intellectual Property	36,363	199,997	10/17/00
Dr. William Davidow Chairman of the Board of Directors	100,000	650,000	3/13/02

The following table summarizes purchases of our preferred stock since December 26, 1998 by our executive officers, directors and holders of more than 5% of our outstanding stock and entities affiliated with them. We sold 2,666,666 shares of our Series E preferred stock in July 1999 at \$7.50 per share, 633,130 shares of our Series F preferred stock from September 2000 to November 2000 at \$11.00 per share and 679,672 shares of our Series G preferred stock from July 2001 to September 2001 at \$15.00 per share. Each share of our preferred stock will convert automatically into one share of our common stock upon the closing of this offering. Dr. Davidow, one of our directors, is a general partner of Mohr, Davidow Ventures IV, L.P. and MDV IV Entrepreneurs’ Network Fund, L.P. Dr. Harding, one of our directors, is a managing member of Morgan Stanley Venture Partners III, L.L.C., which is the general partner of Morgan Stanley Venture Partners III, L.P. and Morgan Stanley Venture Investors III, L.P., and was designated to our board of directors by Morgan Stanley Venture Partners III, L.P.

Purchaser	Shares of Preferred Stock		
	Series E	Series F	Series G
Entities affiliated with Mohr, Davidow Ventures	46,584	—	—
Entities affiliated with Institutional Venture Partners	33,334	—	—
Entities affiliated with Morgan Stanley Venture Partners	33,334	—	—
Yoshikazu Hatsukano Senior Vice President and President of FormFactor Asia-Pacific	—	5,000	—
Mark Brandemuehl Vice President of Marketing	—	6,000	—
James Prestridge Director	13,400	348	—

**Registration Rights**

We have entered into an investors’ rights agreement with each of the purchasers of preferred stock listed above. Under this agreement, these and other stockholders and warrant holders are entitled to registration rights with respect to their shares of common stock issuable upon the automatic conversion of their preferred stock upon

## [Table of Contents](#)

the closing of this offering. For additional information, see “Description of Capital Stock — Registration Rights.”

### Loans to Executive Officers

In connection with exercises of options to purchase our common stock, the following executive officers delivered full recourse promissory notes, each with a six-year term and bearing interest at the annual rate indicated below, compounded semi-annually, on the dates and in the amounts in the table below. These notes are secured by the shares purchased by the executive officer or director.

Borrower	Principal Amount	Interest Rate	Loan Date	Shares Purchased
Igor Khandros President, Chief Executive Officer and Director	\$599,900	5.92%	11/14/00	100,000
Benjamin Eldridge Senior Vice President of Development and Chief Technical Officer	80,000 4,500 9,874	5.51 6.29 5.91	2/27/98 8/05/97 4/08/97	100,000 45,000 59,840
Jens Meyerhoff Senior Vice President, Chief Financial Officer and Secretary	9,516 549,900	6.21 6.00	12/20/96 10/17/00	95,160 100,000
Mark Brandemuehl Vice President of Marketing	50,000	5.62	4/09/98	40,000
Peter Mathews Vice President of Worldwide Sales	8,663	5.91	4/08/97	52,500
Stuart Merkadeau Vice President of Intellectual Property	199,960	6.00	10/17/00	36,363

As of March 30, 2002, the principal amount and the accrued interest of these loans were outstanding.

On February 1, 2001, we loaned \$150,000 to Stuart Merkadeau, our Vice President of Intellectual Property, in accordance with a loan agreement. This loan is evidenced by a full recourse promissory note with an interest rate of 5.01% per year, compounded semiannually. This loan is secured by up to 125,000 shares of our common stock that are issuable to Mr. Merkadeau under a stock option agreement. This loan is due and payable upon the earliest to occur of the sale of his residence or February 1, 2007. As of March 30, 2002, the entire principal amount and the accrued interest of this loan were outstanding.

### Indemnification Agreements

We intend to enter into indemnification agreements with each of our current directors and executive officers. These agreements will require us to indemnify these individuals to the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to FormFactor, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified. We also intend to enter into indemnification agreements with our future directors and executive officers.

### Relationships with Intel Corporation

In connection with the purchase by Intel Corporation of our preferred stock in August 1997, we provided to Intel registration rights with respect to their shares of our common stock issuable upon the automatic conversion of their preferred stock under an investors' rights agreement. We have entered into agreements with Intel Corporation under which we sell to them our wafer test probe cards and related services. The agreements do not obligate Intel to purchase our products. We sell products based on Intel purchase orders and the terms of the agreements. Under these agreements, we price our products and services to Intel at the lowest price that is charged to any of our other customers for the same products and services. We received \$5.2 million in the first quarter of fiscal 2002 and \$9.1 million in fiscal 2001 from sales of our wafer test probe cards and related installation, training and support services to Intel.

**PRINCIPAL STOCKHOLDERS**

The following table presents information regarding the beneficial ownership of our common stock as of March 30, 2002, and as adjusted to reflect the sale of our common stock in this offering, for:

- each person or entity known by us to own beneficially more than 5% of our common stock;
- each of our current directors;
- each of our named executive officers; and
- all of our current directors and executive officers as a group.

The percentage of beneficial ownership for the following table is based on 27,595,225 shares of our common stock outstanding as of March 30, 2002, assuming the automatic conversion of all outstanding shares of our preferred stock into 22,994,543 shares of our common stock, which will occur upon the closing of this offering. The percentage of beneficial ownership after the offering is based on \_\_\_\_\_ shares of our common stock issued in connection with this offering, assuming no exercise of the underwriters' over-allotment option.

Beneficial ownership is determined under the rules and regulations of the Securities and Exchange Commission and does not necessarily indicate beneficial ownership for any other purpose. Under these rules, beneficial ownership includes those shares of common stock over which the stockholder has sole or shared voting or investment power. It also includes shares of common stock that the stockholder has a right to acquire within 60 days of March 30, 2002 through the exercise of any option, warrant or other right, and restricted shares of our common stock, which are subject to a lapsing right of repurchase at their initial purchase price, purchased by some of our officers who exercised immediately exercisable options. The percentage ownership of the outstanding common stock, however, is based on the assumption, expressly required by the rules and regulations of the Securities and Exchange Commission, that only the person or entity whose ownership is being reported has exercised options or warrants into shares of our common stock.

To our knowledge, except under community property laws or as otherwise noted, the persons named in the table have sole voting and sole investment power with respect to all shares beneficially owned. Unless otherwise indicated, each 5% stockholder listed below maintains a mailing address of c/o FormFactor, Inc., 2140 Research Drive, Livermore, California 94550.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Outstanding Shares Beneficially Owned	
		Before Offering	After Offering
Igor Khandros(1)	6,100,000	22.1%	%
William Davidow(2)	5,328,281	19.3	
Entities affiliated with Mohr, Davidow Ventures			
Entities affiliated with Institutional Venture Partners(3)	2,321,299	8.4	
William Harding(4)	2,082,320	7.5	
Entities affiliated with Morgan Stanley Venture Partners			
Intel Corporation	1,775,821	6.4	
Benjamin Eldridge(5)	553,827	2.0	
Yoshikazu Hatsukano(6)	318,770	1.1	
Jens Meyerhoff(7)	302,485	1.1	
Peter Mathews(8)	167,000	*	
Carl Everett, Jr.(9)	100,000	*	
James A. Prestridge(10)	13,748	*	
Joseph R. Bronson(11)	—	*	
All current executive officers and directors as a group (14 persons)(12)	15,454,435	53.7	

---

\* Represents beneficial ownership of less than 1%.

- (1) Includes 2,500,000 shares held by Susan Bloch, Dr. Khandros' spouse, 500,000 shares held by The Khandros 1997 Trust I U/T/A dated March 28, 1997 and 500,000 shares held by The Khandros 1997 Trust II U/T/A dated March 28, 1997. Also includes 100,000 unvested shares that will be, within 60 days of March 30, 2002, subject to our lapsing right of repurchase at the initial purchase price for these shares.
- (2) Includes 160,361 shares held by Dr. Davidow, one of our directors, which includes 93,750 unvested shares that are, as of March 30, 2002, subject to our lapsing right of repurchase at the initial purchase price for these shares. Also includes 75,000 shares held by Chachagua Partnership, of which Dr. Davidow is a general partner. Also includes 4,905,082 shares held by Mohr, Davidow Ventures IV, L.P. and 187,838 shares held by MDV IV Entrepreneurs' Network Fund, L.P. Dr. Davidow is a general partner of Mohr, Davidow Ventures IV, L.P. and MDV IV Entrepreneurs' Network Fund, L.P. Dr. Davidow disclaims beneficial ownership of the shares held by these funds except to the extent of his pecuniary interest in these funds. The address of these funds and Dr. Davidow is 2775 Sand Hill Road, Suite 240, Menlo Park, California 94025.
- (3) Includes 2,168,636 shares held by Institutional Venture Partners VII, L.P., 81,027 shares held by IVP Founders Fund I, L.P., and 36,636 shares held by Institutional Venture Management VII, L.P. Institutional Venture Management VI, L.P. is the general partner of IVP Founders Fund I, L.P. and Institutional Venture Management VII, L.P. is the general partner of Institutional Venture Partners VII, L.P. Also includes 35,000 shares held by T. Peter Thomas, who is a general partner of Institutional Venture Management VI, L.P. and Institutional Venture Management VII, L.P. The address of these funds and Mr. Thomas is 3000 Sand Hill Road, Building 2, Suite 290, Menlo Park, California 94025.
- (4) Represents 1,881,654 shares held by Morgan Stanley Venture Partners III, L.P., 180,666 shares held by Morgan Stanley Venture Investors III, L.P. and 20,000 shares held by Morgan Stanley Venture Partners III, L.L.C. Morgan Stanley Venture Partners III, L.L.C. is the general partner of each of Morgan Stanley Venture Partners III, L.P. and Morgan Stanley Venture Investors III, L.P. Dr. Harding, one of our directors, is a managing member of Morgan Stanley Venture Partners III, L.L.C. Dr. Harding disclaims beneficial ownership of the shares held by these funds except to the extent of his pecuniary interest in these funds. The address of these funds is 1585 Broadway, 38th floor, New York, New York 10036.
- (5) Includes 222,105 shares issuable upon exercise of options that are exercisable within 60 days of March 30, 2002, of which 45,438 will be vested and 176,667 will be unvested.
- (6) Includes 163,770 shares issuable upon exercise of options that are exercisable within 60 days of March 30, 2002, of which 45,103 will be vested and 118,667 will be unvested.
- (7) Includes 202,485 shares issuable upon exercise of options that are exercisable within 60 days of March 30, 2002, of which 10,439 will be vested and 192,046 will be unvested. Also includes 28,030 unvested shares that are, as of March 30, 2002, subject to our lapsing right of repurchase at the initial purchase price for these shares.
- (8) Includes 114,500 shares issuable upon exercise of options that are exercisable within 60 days of March 30, 2002, of which 38,082 will be vested and 76,418 will be unvested.
- (9) Includes 50,000 shares issuable upon exercise of options that are exercisable within 60 days of March 30, 2002, of which 11,458 will be vested and 38,542 will be unvested. Also includes 6,563 unvested shares that are, as of March 30, 2002, subject to our lapsing right of repurchase at the initial purchase price for these shares.
- (10) Represents 13,748 shares of common stock held of record by the Prestridge 1989 Family Trust. Excludes 50,000 shares issuable upon exercise of options that are exercisable within 60 days of March 30, 2002. The options were granted when Mr. Prestridge joined our board of directors in April 2002.
- (11) Excludes 50,000 shares issuable upon exercise of options that are exercisable within 60 days of March 30, 2002. The options were granted when Mr. Bronson joined our board of directors in April 2002.
- (12) Includes 238,491 unvested shares that are, as of March 30, 2002, subject to our lapsing right of repurchase at the initial purchase price for these shares, and 1,158,501 shares issuable upon exercise of options that are exercisable within 60 days of March 30, 2002, of which 243,088 will be vested and 915,413 will be unvested.



## DESCRIPTION OF CAPITAL STOCK

### General

Immediately following the closing of this offering, our authorized capital stock will consist of 250,000,000 shares of common stock, \$.001 par value per share, and 10,000,000 shares of undesignated preferred stock, \$.001 par value per share. As of March 30, 2002, we had outstanding 27,595,225 shares of our common stock, assuming the automatic conversion of all outstanding preferred stock into common stock, which will occur upon the closing of this offering. As of March 30, 2002, we had 261 stockholders of record.

### Common Stock

#### *Dividend Rights*

Subject to preferences that may apply to shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to received dividends out of assets legally available at the times and in the amounts that our board of directors may determine from time to time.

#### *Voting Rights*

Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. We have not provided for cumulative voting for the election of directors in our certificate of incorporation. This means that the holders of a majority of the shares voted can elect all of the directors then standing for election. In addition, our certificate of incorporation and bylaws provide that certain actions require the approval of two-thirds, rather than a majority, of the shares entitled to vote. For a description of these actions, see “— Anti-Takeover Effects of Delaware Law and our Certificate of Incorporation and Bylaws.”

#### *No Preemptive, Conversion or Redemption Rights*

Our common stock is not entitled to preemptive rights and is not subject to conversion or redemption.

#### *Right to Receive Liquidation Distributions*

Upon our liquidation, dissolution or winding-up, the holders of common stock are entitled to share in all assets remaining after payment of all liabilities and the liquidation preferences of any outstanding preferred stock. Each outstanding share of common stock is, and all shares of common stock to be issued in this offering when they are paid for will be, fully paid and nonassessable.

### Preferred Stock

Upon the closing of this offering, each outstanding share of our preferred stock will be converted into one share of common stock. Thereafter, our board of directors will be authorized, subject to limitations imposed by Delaware law, to issue up to a total of 10,000,000 shares of preferred stock in one or more series, without stockholder approval. Our board is authorized to establish from time to time the number of shares to be included in each series, and to fix the rights, preferences and privileges of the shares of each wholly unissued series and any of its qualifications, limitations or restrictions. Our board can also increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding, without any further vote or action by the stockholders.

The board may authorize the issuance of preferred stock with voting or conversion rights that could harm the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of FormFactor and might harm the market price of our common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

## Warrants

Warrants to purchase 132,439 shares of our common stock were outstanding at March 30, 2002, assuming the automatic conversion of our preferred stock into common stock upon the closing of this offering. The warrants that we issued are as follows:

- In April 1996, we issued warrants to purchase a total of 72,727 shares of our Series B preferred stock at an exercise price of \$1.65 per share. If not earlier exercised, these warrants will remain outstanding for the later of five years after the completion of this offering or April 2006.
- In June 1997, we issued a warrant to purchase 14,212 shares of our Series D preferred stock at an exercise price of \$3.45 per share. If not earlier exercised, this warrant will expire immediately prior to the completion of this offering.
- In September 2000, we issued a warrant to purchase 45,500 shares of our Series F preferred stock at an exercise price of \$11.00 per share. This warrant is first exercisable on September 22, 2005. This warrant will become exercisable earlier with respect to 22,750 shares on March 22, 2003 if, on or before that date, the warrant holder has achieved specified commercial milestones. Further, this warrant will become exercisable immediately with respect to all 45,500 shares if the warrant holder achieves certain higher commercial milestones. If not earlier exercised, this warrant will remain outstanding until September 23, 2005.

## Registration Rights

The holders of 16,949,543 shares of our common stock issuable upon the automatic conversion of our preferred stock and the holders of 132,439 shares of our common stock issuable upon exercise of warrants are entitled to rights with respect to the registration of their shares under the Securities Act. These registration rights are contained in our sixth amended and restated investors' rights agreement and in stockholder's agreements. The holders of 16,737,879 shares of our common stock, including common stock issuable upon conversion of our preferred stock and upon the exercise of warrants, have demand, piggyback and Form S-3 registration rights pursuant to the investors' rights agreement as described below. The holders of 344,103 shares of our common stock that are issuable upon conversion of our preferred stock have piggyback registration rights pursuant to the stockholders' agreements as described below. The registration rights under the investors' rights agreement will expire five years following the completion of this offering, or for any particular stockholder with registration rights, at such time following this offering when that stockholder holds shares of our common stock equal to or less than one percent of the then outstanding capital stock of our company. The piggyback registration rights under the stockholder's agreements expire upon the written agreement of the parties to those agreements.

### *Demand Registration Rights*

At any time following the earlier of December 31, 2002 and six months after the closing of this offering, the holders of at least 40% of our then outstanding shares of common stock having demand registration rights under the investors' rights agreement have the right to require that we register all or a portion of their shares. We are only obligated to effect two registrations in response to these demand registration rights. Each demand registration right exercised must cover a sale of securities with a total public offering price of at least \$10.0 million. We may postpone the filing of a registration statement for up to 120 days once in any 12-month period if we determine that the filing would be materially detrimental to us and our stockholders. The underwriters of any underwritten offering have the right to limit the number of shares to be included in a registration statement filed in response to the exercise of these demand registration rights. We must pay all expenses, except for underwriters' discounts and commissions, incurred in connection with these demand registration rights, except that we are not required to pay for expenses incurred if the holders of these rights subsequently withdraw their request for registration.

### ***Piggyback Registration Rights***

If we register any securities for public sale, the stockholders with piggyback registration rights under the investors' rights agreement have the right to include their shares in the registration, subject to specified exceptions. The underwriters of any underwritten offering have the right to limit the number of shares registered by these holders due to marketing reasons. We must pay all expenses, except for underwriters' discounts and commissions, incurred in connection with these piggyback registration rights.

Under the stockholder's agreements, the stockholders with piggyback registration rights have the right to include their shares in any registration under the Securities Act which we effect, subject to specified exceptions. The underwriters of any underwritten offering have the right to limit the number of shares registered by these holders due to marketing reasons. We must pay all expenses, except for underwriters' discounts and commissions and the expenses of legal counsel for the selling stockholders, incurred in connection with these piggyback registration rights.

### ***Form S-3 Registration Rights***

If we are eligible to file a registration statement on Form S-3, holders of shares of our common stock having Form S-3 registration rights under the investors' rights agreement can request that we register their shares, provided that the stockholders making the request hold at least one percent of the then outstanding capital stock of our company and the total price of the shares of common stock offered to the public is at least \$1.0 million. These holders may only require us to file one Form S-3 registration statement in any 12-month period, and we are not required to file a registration statement on Form S-3 if we have already effected two registrations on Form S-3 at the request of the holders of shares having these registration rights. We may postpone the filing of a registration statement for up to 90 days once in any 12-month period if we determine that the filing would be materially detrimental to us and our stockholders. We must pay all expenses, except for underwriters' discounts and commissions, for two registrations on Form S-3.

### **Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws**

The provisions of Delaware law, our certificate of incorporation and our bylaws described below may have the effect of delaying, deferring or discouraging another party from acquiring control of us.

#### ***Delaware Law***

We will be subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, those provisions prohibit a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless:

- the transaction is approved by the board before the date the interested stockholder attained that status;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced; or
- on or after the date the business combination is approved by the board and authorized at a meeting of stockholders by at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines "business combination" to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;

## [Table of Contents](#)

- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by any of these entities or persons.

A Delaware corporation may opt out of this provision either with an express provision in its original certificate of incorporation or in an amendment to its certificate of incorporation or bylaws approved by its stockholders. However, we have not opted out of this provision. The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us.

### ***Charter and Bylaws***

Following the completion of this offering, our certificate of incorporation and bylaws will provide that:

- no action can be taken by stockholders except at an annual or special meeting of the stockholders called in accordance with our bylaws, and stockholders may not act by written consent;
- the approval of holders of two-thirds of the shares entitled to vote at an election of directors will be required to adopt, amend or repeal our bylaws or amend or repeal the provisions of our certificate of incorporation regarding the election and removal of directors and the ability of stockholders to take action;
- our board of directors will be expressly authorized to make, alter or repeal our bylaws;
- stockholders may not call special meetings of the stockholders or fill vacancies on the board;
- our board of directors will be divided into three classes serving staggered three-year terms. This means that only one class of directors will be elected at each annual meeting of stockholders, with the other classes continuing for the remainder of their respective terms;
- our board of directors will be authorized to issue preferred stock without stockholder approval;
- directors may only be removed for cause by the holders of two-thirds of the shares entitled to vote at an election of directors; and
- we will indemnify officers and directors against losses that they may incur in investigations and legal proceedings resulting from their services to us, which may include services in connection with takeover defense measures.

### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is EquiServe Trust Company, N.A.

### **Listing**

We have applied to list our common stock for quotation on the Nasdaq National Market under the trading symbol FORM.

**SHARES ELIGIBLE FOR FUTURE SALE**

Before this offering, there has not been a public market for our common stock. Future sales of substantial amounts of our common stock, including shares issued upon exercise of outstanding options and warrants, in the public markets after this offering could adversely affect market prices prevailing from time to time. As described below, only a limited number of shares currently outstanding will be available for sale immediately after this offering due to contractual and legal restrictions on resale. Nevertheless, future sales of substantial amounts of our common stock, including shares issued upon exercise of outstanding options and warrants, in the public market after the restrictions lapse, or the possibility of the sales, could cause the prevailing market price of our common stock to fall or impair our ability to raise equity capital in the future.

Upon completion of this offering, we will have outstanding \_\_\_\_\_ shares of our common stock assuming the automatic conversion of all of our outstanding preferred stock, or \_\_\_\_\_ shares if the underwriters' over-allotment option is exercised in full, assuming that there are no exercises of outstanding options or warrants after March 30, 2002. Of these \_\_\_\_\_ shares, all of the \_\_\_\_\_ shares sold in this offering will be freely tradable in the public market without restriction or further registration under the Securities Act, unless these shares are held by "affiliates," as that term is defined in Rule 144 under the Securities Act or are purchased through the directed share program in this offering. For purposes of Rule 144, an "affiliate" of an issuer is a person that, directly or indirectly through one or more intermediaries, controls, or is controlled by or is under common control with, the issuer. Shares purchased by an affiliate may not be resold except pursuant to an effective registration statement or an exemption from registration, including the exemption under Rule 144 of the Securities Act described below. Shares purchased through the directed share program in this offering will be subject to the lock-up agreement described below. Up to approximately \_\_\_\_\_ shares are reserved for the directed share program. The remaining \_\_\_\_\_ shares of our common stock held by existing stockholders are "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities may be sold in the public market only if they are registered or if they qualify for an exemption from registration under Rule 144 or 701 under the Securities Act. These rules are summarized below. Subject to the lock-up agreements described below and the provisions of Rule 144 and Rule 701, these restricted securities will be available for sale in the public market as follows:

Number of Shares	Date
No shares	On the date of this prospectus
_____ shares	180 days after the date of this prospectus
_____ shares	At various times beginning more than 180 days after the date of this prospectus

In addition, based on options and warrants outstanding as of March 30, 2002, after this offering, 4,148,043 shares will be subject to outstanding options and warrants, of which approximately \_\_\_\_\_ will be vested and exercisable 180 days after this offering.

**Lock-Up Agreements**

All of our officers and directors and substantially all of our other stockholders have agreed, subject to limited exceptions, not to offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any of their shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock; or enter into any swap or other arrangement that transfers to another, in whole or in part, any economic consequences of ownership of our common stock during the period ending 180 days after the date of this prospectus without the prior written consent of Morgan Stanley & Co. Incorporated, on behalf of the underwriters. These restrictions will also apply to the shares purchased in our directed share program. These restrictions do not apply to transactions relating to our common stock or other securities acquired in this offering or acquired in open market transactions after this offering.

**Rule 144**

In general, under Rule 144 as currently in effect, beginning 90 days after the date of this prospectus, a person who has beneficially owned shares of our common stock for at least one year from the later of the date

## [Table of Contents](#)

those shares of common stock were acquired from us or from an affiliate of ours would be entitled to sell, within any three-month period, a number of shares that is not more than the greater of:

- 1% of the number of shares of common stock then outstanding, which will equal approximately \_\_\_\_\_ shares immediately after this offering; or
- the average weekly trading volume of our common stock on the Nasdaq National Market during the four calendar weeks before a notice of the sale on Form 144 is filed.

Sales under Rule 144 are also subject to manner of sale provisions, notice requirements and the availability of current public information about us.

### **Rule 144(k)**

In addition, under Rule 144(k), a person who is not one of our affiliates at any time during the three months preceding a sale, and who has beneficially owned the shares proposed to be sold for at least two years from the later of the date these shares of our common stock were acquired from us or from an affiliate of ours, including the holding period of any prior owner other than an affiliate, is entitled to sell those shares without complying with the manner of sale, public information, volume limitation or notice provisions of Rule 144. Therefore, unless otherwise restricted pursuant to the lock-up agreements, those shares may be sold immediately upon the completion of this offering.

### **Rule 701**

Any employee, officer or director of, or consultant to us who purchased his shares under a written compensatory plan or contract may be entitled to sell his shares in reliance on Rule 701. Rule 701 permits affiliates to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. Rule 701 further provides that non-affiliates may sell these shares in reliance on Rule 144 without have to comply with the holding period, public information, volume, limitation or notice provisions of Rule 144. All holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling those shares. However, all shares issued under Rule 701 are subject to lock-up agreements and will only become eligible for sale when the 180-day lock-up agreements expire.

### **Stock Options**

Based on options granted as of March 30, 2002, we intend to file a registration statement on Form S-8 under the Securities Act covering 11,009,895 shares of our common stock subject to options outstanding or reserved for issuance under our 1995 stock plan, 1996 stock option plan, incentive option plan, management incentive option plan, 2002 equity incentive plan and 2002 employee stock purchase plan, and shares of our common stock issued upon exercise of options by employees. We expect to file this registration statement as soon as practicable after this offering. In addition, we will file a registration statement on Form S-8 or such other form as may be required under the Securities Act for the resale of shares of our common stock issued upon the exercise of options that were granted under the management incentive option plan but that were not granted under Rule 701. We expect to file this registration statement as soon as permitted under the Securities Act. However, none of the shares registered on Form S-8 will be eligible for resale until expiration of the 180-day lock-up agreements to which they are subject.

### **Registration Rights**

Upon completion of this offering, the holders of 16,949,543 shares of our common stock issuable upon the automatic conversion of our preferred stock and the holders of 132,439 shares of our common stock issuable upon exercise of warrants, may demand that we register their shares under the Securities Act or, if we file another registration statement under the Securities Act, may elect to include their shares in such registration. If these shares are registered, they will be freely tradable without restriction under the Securities Act. For additional information, see "Description of Capital Stock — Registration Rights."

**UNDERWRITERS**

Under the terms and subject to the conditions contained in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. Incorporated, Lehman Brothers Inc., Banc of America Securities LLC and Thomas Weisel Partners LLC are acting as representatives, have each agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

Name	Number of Shares
Morgan Stanley & Co. Incorporated	
Lehman Brothers Inc.	
Banc of America Securities LLC	
Thomas Weisel Partners LLC	
<b>Total</b>	—

The underwriters and the representatives are collectively referred to as the “underwriters” and the “representatives,” respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters’ over-allotment option described below.

The per share price of any shares sold by the underwriters will be the initial public offering price listed on the cover page of this prospectus, less an amount not greater than the per share amount of the concession to dealers described below.

The table below shows the per share and total underwriting discounts and commissions we will pay the underwriters. These amounts are shown assuming both no exercise and full exercise of the underwriters’ option to purchase additional shares.

Per Share	No Exercise	Full Exercise
Total	\$	\$

The underwriters initially propose to offer part of the shares of common stock directly to the public at the initial public offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of \$ a share under the initial public offering price. Any underwriter may allow, and such dealers may reallocate, a concession not in excess of \$ a share to other underwriters or to certain dealers. After the initial offering of the shares of common stock, the offering price and other selling terms may from time-to-time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to an aggregate of additional shares of common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter’s name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding

## [Table of Contents](#)

table. If the underwriters' option is exercised in full, the total price to the public would be \$ , the total underwriters' discounts and commissions would be \$ and the total proceeds to us would be \$ .

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed five percent of the total number of shares offered by them.

We estimate that the total expenses of the offering payable by us, excluding underwriting discounts and commissions, will be approximately \$ million. Expenses include the Securities and Exchange Commission and NASD filing fees, Nasdaq National Market listing fees, printing, legal, accounting and transfer agent and registrar fees, premiums of approximately \$ for directors' and officers' insurance that we intend to obtain to cover our directors and officers for certain liabilities, including coverage for public securities matters, and other miscellaneous fees and expenses.

Each of our directors, executive officers and substantially all of our other stockholders have agreed that, without the prior written consent of Morgan Stanley & Co. Incorporated on behalf of the underwriters, it will not, during the period ending 180 days after the date of this prospectus:

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock,

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise.

The restrictions described in the immediately preceding paragraph do not apply to:

- the sale of any shares of common stock to the underwriters;
- transactions relating to shares of common stock or other securities acquired in this offering or thereafter acquired in open market transactions;
- the transfer of shares of common stock or other securities by gift;
- the distribution of shares of common stock or other securities to partners, members or stockholders;
- the transfer of shares of common stock or other securities to affiliates of stockholders that are corporations; and
- acquisitions from us of any shares of common stock or other securities,

provided that in the case of each of the last four transactions, each donee, distributee, transferee and recipient agrees to be subject to the restrictions described in the immediately preceding paragraph and no filing under Section 16 of the Exchange Act is required in connection with these transactions.

In order to facilitate this offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. In addition, to stabilize



## [Table of Contents](#)

the price of the common stock, the underwriters may bid for, and purchase, shares of common stock in the open market. Finally, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the common stock in this offering, if the syndicate repurchases previously distributed common stock to cover syndicate short positions or to stabilize the price of the common stock. Any of these activities may stabilize or maintain the market price of the common stock above independent market levels. The underwriters are not required to engage in these activities, and may end any of these activities at any time.

It is anticipated that Morgan Stanley DW Inc., an affiliate of Morgan Stanley & Co. Incorporated, through Morgan Stanley Online, its online service, may be a member of the syndicate and engage in electronic offers, sales and distribution of the shares being offered. A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters. The underwriters may agree to allocate a number of shares to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the lead manager to underwriters that may make Internet distributions on the same basis as other allocations.

Certain entities affiliated with Morgan Stanley & Co. Incorporated, one of the underwriters of this offering, were some of our original investors and continue to hold shares of our capital stock. Morgan Stanley Ventures Partners III, L.P. holds 1,881,654 shares of our preferred stock, Morgan Stanley Venture Investors III, L.P. holds 180,666 shares of our preferred stock and Morgan Stanley Venture Partners III, L.L.C. holds 20,000 shares of our common stock. These entities acquired these shares between April 1997 and August 1999 at an aggregate cost of \$7,266,007. Upon the automatic conversion of the preferred stock into common stock upon the completion of this offering, these entities will own a total of 2,082,320 shares of our common stock. Morgan Stanley Venture Partners III, L.L.C. is the general partner of both Morgan Stanley Venture Partners III, L.P. and Morgan Stanley Venture Investors III, L.P. Morgan Stanley Venture Capital III, Inc., a wholly owned subsidiary of Morgan Stanley Dean Witter & Co., is the institutional managing member of Morgan Stanley Venture Partners III, L.L.C. One of our directors, Dr. William Harding, is a managing member of Morgan Stanley Venture Partners III, L.L.C.

We maintain accounts with Morgan Stanley for which it receives customary fees and commissions.

The underwriters and we have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

At our request, the underwriters have reserved for sale, at the initial public offering price, up to \_\_\_\_\_ shares offered by this prospectus to our employees. We will pay all fees and disbursements of counsel incurred by the underwriters in connection with offering the shares to such persons. The number of shares of common stock available for sale to the general public will be reduced to the extent such persons purchase such reserved shares. Any reserved shares, which are not so purchased, will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus.

### **Pricing of the Offering**

Prior to this offering, there has been no public market for the common stock. The initial public offering price will be determined by negotiations between us and the representatives. Among the factors to be considered in determining the initial public offering price will be our future prospects and those of our industry in general; our sales, earnings and certain other financial and operating information in recent periods; and the price-earnings ratios, price-sales ratios and market prices of securities and certain financial and operating information of companies engaged in activities similar to ours.

### **LEGAL MATTERS**

Fenwick & West LLP, Palo Alto, California, will pass upon the validity of the issuance of the shares of common stock offered by this prospectus. Gray Cary Ware & Freidenrich LLP, Palo Alto, California, will pass upon legal matters for the underwriters. As of the date of this prospectus, two investment entities affiliated with Fenwick & West LLP beneficially owned an aggregate of 23,674 shares of our common stock.

## EXPERTS

The consolidated financial statements of FormFactor, Inc. as of December 30, 2000 and December 29, 2001, and for each of the three years in the period ended December 29, 2001 included in this prospectus have been so included in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

## WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the Securities and Exchange Commission a registration statement on Form S-1, including exhibits, under the Securities Act with respect to the common stock to be sold in this offering. This prospectus, which constitutes a part of the registration statement, does not contain all of the information in the registration statement or the exhibits. Statements made in this prospectus regarding the contents of any contract, agreement or other document are only summaries. With respect to each contract, agreement or other document filed as an exhibit to the registration statement, we refer you to the exhibit for a more complete description of the matter involved. You may read and copy all or any portion of the registration statement or any reports, statements or other information in the files at the public reference facility of the Securities and Exchange Commission located at Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549.

You can request copies of these documents upon payment of a duplicating fee by writing to the Securities and Exchange Commission. You may call the Securities and Exchange Commission at 1-800-SEC-0330 for further information on the operation of its public reference room. Our filings, including the registration statement, will also be available to you on the website maintained by the Securities and Exchange Commission at <http://www.sec.gov>.

We intend to furnish our stockholders with annual reports containing consolidated financial statements audited by our independent auditors, and to make available to our stockholders quarterly reports for the first three quarters of each year containing unaudited interim consolidated financial statements.

**FORMFACTOR, INC.**

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

	<u>Page</u>
Report of Independent Accountants	F-2
Consolidated Balance Sheets	F-3
Consolidated Statements of Operations	F-4
Consolidated Statements of Stockholders' Deficit	F-5
Consolidated Statements of Cash Flows	F-6
Notes to Consolidated Financial Statements	F-7

**REPORT OF INDEPENDENT ACCOUNTANTS**

The Board of Directors and Stockholders of

FormFactor, Inc.

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of FormFactor, Inc. (the "Company") and its subsidiaries at December 30, 2000 and December 29, 2001, and the results of their operations and their cash flows for each of the three years in the period ended December 29, 2001 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America, which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

PRICEWATERHOUSECOOPERS LLP

San Jose, California

February 15, 2002, except for Note 14,  
as to which the date is April 18, 2002

FORMFACTOR, INC.

CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share data)

	December 30, 2000	December 29, 2001	March 30, 2002	Pro Forma at March 30, 2002 (see Note 2)
(unaudited)				
<b>ASSETS</b>				
Current assets:				
Cash and cash equivalents	\$ 11,934	\$ 20,565	\$ 17,693	
Short-term investments	4,963	7,011	12,316	
Accounts receivable, net of allowance for doubtful accounts of \$580 in 2000, \$414 in 2001 and \$430 (unaudited) in 2002	12,198	11,863	11,301	
Inventories, net	2,837	2,390	3,298	
Prepaid expenses and other current assets	1,287	1,813	2,391	
Total current assets	33,219	43,642	46,999	
Property and equipment, net	13,545	17,998	17,223	
Other assets	735	624	570	
Total assets	\$ 47,499	\$ 62,264	\$ 64,792	
<b>LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)</b>				
Current liabilities:				
Bank line of credit	\$ —	\$ —	\$ 375	
Notes payable, current portion	1,572	560	529	
Accounts payable	4,303	5,549	5,250	
Accrued liabilities	3,541	5,849	6,047	
Deferred revenue	412	610	1,306	
Total current liabilities	9,828	12,568	13,507	
Notes payable, less current portion	521	1,167	1,000	
Deferred revenue	607	910	837	
Total liabilities	10,956	14,645	15,344	
Commitments and contingencies (Note 6)				
Redeemable convertible preferred stock, \$0.001 par value:				
Authorized: 24,679,840 shares				
Issued and outstanding: 22,314,871 shares in 2000, 22,994,543 shares in 2001 and 2002 (unaudited) and none pro forma (unaudited) (Liquidation preferences: \$55,691, \$65,886 and \$65,886 at December 30, 2000, December 29, 2001 and March 30, 2002 (unaudited), respectively)				
	54,823	64,895	64,895	\$ —
Redeemable convertible preferred stock warrants	306	306	306	—
	55,129	65,201	65,201	—
Stockholders' equity (deficit):				
Common stock, \$0.001 par value:				
Authorized: 37,000,000 shares				
Issued and outstanding: 4,458,287 shares in 2000, 4,578,450 shares in in 2001, 4,600,682 shares in 2002 (unaudited) and 27,595,225 shares pro forma (unaudited)				
	4	5	5	28
Additional paid-in capital	5,529	10,026	11,942	77,120
Notes receivable from stockholders	(3,961)	(3,818)	(3,465)	(3,465)
Deferred stock-based compensation, net	(184)	(4,071)	(5,357)	(5,357)
Accumulated deficit	(19,974)	(19,724)	(18,878)	(18,878)
Total stockholders' equity (deficit)	(18,586)	(17,582)	(15,753)	\$ 49,448
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	\$ 47,499	\$ 62,264	\$ 64,792	

The accompanying notes are an integral part of these consolidated financial statements.

**FORMFACTOR, INC.**
**CONSOLIDATED STATEMENTS OF OPERATIONS**

(in thousands, except per share data)

	Years Ended			Three Months Ended	
	December 25, 1999	December 30, 2000	December 29, 2001	March 31, 2001	March 30, 2002
				(unaudited)	
Revenues	\$35,722	\$56,406	\$73,433	\$19,849	\$17,288
Cost of revenues	20,420	28,243	38,385	10,410	8,859
Gross margin	15,302	28,163	35,048	9,439	8,429
Operating expenses:					
Research and development(1)	9,466	11,995	14,619	4,073	3,249
Selling, general and administrative(1)	11,020	15,434	18,500	4,730	3,992
Stock-based compensation	341	259	469	58	165
Restructuring charges	—	—	1,380	—	—
Total operating expenses	20,827	27,688	34,968	8,861	7,406
Operating income (loss)	(5,525)	475	80	578	1,023
Interest income	792	1,258	989	246	189
Interest expense	(724)	(661)	(170)	(113)	(17)
Other income (expense), net	(187)	1,122	(342)	(207)	(17)
	(119)	1,719	477	(74)	155
Income (loss) before income taxes	(5,644)	2,194	557	504	1,178
Provision for income taxes	—	(115)	(307)	(207)	(332)
Net income (loss)	\$ (5,644)	\$ 2,079	\$ 250	\$ 297	\$ 846
Net income (loss) per share:					
Basic	\$ (2.16)	\$ 0.61	\$ 0.06	\$ 0.08	\$ 0.19
Diluted	\$ (2.16)	\$ 0.08	\$ 0.01	\$ 0.01	\$ 0.03
Weighted-average number of shares used in per share calculations:					
Basic	2,609	3,408	4,029	3,790	4,381
Diluted	2,609	26,821	28,994	27,924	29,813
Pro forma net income per share (unaudited) (see Note 12):					
Basic			\$ 0.01		\$ 0.03
Diluted			\$ 0.01		\$ 0.03
Weighted-average number of shares used in pro forma per share calculations (unaudited) (see Note 12):					
Basic			27,024		27,376
Diluted			28,994		29,813
(1) Amounts exclude stock-based compensation, as follows:					
Cost of revenues	\$ —	\$ —	\$ 27	\$ —	\$ 22
Research and development	29	61	139	11	3
Selling, general and administrative	312	198	303	47	140
Total	\$ 341	\$ 259	\$ 469	\$ 58	\$ 165

The accompanying notes are an integral part of these consolidated financial statements.

FORMFACTOR, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT

For the Years Ended December 25, 1999, December 30, 2000 and  
December 29, 2001 and the Three Months Ended March 30, 2002  
(in thousands, except share data)

	Common Stock		Additional Paid-in Capital	Notes Receivable from Stockholders	Deferred Stock-based Compensation	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount					
Balances, December 26, 1998	4,079,345	\$ 4	\$ 2,285	\$(1,769)	\$ —	\$(16,409)	\$(15,889)
Repayment of notes receivable from stockholders	—	—	—	11	—	—	11
Issuance of common stock pursuant to exercise of options for cash and notes receivable	411,162	—	861	(778)	—	—	83
Repurchase of common stock in connection with cancellation of notes receivable from stockholders	(134,272)	—	(40)	40	—	—	—
Repurchase of common stock	(49,688)	—	(188)	—	—	—	(188)
Deferred stock-based compensation	—	—	525	—	(525)	—	—
Recognition of stock-based compensation	—	—	—	—	341	—	341
Net loss	—	—	—	—	—	(5,644)	(5,644)
Balances, December 25, 1999	4,306,547	4	3,443	(2,496)	(184)	(22,053)	(21,286)
Issuance of common stock pursuant to exercise of options for cash and notes receivable	509,275	—	2,189	(2,014)	—	—	175
Issuance of common stock for services provided	18,043	—	100	—	—	—	100
Repurchase of common stock in connection with cancellation of notes receivable from stockholders	(375,578)	—	(462)	462	—	—	—
Repayment of notes receivable from stockholders	—	—	—	87	—	—	87
Deferred stock-based compensation	—	—	259	—	(259)	—	—
Recognition of stock-based compensation	—	—	—	—	259	—	259
Net income	—	—	—	—	—	2,079	2,079
Balances, December 30, 2000	4,458,287	4	5,529	(3,961)	(184)	(19,974)	(18,586)
Issuance of common stock pursuant to exercise of options for cash and notes receivable	168,229	1	341	(43)	—	—	299
Issuance of common stock for services provided	2,462	—	15	—	—	—	15
Repurchase of common stock in connection with cancellation of notes receivable from stockholders	(50,528)	—	(215)	186	—	—	(29)
Deferred stock-based compensation	—	—	4,356	—	(4,356)	—	—
Recognition of stock-based compensation	—	—	—	—	469	—	469
Net income	—	—	—	—	—	250	250
Balances, December 29, 2001	4,578,450	5	10,026	(3,818)	(4,071)	(19,724)	(17,582)
Repayment of notes receivable from stockholders (unaudited)	—	—	—	8	—	—	8
Issuance of common stock pursuant to exercise of options for cash (unaudited)	150,494	—	810	—	—	—	810
Repurchase of common stock in connection with cancellation of notes receivable from stockholders (unaudited)	(128,262)	—	(345)	345	—	—	—
Deferred stock-based compensation (unaudited)	—	—	1,451	—	(1,451)	—	—
Recognition of stock-based compensation (unaudited)	—	—	—	—	165	—	165
Net income (unaudited)	—	—	—	—	—	846	846
Balances, March 30, 2002 (unaudited)	4,600,682	\$ 5	\$ 11,942	\$(3,465)	\$(5,357)	\$(18,878)	\$(15,753)

The accompanying notes are an integral part of these consolidated financial statements.

FORMFACTOR, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Years Ended			Three Months Ended	
	December 25, 1999	December 30, 2000	December 29, 2001	March 31, 2001	March 30, 2002
				(unaudited)	
<b>Cash flows from operating activities:</b>					
Net income (loss)	\$ (5,644)	\$ 2,079	\$ 250	\$ 297	\$ 846
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:					
Depreciation and amortization	2,407	3,636	4,745	1,073	1,303
Stock-based compensation expense	341	259	469	58	165
Common stock issued for services provided	—	100	15	—	—
Interest income from stockholders' notes receivable	(120)	(140)	(257)	(64)	(65)
Provision for doubtful accounts	200	(32)	(166)	206	16
Provision for excess and obsolete inventories	3,623	2,227	969	694	143
Loss on disposal of property and equipment	—	—	194	—	—
Non-cash restructuring expenses	—	—	277	—	—
Changes in assets and liabilities:					
Accounts receivable	(720)	(7,903)	501	(2,733)	546
Inventories	(4,432)	(3,146)	(522)	(477)	(1,051)
Prepays and other current assets	(561)	(109)	(268)	(124)	(513)
Accounts payable	6	2,720	1,246	(1,633)	(299)
Accrued liabilities	975	1,349	2,307	1,065	198
Deferred revenues	71	(105)	501	(9)	623
Net cash provided by (used in) operating activities	(3,854)	935	10,261	(1,647)	1,912
<b>Cash flows from investing activities:</b>					
Acquisition of property and equipment	(6,287)	(6,290)	(9,356)	(1,813)	(496)
Purchase of investments	(17,663)	(5,970)	(17,865)	(999)	(9,297)
Proceeds from maturities of investments	9,320	16,937	15,817	3,975	3,992
Other assets	(97)	(468)	(203)	(168)	22
Net cash provided by (used in) investing activities	(14,727)	4,209	(11,607)	995	(5,779)
<b>Cash flows from financing activities:</b>					
Proceeds from issuance of redeemable convertible preferred stock, net	19,950	6,910	10,072	—	—
Proceeds from issuance of common stock	83	175	299	72	810
Repayment of notes receivable from stockholders	11	87	—	—	8
Repurchase of common stock	(188)	—	(29)	—	—
Proceeds from issuance of notes payable	2,085	—	2,000	—	—
Proceeds from issuance of bank line of credit	1,975	—	—	—	375
Repayment of notes payable	(2,609)	(1,913)	(2,365)	(1,073)	(198)
Repayment of bank line of credit	(1,257)	(2,800)	—	—	—
Net cash provided by (used in) financing activities	20,050	2,459	9,977	(1,001)	995
Net increase (decrease) in cash and cash equivalents	1,469	7,603	8,631	(1,653)	(2,872)
Cash and cash equivalents, beginning of period	2,862	4,331	11,934	11,934	20,565
Cash and cash equivalents, end of period	\$ 4,331	\$ 11,934	\$ 20,565	\$ 10,281	\$ 17,693
<b>Non-cash financing activities:</b>					
Common stock issued for notes receivable	\$ 778	\$ 2,014	\$ 43	\$ —	\$ —
Repurchase of common stock in connection with cancellation of notes receivable from stockholders	\$ 40	\$ 462	\$ 186	\$ —	\$ 345
Deferred stock-based compensation	\$ 525	\$ 259	\$ 4,356	\$ 28	\$ 1,451
Issuance of warrants to purchase Series F redeemable convertible preferred stock	\$ —	\$ 306	\$ —	\$ —	\$ —
<b>Supplemental disclosure of cash flow information:</b>					
Interest paid	\$ 680	\$ 669	\$ 170	\$ 38	\$ 17
Income taxes paid	\$ 1	\$ 1	\$ 271	\$ 101	\$ 58

The accompanying notes are an integral part of these consolidated financial statements.



FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

**Note 1 — Formation and Business of the Company:**

FormFactor, Inc., (the "Company") was incorporated on April 15, 1993 to design, develop, manufacture, sell and support precision, high performance advanced semiconductor wafer probe cards. The Company is based in Livermore, California, home to its corporate offices, research and development, and manufacturing locations. The Company has offices in California, Japan, Hungary, Germany and Korea.

**Note 2 — Summary of Significant Accounting Policies:**

***Unaudited interim results***

The accompanying consolidated balance sheet as of March 30, 2002, the consolidated statements of operations and of cash flows for the three months ended March 31, 2001 and March 30, 2002 and the consolidated statement of stockholders' deficit for the three months ended March 30, 2002 are unaudited. The unaudited interim financial statements have been prepared on the same basis as the annual financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to present fairly the Company's financial position and results of operations and cash flows for the three months ended March 31, 2001 and March 30, 2002. The financial data and other information disclosed in these notes to financial statements related to the three-month periods are unaudited. The results for the three months ended March 30, 2002 are not necessarily indicative of the results to be expected for the year ending December 28, 2002 or for any other interim period or for any future year.

***Basis of consolidation and foreign currency translation***

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All material intercompany balances and transactions have been eliminated.

Translation adjustments resulting from the process of remeasuring into United States of America dollars the foreign currency financial statements of the Company's wholly owned subsidiaries for which the United States of America dollar is the functional currency are included in operations, if material.

***Unaudited pro forma stockholders' equity***

If the offering contemplated by this prospectus is consummated, all of the redeemable convertible preferred stock outstanding will automatically convert into 22,994,543 shares of common stock based on the shares of redeemable convertible preferred stock outstanding at March 30, 2002. Unaudited pro forma stockholders' equity, as adjusted for the assumed conversion of the redeemable convertible preferred stock, is set forth on the balance sheet.

***Use of estimates***

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

***Cash and cash equivalents***

The Company considers all highly liquid investments with original or remaining maturities of three months or less, at the date of purchase, to be cash equivalents. Cash and cash equivalents include money market and various deposit accounts.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

**Investments**

The Company has classified its investments as “available-for-sale.” Such investments are recorded at fair value and unrealized gains and losses, if material, are recorded as a separate component of stockholders’ equity (deficit) until realized. Realized gains and losses on sale of all such securities are reported in earnings, computed using the specific identification cost method and have not been significant to date.

**Inventories**

Inventories are stated at the lower of cost (principally standard cost which approximates actual cost on a first-in, first-out basis) or market value. Reserves for potentially excess and obsolete inventory are made based on management’s analysis of inventory levels and future sales forecasts.

The Company designs, manufactures and sells a fully custom product into a market that has been subject to cyclicity and significant demand fluctuations. Probe cards are complex products, custom to a specific chip design and have to be delivered on lead-times shorter than most manufacturers’ cycle times. It is therefore common to start production and to acquire production materials ahead of the receipt of an actual purchase order. Probe cards are manufactured in low volumes, therefore, material purchases are often subject to minimum purchase order quantities in excess of the actual demand. These factors make inventory valuation adjustments part of the normally occurring cost of revenue. The aggregate inventory valuation adjustments equal the additions to the inventory reserves and were \$3,623,000, \$2,227,000, \$4,504,000 and \$143,000 (unaudited) for the years ended December 25, 1999, December 30, 2000, December 29, 2001 and the three months ended March 30, 2002, respectively. The Company retains the excess inventory until the customer’s design is discontinued. The inventory may be used to satisfy customer warranty demand. When the customer’s design is discontinued, the Company disposes of any excess inventory. The Company disposed of inventories of \$3,535,000 in fiscal 2001 and did not dispose of any inventories in fiscal years 1999 and 2000 and in the period ended March 30, 2002 (unaudited).

**Property and equipment**

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation is provided on a straight-line method over the estimated useful lives of the assets, generally two to five years. Leasehold improvements are amortized over their estimated useful lives or the term of the related lease, whichever is less. Upon sale or retirement of assets, the cost and related accumulated depreciation or amortization are removed from the balance sheet and the resulting gain or loss is reflected in operations.

**Impairment of long-lived assets**

The Company reviews long-lived assets for impairment, whenever events or changes in circumstances indicate that the carrying amount of an asset might not be recoverable. When such an event occurs, management determines whether there has been an impairment by comparing the anticipated undiscounted future net cash flows to the related asset’s carrying value. If an asset is considered impaired, the asset is written down to fair value, which is determined based either on discounted cash flows or appraised value, depending on the nature of the asset.

**Concentration of credit risk and other risks and uncertainties**

The Company maintains its cash and cash equivalents in accounts with two major financial institutions in the United States and in countries where subsidiaries operate, in the form of demand deposits and money market accounts. Deposits in these banks may exceed the amounts of insurance provided on such deposits. The Company has not experienced any losses on its deposits of cash and cash equivalents.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Carrying amounts of certain of the Company's financial instruments including cash and cash equivalents, accounts receivable and accounts payable approximate fair value due to their short maturities. Based on borrowing rates currently available to the Company for loans with similar terms, the carrying value of notes payable approximate fair value. Estimated fair values for marketable securities, which are separately disclosed elsewhere, are based on quoted market prices for the same or similar instruments.

The Company markets and sells its technology to a narrow base of customers and generally does not require collateral. In fiscal year 1999, three customers accounted for approximately 30%, 17% and 15% of revenues. In fiscal year 2000, three customers accounted for approximately 25%, 21% and 17% of revenues. In fiscal year 2001, four customers accounted for approximately 26%, 20%, 16% and 12% of revenues. At December 30, 2000, four customers accounted for approximately 26%, 14%, 11% and 10% of accounts receivable. At December 29, 2001, three customers accounted for approximately 24%, 20% and 11% of accounts receivable.

The Company operates in the intensely competitive semiconductor industry, primarily dynamic random access memory, or DRAM, which has been characterized by price erosion, rapid technological change, short product life, cyclical market patterns and heightened foreign and domestic competition. Significant technological changes in the industry could affect operating results adversely.

Certain components that meet the Company's requirements are available only from a limited number of suppliers. The rapid rate of technological change and the necessity of developing and manufacturing products with short life-cycles may intensify these risks. The inability to obtain components as required, or to develop alternative sources, if and as required in the future, could result in delays or reductions in product shipments, which in turn could have a material adverse effect on the Company's business, financial condition, and results of operations.

**Revenue recognition**

The Company recognizes revenue upon shipment where there is a contract or purchase order, the fee is fixed or determinable and where collectibility of the resulting receivable is reasonably assured. Revenues from product sales to customers other than distributors are recognized upon shipment and reserves are provided for estimated returns and allowances. The Company defers recognition of revenue from distributors until the distributor confirms an order from its customer. The Company's distributors have no price protection rights or rights to return product, other than for warranty claims. Revenues from the licensing of the Company's design and manufacturing technology are recognized over the term of the license agreement or when the significant contractual obligations have been fulfilled.

**Research and development**

Research and development costs are charged to operations as incurred.

**Advertising costs**

Advertising costs, included in sales and marketing expenses, are expensed as incurred. Advertising expenses in 1999, 2000 and 2001 were \$249,000, \$301,000 and \$328,000, respectively.

**Income taxes**

The Company accounts for income taxes under the provisions of Statement of Financial Accounting Standards ("SFAS") No. 109, "Accounting for Income Taxes." Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

**Segments**

The Company operates in one segment, using one measurement of profitability to manage its business.

**Stock-based compensation**

The Company uses the intrinsic value method of Accounting Principles Board Opinion No. 25 ("APB No. 25"), "Accounting for Stock Issued to Employees," and Financial Accounting Standards Board Interpretation No. 44 ("FIN 44"), "Accounting for Certain Transactions Involving Stock Compensation, an Interpretation of APB No. 25," in accounting for its employee stock options, and presents disclosure of pro forma information required under SFAS No. 123 ("SFAS No. 123"), "Accounting for Stock-Based Compensation."

The Company accounts for equity instruments issued to non-employees in accordance with the provisions of SFAS No. 123 and Emerging Issues Task Force Issue No. 96-18, "Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services" which require that such equity instruments are recorded at their fair value on the measurement date. The measurement of stock-based compensation is subject to periodic adjustment as the underlying equity instruments vest.

**Net income (loss) per share**

Basic net income (loss) per share is computed by dividing net income (loss) by the weighted-average number of vested common shares outstanding for the period. Diluted net income (loss) per share is computed giving effect to all potential dilutive common stock, including options, warrants, common stock subject to repurchase and redeemable convertible preferred stock. For the year ended December 25, 1999, options, warrants, common stock subject to repurchase and redeemable convertible preferred stock were not included in the computation of diluted net loss per share because the effect would be antidilutive.

A reconciliation of the numerator and denominator used in the calculation of basic and diluted net income (loss) per share follows (in thousands):

	Years Ended			Three Months Ended	
	December 25, 1999	December 30, 2000	December 29, 2001	March 31, 2001	March 30, 2002
				(unaudited)	
<b>Numerator:</b>					
Net income (loss)	\$(5,644)	\$ 2,079	\$ 250	\$ 297	\$ 846
<b>Denominator:</b>					
Weighted-average common stock outstanding	4,235	4,262	4,557	4,505	4,632
Less: Weighted-average shares subject to repurchase	(1,626)	(854)	(528)	(715)	(251)
Weighted-average shares used in computing basic net income (loss) per share	2,609	3,408	4,029	3,790	4,381
Dilutive potential common shares used in computing diluted net income (loss) per share	—	23,413	24,965	24,134	25,432
Total weighted-average number of shares used in computing diluted net income (loss) per share	2,609	26,821	28,994	27,924	29,813

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following outstanding options, common stock subject to repurchase, redeemable convertible preferred stock and warrants were excluded from the computation of diluted net income (loss) per share as they had an antidilutive effect (in thousands):

	December 25, 1999	December 30, 2000	December 29, 2001	March 31, 2001	March 30, 2002
				(unaudited)	
Options to purchase common stock	1,889	392	1,164	—	—
Common stock subject to repurchase	1,318	—	—	—	—
Redeemable convertible preferred stock	21,355	—	—	—	—
Warrants	87	46	46	46	—

**Comprehensive income (loss)**

Comprehensive income (loss) generally represents all changes in stockholders' equity (deficit) except those resulting from investments or contributions by stockholders. The components of comprehensive income which are excluded from the net income (loss) are not significant, individually or in aggregate, and therefore, no separate statement of comprehensive income (loss) has been presented.

**Recent accounting pronouncements**

On January 1, 2001, the Company adopted SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities," which establishes accounting and reporting standards for derivative instruments and hedging activities. It requires that an entity recognize all derivatives as either assets or liabilities in the statement of financial position and measure those instruments at fair value. The Company, to date, has not engaged in derivative and hedging activities and therefore, the adoption had no impact on the Company's financial statements.

In July 2001, the FASB issued SFAS No. 141 "Business Combinations" ("SFAS No. 141") which establishes financial accounting and reporting for business combinations and supersedes APB Opinion No. 16, "Business Combinations," and FASB Statement No. 38, "Accounting for Preacquisition Contingencies of Purchased Enterprises." SFAS No. 141 requires that all business combinations be accounted for using one method, the purchase method. The provisions of SFAS No. 141 apply to all business combinations initiated after June 30, 2001. The Company adopted SFAS No. 141 during the first quarter of fiscal 2002, and the adoption of SFAS No. 141 had no material impact on financial reporting and related disclosures of the Company.

In October 2001, the FASB issued SFAS No. 144 ("SFAS No. 144"), "Accounting for the Impairment or Disposal of Long-Lived Assets," which is effective for fiscal years beginning after December 15, 2001 and interim periods within those fiscal periods. SFAS No. 144 supersedes FASB Statement No. 121 "Accounting for the Impairment or Disposal of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of," and parts of APB Opinion No. 30, "Reporting the Results of Operations-Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions Relating to Extraordinary Items," however, SFAS No. 144 retains the requirement of APB Opinion No. 30 to report discontinued operations separately from continuing operations and extends that reporting to a component of an entity that either has been disposed of (by sale, by abandonment, or in a distribution to owners) or is classified as held for sale. SFAS No. 144 addresses financial accounting and reporting for the impairment of certain long-lived assets and for long-lived assets to be disposed of. The Company does not expect the adoption of SFAS No. 144 to have a material impact on the Company's financial position and results of operations.

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

**Note 3 — Balance Sheet Components:**

At December 30, 2000 and December 29, 2001, the amortized cost basis of the available-for-sale securities represents the fair value of the investments, and there were no unrealized gains or losses (in thousands):

	December 30, 2000	December 29, 2001
<b>Short-term investments:</b>		
Commercial paper	\$2,974	\$3,989
Corporate bonds and notes	989	—
Term notes	1,000	1,025
US Government	—	1,997
	<u>\$4,963</u>	<u>\$7,011</u>

At December 29, 2001, the investments mature between January 2002 and November 2002.

At March 30, 2002 (unaudited), the fair value of the available-for-sale securities approximates the amortized cost basis of the securities.

Inventories, net of reserves, consisted of the following (in thousands):

	December 30, 2000	December 29, 2001	March 30, 2002
Raw materials	\$ 932	\$ 744	(unaudited) \$ 956
Work-in-progress	1,466	1,296	1,839
Finished goods	439	350	503
	<u>\$2,837</u>	<u>\$2,390</u>	<u>\$3,298</u>

Property and equipment consisted of the following (in thousands):

	December 30, 2000	December 29, 2001
Machinery and equipment	\$14,412	\$ 17,078
Computer equipment and software	3,730	5,176
Furniture and fixtures	468	599
Leasehold improvements	1,676	3,055
Construction in progress	1,503	4,560
	<u>21,789</u>	<u>30,468</u>
Less: Accumulated depreciation and amortization	(8,244)	(12,470)
	<u>\$13,545</u>	<u>\$ 17,998</u>

Depreciation and amortization of property and equipment for the years ended December 25, 1999, December 30, 2000 and December 29, 2001 was approximately \$2,407,000, \$3,345,000 and \$4,433,000, respectively.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Accrued liabilities consisted of the following (in thousands):

	December 30, 2000	December 29, 2001
Accrued compensation and benefits	\$1,552	\$2,622
Accrued commissions	673	690
Accrued restructuring	—	441
Other accrued expenses	1,316	2,096
	<u>\$3,541</u>	<u>\$5,849</u>

**Note 4 — Restructuring Charges and Expenses:**

During fiscal 2001, the Company recorded a restructuring charge of approximately \$1,400,000. The Company implemented the restructuring plan to better align the infrastructure with the market conditions in the semiconductor industry and to further focus the Company on the wafer probe card business. The restructuring charge consisted of \$880,000 for headcount reductions covering 14 employees in research and development, 23 employees in operations and 17 employees in selling, general and administrative. The majority of the affected employees were based in Livermore, California. Further, the Company recorded \$223,000 for the consolidation of excess facilities and \$277,000 for asset write-offs, primarily for property and equipment. The consolidation of excess facilities included the closure of certain corporate facilities that had been vacated. The charge of \$223,000 primarily related to lease termination and noncancelable lease costs. Property and equipment that was disposed of resulted in a charge of \$277,000 and primarily consisted of leasehold improvements for the excess facilities. As of December 29, 2001, \$441,000 of the \$1,400,000 restructuring charge remained accrued, primarily relating to ongoing scheduled severance payments and pending lease contract cancellations being executed under the restructuring plan. The Company anticipates that the restructuring payment obligations will be substantially complete by the end of the third quarter of fiscal 2002.

Information related to the restructuring plan follows (in thousands):

	Workforce Reductions	Lease Contractual Commitments	Facilities	Total
Restructuring provisions at August 16, 2001	\$ 880	\$223	\$ 277	\$1,380
Utilized:				
Non-cash	—	—	(277)	(277)
Cash	(615)	(47)	—	(662)
Restructuring liability at December 29, 2001	265	176	—	441
Utilized:				
Cash (unaudited)	(247)	(38)	—	(285)
Restructuring liability at March 30, 2002 (unaudited)	<u>\$ 18</u>	<u>\$138</u>	<u>\$ —</u>	<u>\$ 156</u>

**Note 5 — Notes Payable and Bank Line of Credit:**

In June 1997, the Company entered into two financing agreements with a financial institution which provided for borrowings up to \$1,600,000 and \$3,300,000 to purchase equipment. The agreements expired on March 31 and June 30, 1998, respectively. Prior to their expiration, the Company borrowed a total of \$4,526,000 under these agreements. During 2001, the Company paid off the remaining balances of the loans in their entirety.

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

In February 1999, the Company entered into a financing agreement, which provided for borrowings up to \$5,000,000 to purchase semiconductor assembly manufacturing and test equipment and expired on December 31, 1999. Prior to its expiration, the Company borrowed \$1,775,000 under this financing line. During 2001, the Company paid off the remaining balance of the loan in its entirety.

In June 1999, the Company entered into a note payable agreement to finance the acquisition and installation of software. The Company borrowed a total of \$311,000 under this agreement. All borrowings are repayable in 12 equal quarterly installments and represent both principal and interest at 12.0% to 13.8% per annum. All borrowings under the financing agreement are collateralized by the related software. As of December 29, 2001, the Company has an outstanding balance of \$60,000 under this agreement.

In March 2001, the Company entered into a financing agreement with a financial institution which provided for total borrowings up to \$16,000,000. The terms of the agreement provide for a revolving line of credit, up to the commitment amount of \$12,000,000 for working capital requirements and the issuance of letters of credit, an equipment line of credit, which provides for borrowings up to \$2,000,000, and a term loan of \$2,000,000, to be used only to consolidate and refund other existing long-term debt. The facility is renewed annually and expires on April 30, 2002. The Company executed the term loan of \$2,000,000, and as at December 29, 2001, has an outstanding balance of \$1,667,000. The term loan, and any additional borrowings under the agreements, accrue interest based on the LIBOR rate plus 2.0%, which was 4.11% at December 29, 2001, and is repayable in 48 equal monthly payments of principal plus accrued interest. In addition, six letters of credit totaling \$2,830,000 have been issued to the lessor of the Company's facilities (see Note 6). All borrowings under the financing agreements are collateralized by all of the Company's right, title, and interest, whether presently existing or hereafter created or acquired, including but not limited to: all accounts, books, deposit accounts, equipment, general intangibles, inventory, investment property, letter of credit rights, negotiable collateral, supporting obligations, any money or other assets, and the proceeds and products of any of the foregoing.

Aggregate annual maturities of notes payable at December 29, 2001 are as follows (in thousands):

2002	\$ 560
2003	500
2004	500
2005	167
	<hr/>
	1,727
Less: Current portion	(560)
	<hr/>
	\$1,167
	<hr/>

**Note 6 — Commitments and Contingencies:**

The Company leases its facilities under various operating leases which expire through December 2011. In addition to the base rental, the Company is responsible for certain taxes, insurance and maintenance costs. Under



## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

the terms of the lease agreements, the Company has the option to extend the term leases. As of December 29, 2001, future minimum lease payments are as follows (in thousands):

2002	\$ 2,694
2003	2,482
2004	2,313
2005	2,258
2006	2,258
Thereafter	10,754
	<hr/>
	\$22,759
	<hr/>

Rent expense for the years ended December 25, 1999, December 30, 2000, and December 29, 2001 was approximately \$855,000, \$932,000 and \$1,016,000, respectively.

During fiscal 2000, the Company received \$1,330,000 from the settlement of a claim against a licensee for an alleged breach of a license agreement. This amount was recognized immediately as other income.

From time to time, the Company may become involved in litigation relating to additional claims arising from the ordinary course of business. Management is not currently aware of any matters that will have a material adverse affect on the financial position, results of operations or cash flows of the Company.

**Note 7 — Redeemable Convertible Preferred Stock:**

Under the Company's Certificate of Incorporation, the Company's redeemable convertible preferred stock is issuable in series.

From April through December 1995, the Company sold 6,389,103 shares of Series A redeemable convertible preferred stock to new investors for net cash proceeds of \$349,000.

In December 1995, the Company sold 3,448,293 shares of Series B redeemable convertible preferred stock to new investors for net cash proceeds of \$2,967,000.

From May through July 1996, the Company sold 3,298,161 shares of Series C redeemable convertible preferred stock to existing and 60% to new investors for net cash proceeds of \$5,426,000.

From April 1997 through October 1998, the Company sold 5,552,973 shares of Series D redeemable convertible preferred stock to existing and 84% to new investors for net cash proceeds of \$19,221,000. In October 1999, the Company issued an additional 326,545 shares of Series D redeemable convertible preferred stock pursuant to the exercise of a warrant.

From August through October 1999, the Company sold 2,666,666 shares of Series E redeemable convertible preferred stock to existing and 80% to new investors for net cash proceeds of \$19,950,000.

From September through November 2000, the Company sold 633,130 shares of Series F redeemable convertible preferred stock to existing and 94% to new investors for net cash proceeds of \$6,910,000.

From July through September 2001, the Company sold 679,672 shares of Series G redeemable convertible preferred stock to an existing and 98% to new investors for net cash proceeds of \$10,072,000.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

As of December 25, 1999, the redeemable convertible preferred stock comprised (in thousands, except share and per share data):

	Number of Shares Authorized	Number of Shares Issued and Outstanding	Proceeds, Net of Issuance Costs	Liquidation Preference Per Share	Annual Dividends Per Share
Series A	6,389,103	6,389,103	\$ 349	—	\$0.0424
Series B	3,527,258	3,448,293	2,967	\$0.87	\$0.0696
Series C	3,300,000	3,298,161	5,426	\$1.65	\$0.1320
Series D	6,376,812	5,552,973	19,221	\$3.45	\$0.2760
Series E	2,866,667	2,666,666	19,950	\$7.50	\$0.6000
	<u>22,459,840</u>	<u>21,355,196</u>	<u>\$47,913</u>		

As of December 30, 2000, the redeemable convertible preferred stock comprised (in thousands, except share and per share data):

	Number of Shares Authorized	Number of Shares Issued and Outstanding	Proceeds, Net of Issuance Cost	Liquidation Preference Per Share	Annual Dividends Per Share
Series A	6,389,103	6,389,103	\$ 349	—	\$0.0424
Series B	3,527,258	3,448,293	2,967	\$ 0.87	\$0.0696
Series C	3,300,000	3,298,161	5,426	\$ 1.65	\$0.1320
Series D	6,376,812	5,879,518	19,221	\$ 3.45	\$0.2760
Series E	2,866,667	2,666,666	19,950	\$ 7.50	\$0.6000
Series F	750,000	633,130	6,910	\$11.00	\$0.8800
	<u>23,209,840</u>	<u>22,314,871</u>	<u>\$54,823</u>		

As of December 29, 2001 and March 30, 2002 (unaudited), the redeemable convertible preferred stock comprised (in thousands, except share and per share data):

	Number of Shares Authorized	Number of Shares Issued and Outstanding	Proceeds, Net of Issuance Cost	Liquidation Preference Per Share	Annual Dividends Per Share
Series A	6,389,103	6,389,103	\$ 349	—	\$0.0424
Series B	3,527,258	3,448,293	2,967	\$ 0.87	\$0.0696
Series C	3,300,000	3,298,161	5,426	\$ 1.65	\$0.1320
Series D	6,376,812	5,879,518	19,221	\$ 3.45	\$0.2760
Series E	2,866,667	2,666,666	19,950	\$ 7.50	\$0.6000
Series F	750,000	633,130	6,910	\$11.00	\$0.8800
Series G	1,470,000	679,672	10,072	\$15.00	\$1.2000
	<u>24,679,840</u>	<u>22,994,543</u>	<u>\$64,895</u>		

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The rights, preferences and privileges of the redeemable convertible preferred stock are as follows:

**Dividends**

The holders of Series B, Series C, Series D, Series E, Series F and Series G redeemable convertible preferred stock are entitled to receive the above annual dividends which are cumulative, accrue quarterly, and are payable when and as declared by the Board of Directors. After payment of the dividends on the Series B, Series C, Series D, Series E, Series F and Series G redeemable convertible preferred stock, holders of Series A redeemable convertible preferred stock are entitled to receive non-cumulative annual dividends as stated above, when and as declared by the Board of Directors. No dividends can be paid on common stock until the dividends on the redeemable convertible preferred stock have been paid in full. As of March 30, 2002, no dividends have been declared or paid. As there are no fixed redemption dates associated with the preferred stock and as no dividends have been declared to date, no amounts have been accreted for the dividends. As of March 30, 2002, the amount of dividends in arrears is approximately \$15,995,000 (unaudited).

**Liquidation**

The holders of the Series D, Series E, Series F and Series G redeemable convertible preferred stock shall be entitled to receive prior and in preference to any distribution of any of the assets or surplus funds of the Company to the holders of Series C, Series B and Series A redeemable convertible preferred stock or common stock by reason of their ownership thereof, an amount per share as stated in the table above (each as adjusted for any stock dividends, combinations or splits with respect to such shares) plus all accrued or declared but unpaid dividends on each such share. If upon the occurrence of such event, the assets and funds thus distributed among the holders of the Series D, Series E, Series F and Series G redeemable convertible preferred stock shall be insufficient to permit the payment to such holders of the full preferential amount, then the entire assets and funds of the Company legally available for distribution shall be distributed ratably and with equal priority among the holders of the Series D, the Series E, the Series F and the Series G redeemable convertible preferred stock in proportion to the preferential amount each such holder is otherwise entitled to receive. After payment has been made to the holders of the Series D, the Series E, the Series F and the Series G redeemable convertible preferred stock of the full amounts to which they shall be entitled, the holders of the Series B and Series C redeemable convertible preferred stock are entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds to the holders of the Series A redeemable convertible preferred stock or common stock by reason of their ownership thereof, an amount per share as stated in the table above (each adjusted for any stock dividend, combinations or splits with respect to such shares). After payment has been made to the holders of the Series D, Series E, Series F, Series G, Series B and Series C redeemable convertible preferred stock of the full amounts to which they shall be entitled, any remaining assets are distributed pro-rata to holders of Series A convertible preferred and common stock.

**Redemption**

The merger or consolidation of the Company into another entity or any transactions in which more than 50% of the voting power of the Company is disposed of or the sale, transfer or disposition of substantially all of the property or business of the Company is deemed a liquidation, dissolution, or winding up of the Company. These liquidation characteristics require classification of the redeemable convertible preferred stock outside of the stockholders' equity section as these factors are outside the control of the Company. The redeemable convertible preferred stock is not redeemable in any other circumstances.

**Voting**

Each share of preferred stock is entitled to vote on an "as converted" basis along with common stockholders. The holders of Series B redeemable convertible preferred stock shall have the right, voting together

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

as a separate class, to elect one member of the Board of Directors. The holders of common stock and Series A redeemable convertible preferred stock shall have the right, voting together as a separate class, to elect two members to the Board of Directors. The holders of at least seventy percent (70%) of Series D redeemable convertible preferred stock shall have the right, voting together as a separate class, to elect one member to the Board of Directors. The remaining director shall be elected by the holders of common stock and Series A, Series B, Series C, Series D, Series E, Series F and Series G redeemable convertible preferred stock, voting together as a single class, with the holder of each share of the preferred stock entitled to the number of votes equal to the number of shares of common stock into which such share of preferred stock could then be converted.

**Conversion**

Each share of preferred stock, at the option of the holders, is convertible into the number of fully paid and nonassessable shares of common stock which results from dividing the respective conversion price per share in effect for the preferred stock at the time of conversion by the per share conversion value of such shares in effect at that time. The initial per share conversion price and per share conversion value of the Series A, Series B, Series C, Series D, Series E, Series F and Series G preferred stock is \$0.53, \$0.87, \$1.65, \$3.45, \$7.50, \$11.00 and \$15.00 per share, respectively. Conversion is automatic at its then effective conversion rate upon the earlier of (i) in the case of the Series A, Series B, Series C and Series D preferred stock, the closing of the sale of the Company's common stock in a firm commitment underwritten public offering with aggregate proceeds of at least \$10,000,000 at a price not less than \$6.90 per share, (ii) in the case of the Series E preferred stock, the closing of the sale of the common stock in a firm commitment underwritten public offering with aggregate proceeds of at least \$10,000,000 at a price not less than \$7.50 per share (iii) in the case of the Series F preferred stock, the closing of the sales of the common stock in a firm commitment underwritten public offering with aggregate proceeds of at least \$10,000,000 at a price not less than \$11.00 per share, (iv) in the case of the Series G preferred stock, the closing of the sale of the common stock in a firm commitment underwritten public offering with aggregate proceeds of at least \$10,000,000 at a price not less than \$15.00 per share and (v) the date specified by written consent or agreement of the holders of not less than two-thirds of the then outstanding shares of each series of preferred stock.

**Warrants**

In connection with a financing agreement entered into by the Company in April 1996, the Company issued warrants to purchase an aggregate of 72,727 shares of Series B redeemable convertible preferred stock at an exercise price of \$1.65 per share. These warrants expire upon the later of April 2006 or five years after the closing of an underwritten initial public offering. The value of these warrants determined using a Black-Scholes model was not material.

In connection with a financing agreement entered into by the Company in June 1997, the Company issued a warrant to purchase up to 14,212 shares of Series D redeemable convertible preferred stock at an exercise price of \$3.45 per share. This warrant expires upon the later of June 2002, immediately prior to the closing of an underwritten initial public offering or immediately prior to an acquisition of the Company. The Company reserved 14,212 shares of Series D redeemable convertible preferred stock in the event of exercise. The value of this warrant determined using a Black-Scholes model was not material.

In September 2000, the Company entered into a seven year technology license agreement to transfer technology to a related party. In connection with the license agreement, the Company issued a warrant to purchase 45,500 shares of Series F redeemable convertible preferred stock at an exercise price of \$11.00 per share. The warrant was fully vested upon grant and nonforfeitable. This warrant is exercisable on September 22, 2005 and will become exercisable earlier with respect to 22,750 shares on March 22, 2003 if, on or before that date, the warrant holder has achieved specified commercial milestones. Further, the warrant will become exercisable immediately with respect to all 45,500 shares if the warrant holder has achieved certain higher

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

commercial milestones. As of March 30, 2002 (unaudited), no shares are exercisable. This warrant expires upon the earlier of September 23, 2005 or immediately prior to an acquisition of the Company. The Company reserved 45,500 shares of Series F redeemable convertible preferred stock in the event of exercise. The fair value of this warrant, estimated on the date of grant using a Black-Scholes model, of \$306,220 has been capitalized as an other asset, and is being amortized against revenue using the straight-line method over the expected life of the technology of five years. The assumptions used in the calculation were: dividend yield of 0%; expected volatility of 67%; an expected term of 5 years; risk free interest rate of 6.00%.

**Note 8 — Stockholders' Equity (Deficit):**

*Common stock*

Each share of common stock has the right to one vote. The holders of common stock are also entitled to receive dividends whenever funds are legally available and when declared by the Board of Directors, subject to the prior rights of holders of all classes of stock outstanding having priority rights as to dividends. No dividends have been declared or paid as of March 30, 2002.

During fiscal 2000 and 2001, the Company issued fully vested unrestricted common stock in exchange for goods or services from non-employees. The Company believes that the fair value of the common stock is more reliably measurable than the fair value of the consideration received. The Company has measured these transactions using the fair value of the unrestricted common stock at the time of issuance and has recognized the related expenses immediately.

*Stock option plans*

The Company reserved shares of common stock for issuance under the 1995 and 1996 Stock Option Plans, Incentive Stock Plan and Management Incentive Stock Plan (the "Plans"). In April 1998, the Company terminated its 1995 Stock Plan and cancelled all shares of common stock which were reserved and available for future option grants under the plan. Under all Plans, the Board of Directors may issue incentive stock options to employees and nonqualified stock options and stock purchase rights to consultants or employees of the Company. The Board of Directors has the authority to determine to whom options will be granted, the number of shares, the term and exercise price (which cannot be less than fair market value at date of grant for incentive stock options or 85% of fair market value for nonqualified stock options). If an employee owns stock representing more than 10% of the outstanding shares, the price of each share shall be at least 110% of the fair market value, as determined by the Board of Directors. Generally, all options are immediately exercisable and vest 25% on the first anniversary of the vesting commencement date and on a monthly basis thereafter for a period of an additional three years. The options have a maximum term of ten years. Unvested option exercises are subject to repurchase upon termination of the holder's status as an employee or consultant. At December 29, 2001 and March 30, 2002, 326,644 and 260,836 (unaudited) shares of common stock were subject to the Company's right of repurchase, respectively.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Activity under the Plans is set forth below (in thousands, except share and per share data):

	Outstanding Options				
	Shares Available	Number of Shares	Exercise Price	Aggregate Price	Weighted Average Exercise Price
Balances, December 26, 1998	513,761	975,862	\$ 0.10-\$1.50	\$ 839	\$0.86
Additional shares reserved	1,500,000	—	—	—	—
Shares terminated	(1,875)	—	—	—	—
Options granted	(1,529,560)	1,529,560	\$ 1.50-\$5.00	5,024	\$3.28
Options exercised	—	(411,162)	\$ 0.10-\$3.75	(861)	\$2.09
Options canceled	205,078	(205,078)	\$ 0.10-\$4.25	(267)	\$1.30
Balances, December 25, 1999	687,404	1,889,182	\$ 0.10-\$5.00	4,735	\$2.51
Additional shares reserved	1,885,000	—	—	—	—
Options granted	(2,238,660)	2,238,660	\$ 5.50-\$6.00	12,558	\$5.61
Options exercised	—	(509,275)	\$ 0.10-\$6.00	(2,189)	\$4.30
Options canceled	353,986	(353,986)	\$0.165-\$6.00	(1,406)	\$3.97
Balances, December 30, 2000	687,730	3,264,581	\$ 0.10-\$6.00	13,698	\$4.20
Additional shares reserved	1,840,000	—	—	—	—
Options granted	(1,952,073)	1,952,073	\$ 6.00-\$6.50	12,308	\$6.31
Options exercised	—	(168,229)	\$ 0.10-\$6.00	(341)	\$2.03
Options canceled/shares repurchased	922,278	(885,971)	\$ 0.50-\$6.50	(4,444)	\$5.02
Balances, December 29, 2001	1,497,935	4,162,454	\$ 0.10-\$6.50	21,221	\$5.10
Additional shares reserved (unaudited)	3,500,000	—	—	—	—
Options granted (unaudited)	(96,575)	96,575	\$ 6.50	628	\$6.50
Options exercised (unaudited)	—	(150,494)	\$0.165-\$6.50	(810)	\$5.38
Options canceled (unaudited)	92,931	(92,931)	\$ 1.50-\$6.50	(546)	\$5.87
Balances, March 30, 2002 (unaudited)	4,994,291	4,015,604	\$ 0.10-\$6.50	\$20,493	\$5.10

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The options outstanding and vested by exercise price at December 29, 2001 are as follows:

Options Outstanding and Exercisable				Options Vested	
Range of Exercise Prices	Number of Options Outstanding	Weighted Average Remaining Contractual Life in Years	Weighted Average Exercise Price	Number Vested	Weighted Average Exercise Price
\$0.10 - \$1.25	261,587	5.55	\$0.61	261,009	\$0.61
\$1.50	91,439	6.83	\$1.50	68,539	\$1.50
\$2.50 - \$3.00	25,025	7.26	\$2.55	16,726	\$2.54
\$3.25	682,902	7.45	\$3.25	251,437	\$3.25
\$3.75 - \$5.00	39,633	7.74	\$4.30	23,117	\$4.26
\$5.50	974,940	8.62	\$5.50	208,154	\$5.50
\$6.00	923,035	9.09	\$6.00	148,273	\$6.00
\$6.50	1,163,893	9.79	\$6.50	28,501	\$6.50
	<u>4,162,454</u>			<u>1,005,756</u>	

The options outstanding and vested by exercise price at March 30, 2002 (unaudited) are as follows:

Options Outstanding and Exercisable				Options Vested	
Range of Exercise Prices	Number of Options Outstanding	Weighted Average Remaining Contractual Life in Years	Weighted Average Exercise Price	Number Vested	Weighted Average Exercise Price
\$0.10 - \$1.25	241,212	5.36	\$0.65	241,157	\$0.65
\$1.50	88,209	6.59	\$1.50	72,361	\$1.50
\$2.50 - \$3.00	25,025	7.01	\$2.55	18,291	\$2.54
\$3.25	676,663	7.20	\$3.25	286,673	\$3.25
\$3.75 - \$5.00	34,018	7.48	\$4.24	23,020	\$4.45
\$5.50	963,693	8.37	\$5.50	235,860	\$5.50
\$6.00	842,589	8.85	\$6.00	211,486	\$6.00
\$6.50	1,144,195	9.55	\$6.50	37,581	\$6.50
	<u>4,015,604</u>			<u>1,126,429</u>	

*Stock-based compensation*

The Company has adopted the disclosure only provisions of SFAS No. 123. The Company calculated the fair value of each option on the date of grant using the minimum value method as prescribed by SFAS No. 123. The assumptions used are as follows:

	Years Ended			Three Months Ended	
	December 25, 1999	December 30, 2000	December 29, 2001	March 31, 2001	March 30, 2002
Risk-free interest rate	5.54%	6.24%	4.58%	4.86%	4.83%
Expected life (in years)	5	5	5	5	5
Dividend yield	—	—	—	—	—

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

As the determination of fair value of all options granted after such time the Company becomes a public company will include an expected volatility factor in addition to the factors described in the preceding table, the following results may not be representative of future periods.

Had compensation costs been determined based upon the fair value at the grant date, consistent with the methodology prescribed under SFAS No. 123, the Company's pro forma net income (loss) and pro forma basic and diluted net income (loss) per share under SFAS No. 123 would have been as follows (in thousands, except per share data):

	Years Ended			Three Months Ended	
	December 25, 1999	December 30, 2000	December 29, 2001	March 31, 2001	March 30, 2002
				(unaudited)	
Net income (loss):					
As reported	\$(5,644)	\$2,079	\$ 250	\$ 297	\$ 846
Pro forma	\$(5,873)	\$1,559	\$(1,019)	\$ 46	\$ 355
Net income (loss) per share:					
Basic:					
As reported	\$ (2.16)	\$ 0.61	\$ 0.06	\$0.08	\$0.19
Pro forma	\$ (2.25)	\$ 0.46	\$ (0.25)	\$0.01	\$0.08
Diluted:					
As reported	\$ (2.16)	\$ 0.08	\$ 0.01	\$0.01	\$0.03
Pro forma	\$ (2.25)	\$ 0.06	\$ (0.04)	\$0.00	\$0.01

The weighted-average per share grant date fair value of options granted during the years ended December 25, 1999, December 30, 2000 and December 29, 2001 and for the three months ended March 30, 2002 was \$0.78, \$1.46, \$1.06 and \$1.33 (unaudited), respectively.

**Deferred stock-based compensation**

During 2001 and the three months ended March 30, 2002, the Company issued options to certain employees under the Plan with exercise prices below the deemed fair market value of the Company's common stock at the date of grant. In accordance with the requirements of APB No. 25, the Company has recorded deferred stock-based compensation for the difference between the exercise price of the stock option and the deemed fair market value of the Company's stock at the grant. This deferred stock-based compensation is amortized to expense on a straight line basis over the period during which the Company's right to repurchase the stock lapses or the options become vested, generally four years. During the year ended December 29, 2001 and the three months ended March 30, 2002, the Company had recorded deferred stock-based compensation related to these options in the amounts of \$4,265,000 and \$1,451,000 (unaudited), net of cancellations, respectively, of which \$195,000 and \$164,000 (unaudited) had been amortized to expense during 2001 and the three months ended March 30, 2002, respectively.

Stock-based compensation expense related to stock options granted to non-employees is recognized on a straight line basis, as the stock options are earned. The options generally vest ratably over four years. The values attributable to these options are amortized over the service period on a graded vesting method, and the vested portion of these options were remeasured at each vesting date. The Company believes that the fair value of the stock options is more reliably measurable than the fair value of the services received. The fair value of the stock



FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

options granted were revalued at each reporting date using the Black-Scholes option pricing model as prescribed by SFAS No. 123 using the following assumptions:

	Years Ended			Three Months Ended	
	December 25, 1999	December 30, 2000	December 29, 2001	March 31, 2001	March 30, 2002
Risk-free interest rate	4.93%	6.05%	5.75%	5.75%	4.83%
Expected life (in years)	10	10	10	10	10
Dividend yield	—	—	—	—	—
Expected volatility	67%	67%	67%	67%	67%

The stock-based compensation expense will fluctuate as the deemed fair market value of the common stock fluctuates. In connection with the grant of stock options to non-employees, the Company recorded deferred stock-based compensation of \$525,000, \$259,000, \$91,000 and none (unaudited) for the years ended December 25, 1999, December 30, 2000, December 29, 2001 and for the three months ended March 30, 2002, respectively. Stock-based compensation expenses related to options granted to non-employees were allocated to research and development, selling, general and administrative expenses as follows (in thousands):

	Years Ended			Three Months Ended	
	December 25, 1999	December 30, 2000	December 29, 2001	March 31, 2001	March 30, 2002
Research and development	\$ 29	\$ 61	\$ 70	\$ 10	\$ —
Selling, general and administrative	312	198	204	46	1
	\$341	\$259	\$274	\$ 56	\$ 1

**Notes receivable**

In fiscal 1999, 2000 and 2001, the Company received full recourse notes receivable from certain employees in exchange for common stock. The notes bear interest at the applicable market interest rate, ranging from 4.46% to 6.60%, and have due dates through May 2007. Under the terms of the full recourse notes receivable, the Company may proceed against any assets of the holder of the notes, or against the collateral securing the notes, or both, in event of default. The notes are collateralized by the underlying shares of common stock.

**Note 9 — Income Taxes:**

The components of the provision for income taxes are as follows (in thousands):

	Years Ended		
	December 25, 1999	December 30, 2000	December 29, 2001
Current:			
Federal	\$ —	\$114	\$158
State	—	1	108
Foreign	—	—	41
Total provision for income taxes	\$ —	\$115	\$307

At December 29, 2001, the Company had federal and state net operating loss carryforwards of approximately \$3,603,000 and none, respectively, available to offset future taxable income. These carryforwards expire

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

by the year 2012 for federal tax purposes unless utilized. The Company's net operating loss carryforwards may be subject to annual utilization limitations in case of a change in stock ownership, as defined by federal and state tax laws.

At December 29, 2001, the Company had research credit carryforwards of approximately \$3,500,000 and \$3,600,000 for federal and state income tax purposes, respectively. If not utilized, the federal carryforwards will expire in various amounts beginning in 2010. The state research credit can be carried forward indefinitely.

Components of the Company's deferred tax assets are as follows (in thousands):

	December 30, 2000	December 29, 2001
Net operating losses	\$ 3,080	\$ 1,225
Research and development credits	1,831	3,468
Depreciation and amortization	(392)	208
Inventory reserves	2,953	3,328
Other reserves and accruals	1,277	832
	8,749	9,061
Less: Valuation allowance	(8,749)	(9,061)
	\$ —	\$ —

The Company has established a valuation allowance to the extent of its deferred tax asset since it is uncertain that a benefit can be realized in the future due to the Company's recurring operating losses. At such time, if it is determined that it is more likely than not that the deferred tax assets are realizable, the valuation allowance will be reduced.

**Note 10 — Employee Benefit Plan:**

In 1996, the Company adopted a retirement plan which is qualified under Section 401(k) of the Internal Revenue Code of 1986. Eligible employees may make voluntary contributions to the retirement plan of up to 25% of their annual compensation, not to exceed the statutory amount, and the Company may make matching contributions. The Company made no contributions to the retirement plan in 1999, 2000 and 2001.

**Note 11 — Operating Segment and Geographic Information:**

As of December 30, 2000, December 29, 2001 and March 30, 2002, 99%, 97% and 97% (unaudited) of long-lived assets are maintained in the United States of America, respectively.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table summarizes revenue by geographic region:

	Years Ended			Three Months Ended	
	December 25, 1999	December 30, 2000	December 29, 2001	March 31, 2001	March 30, 2002
				(unaudited)	
North America	57.6%	42.0%	52.7%	60.8%	66.4%
Taiwan	14.6%	25.4%	26.4%	18.4%	12.8%
Asia (excluding Japan and Taiwan)	5.4%	8.0%	0.2%	1.1%	0.1%
Japan	2.4%	8.2%	6.9%	7.9%	4.9%
Europe	20.0%	16.4%	13.8%	11.8%	15.8%
Total export sales	100%	100%	100%	100%	100%

**Note 12 — Unaudited Pro Forma Net Income Per Share:**

Pro forma basic and diluted net income per share have been computed to give effect to redeemable convertible preferred stock that will convert to common stock upon the closing of the Company's initial public offering (using the as-converted method) for the year ended December 29, 2001 and the three months ended March 30, 2002. A reconciliation of the numerator and denominator used in the calculation of pro forma basic and diluted net income per share follows (in thousands, except per share data):

	Year Ended December 29, 2001	Three Months Ended March 30, 2002
	(unaudited)	
<b>Numerator:</b>		
Net income	\$ 250	\$ 846
<b>Denominator:</b>		
Weighted-average shares outstanding used in computing basic net income per share	4,029	4,381
Adjustments to reflect the effect of the assumed conversion of the preferred stock from the date of issuance	22,995	22,995
Weighted-average shares used in computing basic pro forma net income per share	27,024	27,376
Adjustments to reflect the effect of the assumed conversion of options outstanding, warrants and weighted-average unvested common shares subject to repurchase	1,970	2,437
Weighted-average shares used in computing diluted pro forma net income per share	28,994	29,813
<b>Pro forma net income per share</b>		
Basic	\$ 0.01	\$ 0.03
Diluted	\$ 0.01	\$ 0.03

## FORMFACTOR, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

**Note 13 — Related Party Transactions:**

The Company provided services or sold products to related parties, who are also stockholders of the Series D, Series E, Series F and Series G redeemable convertible preferred stock which were issued by the Company in 1997, 1999, 2000 and 2001, respectively. For the years ended December 25, 1999, December 30, 2000, and December 29, 2001, revenue recognized from these related parties was approximately \$11,797,000, \$35,311,000, and \$46,042,000, respectively. At December 30, 2000 and December 29, 2001, the Company had accounts receivable of approximately \$9,397,000 and \$7,313,000, respectively, from its related parties.

The Company purchased inventory from related parties, and paid commission to related parties, who are also stockholders of the Series E and Series G redeemable convertible preferred stock. For the years ended December 25, 1999, December 30, 2000, and December 29, 2001, transactions with these related parties were approximately none, \$133,000 and \$11,458,000, respectively. At December 30, 2000 and December 29, 2001, the Company had accounts payable of approximately \$120,000 and \$1,458,000, respectively, to its related parties.

**Note 14 — Subsequent Events:**

On April 14, 2002, the Company granted options to purchase 1,173,102 shares of common stock under the Company's Incentive Stock Plan and Management Incentive Stock Plan at an exercise price of \$6.50 per share.

On April 18, 2002, the Company granted options to purchase 67,500 shares of common stock under the Company's 1996 Stock Option Plan at an exercise price of \$7.50 per share.

The total deferred stock-based compensation related to options granted in April 2002 amounted to approximately \$6,384,000 and will be amortized to expenses over the vesting period.

On April 18, 2002, the Board of Directors adopted the 2002 Equity Incentive Plan ("2002 Plan"), subject to stockholder approval, which will become effective upon the effective date of an initial public offering of the Company's common stock. The 2002 Plan provides for the grant of both incentive stock options and non-qualified stock options. The incentive stock options may be granted to the employees and the non-qualified stock options may be granted to employees, officers, directors and consultants. The exercise price of incentive stock options must be at least equal to the fair market value of common stock on the date of grant. The exercise price of incentive stock options granted to 10% stockholders must be at least equal to 110% at the fair market value of common stock on the date of grant. The Company has reserved 500,000 shares of common stock for issuance under the 2002 Plan plus any shares which have been reserved but not issued under the Company's 1995 Stock Plan, 1996 Stock Plan, Incentive Option Plan and Management Incentive Option Plan, plus any shares returned thereafter. The 1996 Stock Plan, the Incentive Stock Plan and the Management Incentive Option Plan will terminate upon the effectiveness of the 2002 Plan. In addition, on each January 1, the number of shares available for issuance will be increased by an amount equal to 5.0% of the outstanding shares of common stock on the last day of the preceding fiscal year.

On April 18, 2002, the Board of Directors approved the 2002 Employee Stock Purchase Plan ("2002 ESPP"), subject to stockholder approval, which will commence on the effective date of an initial public offering of the Company's common stock. The 2002 ESPP is designed to enable eligible employees to purchase shares of common stock at a discount on a periodic basis through payroll deductions or through a single lump sum cash payment in the case of the first offering period. Except for the first offering period, each offering period will be for two years and will consist of four-six month purchase periods. The price of the common stock purchased shall be 85% at the lesser of the fair market value of the common stock on the first day of the applicable offering period or the last day of each purchase period. 1,500,000 shares of common stock are reserved for issuance under the 2002 ESPP and will be increased on each January 1 by an amount equal to 1.0% of the outstanding shares of common stock on the last day of the preceding fiscal year.

FORMFACTOR, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

**Note 15 — Subsequent Events (unaudited):**

On May 16, 2002, the Company granted options to purchase 177,100 shares of common stock under the Company's 1996 Stock Option Plan at an exercise price of \$8.00 per share. The total deferred stock-based compensation related to these options amounted to approximately \$655,000 and will be amortized to expenses over the vesting period.

## [Table of Contents](#)

### INSIDE BACK COVER PAGE

This page contains the picture of a wafer probe card manufactured by FormFactor. The wafer probe card is set in the lower half of the page and is held by a technician whose image fades into the background of the picture. In the top of the picture and written upon the image of the technician is the title of the picture, "Delivering the Solution." The words "Delivering the Solution" are repeated in a larger font behind the title as a shadow to the title. Five lines of text appear below the title and above the image of the wafer probe card. The lines of text read from top to bottom as follows: "Proprietary Design Tools," "MicroSpring Interconnect Technology," "Micro-machining Manufacturing," "Large Contact Arrays" and "Test Integration." Each line of text stated in the sentence above has a shadow that repeats the line of text in a larger font. The FormFactor logo trademark placed next to the company's name, "FORMFACTOR," appears in the bottom left corner of the picture.

---



**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth the expenses, other than the underwriting discounts and commissions, payable by the Registrant in connection with the sale and distribution of the shares of common stock being registered hereby. All amounts shown are estimates, except the Securities and Exchange Commission registration fee, the National Association of Securities Dealers, Inc. filing fee and the Nasdaq National Market listing fee.

Securities and Exchange Commission registration fee	\$ 9,200
National Association of Securities Dealers, Inc. filing fee	10,500
Nasdaq National Market listing fee	100,000
Accounting fees and expenses	*
Legal fees and expenses	*
Road show expenses	*
Printing expenses	*
Blue Sky fees and expenses	*
Transfer agent and registrar fees and expenses	*
Miscellaneous	*
Total	\$ *

\* To be filed by amendment.

**Item 14. Indemnification of Directors and Officers.**

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers under certain circumstances and subject to certain limitations. The terms of Section 145 of the Delaware General Corporation Law are sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement of expenses incurred, arising under the Securities Act.

As permitted by the Delaware General Corporation Law, the Registrant's certificate of incorporation includes a provision that eliminates the personal liability of its directors for monetary damages for breach of fiduciary duty as a director, except for liability:

- for any breach of the director's duty of loyalty to the Registrant or its stockholders;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law regarding unlawful dividends and stock purchases; or
- for any transaction from which the director derived an improper personal benefit.

As permitted by the Delaware General Corporation Law, the Registrant's bylaws provide that:

- the Registrant is required to indemnify its directors and officers to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions where indemnification is not permitted by applicable law;
- the Registrant is required to advance expenses, as incurred, to its directors and officers in connection with a legal proceeding to the fullest extent permitted by the Delaware General Corporation Law, subject to certain limited exceptions; and



## [Table of Contents](#)

- the rights conferred in the bylaws are not exclusive.

In addition, the Registrant intends to enter into indemnity agreements with each of its current directors and officers. These agreements will provide for the indemnification of the Registrant's officers and directors for all expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were agents of the Registrant. At present, there is no pending litigation or proceeding involving a director, officer or employee of the Registrant regarding which indemnification is sought, nor is the Registrant aware of any threatened litigation that may result in claims for indemnification.

The Registrant intends to obtain directors' and officers' insurance to cover its directors and officers for certain liabilities, including coverage for public securities matters.

The indemnification provisions in the Registrant's certificate of incorporation and bylaws and the indemnity agreements to be entered into between the Registrant and each of its directors and officers may be sufficiently broad to permit indemnification of the Registrant's directors and officers for liabilities arising under the Securities Act.

Reference is also made to Section 7 of the underwriting agreement (Exhibit 1.01 hereto), which provides for the indemnification by the underwriters of the Registrant and its executive officers, directors and controlling persons against certain liabilities, including liabilities arising under the Securities Act, in connection with matters specifically provided for in writing by the underwriters for inclusion in this Registration Statement.

See also the undertakings set out in response to Item 17.

Reference is made to the following documents filed as exhibits to this Registration Statement regarding relevant indemnification provisions described above and elsewhere herein:

Exhibit Document	Number
Form of Underwriting Agreement	1.01
Form of Restated Certificate of Incorporation to be filed upon the closing of the offering	3.02
Restated Bylaws of the Registrant to be effective upon the closing of the offering	3.04
Form of Indemnity Agreement	10.01
Sixth Amended and Restated Rights Agreement by and among the Registrant and certain stockholders of the Registrant dated July 13, 2001	4.02

### **Item 15. Recent Sales of Unregistered Securities.**

In the three years prior to the filing of this Registration Statement, the Registrant issued and sold the following unregistered securities.

1. In July 1999, the Registrant issued and sold a total of 2,666,666 shares of Series E preferred stock to 29 investors, consisting of 10 individual investors, nine corporate investors and 10 venture capital and investment funds for a total purchase price of \$19,999,995, all of which was paid in cash.

2. In September 2000, the Registrant issued a warrant to a customer to purchase up to 45,500 shares of Series F preferred stock at \$11.00 per share. The warrant is first exercisable on September 22, 2005. The warrant will become exercisable earlier with respect to 22,750 shares on March 22, 2003 if, on or before that date, the customer has achieved certain commercial milestones. Further, this warrant will become exercisable immediately with respect to all 45,500 shares if the customer achieves certain higher commercial milestones. If not earlier exercised, this warrant will expire September 23, 2005.

3. In September through November 2000, the Registrant issued and sold a total of 633,130 shares of Series F preferred stock to 19 investors, consisting of 14 individual investors, two corporate investors and three venture capital and investment funds for a total purchase price of \$6,964,430, all of which was paid in cash.

## [Table of Contents](#)

4. In July and September 2001, the Registrant issued and sold a total of 679,672 shares of Series G preferred stock to five corporate investors for a total purchase price of \$10,195,080, all of which was paid in cash.

5. As of March 30, 2002, the Registrant had issued 2,583 shares of common stock to its employees, directors, consultants and other service providers upon exercise of options under the Registrant's incentive option plan, with exercise prices ranging from \$3.25 to \$6.50 per share.

6. As of March 30, 2002, the Registrant had issued 438,029 shares of common stock to its employees, directors, consultants and other service providers upon exercise of options under the Registrant's management incentive option plan, with exercise prices ranging from \$5.50 to \$6.50 per share.

7. As of March 30, 2002, the Registrant had issued 2,123,139 shares of common stock to its employees, directors, consultants and other service providers upon exercise of options under the Registrant's 1995 stock plan, with exercise prices ranging from \$0.10 to \$0.165 per share.

8. As of March 30, 2002, the Registrant had issued 3,114,800 shares of common stock to its employees, directors, consultants and other service providers upon exercise of options under the Registrant's 1996 stock option plan, with exercise prices ranging from \$0.165 to \$6.50 per share.

The sales and issuances of securities above, other than the sales and issuances in items 5 through 8, were determined to be exempt from registration under Section 4(2) of the Securities Act or Regulation D thereunder as transactions by an issuer not involving a public offering. The sales and issuances of securities listed above in items 5 through 8 were deemed to be exempt from registration under the Securities Act by virtue of Rule 701 promulgated under Section 3(b) of the Securities Act as transactions pursuant to compensation benefits plans and contracts relating to compensation. All of the foregoing securities are deemed restricted securities for the purposes of the Securities Act.

### **Item 16. Exhibits and Financial Statement Schedules.**

(a) The following exhibits are filed herewith:

<b>Exhibit Number</b>	<b>Exhibit Title</b>
1.01	Form of Underwriting Agreement.
3.01	Restated Certificate of Incorporation of the Registrant as filed July 5, 2001 and the Amendment to Restated Certificate of Incorporation as filed April 10, 2002.
3.02**	Form of Registrant's Amended and Restated Certificate of Incorporation to be filed upon the closing of the offering.
3.03	Amended Bylaws of the Registrant, as amended through March 14, 2002.
3.04**	Amended and Restated Bylaws of the Registrant to be effective upon the closing of the offering.
4.01**	Specimen Common Stock Certificate.
4.02	Sixth Amended and Restated Rights Agreement by and among the Registrant and certain stockholders of the Registrant dated July 13, 2001.
4.03	Stockholders Agreement by and among the Registrant, Dr. Igor Y. Khandros, Susan Bloch and Richard Hoffman dated February 9, 1994.
4.04	Stockholders Agreement by and among the Registrant, Dr. Igor Y. Khandros, Susan Bloch and Milton Ohring dated April 11, 1994.
4.05	Stockholders Agreement by and among the Registrant, Dr. Igor Y. Khandros, Susan Bloch and Benjamin Eldridge dated August 12, 1994.
4.06	Stockholders Agreement by and among the Registrant, Dr. Igor Y. Khandros, Susan Bloch and Charles Baxley, P.C. dated September 8, 1994.

[Table of Contents](#)

Exhibit Number	Exhibit Title
5.01**	Form of opinion of Fenwick & West LLP.
10.01**	Form of Indemnity Agreement.
10.02	1995 Stock Plan, and form of option grant.
10.03	1996 Stock Option Plan, and form of option grant.
10.04	Incentive Option Plan, and form of option grant.
10.05	Management Incentive Option Plan, and form of option grant.
10.06**	2002 Equity Incentive Plan.
10.07**	2002 Employee Stock Purchase Plan.
10.08†	Key Management Bonus Plan.
10.09	Forms of promissory notes from executive officers and directors to the Registrant made in connection with exercise of options.
10.10	Loan Agreement by and between Stuart Merkadeau and the Registrant dated February 1, 2001.
10.11	Employment Offer Letter dated October 29, 1998 to Yoshikazu Hatsukano.
10.12	Lease by and between Paul E. Iocano and the Registrant dated June 26, 1995.
10.13	Lease by and between Paul E. Iocano and the Registrant dated April 12, 1996.
10.14	Lease by and between Paul E. Iocano and the Registrant dated November 20, 1996.
10.15	Lease by and between Paul E. Iocano and the Registrant dated April 24, 1997.
10.16	Lease by and between Richard K. and Pamela K. Corbett, Robert and Cheryl Rumberger, Connie Duke and the Registrant dated March 12, 1998.
10.17	Lease by and between L. One and the Registrant dated March 25, 1998.
10.18†	Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated May 3, 2001.
10.19†	Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated May 3, 2001.
10.20†	Pacific Corporate Center Lease by and between Greenville Investors, L.P. and the Registrant dated May 3, 2001.
10.21	Second Amended and Restated Loan and Security Agreement by and between Comerica Bank — California and the Registrant dated as of March 20, 2001, as amended through September 17, 2001.
10.22†	Basic Purchase Agreement by and among Infineon Technologies Aktiengesellschaft, Whiteoak Semiconductor Partnership, Promos Technologies Inc. and the Registrant dated July 9, 1999.
10.23†	Authorized International Distributor Agreement by and between Spirox Corporation and the Registrant dated June 1, 2000.
10.24†	Probecard Purchase Agreement by and between Samsung Electronics Industries Co., Ltd. and the Registrant dated November 22, 2000.
10.25†	Intel Corporation Purchase Agreement — Capital Equipment and Services by and between Intel Corporation and the Registrant dated January 8, 2001, and as amended on January 22, 2001, on March 1, 2001, and on April 1, 2001.
10.26**	Second Modification to Second Amended and Restated Loan and Security Agreement by and between Comerica Bank — California and the Registrant dated as of January 15, 2002 and Third Modification to Second Amended and Restated Loan and Security Agreement by and between Comerica Bank — California and the Registrant dated as of May 14, 2002.
21.01	List of Subsidiaries of Registrant.
23.01*	Consent of Fenwick & West LLP (See Exhibit 5.01).
23.02**	Consent of independent accountants.
24.01	Power of Attorney (see page II-8 of the original filing of this Registration Statement).

[Table of Contents](#)

---

\* To be filed by amendment.

\*\* Filed herewith.

† Confidential treatment has been requested for portions of this exhibit. These portions have been omitted from this Registration Statement and have been filed separately with the Securities and Exchange Commission.

(b) *Financial Statement Schedule*

**REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULE**

To the Board of Directors of

FormFactor, Inc.:

Our audits of the consolidated financial statements referred to in our report dated February 15, 2002, except for Note 14, as to which the date is April 18, 2002, appearing in the Registration Statement on Form S-1 of FormFactor, Inc. also included an audit of the financial statement schedule listed in Item 16(b) on Page II-6 of this Form S-1. In our opinion, the financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements.

PRICEWATERHOUSECOOPERS LLP

San Jose, California

April 22, 2002

## FORMFACTOR, INC.

## VALUATION AND QUALIFYING ACCOUNTS

For the Years Ended December 25, 1999, December 30, 2000 and December 29, 2001  
(In thousands)

Descriptions	Balance at Beginning of Period	Additions	Deductions	Balance at End of Year
<b>Allowance for doubtful accounts receivable:</b>				
Year ended December 25, 1999	\$ 412	\$ 200	\$ —	\$ 612
Year ended December 30, 2000	\$ 612	\$ —	\$ 32	\$ 580
Year ended December 29, 2001	\$ 580	\$ —	\$ 166	\$ 414
<b>Reserve for excess and obsolete inventory:</b>				
Year ended December 25, 1999	\$1,797	\$3,623	\$ —	\$5,420
Year ended December 30, 2000	\$5,420	\$2,227	\$ —	\$7,647
Year ended December 29, 2001	\$7,647	\$4,504	\$3,535	\$8,616
<b>Allowance against deferred tax assets:</b>				
Year ended December 25, 1999	\$6,092	\$1,880	\$ —	\$7,972
Year ended December 30, 2000	\$7,972	\$ 777	\$ —	\$8,749
Year ended December 29, 2001	\$8,749	\$ 312	\$ —	\$9,061

All other financial statement schedules have been omitted because the information required to be set forth herein is not applicable or is shown either in the consolidated financial statements or the notes thereto.

**SIGNATURES**

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this Amendment to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Livermore, State of California, on this 24th day of May 2002.

FORMFACTOR, INC.

By: /s/ STUART L. MERKADEAU

---

Stuart L. Merkadeau  
*Vice President of Intellectual Property*

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the date indicated.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<b>Principal Executive Officer:</b>		
<u>/s/ IGOR Y. KHANDROS*</u> Dr. Igor Y. Khandros	President, Chief Executive Officer and Director	May 24, 2002
<b>Principal Financial Officer and Principal Accounting Officer:</b>		
<u>/s/ JENS MEYERHOFF*</u> Jens Meyerhoff	Senior Vice President, Chief Financial Officer and Secretary	May 24, 2002
<b>Additional Directors:</b>		
<u>/s/ JOSEPH R. BRONSON*</u> Joseph R. Bronson	Director	May 24, 2002
<u>/s/ WILLIAM H. DAVIDOW*</u> Dr. William H. Davidow	Director	May 24, 2002
<u>/s/ G. CARL EVERETT, JR.*</u> G. Carl Everett, Jr.	Director	May 24, 2002
<u>/s/ WILLIAM J. HARDING*</u> Dr. William J. Harding	Director	May 24, 2002
<u>/s/ JAMES A. PRESTRIDGE*</u> James A. Prestridge	Director	May 24, 2002
<b>*By: /s/ STUART L. MERKADEAU</b> Stuart L. Merkadeau, Attorney-in-Fact May 24, 2002		

EXHIBIT INDEX

Exhibit Number	Exhibit Title
3.02	Form of Registrant's Amended and Restated Certificate of Incorporation to be filed upon the closing of the offering.
3.04	Amended and Restated Bylaws of the Registrant to be effective upon the closing of the offering.
4.01	Specimen Common Stock Certificate.
5.01	Form of opinion of Fenwick & West LLP.
10.01	Form of Indemnity Agreement.
10.06	2002 Equity Incentive Plan.
10.07	2002 Employee Stock Purchase Plan.
10.26	Second Modification to Second Amended and Restated Loan and Security Agreement by and between Comerica Bank — California and the Registrant dated as of January 15, 2002 and Third Modification to Second Amended and Restated Loan and Security Agreement by and between Comerica Bank — California and the Registrant dated as of May 14, 2002.
23.02	Consent of independent accountants.



-----  
AMENDED AND RESTATED  
CERTIFICATE OF INCORPORATION  
OF  
FORMFACTOR, INC.  
-----

FormFactor, Inc., a corporation organized and existing under the General Corporation Law of the State of Delaware (the "CORPORATION"), in accordance with the provisions of Sections 242 and 245 thereof, DOES HEREBY CERTIFY:

FIRST: The name of this corporation is FormFactor, Inc. FormFactor, Inc. was originally incorporated under the same name and the original Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on April 15, 1993.

SECOND: The Amendment and Restatement of the Corporation's Certificate of Incorporation as set forth in the following resolution has been approved by the Corporation's Board of Directors and stockholders and was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware.

NOW, THEREFORE, BE IT RESOLVED, that the Certificate of Incorporation of this Corporation be, and it hereby is, restated and further amended to read in its entirety as follows:

FIRST

The name of this corporation is FormFactor, Inc.

SECOND

The address of its registered office in the State of Delaware is 15 East North Street, City of Dover, County of Kent. The name of its registered agent at such address is United Corporate Services, Inc.

THIRD

The nature of the business and of the purposes to be conducted and promoted by the Corporation are to conduct any lawful business, to promote any lawful purpose, and to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

#### FOURTH

A. This Corporation is authorized to issue two classes of shares of stock, to be designated, respectively, "Common Stock" and "Preferred Stock." The Preferred Stock may be issued in one or more series. The total number of shares that the Corporation is authorized to issue is Two Hundred Sixty Million (260,000,000). Two Hundred Fifty Million (250,000,000) shares with a par value of \$0.001 each shall be Common Stock, and Ten Million (10,000,000) shares with a par value of \$0.001 each shall be Preferred Stock.

B. The Board of Directors is authorized, subject to any limitations prescribed by this Article FOURTH or the law of the State of Delaware, to provide for the issuance of the shares of Preferred Stock in one or more series, and, by filing a Certificate of Designation pursuant to the applicable law of the State of Delaware, to establish from time to time the number of shares to be included in each such series, to fix the designation, powers, preferences and rights of the shares of each such series and any qualifications, limitations or restrictions thereof, and to increase or decrease the number of shares of any such series (but not below the number of shares of such series then outstanding). The number of authorized shares of Preferred Stock may also be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the stock of the Corporation entitled to vote, unless a vote of any other holders is required pursuant to this Article FOURTH or to a Certificate or Certificates of Designation establishing a series of Preferred Stock.

C. Except as otherwise expressly provided in this Article FOURTH or in any Certificate of Designation designating any series of Preferred Stock pursuant to the foregoing provisions of this Article FOURTH, any new series of Preferred Stock may be designated, fixed and determined as provided herein by the Board of Directors without approval of the holders of Common Stock or the holders of Preferred Stock, or any series thereof, and any such new series may have powers, preferences and rights, including, without limitation, voting rights, dividend rights, liquidation rights, redemption rights and conversion rights, senior to, junior to or pari passu with the rights of the Common Stock, the Preferred Stock, or any future class or series of Preferred Stock or Common Stock.

#### FIFTH

For the management of the business and for the conduct of the affairs of this Corporation, and in further definition, limitation and regulation of the powers of the Corporation, of its directors and of its stockholders or any class thereof, as the case may be, it is further provided that:

A. The conduct of the affairs of the Corporation shall be managed under the direction of the Board of Directors. The number of directors shall be fixed from time to time exclusively by resolution of the Board of Directors.

B. Notwithstanding the foregoing provision of this Article FIFTH, each director shall hold office until such director's successor is elected and qualified, or until such director's

earlier death, resignation or removal. No decrease in the authorized number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

C. Subject to the rights of the holders of any series of Preferred Stock then outstanding, any vacancy occurring in the Board of Directors for any cause, and any newly created directorship resulting from any increase in the authorized number of directors, shall, unless (i) the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders, or (ii) as otherwise provided by law, be filled only by the affirmative vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred.

D. Subject to the rights of the holders of any series of Preferred Stock then outstanding, and unless otherwise required by law, any director or the entire Board of Directors of the Corporation may be removed only for cause and only by the affirmative vote of the holders of at least sixty six and two-thirds percent (66 2/3%) of the shares then entitled to vote at an election of directors.

E. Classification of Board of Directors:

(1) The provisions of this Article FIFTH, Section E are subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances. As used in this Article FIFTH, Section E, the term "INITIAL PUBLIC OFFERING" shall mean the initial public offering of the Corporation pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale of Common Stock to the public.

(2) The directors shall be divided, with respect to the time for which they severally hold office, into three classes designated as Class I, Class II and Class III, respectively. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board of Directors, with the number of directors in each class to be divided as equally as reasonably possible. No one class shall have more than one director more than any other class. The term of office of the Class I directors shall expire at the Corporation's first annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class II directors shall expire at the Corporation's second annual meeting of stockholders following the closing of the Initial Public Offering, and the term of office of the Class III directors shall expire at the Corporation's third annual meeting of stockholders following the closing of the Initial Public Offering. At each annual meeting of stockholders commencing with the first annual meeting of stockholders following the closing of the Initial Public Offering, each director elected to succeed a director of the class whose term then expires shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after his or her election, or until such director's earlier death, resignation or removal.

(3) In the event of any increase or decrease in the authorized number of directors, (i) each director then serving as such shall nevertheless continue as a director of the class of which he is a member and (ii) the newly created or eliminated directorships resulting from such increase or decrease shall be apportioned by the Board of Directors among the three classes of directors so as to ensure that no one class has more than one director more than any other class. To the extent possible, consistent with the foregoing rule, any newly created directorships shall be added to those classes whose terms of office are to expire at the latest dates following such allocation, and any newly eliminated directorships shall be subtracted from those classes whose terms of office are to expire at the earliest dates following such allocation, unless otherwise provided from time to time by resolution adopted by the Board of Directors.

F. Election of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

G. No action shall be taken by the stockholders of the Corporation except at an annual or special meeting of stockholders called in accordance with the Bylaws of the Corporation, and no action shall be taken by the stockholders by written consent.

H. Advance notice of stockholder nominations for the election of directors of the Corporation and of business to be brought by stockholders before any meeting of stockholders of the Corporation shall be given in the manner provided in the Bylaws of the Corporation. Business transacted at special meetings of stockholders shall be confined to the purpose or purposes stated in the notice of meeting.

I. Notwithstanding any other provisions of law, this Certificate of Incorporation or the Bylaws, each as amended, and notwithstanding the fact that a lesser percentage may be specified by applicable law, this Certificate of Incorporation or the Bylaws, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the Corporation's outstanding voting stock then entitled to vote at an election of directors, voting together as a single class, shall be required to alter, change, amend or repeal, or adopt any provision inconsistent with, this Article FIFTH.

#### SIXTH

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to adopt, make, alter or repeal the By-laws of the Corporation unless and to the extent such authority is specifically and expressly limited in the By-laws or this Certificate of Incorporation. Notwithstanding any other provisions of law, this Certificate of Incorporation or the Bylaws, each as amended, and notwithstanding the fact that a lesser percentage may be specified by law, this Certificate of Incorporation or the Bylaws, the affirmative vote of the holders of at least sixty six and two-thirds percent (66 2/3%) of the outstanding voting stock then entitled to vote at an election of directors, voting together as a single class, shall be required to make, alter, change, amend or repeal, or adopt any provision inconsistent with, this Article SIXTH.

## SEVENTH

A. No director shall have any personal liability to the Corporation or its stockholders for any monetary damages for breach of fiduciary duty as a director, except that this Article shall not eliminate or limit the liability of each director (i) for any breach of such director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which such director derived an improper personal benefit.

B. It is the intention of the foregoing provision to eliminate the liability of the Corporation's directors to the fullest extent permitted by Section 102(b)(7) of the General Corporation Law of the State of Delaware, as amended from time to time. If the General Corporation Law of the State of Delaware is amended after approval by the stockholders of this Article SEVENTH to authorize corporate action further eliminating or limiting the personal liability of directors, then a director of the Corporation, in addition to the circumstances in which he is not now personally liable, shall be free of liability to the fullest extent permitted by the General Corporation Law of the State of Delaware as so amended.

C. Any repeal or modification of the foregoing Section A of this Article SEVENTH by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification.

D. Neither any amendment nor repeal of this Article SEVENTH, nor the adoption of any provision of this Certificate of Incorporation inconsistent with this Article SEVENTH, shall eliminate or reduce the effect of this Article SEVENTH in respect of any matter occurring, or any cause of action, suit or claim accruing or arising or that, but for this Article SEVENTH, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Incorporation to be executed on its behalf by its Chief Financial Officer and Secretary, this \_\_ day of May 2002.

FORMFACTOR, INC.

By:

-----  
Jens Meyerhoff, Chief Financial  
Officer and Secretary

AMENDED AND RESTATED  
BY-LAWS  
OF  
FORMFACTOR, INC.

(A Delaware corporation)

(as adopted on January 3, 1994, and  
as amended on April 10, 1997, and  
as amended on May 13, 1999, and  
as amended on March 14, 2002, and  
as amended on April 18, 2002)

AMENDED AND RESTATED  
BY-LAWS  
OF  
FORMFACTOR, INC.

(a Delaware corporation)

TABLE OF CONTENTS

	PAGE
	----
ARTICLE I - STOCKHOLDERS	
Section 1.1: Annual Meetings.....	1
Section 1.2: Special Meetings.....	1
Section 1.3: Notice of Meetings.....	1
Section 1.4: Adjournments.....	2
Section 1.5: Quorum.....	2
Section 1.6: Organization.....	2
Section 1.7: Voting; Proxies.....	2
Section 1.8: Fixing Date for Determination of Stockholders of Record...	3
Section 1.9: List of Stockholders Entitled to Vote.....	3
Section 1.10: Inspectors of Elections.....	3
Section 1.11: Notice of Stockholder Business; Nominations.....	4
ARTICLE II - BOARD OF DIRECTORS	
Section 2.1: Number; Qualifications.....	7
Section 2.2: Election; Resignation; Removal; Vacancies.....	7
Section 2.3: Regular Meetings.....	8
Section 2.4: Special Meetings.....	8
Section 2.5: Telephonic Meetings Permitted.....	8
Section 2.6: Quorum; Vote Required for Action.....	8



AMENDED AND RESTATED  
BY-LAWS  
OF  
FORMFACTOR, INC.

(a Delaware corporation)

TABLE OF CONTENTS (CONT'D)

	PAGE
	----
Section 2.7: Organization.....	8
Section 2.8: Written Action by Directors.....	8
Section 2.9: Powers.....	9
Section 2.10: Compensation of Directors.....	9
ARTICLE III - COMMITTEES	
Section 3.1: Committees.....	9
Section 3.2: Committee Rules.....	9
ARTICLE IV - OFFICERS	
Section 4.1: Generally.....	9
Section 4.2: Chief Executive Officer.....	10
Section 4.3: Chairperson of the Board.....	10
Section 4.4: President.....	10
Section 4.5: Vice President.....	11
Section 4.6: Chief Financial Officer.....	11
Section 4.7: Treasurer.....	11
Section 4.8: Secretary.....	11
Section 4.9: Delegation of Authority.....	11
Section 4.10: Removal.....	11

AMENDED AND RESTATED  
BY-LAWS  
OF  
FORMFACTOR, INC.

(a Delaware corporation)

TABLE OF CONTENTS (CONT'D)

	PAGE
	-----
ARTICLE V - STOCK	
Section 5.1: Certificates.....	11
Section 5.2: Lost, Stolen or Destroyed Stock Certificates; Issuance of New Certificate.....	11
Section 5.3: Other Regulations.....	12
ARTICLE VI - INDEMNIFICATION	
Section 6.1: Indemnification of Officers and Directors.....	12
Section 6.2: Advance of Expenses.....	12
Section 6.3: Non-Exclusivity of Rights.....	13
Section 6.4: Indemnification Contracts.....	13
Section 6.5: Effect of Amendment.....	13
ARTICLE VII - NOTICES	
Section 7.1: Notice.....	13
Section 7.2: Waiver of Notice.....	14
ARTICLE VIII - INTERESTED DIRECTORS	
Section 8.1: Interested Directors; Quorum.....	14
ARTICLE IX - MISCELLANEOUS	
Section 9.1: Fiscal Year.....	14
Section 9.2: Seal.....	15
Section 9.3: Form of Records.....	15
Section 9.4: Reliance Upon Books and Records.....	15

AMENDED AND RESTATED  
BY-LAWS  
OF  
FORMFACTOR, INC.

(a Delaware corporation)

TABLE OF CONTENTS (CONT'D)

	PAGE
	----
Section 9.5: Certificate of Incorporation Governs.....	15
Section 9.6: Severability.....	15
ARTICLE X - AMENDMENT	
Section 10.1: Amendments.....	15

AMENDED AND RESTATED  
BY-LAWS  
OF  
FORMFACTOR, INC.

-----  
(A Delaware corporation)

(as adopted on January 3, 1994, and  
as amended on April 10, 1997, and  
as amended on May 13, 1999, and  
as amended on March 14, 2002, and  
as amended on April 18, 2002)

ARTICLE I

STOCKHOLDERS

Section 1.1: Annual Meetings. An annual meeting of stockholders shall be held for the election of directors at such date, time and place, either within or without the State of Delaware or by means of remote communication, as the Board of Directors in its sole discretion may determine from time to time. Any other proper business may be transacted at the annual meeting.

Section 1.2: Special Meetings. Special meetings of stockholders for any purpose or purposes may be called at any time by the Board of Directors, and shall be called upon the request of the Chairperson of the Board of Directors, the Chief Executive Officer, the President, or by a majority of the members of the Board of Directors. Special meetings may not be called by any other person or persons. If a special meeting of stockholders is called at the request of the Chairperson of the Board of Directors, the Chief Executive Officer or the President, then such person shall request such meeting by delivering a written request to call such meeting to each member of the Board of Directors, and the Board of Directors shall then determine the time, date and place of such special meeting, which shall be held not more than one hundred twenty (120) nor less than thirty-five (35) days after the written request to call such special meeting was delivered to each member of the Board of Directors. Special meetings may be held at such time and place, within or without the State of Delaware or by means of remote communication, as shall be stated in the notice of such meeting or in a duly executed waiver of notice thereof.

Section 1.3: Notice of Meetings. Written notice of all meetings of stockholders stating the place, date and time of the meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called, shall be given in writing, by electronic transmission in the manner provided by law (including without limitation as set forth in Article VII, Section 7.1 of these Bylaws) or in any other form or manner that is allowable by law. Unless otherwise required by applicable law or the Certificate of Incorporation of the Corporation, such notice shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder of record entitled to vote at such meeting.

Section 1.4: Adjournments. Any meeting of stockholders may adjourn from time to time to reconvene at the same or another place, and notice need not be given of any such adjourned meeting if the time, date and place thereof are announced at the meeting at which the adjournment is taken; provided, however, that if the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, then a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. At the adjourned meeting the Corporation may transact any business that might have been transacted at the original meeting.

Section 1.5: Quorum. At each meeting of stockholders the holders of a majority of the shares of stock entitled to vote at the meeting, present in person or represented by proxy, shall constitute a quorum for the transaction of business, except if otherwise required by applicable law. If a quorum shall fail to attend any meeting, the chairperson of the meeting or the holders of a majority of the shares entitled to vote who are present, in person or by proxy, at the meeting may adjourn the meeting. Shares of the Corporation's stock belonging to the Corporation (or to another corporation, if a majority of the shares entitled to vote in the election of directors of such other corporation are held, directly or indirectly, by the Corporation), shall neither be entitled to vote nor be counted for quorum purposes; provided, however, that the foregoing shall not limit the right of the Corporation or any other corporation to vote any shares of the Corporation's stock held by it in a fiduciary capacity.

Section 1.6: Organization. Meetings of stockholders shall be presided over by such person as the Board of Directors may designate, or, in the absence of such a person, the Chief Executive Officer, or, in the absence of such person, the President of the Corporation, or, in the absence of such person, such person as may be chosen by the holders of a majority of the shares entitled to vote who are present, in person or by proxy, at the meeting. Such person shall be chairperson of the meeting and, subject to Section 1.10 hereof, shall determine the order of business and the procedure at the meeting, including such regulation of the manner of voting and the conduct of discussion as seems to him or her to be in order, and shall have the power to adjourn the meeting to another time, date and place (if any). The Secretary of the Corporation shall act as secretary of the meeting, but in such person's absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 1.7: Voting; Proxies. Unless otherwise provided by law or the Certificate of Incorporation, and subject to the provisions of Section 1.8 of these Bylaws, each stockholder shall be entitled to one (1) vote for each share of stock held by such stockholder. Each stockholder entitled to vote at a meeting of stockholders, or to express consent or dissent to corporate action in writing without a meeting, may authorize another person or persons to act for such stockholder by proxy. Such a proxy may be prepared, transmitted and delivered in any manner permitted by applicable law. Voting at meetings of stockholders need not be by written ballot unless such is demanded at the meeting before voting begins by a stockholder or stockholders holding shares representing at least one percent (1%) of the votes entitled to vote at such meeting, or by such stockholder's or stockholders' proxy; provided, however, that an election of directors shall be by written ballot if demand is so made by any stockholder at the meeting before voting begins. If a vote is to be taken by written ballot, then each such ballot shall state the name of the stockholder or proxy voting and such other information as the chairperson of the meeting deems appropriate and, if authorized by the Board of Directors, the

ballot may be submitted by electronic transmission in the manner provided by law. Directors shall be elected by a plurality of the votes of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. Unless otherwise provided by applicable law, the Certificate of Incorporation or these Bylaws, every matter other than the election of directors shall be decided by the affirmative vote of the holders of a majority of the shares of stock entitled to vote thereon that are present in person or represented by proxy at the meeting and are voted for or against the matter.

Section 1.8: Fixing Date for Determination of Stockholders of Record. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors and which shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting, nor more than sixty (60) days prior to any other action. If no record date is fixed by the Board of Directors, then the record date shall be as provided by applicable law. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

Section 1.9: List of Stockholders Entitled to Vote. A complete list of stockholders entitled to vote at any meeting of stockholders, arranged in alphabetical order and showing the address of each stockholder and the number of shares registered in the name of each stockholder, shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, either on a reasonably accessible electronic network as permitted by law (provided that the information required to gain access to the list is provided with the notice of the meeting) or during business hours for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any stockholder who is present at the meeting. If the meeting is held solely by means of remote communication, then the list shall be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access the list shall be provided with the notice of the meeting.

Section 1.10: Inspectors of Elections.

(a) Applicability. Unless otherwise provided in the Corporation's Certificate of Incorporation or required by the Delaware General Corporation Law, the following provisions of this Section 1.10 shall apply only if and when the Corporation has a class of voting stock that is: (i) listed on a national securities exchange; (ii) authorized for quotation on an automated interdealer quotation system of a registered national securities association; or (iii) held of record by more than 2,000 stockholders; in all other cases, observance of the provisions of this Section 1.10 shall be optional, and at the discretion of the Corporation.

(b) Appointment. The Corporation shall, in advance of any meeting of stockholders, appoint one or more inspectors of election to act at the meeting and make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting of stockholders, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting.

(c) Inspector's Oath. Each inspector of election, before entering upon the discharge of his duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of such inspector's ability.

(d) Duties of Inspectors. At a meeting of stockholders, the inspectors of election shall (i) ascertain the number of shares outstanding and the voting power of each share, (ii) determine the shares represented at a meeting and the validity of proxies and ballots, (iii) count all votes and ballots, (iv) determine and retain for a reasonable period of time a record of the disposition of any challenges made to any determination by the inspectors, and (v) certify their determination of the number of shares represented at the meeting, and their count of all votes and ballots. The inspectors may appoint or retain other persons or entities to assist the inspectors in the performance of the duties of the inspectors.

(e) Opening and Closing of Polls. The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced by the chairperson of the meeting. No ballot, proxies or votes, nor any revocations thereof or changes thereto, shall be accepted by the inspectors after the closing of the polls unless the Court of Chancery upon application by a stockholder shall determine otherwise.

(f) Determinations. In determining the validity and counting of proxies and ballots, the inspectors shall be limited to an examination of the proxies, any envelopes submitted with those proxies, any information provided in connection with proxies in accordance with Section 212(c)(2) of the Delaware General Corporation Law, ballots and the regular books and records of the Corporation, except that the inspectors may consider other reliable information for the limited purpose of reconciling proxies and ballots submitted by or on behalf of banks, brokers, their nominees or similar persons which represent more votes than the holder of a proxy is authorized by the record owner to cast or more votes than the stockholder holds of record. If the inspectors consider other reliable information for the limited purpose permitted herein, the inspectors at the time they make their certification of their determinations pursuant to this Section 1.10 shall specify the precise information considered by them, including the person or persons from whom they obtained the information, when the information was obtained, the means by which the information was obtained and the basis for the inspectors' belief that such information is accurate and reliable.

#### Section 1.11: Notice of Stockholder Business; Nominations.

##### (a) Annual Meeting of Stockholders.

(i) Nominations of persons for election to the Board of Directors and the proposal of business to be considered by the stockholders shall be made at an annual meeting of stockholders (A) pursuant to the Corporation's notice of such meeting, (B) by or at the direction

of the Board of Directors or (C) by any stockholder of the Corporation who was a stockholder of record at the time of giving of the notice provided for in this Section 1.11, who is entitled to vote at such meeting and who complies with the notice procedures set forth in this Section 1.11.

(ii) For nominations or other business to be properly brought before an annual meeting by a stockholder pursuant to clause (C) of subparagraph (a)(i) of this Section 1.11, the stockholder must have given timely notice thereof in writing to the Secretary of the Corporation and such other business must otherwise be a proper matter for stockholder action. To be timely, a stockholder's notice must be delivered to the Secretary at the principal executive offices of the Corporation not later than the close of business on the seventy-fifth (75th) day nor earlier than the close of business on the one hundred-fifth (105th) day prior to the first anniversary of the preceding year's annual meeting (except in the case of the Corporation's first annual meeting following the closing of the Initial Public Offering (as defined in Section 2.2 herein), for which such notice shall be timely if delivered in the same time period as if such meeting were a special meeting governed by subparagraph (b) of this Section 1.11); provided, however, that in the event that the date of the annual meeting is more than thirty (30) days before or more than sixty (60) days after such anniversary date, notice by the stockholder to be timely must be so delivered not earlier than the close of business on the one hundred-fifth (105th) day prior to such annual meeting and not later than the close of business on the later of the seventy-fifth (75th) day prior to such annual meeting or the close of business on the tenth (10th) day following the day on which public announcement of the date of such meeting is first made by the Corporation. Such stockholder's notice shall set forth: (a) as to each person whom the stockholder proposes to nominate for election or reelection as a director all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors, or is otherwise required, in each case pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "EXCHANGE ACT"), including such person's written consent to being named in the proxy statement as a nominee and to serving as a director if elected; (b) as to any other business that the stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting and any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made; and (c) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (1) the name and address of such stockholder, as they appear on the Corporation's books, and of such beneficial owner, and (2) the class and number of shares of the Corporation that are owned beneficially and held of record by such stockholder and such beneficial owner.

(iii) Notwithstanding anything in the second sentence of subparagraph (a)(ii) of this Section 1.11 to the contrary, in the event that the number of directors to be elected to the Board of Directors of the Corporation is increased and there is no public announcement by the Corporation naming all of the nominees for director or specifying the size of the increased board of directors at least seventy five (75) days prior to the first anniversary of the preceding year's annual meeting (or, if the annual meeting is held more than thirty (30) days before or sixty (60) days after such anniversary date, at least seventy five (75) days prior to such annual meeting), a stockholder's notice required by this Section 1.11 shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be delivered to the Secretary of the Corporation at the principal executive office of the Corporation not later than the



close of business on the tenth (10th) day following the day on which such public announcement is first made by the Corporation.

(b) Special Meetings of Stockholders. Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting pursuant to the Corporation's notice of such meeting. Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected pursuant to the Corporation's notice of such meeting (i) by or at the direction of the Board of Directors or (ii) provided that the Board of Directors has determined that directors shall be elected at such meeting, by any stockholder of the Corporation who is a stockholder of record at the time of giving of notice of the special meeting, who shall be entitled to vote at the meeting and who complies with the notice procedures set forth in this Section 1.11. In the event the Corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder may nominate a person or persons (as the case may be), for election to such position(s) as specified in the Corporation's notice of meeting, if the stockholder's notice required by subparagraph (a)(ii) of this Section 1.11 shall be delivered to the Secretary of the Corporation at the principal executive offices of the Corporation not earlier than the one hundred-fifth (105th) day prior to such special meeting and not later than the close of business on the later of the seventy-fifth (75th) day prior to such special meeting or the tenth (10th) day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting.

(c) General.

(i) Only such persons who are nominated in accordance with the procedures set forth in this Section 1.11 shall be eligible to serve as directors and only such business shall be conducted at a meeting of stockholders as shall have been brought before the meeting in accordance with the procedures set forth in this Section 1.11. Except as otherwise provided by law or these Bylaws, the chairperson of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made or proposed, as the case may be, in accordance with the procedures set forth in this Section 1.11 and, if any proposed nomination or business is not in compliance herewith, to declare that such defective proposal or nomination shall be disregarded.

(ii) For purposes of this Section 1.11, the term "PUBLIC ANNOUNCEMENT" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to section 13, 14 or 15(d) of the Exchange Act.

(iii) Notwithstanding the foregoing provisions of this Section 1.11, a stockholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder with respect to the matters set forth herein. Nothing in this Section 1.11 shall be deemed to affect any rights of stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act.

## ARTICLE II

### BOARD OF DIRECTORS

Section 2.1: Number; Qualifications. The Board of Directors shall consist of one or more members. The initial number of directors shall be seven (7), and thereafter shall be fixed from time to time by resolution of the Board of Directors. No decrease in the authorized number of directors constituting the Board of Directors shall shorten the term of any incumbent director. Directors need not be stockholders of the Corporation.

Section 2.2: Election; Resignation; Removal; Vacancies. The Board of Directors shall initially consist of the person or persons elected by the incorporator or named in the Corporation's initial Certificate of Incorporation. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, following the closing of the Corporation's initial public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale of Common Stock to the public (the "INITIAL PUBLIC OFFERING"), the directors shall be divided, with respect to the time for which they severally hold office, into three classes designated as Class I, Class II and Class III, respectively. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board of Directors, with the number of directors in each class to be divided as equally as reasonably possible. No one class shall have more than one director more than any other class. The term of office of the Class I directors shall expire at the Corporation's first annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class II directors shall expire at the Corporation's second annual meeting of stockholders following the closing of the Initial Public Offering, and the term of office of the Class III directors shall expire at the Corporation's third annual meeting of stockholders following the closing of the Initial Public Offering. At each annual meeting of stockholders commencing with the first annual meeting of stockholders following the closing of the Initial Public Offering, each director elected to succeed a director of the class whose term then expires shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after his or her election, or until such director's earlier death, resignation or removal. Subject to the provisions of the Corporation's then effective Certificate of Incorporation, prior to the closing of the Initial Public Offering, each director shall hold office until the next annual meeting of stockholders and until such director's successor is elected and qualified, or until such director's earlier death, resignation or removal. Any director may resign at any time upon notice to the Corporation given in writing or by electronic transmission. Subject to the rights of the holders of any series of Preferred Stock then outstanding, and unless otherwise required by law, any director or the entire Board of Directors may be removed only for cause and only by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the shares then entitled to vote at an election of directors. Subject to the rights of the holders of any series of Preferred Stock then outstanding, any vacancy occurring in the Board of Directors for any cause, and any newly created directorship resulting from any increase in the authorized number of directors, shall, unless (i) the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders, or (ii) as otherwise provided by law, be filled only by the affirmative vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, and not by the stockholders.

Section 2.3: Regular Meetings. Regular meetings of the Board of Directors may be held at such places, within or without the State of Delaware, and at such times as the Board of Directors may from time to time determine. Notice of regular meetings need not be given if the date, times and places thereof are fixed by resolution of the Board of Directors.

Section 2.4: Special Meetings. Special meetings of the Board of Directors may be called by the Chairperson of the Board of Directors, the President or a majority of the members of the Board of Directors then in office and may be held at any time, date or place, within or without the State of Delaware, as the person or persons calling the meeting shall fix. Notice of the time, date and place of such meeting shall be given, orally, in writing or by electronic transmission (including electronic mail), by the person or persons calling the meeting to all directors at least four (4) days before the meeting if the notice is mailed, or at least twelve (12) hours before the meeting if such notice is given by telephone, hand delivery, telegram, telex, mailgram, facsimile, electronic mail or other means of electronic transmission, or in any other form or by any other manner allowable by law. Unless otherwise indicated in the notice, any and all business may be transacted at a special meeting.

Section 2.5: Remote Meetings Permitted. Members of the Board of Directors, or any committee of the Board, may participate in a meeting of the Board or such committee by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to conference telephone or similar communications equipment shall constitute presence in person at such meeting.

Section 2.6: Quorum; Vote Required for Action. At all meetings of the Board of Directors a majority of the total number of authorized directors shall constitute a quorum for the transaction of business. Except as otherwise provided herein or in the Certificate of Incorporation, or required by law, the vote of a majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors.

Section 2.7: Organization. Meetings of the Board of Directors shall be presided over by the Chairperson of the Board of Directors, or in such person's absence by the Chief Executive Officer, or in such person's absence by a chairperson chosen at the meeting. The Secretary shall act as secretary of the meeting, but in such person's absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 2.8: Written Action by Directors. Any action required or permitted to be taken at any meeting of the Board of Directors, or of any committee thereof, may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing, by electronic transmission or any other form allowable by law, and the writing or writings, the electronic transmission or transmissions or any other form or format allowable by law are filed with the minutes of proceedings of the Board or committee, respectively. Such filing shall be in paper form if the minutes are maintained in paper form, shall be in electronic form if the minutes are maintained in electronic form and, in any case, shall be in any other format allowable by law and being used to maintain the minutes.

Section 2.9: Powers. The Board of Directors may, except as otherwise required by law or the Certificate of Incorporation, exercise all such powers and do all such acts and things as may be exercised or done by the Corporation.

Section 2.10: Compensation of Directors. Directors, as such, may receive, pursuant to a resolution of the Board of Directors, fees and other compensation for their services as directors, including without limitation their services as members of committees of the Board of Directors.

### ARTICLE III

#### COMMITTEES

Section 3.1: Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of the committee, the member or members thereof present at any meeting of such committee who are not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in place of any such absent or disqualified member. Any such committee, to the extent provided in a resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority in reference to the following matters: (i) approving or adopting, or recommending to the stockholders, any action or matter expressly required by the Delaware General Corporation Law to be submitted to stockholders for approval or (ii) adopting, amending or repealing any bylaw of the Corporation.

Section 3.2: Committee Rules. Unless the Board of Directors otherwise provides, each committee designated by the Board of Directors may make, alter and repeal rules for the conduct of its business. In the absence of such rules each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article II of these Bylaws.

### ARTICLE IV

#### OFFICERS

Section 4.1: Generally. The officers of the Corporation shall consist of a Chief Executive Officer and/or a President, a Secretary, a Treasurer and such other officers as may from time to time be appointed by the Board of Directors. All officers shall be elected by the Board of Directors; provided, however, that the Board of Directors may empower the Chief Executive Officer of the Corporation to appoint officers other than the Chairperson of the Board, the Chief Executive Officer, the President, the Chief Financial Officer or the Treasurer. Each officer shall hold office until such person's successor is elected and qualified or until such person's earlier resignation or removal. Any number of offices may be held by the same person. Any officer may resign at any time upon written notice to the Corporation. Any vacancy

occurring in any office of the Corporation by death, resignation, removal or otherwise may be filled by the Board of Directors.

Section 4.2: Chief Executive Officer. Subject to the control of the Board of Directors and such supervisory powers, if any, as may be given by the Board of Directors, the powers and duties of the Chief Executive Officer of the Corporation are:

- (a) To act as the general manager and, subject to the control of the Board of Directors, to have general supervision, direction and control of the business and affairs of the Corporation;
- (b) To preside at all meetings of the stockholders;
- (c) To call meetings of the stockholders to be held at such times and, subject to the limitations prescribed by law or by these Bylaws, at such places as he or she shall deem proper; and
- (d) To affix the signature of the Corporation to all deeds, conveyances, mortgages, guarantees, leases, obligations, bonds, certificates and other papers and instruments in writing which have been authorized by the Board of Directors or which, in the judgment of the Chief Executive Officer, should be executed on behalf of the Corporation; to sign certificates for shares of stock of the Corporation; and, subject to the direction of the Board of Directors, to have general charge of the property of the Corporation and to supervise and control all officers, agents and employees of the Corporation.

The President shall be the Chief Executive Officer of the Corporation unless the Board of Directors shall designate another officer to be the Chief Executive Officer. If there is no President, and the Board of Directors has not designated any other officer to be the Chief Executive Officer, then the Chairperson of the Board of Directors shall be the Chief Executive Officer.

Section 4.3: Chairperson of the Board. The Chairperson of the Board of Directors shall have the power to preside at all meetings of the Board of Directors and shall have such other powers and duties as provided in these Bylaws and as the Board of Directors may from time to time prescribe.

Section 4.4: President. The President shall be the Chief Executive Officer of the Corporation unless the Board of Directors shall have designated another officer as the Chief Executive Officer of the Corporation. Subject to the provisions of these Bylaws and to the direction of the Board of Directors, and subject to the supervisory powers of the Chief Executive Officer (if the Chief Executive Officer is an officer other than the President), and subject to such supervisory powers and authority as may be given by the Board of Directors to the Chairperson of the Board of Directors, and/or to any other officer, the President shall have the responsibility for the general management the control of the business and affairs of the Corporation and the general supervision and direction of all of the officers, employees and agents of the Corporation (other than the Chief Executive Officer, if the Chief Executive Officer is an officer other than the President) and shall perform all duties and have all powers that are commonly incident to the office of President or that are delegated to the President by the Board of Directors.

Section 4.5: Vice President. Each Vice President shall have all such powers and duties as are commonly incident to the office of Vice President, or that are delegated to him or her by the Board of Directors or the Chief Executive Officer. A Vice President may be designated by the Board to perform the duties and exercise the powers of the Chief Executive Officer in the event of the Chief Executive Officer's absence or disability.

Section 4.6: Chief Financial Officer. The Chief Financial Officer shall be the Treasurer of the Corporation unless the Board of Directors shall have designated another officer as the Treasurer of the Corporation. Subject to the direction of the Board of Directors and the Chief Executive Officer, the Chief Financial Officer shall perform all duties and have all powers that are commonly incident to the office of Chief Financial Officer.

Section 4.7: Treasurer. The Treasurer shall have custody of all monies and securities of the Corporation. The Treasurer shall make such disbursements of the funds of the Corporation as are authorized and shall render from time to time an account of all such transactions. The Treasurer shall also perform such other duties and have such other powers as are commonly incident to the office of Treasurer, or as the Board of Directors or the Chief Executive Officer may from time to time prescribe.

Section 4.8: Secretary. The Secretary shall issue or cause to be issued all authorized notices for, and shall keep, or cause to be kept, minutes of all meetings of the stockholders and the Board of Directors. The Secretary shall have charge of the corporate minute books and similar records and shall perform such other duties and have such other powers as are commonly incident to the office of Secretary, or as the Board of Directors or the Chief Executive Officer may from time to time prescribe.

Section 4.9: Delegation of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officers or agents, notwithstanding any provision hereof.

Section 4.10: Removal. Any officer of the Corporation shall serve at the pleasure of the Board of Directors and may be removed at any time, with or without cause, by the Board of Directors. Such removal shall be without prejudice to the contractual rights of such officer, if any, with the Corporation.

## ARTICLE V

### STOCK

Section 5.1: Certificates. Every holder of stock shall be entitled to have a certificate signed by or in the name of the Corporation by the Chairperson or Vice-Chairperson of the Board of Directors, or the President or a Vice President, and by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary, of the Corporation, certifying the number of shares owned by such stockholder in the Corporation. Any or all of the signatures on the certificate may be a facsimile.

Section 5.2: Lost, Stolen or Destroyed Stock Certificates; Issuance of New Certificates. The Corporation may issue a new certificate of stock in the place of any certificate previously

issued by it, alleged to have been lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to agree to indemnify the Corporation and/or to give the Corporation a bond sufficient to indemnify it, against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate.

Section 5.3: Other Regulations. The issue, transfer, conversion and registration of stock certificates shall be governed by such other regulations as the Board of Directors may establish.

## ARTICLE VI

### INDEMNIFICATION

Section 6.1 Indemnification of Officers and Directors. Each person who was or is made a party to, or is threatened to be made a party to, or is involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "PROCEEDING"), by reason of the fact that such person (or a person of whom such person is the legal representative), is or was a director or officer of the Corporation or is or was serving at the request of the Corporation as a director or officer of another corporation, or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, shall be indemnified and held harmless by the Corporation to the fullest extent permitted by the Delaware General Corporation Law, against all expenses, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes and penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such person in connection therewith, provided such person acted in good faith and in a manner which the person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful. Such indemnification shall continue as to a person who has ceased to be a director or officer and shall inure to the benefit of such person's heirs, executors and administrators. Notwithstanding the foregoing, the Corporation shall indemnify any such person seeking indemnity in connection with a Proceeding (or part thereof) initiated by such person only if such Proceeding (or part thereof) was authorized by the Board of Directors of the Corporation.

Section 6.2: Advance of Expenses. The Corporation shall pay all expenses (including attorneys' fees) incurred by such a director or officer in defending any such Proceeding as they are incurred in advance of its final disposition; provided, however, that if the Delaware General Corporation Law then so requires, the payment of such expenses incurred by such a director or officer in advance of the final disposition of such Proceeding shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it should be determined ultimately that such director or officer is not entitled to be indemnified under this Article VI or otherwise; and provided, further, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation directly brings a claim, in a Proceeding, alleging that such person has breached such person's duty of loyalty to the Corporation, committed an act or omission not in good faith or that involves intentional misconduct or a knowing violation of law, or derived an improper personal benefit from a transaction.

Section 6.3: Non-Exclusivity of Rights. The rights conferred on any person in this Article VI shall not be exclusive of any other right that such person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, Bylaw, agreement, vote or consent of stockholders or disinterested directors, or otherwise. Additionally, nothing in this Article VI shall limit the ability of the Corporation, in its discretion, to indemnify or advance expenses to persons whom the Corporation is not obligated to indemnify or advance expenses pursuant to this Article VI.

Section 6.4: Indemnification Contracts. The Board of Directors is authorized to cause the Corporation to enter into indemnification contracts with any director, officer, employee or agent of the Corporation, or any person serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, including employee benefit plans, providing indemnification rights to such person. Such rights may be greater than those provided in this Article VI.

Section 6.5: Effect of Amendment. Any amendment, repeal or modification of any provision of this Article VI shall be prospective only, and shall not adversely affect any right or protection conferred on a person pursuant to this Article VI and existing at the time of such amendment, repeal or modification.

## ARTICLE VII

### NOTICES

Section 7.1: Notice. Except as otherwise specifically provided herein or required by law, all notices required to be given pursuant to these Bylaws shall be in writing and may in every instance be effectively given by hand delivery (including use of a delivery service), by depositing such notice in the mail, postage prepaid, or by sending such notice by prepaid telegram, telex, overnight express courier, mailgram, or facsimile. Any such notice shall be addressed to the person to whom notice is to be given at such person's address as it appears on the records of the Corporation. The notice shall be deemed given (i) in the case of hand delivery, when received by the person to whom notice is to be given or by any person accepting such notice on behalf of such person, (ii) in the case of delivery by mail, upon deposit in the mail, (iii) in the case of delivery by overnight express courier, when dispatched, and (iv) in the case of delivery via telegram, telex, mailgram, or fax when dispatched. Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Corporation under any provision of the Delaware General Corporation Law, the Certificate of Incorporation, or these Bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the Corporation. Any such consent shall be deemed revoked if (i) the Corporation is unable to deliver by electronic transmission two consecutive notices given by the Corporation in accordance with such consent and (ii) such inability becomes known to the Secretary or an Assistant Secretary of the Corporation or to the transfer agent, or other person responsible for the giving of notice; provided, however, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action. Notice given pursuant to this Section 7.1 shall be deemed given: (i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive



notice; (ii) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice; (iii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and (iv) if by any other form of electronic transmission, when directed to the stockholder. An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Corporation that the notice has been given in writing or by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

Section 7.2: Waiver of Notice. Whenever notice is required to be given under any provision of these Bylaws, a written waiver of notice, signed by the person entitled to notice, or waiver by electronic transmission by such person, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or members of a committee of directors need be specified in any written waiver of notice.

## ARTICLE VIII

### INTERESTED DIRECTORS

Section 8.1: Interested Directors; Quorum. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof that authorizes the contract or transaction, or solely because his, her or their votes are counted for such purpose, if: (i) the material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; (ii) the material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (iii) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee thereof, or the stockholders. Interested or common directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

## ARTICLE IX

### MISCELLANEOUS

Section 9.1: Fiscal Year. The fiscal year of the Corporation shall be determined by resolution of the Board of Directors.

Section 9.2: Seal. The Board of Directors may provide for a corporate seal, which shall have the name of the Corporation inscribed thereon and shall otherwise be in such form as may be approved from time to time by the Board of Directors.

Section 9.3: Form of Records. Any records maintained by the Corporation in the regular course of its business, including its stock ledger, books of account and minute books, may be kept on, or be in the form of, magnetic tape, diskettes, photographs, microphotographs or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time. The Corporation shall so convert any records so kept upon the request of any person entitled to inspect such records pursuant to any provision of the Delaware General Corporation Law.

Section 9.4: Reliance Upon Books and Records. A member of the Board of Directors, or a member of any committee designated by the Board of Directors shall, in the performance of such person's duties, be fully protected in relying in good faith upon records of the Corporation and upon such information, opinions, reports or statements presented to the Corporation by any of the Corporation's officers or employees, or committees of the Board of Directors, or by any other person as to matters the member reasonably believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Corporation.

Section 9.5: Certificate of Incorporation Governs. In the event of any conflict between the provisions of the Corporation's Certificate of Incorporation and Bylaws, the provisions of the Certificate of Incorporation shall govern.

Section 9.6: Severability. If any provision of these Bylaws shall be held to be invalid, illegal, unenforceable or in conflict with the provisions of the Corporation's Certificate of Incorporation, then such provision shall nonetheless be enforced to the maximum extent possible consistent with such holding and the remaining provisions of these Bylaws (including without limitation, all portions of any section of these Bylaws containing any such provision held to be invalid, illegal, unenforceable or in conflict with the Certificate of Incorporation, that are not themselves invalid, illegal, unenforceable or in conflict with the Certificate of Incorporation) shall remain in full force and effect.

#### ARTICLE X

#### AMENDMENT

Section 10.1: Amendments. Following the closing of the Initial Public Offering, stockholders of the Corporation holding at least sixty-six and two-thirds percent (66-2/3%) of the Corporation's outstanding voting stock then entitled to vote at an election of directors shall have the power to adopt, amend or repeal Bylaws. Prior to the Initial Public Offering, stockholders of the Corporation holding a majority of the Corporation's outstanding voting stock then entitled to vote at an election of directors shall have the power to adopt, amend or repeal Bylaws. To the extent provided in the Corporation's Certificate of Incorporation, the Board of Directors of the Corporation shall also have the power to adopt, amend or repeal Bylaws of the Corporation.

CERTIFICATION OF AMENDED AND RESTATED

BY-LAWS

OF

FORMFACTOR, INC.

(A DELAWARE CORPORATION)

KNOW ALL BY THESE PRESENTS:

I, Jens Meyerhoff, certify that I am Secretary of FormFactor, Inc., a Delaware corporation (the "COMPANY"), that I am duly authorized to make and deliver this certification, and that the attached Restated Bylaws are a true and correct copy of the Restated Bylaws of the Company in effect as of the date of this certificate.

Dated: \_\_\_\_\_, 2002

By: \_\_\_\_\_

NUMBER  
FFI

SHARES

SEE REVERSE FOR CERTAIN DEFINITIONS

CUSIP 346375 10 8

FORMFACTOR  
FORMFACTOR, INC.

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

THIS CERTIFICATE IS TRANSFERABLE IN CANTON, MA, JERSEY CITY, NJ AND  
NEW YORK CITY, NY

This  
certifies  
that

is the  
registered  
owner of

FULLY PAID AND NON-ASSESSABLE SHARES OF THE COMMON STOCK, \$0.001 PAR VALUE, OF

FORMFACTOR, INC.

transferable on the books of the Corporation in person or by duly authorized  
attorney upon surrender of this Certificate properly endorsed. This Certificate  
is not valid until countersigned by the Transfer Agent and registered by the  
Registrar.

WITNESS the facsimile seal of the Corporation and the facsimile signatures  
of its duly authorized officers.

Dated:

/s/ Igor Khandros  
PRESIDENT AND CHIEF EXECUTIVE OFFICER

[Corporate Seal]

/s/ Jens Meyerhoff  
CHIEF FINANCIAL OFFICER

COUNTERSIGNED AND REGISTERED  
EquiServe Trust Company, N.A.  
TRANSFER AGENT AND REGISTRAR  
BY /s/ [illegible]  
AUTHORIZED SIGNATURE

FORMFACTOR, INC.

The Corporation will furnish to any stockholder, upon request and without charge, a full statement of the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock of series thereof which the Corporation is authorized to issue and the qualifications, limitations or restrictions of such preferences and/or rights of each such class of stock or series thereof. Any such request should be made to the Secretary of the Corporation at its principal place of business or to the Transfer Agent and Registrar.

The following abbreviations, when used in the inscription on the face of this Certificate, shall be construed as through they were written out in full according to applicable laws or regulations:

TEN COM	-- as tenants in common	UNIF GIFT MIN ACT	--	_____ Custodian _____
TEN ENT	-- as tenants by the entireties			(Cust) _____ (Minor)
JT TEN	-- as joint tenants with right of survivorship and not as tenants in common			under Uniform Gifts to Minors Act _____
				(State)
		UNIF TRF MIN ACT	--	_____ Custodian (until age _____)
				(Cust) _____
				under Uniform Transfers to Minors Act _____
				(Minor) _____
				(State)

Additional abbreviations may also be used though not in the above list.

FOR VALUE RECEIVED, \_\_\_\_\_ hereby sell, assign and transfer unto

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

-----  
-----

-----  
(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)  
-----

\_\_\_\_\_  
Shares  
of the common stock represented by the within Certificate, and do hereby irrevocably constitute and appoint

\_\_\_\_\_  
Attorney  
to transfer the said stock on the books of the within named Corporation with full power of substitution in the premises.

Dated \_\_\_\_\_

X  
-----  
X  
-----

NOTICE: THE SIGNATURE(S) TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME(S) AS WRITTEN UPON THE FACE OF THE CERTIFICATE IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATEVER.

Signature(s) Guaranteed

By \_\_\_\_\_

THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM), PURSUANT TO S.E.C. RULE 17Ad-15

[Form of Exhibit 5.01 Legal Opinion]

\_\_\_\_\_, 2002

FormFactor, Inc.  
2140 Research Drive  
Livermore, California 94550

Ladies and Gentlemen:

At your request, we have examined the Registration Statement on Form S-1 (Registration Number 333-86738) filed by FormFactor, Inc., a Delaware corporation (the "COMPANY"), with the Securities and Exchange Commission (the "COMMISSION") on April 22, 2002 (as subsequently amended from time to time, the "REGISTRATION STATEMENT") in connection with the registration under the Securities Act of 1933, as amended, of an aggregate of up to \_\_\_\_\_ shares of the Company's Common Stock, par value \$0.001 per share (the "STOCK").

In rendering this opinion, we have examined the following.

- (1) the Company's Certificate of Incorporation, certified by the Delaware Secretary of State on July 6, 2001 and Amendment to Restated Certificate of Incorporation, certified by the Delaware Secretary of State on April 10, 2002.
- (2) form of the Company's Amended and Restated Certificate of Incorporation to be filed upon the closing of the offering contemplated by the Registration Statement.
- (3) form of the Company's Amended and Restated Certificate of Incorporation to be filed upon conversion of the Company's Preferred Stock into Stock at the closing of the offering contemplated by the Registration Statement.
- (4) the Company's Bylaws, certified by the Company's Secretary on \_\_\_\_\_, 2002.
- (5) the Company's Restated Bylaws to be effective upon the closing of the offering contemplated by the Registration Statement.
- (6) the Registration Statement, together with the exhibits filed as a part thereof or incorporated therein by reference.
- (7) the Prospectus prepared in connection with the Registration Statement.
- (8) the minutes of meetings and actions by written consent of the stockholders and the Board of Directors of the Company that are contained in the Company's minute books that are in our possession.

- (9) the stock records for the Company that the Company has provided to us (consisting of a list of stockholders and a list of option and warrant holders respecting the Company's capital and of any rights to purchase capital stock that was prepared by the Company and dated \_\_\_\_\_, 2002 verifying the number of such issued and outstanding securities).
- (10) a Management Certificate addressed to us and dated of even date herewith executed by the Company containing certain factual and other representations (the "MANAGEMENT CERTIFICATE").
- (11) the Underwriting Agreement by and among the Company and the several underwriters party thereto, a form of which is attached as Exhibit 1.01 to the Registration Statement (the "UNDERWRITING AGREEMENT").

In our examination of documents for purposes of this opinion, we have assumed, and express no opinion as to, the genuineness of all signatures on original documents, the authenticity and completeness of all documents submitted to us as originals, the conformity to originals and completeness of all documents submitted to us as copies, the legal capacity of all persons or entities executing the same, the lack of any undisclosed termination, modification, waiver or amendment to any document reviewed by us and the due authorization, execution and delivery of the Underwriting Agreement by the parties thereto other than the Company. We have also assumed that the certificates representing the Stock will be, when issued, properly signed by authorized officers of the Company or their agents.

As to matters of fact relevant to this opinion, we have relied solely upon our examination of the documents referred to above and have assumed the current accuracy and completeness of the information obtained from the documents referred to above and the representations and warranties made by representatives of the Company to us, including but not limited to those set forth in the Management Certificate. We have made no independent investigation or other attempt to verify the accuracy of any of such information or to determine the existence or non-existence of any other factual matters; however, we are not aware of any facts that would cause us to believe that the opinion expressed herein is not accurate.

We are admitted to practice law in the State of California, and we render this opinion only with respect to, and express no opinion herein concerning the application or effect of the laws of any jurisdiction other than, the existing laws of the United States of America, of the State of California and, with respect to the validity of corporate action and the requirements for the issuance of stock, of the Delaware General Corporation Law, the Delaware Constitution and reported judicial decisions relating thereto.

In connection with our opinion expressed below, we have assumed that, at or prior to the time of the delivery of any shares of Stock, the Registration Statement will have been declared effective under the Securities Act of 1933, as amended, that the registration will apply to such shares of Stock and will not have been modified or rescinded and that there will not have occurred any change in law affecting the validity or enforceability of such shares of Stock.

Based upon the foregoing, it is our opinion that the up to \_\_\_\_\_ shares of Stock to be issued and sold by the Company, when issued, sold and delivered in the manner and for the consideration stated in the Registration Statement and the Prospectus and pursuant to the terms of the Underwriting Agreement, will be validly issued, fully paid and nonassessable.

We consent to the use of this opinion as an exhibit to the Registration Statement and further consent to all references to us, if any, in the Registration Statement, the Prospectus constituting a part thereof and any amendments thereto. This opinion is intended solely for use in connection with issuance and sale of shares subject to the Registration Statement and is not to be relied upon for any other purpose. This opinion speaks only as of its date and we assume no obligation to advise you of any fact, circumstance, event or change in the law or the facts that may hereafter be brought to our attention whether or not such occurrence would affect or modify the opinions expressed herein.

Very truly yours,

FENWICK & WEST LLP

By: \_\_\_\_\_



## INDEMNITY AGREEMENT

This Indemnity Agreement (this "AGREEMENT"), dated as of \_\_\_\_\_, 2002, is made by and between FormFactor, Inc., a Delaware corporation (the "COMPANY"), and \_\_\_\_\_, a director and/or officer of the Company (the "INDEMNITEE").

## RECITALS

A. The Company is aware that competent and experienced persons are increasingly reluctant to serve as directors or officers of corporations unless they are protected by comprehensive liability insurance and/or indemnification, due to increased exposure to litigation costs and risks resulting from their service to such corporations, and due to the fact that the exposure frequently bears no reasonable relationship to the compensation of such directors and officers;

B. Based on their experience as business managers, the Board of Directors of the Company (the "BOARD") has concluded that, to retain and attract talented and experienced individuals to serve as officers and directors of the Company, and to encourage such individuals to make the business decisions necessary for the success of the Company, it is necessary for the Company contractually to indemnify officers and directors and to assume for itself maximum liability for expenses and damages in connection with claims against such officers and directors in connection with their service to the Company;

C. Section 145 of the General Corporation Law of Delaware, under which the Company is organized (the "LAW"), empowers the Company to indemnify by agreement its officers, directors, employees and agents, and persons who serve, at the request of the Company, as directors, officers, employees or agents of other corporations or enterprises, and expressly provides that the indemnification provided by the Law is not exclusive; and

D. The Company desires and has requested the Indemnitee to serve or continue to serve as a director or officer of the Company free from undue concern for claims for damages arising out of or related to such services to the Company.

NOW, THEREFORE, the parties hereto, intending to be legally bound, hereby agree as follows:

## 1. DEFINITIONS.

1.1 Agent. For the purposes of this Agreement, "AGENT" of the Company means any person who is or was a director or officer of the Company or a subsidiary of the Company; or is or was serving at the request of, for the convenience of, or to represent the interest of the Company or a subsidiary of the Company as a director or officer of another foreign or domestic corporation, partnership, joint venture, trust or other enterprise or an affiliate of the Company; or was a director or officer of a foreign or domestic corporation which was a predecessor corporation of the Company, or was a director or officer of another enterprise or affiliate of the Company at the request of, for the convenience of, or to represent the interests of such predecessor corporation. The term "ENTERPRISE" includes any employee benefit plan of the Company, its subsidiaries, affiliates and predecessor corporations.

1.2 Expenses. For purposes of this Agreement, "EXPENSES" includes all direct and indirect costs of any type or nature whatsoever (including, without limitation, all attorneys' fees and related disbursements and other out-of-pocket costs) actually and reasonably incurred by the Indemnitee in connection with the investigation, defense or appeal of a proceeding or establishing or enforcing a right to indemnification or advancement of expenses under this Agreement, the Law or otherwise.

1.3 Proceeding. For the purposes of this Agreement, "PROCEEDING" means any threatened, pending or completed action, suit or other proceeding, whether civil, criminal, administrative, investigative or any other type whatsoever.

1.4 Subsidiary. For purposes of this Agreement, "SUBSIDIARY" means any corporation of which more than fifty percent (50%) of the outstanding voting securities is owned directly or indirectly by the Company, by the Company and one or more of its subsidiaries or by one or more of the Company's subsidiaries.

2. AGREEMENT TO SERVE. The Indemnitee agrees to serve and/or continue to serve as an agent of the Company, at the will of the Company (or under separate agreement, if such agreement exists), in the capacity the Indemnitee currently serves as an agent of the Company, faithfully and to the best of his ability, so long as he is duly appointed or elected and qualified in accordance with the applicable provisions of the charter documents of the Company or any subsidiary of the Company; provided, however, that the Indemnitee may at any time and for any reason resign from such position (subject to any contractual obligation that the Indemnitee may have assumed apart from this Agreement), and the Company or any subsidiary shall have no obligation under this Agreement to continue the Indemnitee in any such position.

3. DIRECTORS' AND OFFICERS' INSURANCE. The Company shall, to the extent that the Board determines it to be economically reasonable, maintain a policy of directors' and officers' liability insurance ("D&O INSURANCE"), on such terms and conditions as may be approved by the Board.

4. MANDATORY INDEMNIFICATION. Subject to Section 9 below, the Company shall indemnify the Indemnitee:

4.1 Third Party Actions. If the Indemnitee is a person who was or is a party or is threatened to be made a party to any proceeding (other than an action by or in the right of the Company) by reason of the fact that he is or was an agent of the Company, or by reason of anything done or not done by him in any such capacity, against any and all expenses and liabilities of any type whatsoever (including, but not limited to, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) actually and reasonably incurred by him in connection with the investigation, defense, settlement or appeal of such proceeding if he acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the Company and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful;

4.2 Derivative Actions. If the Indemnitee is a person who was or is a party or is threatened to be made a party to any proceeding by or in the right of the Company to procure a judgment in its favor by reason of the fact that he is or was an agent of the Company, or by

reason of anything done or not done by him in any such capacity, against any amounts paid in settlement of any such proceeding and all expenses actually and reasonably incurred by him in connection with the investigation, defense, settlement or appeal of such proceeding if he acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the Company; except that no indemnification under this subsection shall be made in respect of any claim, issue or matter as to which such person shall have been finally adjudged to be liable to the Company by a court of competent jurisdiction due to willful misconduct of a culpable nature in the performance of his duty to the Company, unless and only to the extent that the Court of Chancery or the court in which such proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such amounts which the Court of Chancery or such other court shall deem proper; and

4.3 Exception for Amounts Covered by Insurance. Notwithstanding the foregoing, the Company shall not be obligated to indemnify the Indemnitee for expenses or liabilities of any type whatsoever (including, but not limited to, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) to the extent such have been paid directly to the Indemnitee by D&O Insurance.

#### 5. PARTIAL INDEMNIFICATION AND CONTRIBUTION.

5.1 Partial Indemnification. If the Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of any expenses or liabilities of any type whatsoever (including, but not limited to, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) incurred by him in the investigation, defense, settlement or appeal of a proceeding but is not entitled, however, to indemnification for all of the total amount thereof, then the Company shall nevertheless indemnify the Indemnitee for such total amount except as to the portion thereof to which the Indemnitee is not entitled to indemnification.

5.2 Contribution. If the Indemnitee is not entitled to the indemnification provided in Section 4 for any reason other than the statutory limitations set forth in the Law, then in respect of any threatened, pending or completed proceeding in which the Company is jointly liable with the Indemnitee (or would be if joined in such proceeding), the Company shall contribute to the amount of expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by the Indemnitee in such proportion as is appropriate to reflect (i) the relative benefits received by the Company on the one hand and the Indemnitee on the other hand from the transaction from which such proceeding arose and (ii) the relative fault of the Company on the one hand and of the Indemnitee on the other hand in connection with the events which resulted in such expenses, judgments, fines or settlement amounts, as well as any other relevant equitable considerations. The relative fault of the Company on the one hand and of the Indemnitee on the other hand shall be determined by reference to, among other things, the parties' relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. The Company agrees that it would not be just and equitable if contribution pursuant to this Section 5 were determined by pro rata allocation or any other method of allocation which does not take account of the foregoing equitable considerations.

## 6. MANDATORY ADVANCEMENT OF EXPENSES.

6.1 Advancement. Subject to Section 9 below, the Company shall advance all expenses incurred by the Indemnitee in connection with the investigation, defense, settlement or appeal of any proceeding to which the Indemnitee is a party or is threatened to be made a party by reason of the fact that the Indemnitee is or was an agent of the Company or by reason of anything done or not done by him in any such capacity. The Indemnitee hereby undertakes to promptly repay such amounts advanced only if, and to the extent that, it shall ultimately be determined that the Indemnitee is not entitled to be indemnified by the Company under the provisions of this Agreement, the Certificate of Incorporation or Bylaws of the Company, the Law or otherwise. The advances to be made hereunder shall be paid by the Company to the Indemnitee within thirty (30) days following delivery of a written request therefor by the Indemnitee to the Company.

6.2 Exception. Notwithstanding the foregoing provisions of this Section 6, the Company shall not be obligated to advance any expenses to the Indemnitee arising from a lawsuit filed directly by the Company against the Indemnitee if an absolute majority of the members of the Board reasonably determines in good faith, within thirty (30) days of the Indemnitee's request to be advanced expenses, that the facts known to them at the time such determination is made demonstrate clearly and convincingly that the Indemnitee acted in bad faith. If such a determination is made, the Indemnitee may have such decision reviewed by another forum, in the manner set forth in Sections 8.3, 8.4 and 8.5 hereof, with all references therein to "indemnification" being deemed to refer to "advancement of expenses," and the burden of proof shall be on the Company to demonstrate clearly and convincingly that, based on the facts known at the time, the Indemnitee acted in bad faith. The Company may not avail itself of this Section 6.2 as to a given lawsuit if, at any time after the occurrence of the activities or omissions that are the primary focus of the lawsuit, the Company has undergone a change in control. For this purpose, a change in control shall mean a given person or group of affiliated persons or groups increasing their beneficial ownership interest in the Company by at least twenty (20) percentage points without advance Board approval.

## 7. NOTICE AND OTHER INDEMNIFICATION PROCEDURES.

7.1 Promptly after receipt by the Indemnitee of notice of the commencement of or the threat of commencement of any proceeding, the Indemnitee shall, if the Indemnitee believes that indemnification with respect thereto may be sought from the Company under this Agreement, notify the Company of the commencement or threat of commencement thereof.

7.2 If, at the time of the receipt of a notice of the commencement of a proceeding pursuant to Section 7.1 hereof, the Company has D&O Insurance in effect, the Company shall give prompt notice of the commencement of such proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of the Indemnitee, all amounts payable as a result of such proceeding in accordance with the terms of such D&O Insurance policies.

7.3 In the event the Company shall be obligated to advance the expenses for any proceeding against the Indemnitee, the Company, if appropriate, shall be entitled to assume

the defense of such proceeding, with counsel approved by the Indemnitee (which approval shall not be unreasonably withheld), upon the delivery to the Indemnitee of written notice of its election to do so. After delivery of such notice, approval of such counsel by the Indemnitee and the retention of such counsel by the Company, the Company will not be liable to the Indemnitee under this Agreement for any fees of counsel subsequently incurred by the Indemnitee with respect to the same proceeding, provided that: (a) the Indemnitee shall have the right to employ his own counsel in any such proceeding at the Indemnitee's expense; (b) the Indemnitee shall have the right to employ his own counsel in connection with any such proceeding, at the expense of the Company, if such counsel serves in a review, observer, advice and counseling capacity and does not otherwise materially control or participate in the defense of such proceeding; and (c) if (i) the employment of counsel by the Indemnitee has been previously authorized by the Company, (ii) the Indemnitee shall have reasonably concluded that there may be a conflict of interest between the Company and the Indemnitee in the conduct of any such defense or (iii) the Company shall not, in fact, have employed counsel to assume the defense of such proceeding, then the fees and expenses of the Indemnitee's counsel shall be at the expense of the Company.

#### 8. DETERMINATION OF RIGHT TO INDEMNIFICATION.

8.1 Without in any way limiting the provisions of Section 4.1 or 4.2 of this Agreement, to the extent the Indemnitee has been successful on the merits or otherwise in defense of any proceeding referred to in Section 4.1 or 4.2 of this Agreement or in the defense of any claim, issue or matter described therein, the Company shall indemnify the Indemnitee against expenses actually and reasonably incurred by him in connection with the investigation, defense or appeal of such proceeding, or such claim, issue or matter, as the case may be.

8.2 Without in any way limiting the provisions of Section 4.1 or 4.2 of this Agreement, in the event that Section 8.1 is inapplicable, or does not apply to the entire proceeding, the Company shall nonetheless indemnify the Indemnitee unless the Company shall prove by clear and convincing evidence to a forum listed in Section 8.3 below that the Indemnitee has not met the applicable standard of conduct required to entitle the Indemnitee to such indemnification.

8.3 The Indemnitee shall be entitled to select the forum in which the validity of the Company's claim under Section 8.2 hereof that the Indemnitee is not entitled to indemnification will be heard from among the following, except that the Indemnitee can select a forum consisting of the stockholders of the Company only with the approval of the Company:

(a) A quorum of the Board consisting of directors who are not parties to the proceeding for which indemnification is being sought;

(b) The stockholders of the Company;

(c) Legal counsel mutually agreed upon by the Indemnitee and the Board, which counsel shall make such determination in a written opinion;

(d) A panel of three arbitrators, one of whom is selected by the Company, another of whom is selected by the Indemnitee and the last of whom is selected by the first two arbitrators so selected; or

(e) The Court of Chancery of Delaware or other court having jurisdiction of subject matter and the parties.

8.4 As soon as practicable, and in no event later than thirty (30) days after the forum has been selected pursuant to Section 8.3 above, the Company shall, at its own expense, submit to the selected forum its claim that the Indemnitee is not entitled to indemnification, and the Company shall act in the utmost good faith to assure the Indemnitee a complete opportunity to defend against such claim.

8.5 If the forum selected in accordance with Section 8.3 hereof is not a court, then after the final decision of such forum is rendered, the Company or the Indemnitee shall have the right to apply to the Court of Chancery of Delaware, the court in which the proceeding giving rise to the Indemnitee's claim for indemnification is or was pending or any other court of competent jurisdiction, for the purpose of appealing the decision of such forum, provided that such right is executed within sixty (60) days after the final decision of such forum is rendered. If the forum selected in accordance with Section 8.3 hereof is a court, then the rights of the Company or the Indemnitee to appeal any decision of such court shall be governed by the applicable laws and rules governing appeals of the decision of such court.

8.6 Notwithstanding any other provision in this Agreement to the contrary, the Company shall indemnify the Indemnitee against all expenses incurred by the Indemnitee in connection with any hearing or proceeding under this Section 8 involving the Indemnitee and against all expenses incurred by the Indemnitee in connection with any other proceeding between the Company and the Indemnitee involving the interpretation or enforcement of the rights of the Indemnitee under this Agreement unless a court of competent jurisdiction finds that each of the material claims and/or defenses of the Indemnitee in any such proceeding was frivolous or not made in good faith.

9. EXCEPTIONS. Any other provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement:

9.1 Claims Initiated by Indemnitee. To indemnify or advance expenses to the Indemnitee with respect to proceedings or claims initiated or brought voluntarily by the Indemnitee and not by way of defense, except with respect to proceedings specifically authorized by the Board or brought to establish or enforce a right to indemnification and/or advancement of expenses arising under this Agreement, the charter documents of the Company or any subsidiary or any statute or law or otherwise, but such indemnification or advancement of expenses may be provided by the Company in specific cases if the Board finds it to be appropriate; or

9.2 Unauthorized Settlements. To indemnify the Indemnitee hereunder for any amounts paid in settlement of a proceeding unless the Company consents in advance in writing to such settlement, which consent shall not be unreasonably withheld or delayed; or

9.3 Securities Law Actions. To indemnify the Indemnitee on account of any suit in which judgment is rendered against the Indemnitee for an accounting of profits made from the purchase or sale by the Indemnitee of securities of the Company pursuant to the provisions of Section 16(b) of the Securities Exchange Act of 1934 and amendments thereto or similar provisions of any federal, state or local statutory law; or

9.4 Unlawful Indemnification. To indemnify the Indemnitee if a final decision by a court having jurisdiction in the matter shall determine that such indemnification is not lawful. In this respect, the Company and the Indemnitee have been advised that the Securities and Exchange Commission takes the position that indemnification for liabilities arising under the federal securities laws is against public policy and is, therefore, unenforceable and that claims for indemnification should be submitted to appropriate courts for adjudication.

10. NON-EXCLUSIVITY. The provisions for indemnification and advancement of expenses set forth in this Agreement shall not be deemed exclusive of any other rights which the Indemnitee may have under any provision of law, the Company's Certificate of Incorporation or Bylaws, the vote of the Company's stockholders or disinterested directors, other agreements or otherwise, both as to action in the Indemnitee's official capacity and to action in another capacity while occupying his position as an agent of the Company, and the Indemnitee's rights hereunder shall continue after the Indemnitee has ceased acting as an agent of the Company and shall inure to the benefit of the heirs, executors and administrators of the Indemnitee.

#### 11. GENERAL PROVISIONS.

11.1 Interpretation of Agreement. It is understood that the parties hereto intend this Agreement to be interpreted and enforced so as to provide indemnification and advancement of expenses to the Indemnitee to the fullest extent now or hereafter permitted by law, except as expressly limited herein.

11.2 Severability. If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable for any reason whatsoever, then: (a) the validity, legality and enforceability of the remaining provisions of this Agreement (including, without limitation, all portions of any paragraphs of this Agreement containing any such provision held to be invalid, illegal or unenforceable that are not themselves invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby; and (b) to the fullest extent possible, the provisions of this Agreement (including, without limitation, all portions of any Sections or paragraphs of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that are not themselves invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable and to give effect to Section 11.1 hereof.

11.3 Modification and Waiver. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing by both of the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (whether or not similar), nor shall such waiver constitute a continuing waiver.

11.4 Subrogation. In the event of full payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of the Indemnitee, who shall execute all documents required and shall do all acts that may be necessary or desirable to secure such rights and to enable the Company effectively to bring suit to enforce such rights.

11.5 Counterparts. This Agreement may be executed in one or more counter-parts, which shall together constitute one agreement.

11.6 Successors and Assigns. The terms of this Agreement shall bind, and shall inure to the benefit of, the successors and assigns of the parties hereto.

11.7 Notice. All notices, requests, demands and other communications under this Agreement shall be in writing and shall be deemed duly given: (a) if delivered by hand and signed for by the party addressee; or (b) if mailed by certified or registered mail, with postage prepaid, on the third business day after the mailing date. Addresses for notice to either party are as shown on the signature page of this Agreement or as subsequently modified by written notice.

11.8 Governing Law. This Agreement shall be governed exclusively by and construed according to the laws of the State of Delaware.

11.9 Consent to Jurisdiction. The Company and the Indemnatee each hereby irrevocably consent to the jurisdiction of the courts of the State of California for all purposes in connection with any action or proceeding which arises out of or relates to this Agreement.

11.10 Attorneys' Fees. In the event Indemnatee is required to bring any action to enforce rights under this Agreement (including, without limitation, the expenses of any Proceeding described in Section 3), the Indemnatee shall be entitled to all reasonable fees and expenses in bringing and pursuing such action, unless a court of competent jurisdiction finds each of the material claims of the Indemnatee in any such action was frivolous and not made in good faith.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]



IN WITNESS WHEREOF, the parties hereto have entered into this Indemnity Agreement effective as of the date first written above.

FORMFACTOR, INC.

INDEMNITEE:

By: \_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

## FORMFACTOR, INC.

## 2002 EQUITY INCENTIVE PLAN

As Adopted April 18, 2002

1. PURPOSE. The purpose of this Plan is to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of the Company, its Parent and Subsidiaries, by offering them an opportunity to participate in the Company's future performance through awards of Options, Restricted Stock and Stock Bonuses. Capitalized terms not defined in the text are defined in Section 24.

## 2. SHARES SUBJECT TO THE PLAN.

2.1 Number of Shares Available. Subject to Sections 2.2 and 18, the total number of Shares reserved and available for grant and issuance pursuant to this Plan will be 500,000 Shares plus Shares that are subject to: (a) issuance upon exercise of an Option but cease to be subject to such Option for any reason other than exercise of such Option; (b) an Award granted hereunder but are forfeited or are repurchased by the Company at the original issue price; and (c) an Award that otherwise terminates without Shares being issued. In addition, any authorized shares not issued or subject to outstanding grants under the Company's 1996 Stock Option Plan, Incentive Option Plan and Management Incentive Option Plan on the Effective Date (as defined below) and any shares issued under the Company's 1995 Stock Plan, 1996 Stock Option Plan, Incentive Option Plan and Management Incentive Option Plan (the "PRIOR PLANS") that are forfeited or repurchased by the Company or that are issuable upon exercise of options granted pursuant to the Prior Plans that expire or become unexercisable for any reason without having been exercised in full, will no longer be available for grant and issuance under the Prior Plans, but will be available for grant and issuance under this Plan. In addition, on each January 1, the aggregate number of Shares reserved and available for grant and issuance pursuant to this Plan will be increased automatically by a number of Shares equal to 5% of the total outstanding shares of the Company as of the immediately preceding December 31; provided, that the Board may in its sole discretion reduce the amount of the increase in any particular year; and, provided further, provided that no more than 40,000,000 shares shall be issued as ISOs (as defined in Section 5 below). At all times the Company shall reserve and keep available a sufficient number of Shares as shall be required to satisfy the requirements of all outstanding Options granted under this Plan and all other outstanding but unvested Awards granted under this Plan.

2.2 Adjustment of Shares. In the event that the number of outstanding shares is changed by a stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in the capital structure of the Company without consideration, then (a) the number of Shares reserved for issuance under this Plan, (b) the number of Shares that may be granted pursuant to Sections 3 and 9 below, (c) the Exercise Prices of and number of Shares subject to outstanding Options, and (d) the number of Shares subject to other outstanding Awards may, upon approval of the Board in its discretion, be proportionately adjusted in compliance with applicable securities laws; provided, however, that fractions of a Share will not be issued but will either be replaced by a cash payment equal to the Fair Market Value of such fraction of a Share or will be rounded up to the nearest whole Share, as determined by the Committee.

3. ELIGIBILITY. ISOs (as defined in Section 5 below) may be granted only to employees (including officers and directors who are also employees) of the Company or of a Parent or Subsidiary of the Company. All other Awards may be granted to employees, officers, directors, consultants, independent contractors and advisors of the Company or any Parent or Subsidiary of the Company; provided such consultants, contractors and advisors render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction. No person will be eligible to receive more than 1,000,000 Shares in any calendar year under this Plan pursuant to the grant of Awards hereunder, other than new employees of the Company or of a Parent or Subsidiary of the Company (including new employees who are also officers and directors of the Company or any Parent or

Subsidiary of the Company), who are eligible to receive up to a maximum of 3,000,000 Shares in the calendar year in which they commence their employment. A person may be granted more than one Award under this Plan.

#### 4. ADMINISTRATION.

4.1 Committee Authority. This Plan will be administered by the Committee or by the Board acting as the Committee. Except for automatic grants to Outside Directors pursuant to Section 9 hereof, and subject to the general purposes, terms and conditions of this Plan, and to the direction of the Board, the Committee will have full power to implement and carry out this Plan. Except for automatic grants to Outside Directors pursuant to Section 9 hereof, the Committee will have the authority to:

- (a) construe and interpret this Plan, any Award Agreement and any other agreement or document executed pursuant to this Plan;
- (b) prescribe, amend and rescind rules and regulations relating to this Plan or any Award;
- (c) select persons to receive Awards;
- (d) determine the form and terms of Awards;
- (e) determine the number of Shares or other consideration subject to Awards;
- (f) determine whether Awards will be granted singly, in combination with, in tandem with, in replacement of, or as alternatives to, other Awards under this Plan or any other incentive or compensation plan of the Company or any Parent or Subsidiary of the Company;
- (g) grant waivers of Plan or Award conditions;
- (h) determine the vesting, exercisability and payment of Awards;
- (i) correct any defect, supply any omission or reconcile any inconsistency in this Plan, any Award or any Award Agreement;
- (j) determine whether an Award has been earned; and
- (k) make all other determinations necessary or advisable for the administration of this Plan.

4.2 Committee Discretion. Except for automatic grants to Outside Directors pursuant to Section 9 hereof, any determination made by the Committee with respect to any Award will be made in its sole discretion at the time of grant of the Award or, unless in contravention of any express term of this Plan or Award, at any later time, and such determination will be final and binding on the Company and on all persons having an interest in any Award under this Plan. The Committee may delegate to one or more officers of the Company the authority to grant an Award under this Plan to Participants who are not Insiders of the Company.

5. OPTIONS. The Committee may grant Options to eligible persons and will determine whether such Options will be Incentive Stock Options within the meaning of the Code ("ISO") or Nonqualified Stock Options ("NQSO"), the number of Shares subject to the Option, the Exercise Price of the Option, the period during which the Option may be exercised, and all other terms and conditions of the Option, subject to the following:

5.1 Form of Option Grant. Each Option granted under this Plan will be evidenced by an Award Agreement which will expressly identify the Option as an ISO or an NQSO ("STOCK OPTION AGREEMENT"), and, except as otherwise required by the terms of Section 9 hereof, will be in such form and contain such provisions

(which need not be the same for each Participant) as the Committee may from time to time approve, and which will comply with and be subject to the terms and conditions of this Plan.

5.2 Date of Grant. The date of grant of an Option will be the date on which the Committee makes the determination to grant such Option, unless otherwise specified by the Committee. The Stock Option Agreement and a copy of this Plan will be delivered to the Participant within a reasonable time after the granting of the Option.

5.3 Exercise Period. Options may be exercisable within the times or upon the events determined by the Committee as set forth in the Stock Option Agreement governing such Option; provided, however, that no Option will be exercisable after the expiration of ten (10) years from the date the Option is granted; and provided further that no ISO granted to a person who directly or by attribution owns more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of any Parent or Subsidiary of the Company ("TEN PERCENT STOCKHOLDER") will be exercisable after the expiration of five (5) years from the date the ISO is granted. The Committee also may provide for Options to become exercisable at one time or from time to time, periodically or otherwise, in such number of Shares or percentage of Shares as the Committee determines.

5.4 Exercise Price. The Exercise Price of an Option will be determined by the Committee when the Option is granted; provided that: (i) the Exercise Price of an ISO will be not less than 100% of the Fair Market Value of the Shares on the date of grant; and (ii) the Exercise Price of any ISO granted to a Ten Percent Stockholder will not be less than 110% of the Fair Market Value of the Shares on the date of grant. Payment for the Shares purchased may be made in accordance with Section 8 of this Plan.

5.5 Method of Exercise. Options may be exercised only by delivery to the Company of a written stock option exercise agreement (the "EXERCISE AGREEMENT") in a form approved by the Committee (which need not be the same for each Participant), stating the number of Shares being purchased, the restrictions imposed on the Shares purchased under such Exercise Agreement, if any, and such representations and agreements regarding Participant's investment intent and access to information and other matters, if any, as may be required or desirable by the Company to comply with applicable securities laws, together with payment in full of the Exercise Price for the number of Shares being purchased.

5.6 Termination. Notwithstanding the exercise periods set forth in the Stock Option Agreement, exercise of an Option will always be subject to the following:

- (a) If the Participant is Terminated for any reason except death or Disability, then the Participant may exercise such Participant's Options only to the extent that such Options would have been exercisable upon the Termination Date no later than three (3) months after the Termination Date (or such shorter or longer time period not exceeding five (5) years as may be determined by the Committee, with any exercise beyond three (3) months after the Termination Date deemed to be an NQSO), but in any event, no later than the expiration date of the Options.
- (b) If the Participant is Terminated because of Participant's death or Disability (or the Participant dies within three (3) months after a Termination other than for Cause or because of Participant's Disability), then Participant's Options may be exercised only to the extent that such Options would have been exercisable by Participant on the Termination Date and must be exercised by Participant (or Participant's legal representative or authorized assignee) no later than twelve (12) months after the Termination Date (or such shorter or longer time period not exceeding five (5) years as may be determined by the Committee, with any such exercise beyond (i) three (3) months after the Termination Date when the Termination is for any reason other than the Participant's death or disability, within the meaning of Section 22(e)(3) of the Code, or

(ii) twelve (12) months after the Termination Date when the Termination is for Participant's disability, within the meaning of Section 22(e)(3) of the Code, deemed to be an NQSO), but in any event no later than the expiration date of the Options.

- (c) If the Participant is terminated for Cause, then the Participant may exercise such Participant's Options only to the extent that such Options would have been exercisable upon the Termination Date no later than one month after the Termination Date (or such shorter or longer time period not exceeding five (5) years as may be determined by the Committee, with any exercise beyond three (3) months after the Termination Date deemed to be an NQSO), but in any event, no later than the expiration date of the Options.

5.7 Limitations on Exercise. The Committee may specify a reasonable minimum number of Shares that may be purchased on any exercise of an Option, provided that such minimum number will not prevent Participant from exercising the Option for the full number of Shares for which it is then exercisable.

5.8 Limitations on ISO. The aggregate Fair Market Value (determined as of the date of grant) of Shares with respect to which ISO are exercisable for the first time by a Participant during any calendar year (under this Plan or under any other incentive stock option plan of the Company, Parent or Subsidiary of the Company) will not exceed \$100,000. If the Fair Market Value of Shares on the date of grant with respect to which ISO are exercisable for the first time by a Participant during any calendar year exceeds \$100,000, then the Options for the first \$100,000 worth of Shares to become exercisable in such calendar year will be ISO and the Options for the amount in excess of \$100,000 that become exercisable in that calendar year will be NQSOs. In the event that the Code or the regulations promulgated thereunder are amended after the Effective Date of this Plan to provide for a different limit on the Fair Market Value of Shares permitted to be subject to ISO, such different limit will be automatically incorporated herein and will apply to any Options granted after the effective date of such amendment.

5.9 Modification, Extension or Renewal. The Committee may modify, extend or renew outstanding Options and authorize the grant of new Options in substitution therefor, provided that any such action may not, without the written consent of a Participant, impair any of such Participant's rights under any Option previously granted. Any outstanding ISO that is modified, extended, renewed or otherwise altered will be treated in accordance with Section 424(h) of the Code. The Committee may reduce the Exercise Price of outstanding Options without the consent of Participants affected by a written notice to them; provided, however, that the Exercise Price may not be reduced below the minimum Exercise Price that would be permitted under Section 5.4 of this Plan for Options granted on the date the action is taken to reduce the Exercise Price.

5.10 No Disqualification. Notwithstanding any other provision in this Plan, no term of this Plan relating to ISO will be interpreted, amended or altered, nor will any discretion or authority granted under this Plan be exercised, so as to disqualify this Plan under Section 422 of the Code or, without the consent of the Participant affected, to disqualify any ISO under Section 422 of the Code.

6. RESTRICTED STOCK. A Restricted Stock Award is an offer by the Company to sell to an eligible person Shares that are subject to restrictions. The Committee will determine to whom an offer will be made, the number of Shares the person may purchase, the price to be paid (the "PURCHASE PRICE"), the restrictions to which the Shares will be subject, and all other terms and conditions of the Restricted Stock Award, subject to the following:

6.1 Form of Restricted Stock Award. All purchases under a Restricted Stock Award made pursuant to this Plan will be evidenced by an Award Agreement ("RESTRICTED STOCK PURCHASE AGREEMENT") that will be in such form (which need not be the same for each Participant) as the Committee will from time to time approve, and will comply with and be subject to the terms and conditions of this Plan. The offer of Restricted Stock will be accepted by the Participant's execution and delivery of the Restricted Stock Purchase Agreement and full payment for the Shares to the Company within thirty (30) days from the date the Restricted Stock Purchase Agreement is

delivered to the person. If such person does not execute and deliver the Restricted Stock Purchase Agreement along with full payment for the Shares to the Company within thirty (30) days, then the offer will terminate, unless otherwise determined by the Committee.

6.2 Purchase Price. The Purchase Price of Shares sold pursuant to a Restricted Stock Award will be determined by the Committee on the date the Restricted Stock Award is granted, except in the case of a sale to a Ten Percent Stockholder, in which case the Purchase Price will be 100% of the Fair Market Value. Payment of the Purchase Price may be made in accordance with Section 8 of this Plan.

6.3 Terms of Restricted Stock Awards. Restricted Stock Awards shall be subject to such restrictions as the Committee may impose. These restrictions may be based upon completion of a specified number of years of service with the Company or upon completion of the performance goals as set out in advance in the Participant's individual Restricted Stock Purchase Agreement. Restricted Stock Awards may vary from Participant to Participant and between groups of Participants. Prior to the grant of a Restricted Stock Award, the Committee shall: (a) determine the nature, length and starting date of any Performance Period for the Restricted Stock Award; (b) select from among the Performance Factors to be used to measure performance goals, if any; and (c) determine the number of Shares that may be awarded to the Participant. Prior to the payment of any Restricted Stock Award, the Committee shall determine the extent to which such Restricted Stock Award has been earned. Performance Periods may overlap and Participants may participate simultaneously with respect to Restricted Stock Awards that are subject to different Performance Periods and having different performance goals and other criteria.

6.4 Termination During Performance Period. If a Participant is Terminated during a Performance Period for any reason, then such Participant will be entitled to payment (whether in Shares, cash or otherwise) with respect to the Restricted Stock Award only to the extent earned as of the date of Termination in accordance with the Restricted Stock Purchase Agreement, unless the Committee will determine otherwise.

## 7. STOCK BONUSES.

7.1 Awards of Stock Bonuses. A Stock Bonus is an award of Shares (which may consist of Restricted Stock) for services rendered to the Company or any Parent or Subsidiary of the Company. A Stock Bonus may be awarded for past services already rendered to the Company, or any Parent or Subsidiary of the Company pursuant to an Award Agreement (the "STOCK BONUS AGREEMENT") that will be in such form (which need not be the same for each Participant) as the Committee will from time to time approve, and will comply with and be subject to the terms and conditions of this Plan. A Stock Bonus may be awarded upon satisfaction of such performance goals as are set out in advance in the Participant's individual Award Agreement (the "PERFORMANCE STOCK BONUS AGREEMENT") that will be in such form (which need not be the same for each Participant) as the Committee will from time to time approve, and will comply with and be subject to the terms and conditions of this Plan. Stock Bonuses may vary from Participant to Participant and between groups of Participants, and may be based upon the achievement of the Company, Parent or Subsidiary and/or individual performance factors or upon such other criteria as the Committee may determine.

7.2 Terms of Stock Bonuses. The Committee will determine the number of Shares to be awarded to the Participant. If the Stock Bonus is being earned upon the satisfaction of performance goals pursuant to a Performance Stock Bonus Agreement, then the Committee will: (a) determine the nature, length and starting date of any Performance Period for each Stock Bonus; (b) select from among the Performance Factors to be used to measure the performance, if any; and (c) determine the number of Shares that may be awarded to the Participant. Prior to the payment of any Stock Bonus, the Committee shall determine the extent to which such Stock Bonuses have been earned. Performance Periods may overlap and Participants may participate simultaneously with respect to Stock Bonuses that are subject to different Performance Periods and different performance goals and other criteria. The number of Shares may be fixed or may vary in accordance with such performance goals and criteria as may be determined by the Committee. The Committee may adjust the performance goals applicable to the Stock Bonuses to take into account changes in law and accounting or tax rules and to make such adjustments as the

Committee deems necessary or appropriate to reflect the impact of extraordinary or unusual items, events or circumstances to avoid windfalls or hardships.

7.3 Form of Payment. The earned portion of a Stock Bonus may be paid currently or on a deferred basis with such interest or dividend equivalent, if any, as the Committee may determine. Payment may be made in the form of cash or whole Shares or a combination thereof, either in a lump sum payment or in installments, all as the Committee will determine.

#### 8. PAYMENT FOR SHARE PURCHASES.

8.1 Payment. Payment for Shares purchased pursuant to this Plan may be made in cash (by check) or, where expressly approved for the Participant by the Committee and where permitted by law:

- (a) by cancellation of indebtedness of the Company to the Participant;
- (b) by surrender of shares that either: (1) have been owned by Participant for more than six (6) months and have been paid for within the meaning of SEC Rule 144 (and, if such shares were purchased from the Company by use of a promissory note, such note has been fully paid with respect to such shares); or (2) were obtained by Participant in the public market;
- (c) by tender of a full recourse promissory note having such terms as may be approved by the Committee and bearing interest at a rate sufficient to avoid imputation of income under Sections 483 and 1274 of the Code; provided, however, that Participants who are not employees or directors of the Company will not be entitled to purchase Shares with a promissory note unless the note is adequately secured by collateral other than the Shares;
- (d) by waiver of compensation due or accrued to the Participant for services rendered;
- (e) with respect only to purchases upon exercise of an Option, and provided that a public market for the Company's stock exists:
  - (1) through a "same day sale" commitment from the Participant and a broker-dealer that is a member of the National Association of Securities Dealers (an "NASD DEALER") whereby the Participant irrevocably elects to exercise the Option and to sell a portion of the Shares so purchased to pay for the Exercise Price, and whereby the NASD Dealer irrevocably commits upon receipt of such Shares to forward the Exercise Price directly to the Company; or
  - (2) through a "margin" commitment from the Participant and a NASD Dealer whereby the Participant irrevocably elects to exercise the Option and to pledge the Shares so purchased to the NASD Dealer in a margin account as security for a loan from the NASD Dealer in the amount of the Exercise Price, and whereby the NASD Dealer irrevocably commits upon receipt of such Shares to forward the Exercise Price directly to the Company; or
- (f) by any combination of the foregoing.

8.2 Loan Guarantees. The Committee may help the Participant pay for Shares purchased under this Plan by authorizing a guarantee by the Company of a third-party loan to the Participant.

#### 9. AUTOMATIC GRANTS TO OUTSIDE DIRECTORS.

9.1 Types of Options and Shares. Options granted under this Plan and subject to this Section 9 shall be NQSOs.

9.2 Eligibility. Options subject to this Section 9 shall be granted only to Outside Directors.

9.3 Initial Grant. Each Outside Director who first becomes a member of the Board after the Effective Date will automatically be granted an option for 12,500 Shares (an "INITIAL GRANT") on the date such Outside Director first becomes a member of the Board. Each Outside Director who became a member of the Board on or prior to the Effective Date and who did not receive a prior option grant (under this Plan or otherwise and from the Company or any of its corporate predecessors) will receive an Initial Grant on the Effective Date.

9.4 Succeeding Grant. Immediately following each Annual Meeting of stockholders, each Outside Director will automatically be granted an option for 12,500 Shares (a "SUCCEEDING GRANT"), provided, that the Outside Director is a member of the Board on such date and has served continuously as a member of the Board for a period of at least twelve (12) months since the last option grant (whether an Initial Grant or a Succeeding Grant) to such Outside Director. If less than twelve (12) months has passed, then the number of shares subject to the Succeeding Grant will be pro-rated based on the number of days passed since the last option grant to such Outside Director, divided by 365 days.

9.5 Vesting and Exercisability. The date an Outside Director receives an Initial Grant or a Succeeding Grant is referred to in this Plan as the "START DATE" for such option.

- (a) Initial Grant. So long as the Outside Director continuously remains a director or a consultant of the Company, each Initial Grant will vest as to 1/12th of the Shares at the end of each full succeeding month from Start Date. Each Initial Grant will be immediately exercisable subject to the Company's right to repurchase unvested shares in the event the Outside Director does not remain a member of the Board or a consultant of the Company.
- (b) Succeeding Grant. So long as the Outside Director continuously remains a director or a consultant of the Company, each Succeeding Grant will vest as to 1/12th of the Shares at the end of each full succeeding month from the later of (i) the Start Date of such Succeeding Grant or (ii) the date when all outstanding stock options, and all outstanding shares issued upon exercise of any stock options granted by the Company to the Outside Director prior to the grant of such Succeeding Grant have fully vested. Each Succeeding Grant will be immediately exercisable subject to the Company's right to repurchase unvested shares in the event the Outside Director does not remain a member of the Board or a consultant of the Company.

Notwithstanding any provision to the contrary, in the event of a Corporate Transaction described in Section 18.1, the vesting of all options granted to Outside Directors pursuant to this Section 9 will accelerate and such options will become exercisable in full prior to the consummation of such event at such times and on such conditions as the Committee determines, and must be exercised, if at all, within three (3) months of the consummation of said event. Any options not exercised within such three-month period shall expire.

9.6 Exercise Price. The exercise price of an option pursuant to an Initial Grant and Succeeding Grant shall be the Fair Market Value of the Shares, at the time that the option is granted.

## 10. WITHHOLDING TAXES.

10.1 Withholding Generally. Whenever Shares are to be issued in satisfaction of Awards granted under this Plan, the Company may require the Participant to remit to the Company an amount sufficient to satisfy federal, state and local withholding tax requirements prior to the delivery of any certificate or certificates for



such Shares. Whenever, under this Plan, payments in satisfaction of Awards are to be made in cash, such payment will be net of an amount sufficient to satisfy federal, state, and local withholding tax requirements.

10.2 Stock Withholding. When, under applicable tax laws, a Participant incurs tax liability in connection with the exercise or vesting of any Award that is subject to tax withholding and the Participant is obligated to pay the Company the amount required to be withheld, the Committee may in its sole discretion allow the Participant to satisfy the minimum withholding tax obligation by electing to have the Company withhold from the Shares to be issued that number of Shares having a Fair Market Value equal to the minimum amount required to be withheld, determined on the date that the amount of tax to be withheld is to be determined. All elections by a Participant to have Shares withheld for this purpose will be made in accordance with the requirements established by the Committee and be in writing in a form acceptable to the Committee.

#### 11. TRANSFERABILITY.

11.1 Except as otherwise provided in this Section 11, Awards granted under this Plan, and any interest therein, will not be transferable or assignable by Participant, and may not be made subject to execution, attachment or similar process, otherwise than by will or by the laws of descent and distribution or as determined by the Committee and set forth in the Award Agreement with respect to Awards that are not ISOs.

11.2 All Awards other than NQSO's. All Awards other than NQSO's shall be exercisable: (i) during the Participant's lifetime, only by (A) the Participant, or (B) the Participant's guardian or legal representative; and (ii) after Participant's death, by the legal representative of the Participant's heirs or legatees.

11.3 NQSOs. Unless otherwise restricted by the Committee, an NQSO shall be exercisable: (i) during the Participant's lifetime only by (A) the Participant, (B) the Participant's guardian or legal representative, (C) a Family Member of the Participant who has acquired the NQSO by "permitted transfer;" and (ii) after Participant's death, by the legal representative of the Participant's heirs or legatees. "Permitted transfer" means, as authorized by this Plan and the Committee in an NQSO, any transfer effected by the Participant during the Participant's lifetime of an interest in such NQSO but only such transfers which are by gift or domestic relations order. A permitted transfer does not include any transfer for value and neither of the following are transfers for value: (a) a transfer of under a domestic relations order in settlement of marital property rights or (b) a transfer to an entity in which more than fifty percent of the voting interests are owned by Family Members or the Participant in exchange for an interest in that entity.

#### 12. PRIVILEGES OF STOCK OWNERSHIP; RESTRICTIONS ON SHARES.

12.1 Voting and Dividends. No Participant will have any of the rights of a stockholder with respect to any Shares until the Shares are issued to the Participant. After Shares are issued to the Participant, the Participant will be a stockholder and have all the rights of a stockholder with respect to such Shares, including the right to vote and receive all dividends or other distributions made or paid with respect to such Shares; provided, that if such Shares are Restricted Stock, then any new, additional or different securities the Participant may become entitled to receive with respect to such Shares by virtue of a stock dividend, stock split or any other change in the corporate or capital structure of the Company will be subject to the same restrictions as the Restricted Stock; provided, further, that the Participant will have no right to retain such stock dividends or stock distributions with respect to Shares that are repurchased at the Participant's Purchase Price or Exercise Price pursuant to Section 12.

12.2 Restrictions on Shares. At the discretion of the Committee, the Company may reserve to itself and/or its assignee(s) in the Award Agreement a right to repurchase a portion of or all Unvested Shares held by a Participant following such Participant's Termination at any time within ninety (90) days after the later of Participant's Termination Date and the date Participant purchases Shares under this Plan, for cash and/or cancellation of purchase money indebtedness, at the Participant's Exercise Price or Purchase Price, as the case may be.

13. CERTIFICATES. All certificates for Shares or other securities delivered under this Plan will be subject to such stock transfer orders, legends and other restrictions as the Committee may deem necessary or advisable, including restrictions under any applicable federal, state or foreign securities law, or any rules, regulations and other requirements of the SEC or any stock exchange or automated quotation system upon which the Shares may be listed or quoted.

14. ESCROW; PLEDGE OF SHARES. To enforce any restrictions on a Participant's Shares, the Committee may require the Participant to deposit all certificates representing Shares, together with stock powers or other instruments of transfer approved by the Committee, appropriately endorsed in blank, with the Company or an agent designated by the Company to hold in escrow until such restrictions have lapsed or terminated, and the Committee may cause a legend or legends referencing such restrictions to be placed on the certificates. Any Participant who is permitted to execute a promissory note as partial or full consideration for the purchase of Shares under this Plan will be required to pledge and deposit with the Company all or part of the Shares so purchased as collateral to secure the payment of Participant's obligation to the Company under the promissory note; provided, however, that the Committee may require or accept other or additional forms of collateral to secure the payment of such obligation and, in any event, the Company will have full recourse against the Participant under the promissory note notwithstanding any pledge of the Participant's Shares or other collateral. In connection with any pledge of the Shares, Participant will be required to execute and deliver a written pledge agreement in such form as the Committee will from time to time approve. The Shares purchased with the promissory note may be released from the pledge on a pro rata basis as the promissory note is paid.

15. EXCHANGE AND BUYOUT OF AWARDS. The Committee may, at any time or from time to time, authorize the Company, with the consent of the respective Participants, to issue new Awards in exchange for the surrender and cancellation of any or all outstanding Awards. The Committee may at any time buy from a Participant an Award previously granted with payment in cash, Shares (including Restricted Stock) or other consideration, based on such terms and conditions as the Committee and the Participant may agree.

16. SECURITIES LAW AND OTHER REGULATORY COMPLIANCE. An Award will not be effective unless such Award is in compliance with all applicable federal and state securities laws, rules and regulations of any governmental body, and the requirements of any stock exchange or automated quotation system upon which the Shares may then be listed or quoted, as they are in effect on the date of grant of the Award and also on the date of exercise or other issuance. Notwithstanding any other provision in this Plan, the Company will have no obligation to issue or deliver certificates for Shares under this Plan prior to: (a) obtaining any approvals from governmental agencies that the Company determines are necessary or advisable; and/or (b) completion of any registration or other qualification of such Shares under any state or federal law or ruling of any governmental body that the Company determines to be necessary or advisable. The Company will be under no obligation to register the Shares with the SEC or to effect compliance with the registration, qualification or listing requirements of any state securities laws, stock exchange or automated quotation system, and the Company will have no liability for any inability or failure to do so.

17. NO OBLIGATION TO EMPLOY. Nothing in this Plan or any Award granted under this Plan will confer or be deemed to confer on any Participant any right to continue in the employ of, or to continue any other relationship with, the Company or any Parent or Subsidiary of the Company or limit in any way the right of the Company or any Parent or Subsidiary of the Company to terminate Participant's employment or other relationship at any time, with or without cause.

#### 18. CORPORATE TRANSACTIONS.

18.1 Assumption or Replacement of Awards by Successor. Except for automatic grants to Outside Directors pursuant to Section 9 hereof, in the event of (a) a dissolution or liquidation of the Company, (b) a merger or consolidation in which the Company is not the surviving corporation (other than a merger or consolidation with a wholly-owned subsidiary, a reincorporation of the Company in a different jurisdiction, or other transaction in which there is no substantial change in the stockholders of the Company or their relative stock

holdings and the Awards granted under this Plan are assumed, converted or replaced by the successor corporation, which assumption will be binding on all Participants), (c) a merger in which the Company is the surviving corporation but after which the stockholders of the Company immediately prior to such merger (other than any stockholder that merges, or which owns or controls another corporation that merges, with the Company in such merger) cease to own their shares or other equity interest in the Company, (d) the sale of substantially all of the assets of the Company, or (e) the acquisition, sale, or transfer of more than 50% of the outstanding shares of the Company by tender offer or similar transaction (each, a "CORPORATE TRANSACTION"), any or all outstanding Awards may be assumed, converted or replaced by the successor corporation (if any), which assumption, conversion or replacement will be binding on all Participants. In the alternative, the successor corporation may substitute equivalent Awards or provide substantially similar consideration to Participants as was provided to stockholders (after taking into account the existing provisions of the Awards). The successor corporation may also issue, in place of outstanding Shares of the Company held by the Participants, substantially similar shares or other property subject to repurchase restrictions no less favorable to the Participant. In the event such successor corporation (if any) refuses to assume or substitute Awards, as provided above, pursuant to a transaction described in this Subsection 18.1, such Awards will expire on such transaction at such time and on such conditions as the Committee will determine. Notwithstanding anything in this Plan to the contrary, the Committee may, in its sole discretion, provide that the vesting of any or all Awards granted pursuant to this Plan will accelerate upon a transaction described in this Section 18. If the Committee exercises such discretion with respect to Options, such Options will become exercisable in full prior to the consummation of such event at such time and on such conditions as the Committee determines, and if such Options are not exercised prior to the consummation of the corporate transaction, they shall terminate at such time as determined by the Committee.

18.2 Other Treatment of Awards. Subject to any greater rights granted to Participants under the foregoing provisions of this Section 18, in the event of the occurrence of any Corporate Transaction described in Section 18.1, any outstanding Awards will be treated as provided in the applicable agreement or plan of merger, consolidation, dissolution, liquidation, or sale of assets.

18.3 Assumption of Awards by the Company. The Company, from time to time, also may substitute or assume outstanding awards granted by another company, whether in connection with an acquisition of such other company or otherwise, by either; (a) granting an Award under this Plan in substitution of such other company's award; or (b) assuming such award as if it had been granted under this Plan if the terms of such assumed award could be applied to an Award granted under this Plan. Such substitution or assumption will be permissible if the holder of the substituted or assumed award would have been eligible to be granted an Award under this Plan if the other company had applied the rules of this Plan to such grant. In the event the Company assumes an award granted by another company, the terms and conditions of such award will remain unchanged (except that the exercise price and the number and nature of Shares issuable upon exercise of any such option will be adjusted appropriately pursuant to Section 424(a) of the Code). In the event the Company elects to grant a new Option rather than assuming an existing option, such new Option may be granted with a similarly adjusted Exercise Price.

19. ADOPTION AND STOCKHOLDER APPROVAL. This Plan will become effective on the date on which the registration statement filed by the Company with the SEC under the Securities Act registering the initial public offering of the Company's Common Stock is declared effective by the SEC (the "EFFECTIVE DATE"). This Plan shall be approved by the stockholders of the Company (excluding Shares issued pursuant to this Plan), consistent with applicable laws, within twelve (12) months before or after the date this Plan is adopted by the Board. Upon the Effective Date, the Committee may grant Awards pursuant to this Plan; provided, however, that: (a) no Option may be exercised prior to initial stockholder approval of this Plan; (b) no Option granted pursuant to an increase in the number of Shares subject to this Plan approved by the Board will be exercised prior to the time such increase has been approved by the stockholders of the Company; (c) in the event that initial stockholder approval is not obtained within the time period provided herein, all Awards granted hereunder shall be cancelled, any Shares issued pursuant to any Awards shall be cancelled and any purchase of Shares issued hereunder shall be rescinded; and (d) in the event that stockholder approval of such increase is not obtained within the time period provided herein, all Awards granted pursuant to such increase will be cancelled, any Shares issued pursuant to any Award

granted pursuant to such increase will be cancelled, and any purchase of Shares pursuant to such increase will be rescinded.

20. TERM OF PLAN/GOVERNING LAW. Unless earlier terminated as provided herein, this Plan will terminate ten (10) years from the date this Plan is adopted by the Board or, if earlier, the date of stockholder approval. This Plan and all agreements thereunder shall be governed by and construed in accordance with the laws of the State of California.

21. AMENDMENT OR TERMINATION OF PLAN. The Board may at any time terminate or amend this Plan in any respect, including without limitation amendment of any form of Award Agreement or instrument to be executed pursuant to this Plan; provided, however, that the Board will not, without the approval of the stockholders of the Company, amend this Plan in any manner that requires such stockholder approval.

22. NONEXCLUSIVITY OF THE PLAN. Neither the adoption of this Plan by the Board, the submission of this Plan to the stockholders of the Company for approval, nor any provision of this Plan will be construed as creating any limitations on the power of the Board to adopt such additional compensation arrangements as it may deem desirable, including, without limitation, the granting of stock options and bonuses otherwise than under this Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

23. INSIDER TRADING POLICY. Each Participant and Outsider Director who receives an Award shall comply with any policy, adopted by the Company from time to time covering transactions in the Company's securities by employees, officers and/or directors of the Company.

24. DEFINITIONS. As used in this Plan, the following terms will have the following meanings:

"AWARD" means any award under this Plan, including any Option, Restricted Stock or Stock Bonus.

"AWARD AGREEMENT" means, with respect to each Award, the signed written agreement between the Company and the Participant setting forth the terms and conditions of the Award.

"BOARD" means the Board of Directors of the Company.

"CAUSE" means (i) the commission of an act of theft, embezzlement, fraud, dishonesty, (b) a breach of fiduciary duty to the Company or a Parent or Subsidiary of the Company or (c) a failure to materially perform the customary duties of employee's employment.

"CODE" means the Internal Revenue Code of 1986, as amended.

"COMMITTEE" means the Compensation Committee of the Board.

"COMPANY" means FormFactor, Inc. or any successor corporation.

"DISABILITY" means a disability, whether temporary or permanent, partial or total, as determined by the Committee.

"EXCHANGE ACT" means the Securities Exchange Act of 1934, as amended.

"EXERCISE PRICE" means the price at which a holder of an Option may purchase the Shares issuable upon exercise of the Option.

"FAIR MARKET VALUE" means, as of any date, the value of a share of the Company's Common Stock determined as follows:

- (a) if such Common Stock is then quoted on the Nasdaq National Market, its closing price on the Nasdaq National Market on the date of determination as reported in The Wall Street Journal;
- (b) if such Common Stock is publicly traded and is then listed on a national securities exchange, its closing price on the date of determination on the principal national securities exchange on which the Common Stock is listed or admitted to trading as reported in The Wall Street Journal;
- (c) if such Common Stock is publicly traded but is not quoted on the Nasdaq National Market nor listed or admitted to trading on a national securities exchange, the average of the closing bid and asked prices on the date of determination as reported in The Wall Street Journal;
- (d) in the case of an Award made on the Effective Date, the price per share at which shares of the Company's Common Stock are initially offered for sale to the public by the Company's underwriters in the initial public offering of the Company's Common Stock pursuant to a registration statement filed with the SEC under the Securities Act; or
- (e) if none of the foregoing is applicable, by the Committee in good faith.

"FAMILY MEMBER" includes any of the following:

- (a) child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law of the Participant, including any such person with such relationship to the Participant by adoption;
- (b) any person (other than a tenant or employee) sharing the Participant's household;
- (c) a trust in which the persons in (a) and (b) have more than fifty percent of the beneficial interest;
- (d) a foundation in which the persons in (a) and (b) or the Participant control the management of assets; or
- (e) any other entity in which the persons in (a) and (b) or the Participant own more than fifty percent of the voting interest.

"INSIDER" means an officer or director of the Company or any other person whose transactions in the Company's Common Stock are subject to Section 16 of the Exchange Act.

"OPTION" means an award of an option to purchase Shares pursuant to Section 5.

"OUTSIDE DIRECTOR" means a member of the Board who is not an employee of the Company or any Parent or Subsidiary.

"PARENT" means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company if each of such corporations other than the Company owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

"PARTICIPANT" means a person who receives an Award under this Plan.

"PERFORMANCE FACTORS" means the factors selected by the Committee from among the following measures to determine whether the performance goals established by the Committee and applicable to Awards have been satisfied:

- (a) Net revenue and/or net revenue growth;
- (b) Earnings before income taxes and amortization and/or earnings before income taxes and amortization growth;
- (c) Operating income and/or operating income growth;
- (d) Net income and/or net income growth;
- (e) Earnings per share and/or earnings per share growth;
- (f) Total stockholder return and/or total stockholder return growth;
- (g) Return on equity;
- (h) Operating cash flow return on income;
- (i) Adjusted operating cash flow return on income;
- (j) Economic value added; and
- (k) Individual confidential business objectives.

"PERFORMANCE PERIOD" means the period of service determined by the Committee, not to exceed five years, during which years of service or performance is to be measured for Restricted Stock Awards or Stock Bonuses.

"PLAN" means this FormFactor, Inc. 2002 Equity Incentive Plan, as amended from time to time.

"RESTRICTED STOCK AWARD" means an award of Shares pursuant to Section 6.

"SEC" means the Securities and Exchange Commission.

"SECURITIES ACT" means the Securities Act of 1933, as amended.

"SHARES" means shares of the Company's Common Stock reserved for issuance under this Plan, as adjusted pursuant to Sections 2 and 18, and any successor security.

"STOCK BONUS" means an award of Shares, or cash in lieu of Shares, pursuant to Section 7.

"SUBSIDIARY" means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company if each of the corporations other than the last corporation in the unbroken chain owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

"TERMINATION" or "TERMINATED" means, for purposes of this Plan with respect to a Participant, that the Participant has for any reason ceased to provide services as an employee, officer, director, consultant, independent contractor, or advisor to the Company or a Parent or Subsidiary of the Company. An employee will not be deemed to have ceased to provide services in the case of (i) sick leave, (ii) military leave, or (iii) any other

leave of absence approved by the Committee, provided, that such leave is for a period of not more than 90 days, unless reemployment upon the expiration of such leave is guaranteed by contract or statute or unless provided otherwise pursuant to formal policy adopted from time to time by the Company and issued and promulgated to employees in writing. In the case of any employee on an approved leave of absence, the Committee may make such provisions respecting suspension of vesting of the Award while on leave from the employ of the Company or a Subsidiary as it may deem appropriate, except that in no event may an Option be exercised after the expiration of the term set forth in the Option agreement. The Committee will have sole discretion to determine whether a Participant has ceased to provide services and the effective date on which the Participant ceased to provide services (the "TERMINATION DATE").

Agreement. "UNVESTED SHARES" means "Unvested Shares" as defined in the Award

Agreement. "VESTED SHARES" means "Vested Shares" as defined in the Award

## FORMFACTOR, INC.

## 2002 EMPLOYEE STOCK PURCHASE PLAN

As Adopted April 18, 2002

1. ESTABLISHMENT OF PLAN. FormFactor, Inc. (the "COMPANY") proposes to grant options for purchase of the Company's Common Stock to eligible employees of the Company and its Participating Subsidiaries (as hereinafter defined) pursuant to this Employee Stock Purchase Plan (this "PLAN"). For purposes of this Plan, "PARENT CORPORATION" and "SUBSIDIARY" shall have the same meanings as "parent corporation" and "subsidiary corporation" in Sections 424(e) and 424(f), respectively, of the Internal Revenue Code of 1986, as amended (the "CODE"). "PARTICIPATING SUBSIDIARIES" are Parent Corporations or Subsidiaries that the Board of Directors of the Company (the "BOARD") designates from time to time as corporations that shall participate in this Plan. The Company intends this Plan to qualify as an "employee stock purchase plan" under Section 423 of the Code (including any amendments to or replacements of such Section), and this Plan shall be so construed. Any term not expressly defined in this Plan but defined for purposes of Section 423 of the Code shall have the same definition herein. A total of 2,000,000 shares of the Company's Common Stock is reserved for issuance under this Plan. In addition, on each January 1, the aggregate number of shares of the Company's Common Stock reserved for issuance under the Plan shall be increased automatically by a number of shares equal to 1% of the total number of outstanding shares of the Company Common Stock on the immediately preceding December 31; provided, that the Board or the Committee may in its sole discretion reduce the amount of the increase in any particular year; and, provided further, that the aggregate number of shares issued over the term of this Plan shall not exceed 20,000,000 shares. Such number shall be subject to adjustments effected in accordance with Section 14 of this Plan.

2. PURPOSE. The purpose of this Plan is to provide eligible employees of the Company and Participating Subsidiaries with a convenient means of acquiring an equity interest in the Company through payroll deductions, to enhance such employees' sense of participation in the affairs of the Company and Participating Subsidiaries, and to provide an incentive for continued employment.

3. ADMINISTRATION. This Plan shall be administered by the Compensation Committee of the Board (the "COMMITTEE"). Subject to the provisions of this Plan and the limitations of Section 423 of the Code or any successor provision in the Code, all questions of interpretation or application of this Plan shall be determined by the Committee and its decisions shall be final and binding upon all participants. Members of the Committee shall receive no compensation for their services in connection with the administration of this Plan, other than standard fees as established from time to time by the Board for services rendered by Board members serving on Board committees. All expenses incurred in connection with the administration of this Plan shall be paid by the Company.

4. ELIGIBILITY. Any employee of the Company or the Participating Subsidiaries is eligible to participate in an Offering Period (as hereinafter defined) under this Plan except the following:

(a) employees who are not employed by the Company or a Participating Subsidiary prior to the beginning of such Offering Period or prior to such other time period as specified by the Committee, except that employees who are employed on the Effective Date of the Registration Statement filed by the Company with the Securities and Exchange Commission ("SEC") under the Securities Act of 1933, as amended (the "SECURITIES ACT") registering the initial public offering of the Company's Common Stock shall be eligible to participate in the first Offering Period under the Plan;

(b) employees who are customarily employed for twenty (20) hours or less per week;

(c) employees who are customarily employed for five (5) months or less in a calendar year;



(d) employees who, together with any other person whose stock would be attributed to such employee pursuant to Section 424(d) of the Code, own stock or hold options to purchase stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or any of its Participating Subsidiaries or who, as a result of being granted an option under this Plan with respect to such Offering Period, would own stock or hold options to purchase stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or any of its Participating Subsidiaries; and

(e) individuals who provide services to the Company or any of its Participating Subsidiaries as independent contractors who are reclassified as common law employees for any reason except for federal income and employment tax purposes.

5. OFFERING DATES. The offering periods of this Plan (each, an "OFFERING PERIOD") shall be of twenty-four (24) months duration commencing on February 1 and August 1 of each year and ending on January 31 and July 31 of each year; provided, however, that the first such Offering Period shall commence on the date on which the registration statement filed by the Company with the SEC under the Securities Act registering the initial public offering of the Company's Common Stock is declared effective by the SEC (the "FIRST OFFERING DATE") and shall end on July 31, 2004 (the "FIRST OFFERING PERIOD"). Each Offering Period shall consist of four (4) six month purchase periods (individually, a "PURCHASE PERIOD") during which payroll deductions of the participants are accumulated under this Plan. The First Offering Period shall consist of no more than five and no fewer than three Purchase Periods, any of which may be greater or less than six months as determined by the Committee. The first business day of each Offering Period is referred to as the "OFFERING DATE". The last business day of each Purchase Period is referred to as the "PURCHASE DATE". The Committee shall have the power to change the Offering Dates, the Purchase Dates and the duration of Offering Periods or Purchase Periods without stockholder approval if such change is announced prior to the relevant Offering Period or prior to such other time period as specified by the Committee.

6. PARTICIPATION IN THIS PLAN. Eligible employees may become participants in an Offering Period under this Plan on the Offering Date after satisfying the eligibility requirements by delivering a subscription agreement to the Company prior to such Offering Date, or such other time period as specified by the Committee; provided, however, that all eligible employees employed on or before the First Offering Date will be automatically enrolled in the First Offering Period. Notwithstanding the foregoing, (i) an eligible employee may elect to decrease the number of shares of Common Stock that such employee would otherwise be permitted to purchase pursuant to Section 7 below for the First Offering Period and/or purchase shares of Common Stock for the First Offering Period through payroll deductions by delivering a subscription agreement to the Company within thirty (30) days following the First Offering Date after the filing of an effective registration statement pursuant to Form S-8 and (ii) the Committee may set a later time for filing the subscription agreement authorizing payroll deductions for all eligible employees with respect to a given Offering Period. Except as provided above with respect to the First Offering Period, an eligible employee who does not deliver a subscription agreement to the Company after becoming eligible to participate in an Offering Period shall not participate in that Offering Period or any subsequent Offering Period unless such employee enrolls in this Plan by filing a subscription agreement with the Company prior to such Offering Period, or such other time period as specified by the Committee. Once an employee becomes a participant in an Offering Period by filing a subscription agreement, such employee will automatically participate in the Offering Period commencing immediately following the last day of the prior Offering Period unless the employee withdraws or is deemed to withdraw from this Plan or terminates further participation in the Offering Period as set forth in Section 11 below. Such participant is not required to file any additional subscription agreement in order to continue participation in this Plan.

7. GRANT OF OPTION ON ENROLLMENT. Enrollment by an eligible employee in this Plan with respect to an Offering Period will constitute the grant (as of the Offering Date) by the Company to such employee of an option to purchase on the Purchase Date up to that number of shares of Common Stock of the Company determined by a fraction, the numerator of which is the amount accumulated in such employee's payroll deduction account during such Purchase Period and the denominator of which is the lower of (i) eighty-five percent (85%) of the fair market value of a share of the Company's Common Stock on the Offering Date (but in no event less than the par value of a

share of the Company's Common Stock), or (ii) eighty-five percent (85%) of the fair market value of a share of the Company's Common Stock on the Purchase Date (but in no event less than the par value of a share of the Company's Common Stock), provided, however, that for each Purchase Period within the First Offering Period the numerator shall be fifteen percent (15%) of the eligible employee's compensation for such Purchase Period and PROVIDED, FURTHER, that the number of shares of the Company's Common Stock subject to any option granted pursuant to this Plan shall not exceed the lesser of (x) the maximum number of shares set by the Committee pursuant to Section 10(c) below with respect to the applicable Purchase Date, or (y) the maximum number of shares which may be purchased pursuant to Section 10(b) below with respect to the applicable Purchase Date. The fair market value of a share of the Company's Common Stock shall be determined as provided in Section 8 below.

8. PURCHASE PRICE. The purchase price per share at which a share of Common Stock will be sold in any Offering Period shall be eighty-five percent (85%) of the lesser of:

- (a) The fair market value on the Offering Date; or
- (b) The fair market value on the Purchase Date.

The term "FAIR MARKET VALUE" means, as of any date, the value of a share of the Company's Common Stock determined as follows:

(a) if such Common Stock is then quoted on the Nasdaq National Market, its closing price on the Nasdaq National Market on the date of determination as reported in The Wall Street Journal;

(b) if such Common Stock is publicly traded and is then listed on a national securities exchange, its closing price on the date of determination on the principal national securities exchange on which the Common Stock is listed or admitted to trading as reported in The Wall Street Journal; or

(c) if such Common Stock is publicly traded but is not quoted on the Nasdaq National Market nor listed or admitted to trading on a national securities exchange, the average of the closing bid and asked prices on the date of determination as reported in The Wall Street Journal.

Notwithstanding the foregoing, for purposes of the First Offering Date, fair market value shall be the price per share at which shares of the Company's Common Stock are initially offered for sale to the public by the Company's underwriters in the initial public offering of the Company's Common Stock pursuant to a registration statement filed with the SEC under the Securities Act.

9. PAYMENT OF PURCHASE PRICE; CHANGES IN PAYROLL DEDUCTIONS; ISSUANCE OF SHARES.

(a) The purchase price of the shares is accumulated by regular payroll deductions made during each Offering Period, PROVIDED, HOWEVER, that for the First Offering Period the purchase price of the shares shall be paid by the eligible employee in cash on each Purchase Date within the First Offering Period unless the eligible employee elects to purchase such shares through payroll deductions after the filing of an effective Form S-8 registration statement pursuant to the second sentence of Section 6 above within thirty (30) days following the First Offering Period. The deductions are made as a percentage of the participant's compensation in one percent (1%) increments not less than one percent (1%), nor greater than fifteen percent (15%) or such lower limit set by the Committee. Compensation shall mean all W-2 cash compensation, including, but not limited to, base salary, wages, commissions, overtime, shift premiums, plus draws against commissions, provided, however, that for purposes of determining a participant's compensation, any election by such participant to reduce his or her regular cash remuneration under Sections 125 or 401(k) of the Code shall be treated as if the participant did not make such election. Payroll deductions shall commence on the first payday of the Offering Period and shall continue to the end of the Offering Period unless sooner altered or terminated as provided in this Plan.

(b) A participant may increase or decrease the rate of payroll deductions during an Offering Period by filing with the Company a new authorization for payroll deductions, in which case the new rate shall

become effective for the next payroll period commencing after the Company's receipt of the authorization and shall continue for the remainder of the Offering Period unless changed as described below. Such change in the rate of payroll deductions may be made at any time during an Offering Period, but not more than one (1) change may be made effective during any Purchase Period. A participant may increase or decrease the rate of payroll deductions for any subsequent Offering Period by filing with the Company a new authorization for payroll deductions prior to the beginning of such Offering Period, or such other time period as specified by the Committee.

(c) A participant may reduce his or her payroll deduction percentage to zero during an Offering Period by filing with the Company a request for cessation of payroll deductions. Such reduction shall be effective beginning with the next payroll period after the Company's receipt of the request and no further payroll deductions will be made for the duration of the Offering Period. Payroll deductions credited to the participant's account prior to the effective date of the request shall be used to purchase shares of Common Stock of the Company in accordance with Section (e) below. A participant may not resume making payroll deductions during the Offering Period in which he or she reduced his or her payroll deductions to zero.

(d) All payroll deductions made for a participant are credited to his or her account under this Plan and are deposited with the general funds of the Company. No interest accrues on the payroll deductions. All payroll deductions received or held by the Company may be used by the Company for any corporate purpose, and the Company shall not be obligated to segregate such payroll deductions.

(e) On each Purchase Date, so long as this Plan remains in effect and provided that the participant has not submitted a signed and completed withdrawal form before that date which notifies the Company that the participant wishes to withdraw from that Offering Period under this Plan and have all payroll deductions accumulated in the account maintained on behalf of the participant as of that date returned to the participant, the Company shall apply the funds then in the participant's account to the purchase of whole shares of Common Stock reserved under the option granted to such participant with respect to the Offering Period to the extent that such option is exercisable on the Purchase Date. The purchase price per share shall be as specified in Section 8 of this Plan. Any cash remaining in a participant's account after such purchase of shares shall be refunded to such participant in cash, without interest; provided, however that any amount remaining in such participant's account on a Purchase Date which is less than the amount necessary to purchase a full share of Common Stock of the Company shall be carried forward, without interest, into the next Purchase Period or Offering Period, as the case may be. In the event that this Plan has been oversubscribed, all funds not used to purchase shares on the Purchase Date shall be returned to the participant, without interest. No Common Stock shall be purchased on a Purchase Date on behalf of any employee whose participation in this Plan has terminated prior to such Purchase Date.

(f) As promptly as practicable after the Purchase Date, the Company shall issue shares for the participant's benefit representing the shares purchased upon exercise of his or her option.

(g) During a participant's lifetime, his or her option to purchase shares hereunder is exercisable only by him or her. The participant will have no interest or voting right in shares covered by his or her option until such option has been exercised.

#### 10. LIMITATIONS ON SHARES TO BE PURCHASED.

(a) No participant shall be entitled to purchase stock under this Plan at a rate which, when aggregated with his or her rights to purchase stock under all other employee stock purchase plans of the Company or any Subsidiary, exceeds \$25,000 in fair market value, determined as of the Offering Date (or such other limit as may be imposed by the Code) for each calendar year in which the employee participates in this Plan. The Company shall automatically suspend the payroll deductions of any participant as necessary to enforce such limit provided that when the Company automatically resumes such payroll deductions, the Company must apply the rate in effect immediately prior to such suspension.

(b) No more than two hundred percent (200%) of the number of shares determined by using eighty-five percent (85%) of the fair market value of a share of the Company's Common Stock on the Offering Date as the denominator may be purchased by a participant on any single Purchase Date.

(c) No participant shall be entitled to purchase more than the Maximum Share Amount (as defined below) on any single Purchase Date. Prior to the commencement of any Offering Period or prior to such time period as specified by the Committee, the Committee may, in its sole discretion, set a maximum number of shares which may be purchased by any employee at any single Purchase Date (hereinafter the "MAXIMUM SHARE AMOUNT"). Until otherwise determined by the Committee, there shall be no Maximum Share Amount. In no event shall the Maximum Share Amount exceed the amounts permitted under Section 10(b) above. If a new Maximum Share Amount is set, then all participants must be notified of such Maximum Share Amount prior to the commencement of the next Offering Period. The Maximum Share Amount shall continue to apply with respect to all succeeding Purchase Dates and Offering Periods unless revised by the Committee as set forth above.

(d) If the number of shares to be purchased on a Purchase Date by all employees participating in this Plan exceeds the number of shares then available for issuance under this Plan, then the Company will make a pro rata allocation of the remaining shares in as uniform a manner as shall be reasonably practicable and as the Committee shall determine to be equitable. In such event, the Company shall give written notice of such reduction of the number of shares to be purchased under a participant's option to each participant affected.

(e) Any payroll deductions accumulated in a participant's account which are not used to purchase stock due to the limitations in this Section 10 shall be returned to the participant as soon as practicable after the end of the applicable Purchase Period, without interest.

#### 11. WITHDRAWAL.

(a) Each participant may withdraw from an Offering Period under this Plan by signing and delivering to the Company a written notice to that effect on a form provided for such purpose. Such withdrawal may be elected at any time prior to the end of an Offering Period, or such other time period as specified by the Committee.

(b) Upon withdrawal from this Plan, the accumulated payroll deductions shall be returned to the withdrawn participant, without interest, and his or her interest in this Plan shall terminate. In the event a participant voluntarily elects to withdraw from this Plan, he or she may not resume his or her participation in this Plan during the same Offering Period, but he or she may participate in any Offering Period under this Plan which commences on a date subsequent to such withdrawal by filing a new authorization for payroll deductions in the same manner as set forth in Section 6 above for initial participation in this Plan.

(c) If the Fair Market Value on the first day of the current Offering Period in which a participant is enrolled is higher than the Fair Market Value on the first day of any subsequent Offering Period, the Company will automatically enroll such participant in the subsequent Offering Period. Any funds accumulated in a participant's account prior to the first day of such subsequent Offering Period will be applied to the purchase of shares on the Purchase Date immediately prior to the first day of such subsequent Offering Period, if any.

12. TERMINATION OF EMPLOYMENT. Termination of a participant's employment for any reason, including retirement, death or the failure of a participant to remain an eligible employee of the Company or of a Participating Subsidiary, immediately terminates his or her participation in this Plan. In such event, the payroll deductions credited to the participant's account will be returned to him or her or, in the case of his or her death, to his or her legal representative, without interest. For purposes of this Section 12, an employee will not be deemed to have terminated employment or failed to remain in the continuous employ of the Company or of a Participating Subsidiary in the case of sick leave, military leave, or any other leave of absence approved by the Board; provided that such leave is for a period of not more than ninety (90) days or reemployment upon the expiration of such leave is guaranteed by contract or statute.

13. RETURN OF PAYROLL DEDUCTIONS. In the event a participant's interest in this Plan is terminated by withdrawal, termination of employment or otherwise, or in the event this Plan is terminated by the Board, the Company shall deliver to the participant all payroll deductions credited to such participant's account. No interest shall accrue on the payroll deductions of a participant in this Plan.

14. CAPITAL CHANGES. Subject to any required action by the stockholders of the Company, the number of shares of Common Stock covered by each option under this Plan which has not yet been exercised and the number of shares of Common Stock which have been authorized for issuance under this Plan but have not yet been placed under option (collectively, the "RESERVES"), as well as the price per share of Common Stock covered by each option under this Plan which has not yet been exercised, shall be proportionately adjusted for any increase or decrease in the number of issued and outstanding shares of Common Stock of the Company resulting from a stock split or the payment of a stock dividend (but only on the Common Stock) or any other increase or decrease in the number of issued and outstanding shares of Common Stock effected without receipt of any consideration by the Company; provided, however, that conversion of any convertible securities of the Company shall not be deemed to have been "effected without receipt of consideration". Such adjustment shall be made by the Committee, whose determination shall be final, binding and conclusive. Except as expressly provided herein, no issue by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of shares of Common Stock subject to an option.

In the event of the proposed dissolution or liquidation of the Company, the Offering Period will terminate immediately prior to the consummation of such proposed action, unless otherwise provided by the Committee. The Committee may, in the exercise of its sole discretion in such instances, declare that this Plan shall terminate as of a date fixed by the Committee and give each participant the right to purchase shares under this Plan prior to such termination. In the event of (i) a merger or consolidation in which the Company is not the surviving corporation (other than a merger or consolidation with a wholly-owned subsidiary, a reincorporation of the Company in a different jurisdiction, or other transaction in which there is no substantial change in the stockholders of the Company or their relative stock holdings and the options under this Plan are assumed, converted or replaced by the successor corporation, which assumption will be binding on all participants), (ii) a merger in which the Company is the surviving corporation but after which the stockholders of the Company immediately prior to such merger (other than any stockholder that merges, or which owns or controls another corporation that merges, with the Company in such merger) cease to own their shares or other equity interest in the Company, (iii) the sale of all or substantially all of the assets of the Company or (iv) the acquisition, sale, or transfer of more than 50% of the outstanding shares of the Company by tender offer or similar transaction, the Plan will continue with regard to Offering Periods that commenced prior to the closing of the proposed transaction and shares will be purchased based on the Fair Market Value of the surviving corporation's stock on each Purchase Date, unless otherwise provided by the Committee.

The Committee may, if it so determines in the exercise of its sole discretion, also make provision for adjusting the Reserves, as well as the price per share of Common Stock covered by each outstanding option, in the event that the Company effects one or more reorganizations, recapitalizations, rights offerings or other increases or reductions of shares of its outstanding Common Stock, or in the event of the Company being consolidated with or merged into any other corporation.

15. NONASSIGNABILITY. Neither payroll deductions credited to a participant's account nor any rights with regard to the exercise of an option or to receive shares under this Plan may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will, the laws of descent and distribution or as provided in Section 22 below) by the participant. Any such attempt at assignment, transfer, pledge or other disposition shall be void and without effect.

16. REPORTS. Individual accounts will be maintained for each participant in this Plan. Each participant shall receive promptly after the end of each Purchase Period a report of his or her account setting forth the total payroll deductions accumulated, the number of shares purchased, the per share price thereof and the remaining cash balance, if any, carried forward to the next Purchase Period or Offering Period, as the case may be.

17. NOTICE OF DISPOSITION. Each participant shall notify the Company in writing if the participant disposes of any of the shares purchased in any Offering Period pursuant to this Plan if such disposition occurs within two (2) years from the Offering Date or within one (1) year from the Purchase Date on which such shares were purchased (the "NOTICE PERIOD"). The Company may, at any time during the Notice Period, place a legend or legends on any certificate representing shares acquired pursuant to this Plan requesting the Company's transfer agent to notify the Company of any transfer of the shares. The obligation of the participant to provide such notice shall continue notwithstanding the placement of any such legend on the certificates.

18. NO RIGHTS TO CONTINUED EMPLOYMENT. Neither this Plan nor the grant of any option hereunder shall confer any right on any employee to remain in the employ of the Company or any Participating Subsidiary, or restrict the right of the Company or any Participating Subsidiary to terminate such employee's employment.

19. EQUAL RIGHTS AND PRIVILEGES. All eligible employees shall have equal rights and privileges with respect to this Plan so that this Plan qualifies as an "employee stock purchase plan" within the meaning of Section 423 or any successor provision of the Code and the related regulations. Any provision of this Plan which is inconsistent with Section 423 or any successor provision of the Code shall, without further act or amendment by the Company, the Committee or the Board, be reformed to comply with the requirements of Section 423. This Section 19 shall take precedence over all other provisions in this Plan.

20. NOTICES. All notices or other communications by a participant to the Company under or in connection with this Plan shall be deemed to have been duly given when received in the form specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

21. TERM; STOCKHOLDER APPROVAL. After this Plan is adopted by the Board, this Plan will become effective on the First Offering Date (as defined above). This Plan shall be approved by the stockholders of the Company, in any manner permitted by applicable corporate law, within twelve (12) months before or after the date this Plan is adopted by the Board. No purchase of shares pursuant to this Plan shall occur prior to such stockholder approval. This Plan shall continue until the earlier to occur of (a) termination of this Plan by the Board (which termination may be effected by the Board at any time), (b) issuance of all of the shares of Common Stock reserved for issuance under this Plan, or (c) ten (10) years from the adoption of this Plan by the Board.

#### 22. DESIGNATION OF BENEFICIARY.

(a) A participant may file a written designation of a beneficiary who is to receive any shares and cash, if any, from the participant's account under this Plan in the event of such participant's death subsequent to the end of an Purchase Period but prior to delivery to him of such shares and cash. In addition, a participant may file a written designation of a beneficiary who is to receive any cash from the participant's account under this Plan in the event of such participant's death prior to a Purchase Date.

(b) Such designation of beneficiary may be changed by the participant at any time by written notice. In the event of the death of a participant and in the absence of a beneficiary validly designated under this Plan who is living at the time of such participant's death, the Company shall deliver such shares or cash to the executor or administrator of the estate of the participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such shares or cash to the spouse or to any one or more dependents or relatives of the participant, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

23. CONDITIONS UPON ISSUANCE OF SHARES; LIMITATION ON SALE OF SHARES. Shares shall not be issued with respect to an option unless the exercise of such option and the issuance and delivery of such shares pursuant thereto shall comply with all applicable provisions of law, domestic or foreign, including, without limitation, the Securities Act, the Securities Exchange Act of 1934, as amended, the rules and regulations promulgated thereunder, and the requirements of any stock exchange or automated quotation system upon which the shares may then be listed, and shall be further subject to the approval of counsel for the Company with respect to such compliance.

24. APPLICABLE LAW. The Plan shall be governed by the substantive laws (excluding the conflict of laws rules) of the State of California.

25. AMENDMENT OR TERMINATION OF THIS PLAN. The Board may at any time amend, terminate or extend the term of this Plan, except that any such termination cannot affect options previously granted under this Plan, nor may any amendment make any change in an option previously granted which would adversely affect the right of any participant, nor may any amendment be made without approval of the stockholders of the Company obtained in accordance with Section 21 above within twelve (12) months of the adoption of such amendment (or earlier if required by Section 21) if such amendment would:

(a) increase the number of shares that may be issued under this Plan; or

(b) change the designation of the employees (or class of employees) eligible for participation in this Plan.

Notwithstanding the foregoing, the Board may make such amendments to the Plan as the Board determines to be advisable, if the continuation of the Plan or any Offering Period would result in financial accounting treatment for the Plan that is different from the financial accounting treatment in effect on the date this Plan is adopted by the Board.

THIRD MODIFICATION TO  
SECOND AMENDED AND RESTATED  
LOAN AND SECURITY AGREEMENT

This Third Modification to Second Amended and Restated Loan and Security Agreement (this "Modification") is entered into by and between FORMFACTOR, INC., a Delaware corporation ("Borrower") and COMERICA BANK-CALIFORNIA, a California banking corporation, as successor by merger to Imperial Bank ("Lender") as of May 14, 2002.

## RECITALS

This Modification is entered into upon the basis of the following facts and understandings of the parties, which facts and understandings are acknowledged by the parties to be true and accurate:

Lender and Borrower previously entered into that certain Second Amended and Restated Loan and Security Agreement, dated March 20, 2001, as modified by that certain First Modification to Second Amended and Restated Loan and Security Agreement, dated as of September 17th, 2001, and by that certain Second Modification to Second Amended and Restated Loan and Security Agreement, dated as of January 15, 2002. The certain Second Amended and Restated Loan and Security Agreement, as so modified and as otherwise amended by any subsequent modification, amendment, restatement, supplement or revision thereto shall collectively be referred to herein as the "Agreement."

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as set forth below.

## AGREEMENT

1. Incorporation by Reference. The Recitals and the documents referred to therein are incorporated herein by this reference. Except as otherwise noted, the terms not defined herein shall have the meaning set forth in the Agreement.

2. Modification to the Agreement. Subject to the satisfaction of the conditions precedent as set forth in Section 4 hereof, the Agreement is hereby modified as set forth below.

(a) The definition of "Maturity Date" contained in the first sentence of subsection 1.1.1 of the Agreement hereby is amended and restated in its entirety and replaced with July 31, 2002.

(b) The first sentence of subsection 1.2.1 of the Agreement hereby is amended and restated in its entirety and replaced with the following:

Subject to the terms and conditions of this Agreement, from time to time from the Closing Date to the Maturity Date, Lender shall, upon Borrower's request in accordance with this Agreement, make advances (each a "Converting Non-Revolving Loan" and collectively, the "Converting Non-Revolving Loans") to Borrower in an aggregate amount not to exceed \$2,000,000, the proceeds of which shall be used by Borrower only for the acquisition of Equipment.

(c) Subsection 5.5.3 of the Agreement hereby is amended and restated in its entirety and replaced with the following:

5.5.3 COMPLIANCE CERTIFICATE. At the same time as each request for a Revolving Loan under subsection 1.1.1 of this Agreement and concurrently with the submission of each financial statement of Borrower required under this Agreement, a certificate signed by chief financial officer of Borrower, stating that as of the date thereof, Borrower has performed and observed each and every covenant contained in this Agreement to be performed by it and that no event has occurred and no condition then exists which constitutes an event of default hereunder or would constitute such an event of default upon the lapse of time or upon the giving of notice and the lapse of time specified herein; or, if any such event has occurred or any such condition exists, specifying the nature thereof, all in form and substance satisfactory to Lender;

(d) The following new Section 5.11 is hereby inserted in the Agreement in its entirety immediately following existing section 5.10 thereof:



5.11 AUDITS. Borrower shall permit representatives of Lender to conduct audits of Borrower's Books relating to the Accounts and other Collateral and make extracts therefrom, with results satisfactory to Lender, provided that Lender shall use its best efforts to not interfere with the conduct of Borrower's business and to the extent possible to arrange for verification of the Accounts directly with the account debtors obligated thereon or otherwise, all under reasonable procedures acceptable to Lender and at Borrower's sole expense, provided, however, that, prior to an Event of Default, Borrower shall not be responsible for more than one (1) such audit in each calendar year. Notwithstanding any of the provisions contained in Section 1.1.1 of this Agreement or otherwise, Borrower hereby acknowledges and agrees that upon completion of any such audit Lender shall have the right to adjust the Maximum Revolving Amount, in its sole and reasonable discretion, based on its review of the results of such collateral audit. This right to conduct audits of Borrower's Books relating to the Accounts and other Collateral is conditional upon (i) the inspecting entities' execution of the Confidentiality Letter Agreement and (ii) the treatment of all information contained in Borrower's Books as confidential consistent with the Confidentiality Letter Agreement.

3. Legal Effect. Except as specifically set forth in this Modification, all of the terms and conditions of the Agreement remain in full force and effect. Except as expressly set forth herein, the execution, delivery, and performance of this Modification shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Lender under the Agreement, as in effect prior to the date hereof. Borrower ratifies and reaffirms the continuing effectiveness of all promissory notes, guaranties, security agreements, mortgages, deeds of trust, environmental agreements, and all other instruments, documents and agreements entered into in connection with the Agreement. Borrower represents and warrants that the Representations and Warranties contained in the Agreement are true and correct as of the date of this Modification, and that no Event of Default has occurred and is continuing. The effectiveness of this Modification and each of the documents, instruments and agreements entered into in connection with this Modification, including without limit any replacement promissory note entered into in connection herewith, is conditioned upon receipt by Lender of this Modification, any other documents which Lender may require to carry out the terms hereof, and including but not limited to each of the following:

- (a) a non-refundable legal documentation fee of \$500, plus any Lender expenses incurred through the date of this Modification;
- (b) Borrower's corporate resolution, authorizing Borrower's entry into this Modification; and
- (c) Such other documents and completion of such other matters, as Lender may reasonably deem necessary or appropriate to carry out the terms hereof.

4. Miscellaneous Provisions.

- (a) This is an integrated Modification and supersedes all prior negotiations and agreements regarding the subject matter hereof. All amendments hereto must be in writing and signed by the parties.
- (b) This Modification may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

IN WITNESS WHEREOF, the parties have agreed as of the date first set forth above.

FORMFACTOR, INC.,  
a Delaware corporation

COMERICA BANK-CALIFORNIA,  
a California corporation

By: /s/ Jens Meyerhoff  
-----

By: /s/ Lorraine M. Sue  
-----

Name: Jens Meyerhoff  
-----

Name: Lorraine M. Sue  
-----

Title: Chief Financial Officer  
-----

Title: Vice President  
-----

This Second Modification to Second amended and Restated Loan and Security Agreement (this "Modification") is entered into by and between FORMFACTOR, INC., a Delaware corporation ("Borrower") and COMERICA BANK-CALIFORNIA, a California banking corporation, as successor by merger to Imperial Bank ("Bank") as of January 15, 2002.

#### RECITALS

This Modification is entered into upon the basis of the following facts and understandings of the parties, which facts and understandings are acknowledged by the parties to be true and accurate:

Bank and Borrower previously entered into that certain Second Amended and Restated Loan and Security Agreement, dated March 20, 2001, as modified by that certain First Modification to Second Amended and Restated Loan and Security Agreement, dated as of September 17th, 2001. The certain Second Amended and Restated Loan and Security Agreement, as so modified, and as otherwise amended by any subsequent modification, amendment, restatement, supplement or revision thereto shall collectively be referred to herein as the "Agreement".

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as set forth below.

#### AGREEMENT

1. Incorporation by Reference. The Recitals and the documents referred to therein are incorporated herein by this reference. Except as otherwise noted, the terms not defined herein shall have the meaning set forth in the Agreement.

2. Modification to the Agreement. Subject to the satisfaction of the conditions precedent as set forth in Section 4 hereof, the Agreement is hereby modified as set forth below.

(a) Each reference in the Agreement to "Imperial Bank" is hereby deleted and replaced with "Comerica Bank-California."

(b) Section 7.5 of the Agreement hereby is amended and restated its entirety and replaced with the following:

7.5 LIMITATION ON LOSSES. Not incur, on a consolidated basis measured as of the last day of each fiscal quarter, a net loss in excess of: (i) \$1,000,000 for the quarter ended December 29, 2001; (ii) \$5,000,000 for the quarter ended March 30, 2002, (iii) \$1,500,000 for the quarter ended June 29, 2002; and (iv) \$-0- for the quarter ended September 28, 2002 and as of each quarter and thereafter.

(c) Section 7.7 of the Agreement hereby is amended and restated its entirety and replaced with the following:

7.7 CASH AND EQUIVALENTS. Maintain as of last day of the month ended December 29, 2001 and as of the last day of each month thereafter, cash and cash equivalents in an aggregate amount of not less than \$15,000,000.

3. Modification to Other Loan Documents. Subject to the satisfaction of the conditions precedent as set forth in Section 4 hereof, each other document, instrument of agreement entered into by Borrower with or in favor of Bank in connection with the Agreement (collectively, the "Loan Documents") are hereby modified as set forth below:

A. Each reference in the Loan Documents to "Imperial Bank" is hereby deleted and replaced with "Comerica Bank - California."

4. Legal Effect. Except as specifically set forth in this Modification, all of the terms and conditions of the Agreement remain in full force and effect. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof. Borrower ratifies and reaffirms the continuing effectiveness of all promissory notes, guaranties, security agreements, mortgages, deeds of trust, environmental agreements, and all other instruments, documents and agreements entered into in connection with the Agreement. Borrower represents and warrants that the Representations and Warranties contained in the Agreement are true and correct as of the date of this Amendment, and that no Event of Default has occurred and is continuing. The effectiveness of this Modification and each of the documents, instruments and agreements entered into in connection with this Modification, including without limit any replacements promissory note entered into in connection herewith, is conditioned upon receipt by Bank of this Modification, any other documents which Bank may require to carry out the terms hereof, and including but not limited to each of the following:

(a) A non-refundable documentation fee of \$250, plus any Bank expenses incurred through the date of this Modification; and

(b) Such other documents and completion of such other matters, as Bank may reasonably deem necessary or appropriate to carry out the terms hereof.

5. Miscellaneous Provisions.

(a) This is an integrated Modification and supersedes all prior negotiations and agreements regarding the subject matter hereof. All amendments hereto must be in writing and signed by the parties.

(b) This Modification may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

IN WITNESS WHEREOF, the parties have agreed as of the date first set forth above.

FORMFACTOR, INC.,  
a Delaware corporation

COMERICA BANK - CALIFORNIA  
a California banking corporation

By: /s/ Jens Meyerhoff

By: /s/ Lorraine Sue

Name: Jens Meyerhoff

Name: Lorraine Sue

Title: CFO

Title: Vice President

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the use in this Amendment No. 2 to the Registration Statement on Form S-1 of our report dated February 15, 2002, except for Note 14, as to which the date is April 18, 2002, relating to the consolidated financial statements and our report dated April 22, 2002, relating to the financial statement schedule of FormFactor, Inc., which appear in such Registration Statement. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

PricewaterhouseCoopers LLP

San Jose, California  
May 24, 2002

