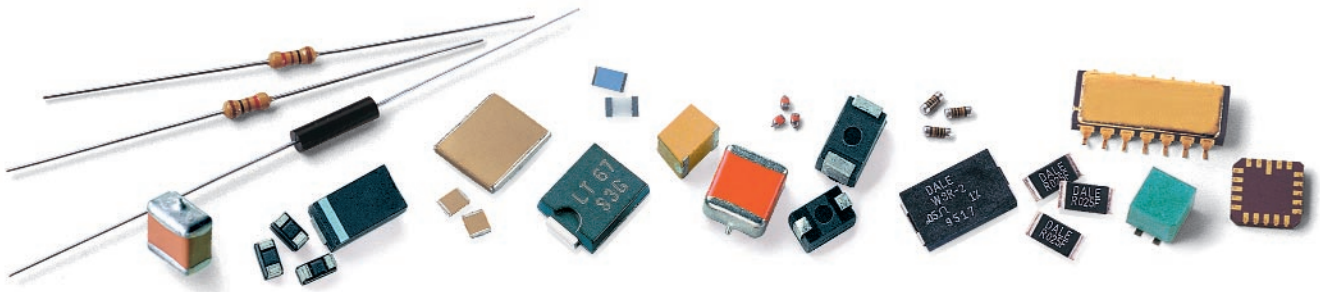




VISHAY INTERTECHNOLOGY, INC.

1998 Annual Report



CORPORATE MISSION

VISHAY IS THE LARGEST AND BROADEST U.S. AND EUROPEAN MANUFACTURER OF PASSIVE COMPONENTS AND A MAJOR PRODUCER OF A BROAD LINE OF DISCRETE SEMICONDUCTORS AND SELECTED INTEGRATED CIRCUITS. AS SUCH, VISHAY IS COMMITTED TO:

1. PROVIDING OUR CUSTOMERS WITH A SINGLE MANUFACTURING SOURCE FOR ALL THEIR DISCRETE ELECTRONIC COMPONENT NEEDS (PASSIVE AND DISCRETE SEMICONDUCTORS);
A CONTINUOUS STREAM OF NEW AND STATE-OF-THE-ART PRODUCTS; QUALITY PRODUCTS AT A COMPETITIVE PRICE; AND SUPERIOR CUSTOMER SERVICE WORLDWIDE.
2. PROVIDING OUR SUPPLIERS WITH A RELIABLE LONG-TERM RELATIONSHIP.
3. PROVIDING OUR SHAREHOLDERS WITH A GOOD RETURN ON THEIR INVESTMENT.
4. PROVIDING OUR EMPLOYEES WITH RESPONSIBLE AND ETHICAL LEADERSHIP AND A CREATIVE WORKING ENVIRONMENT.
5. BEING RESPONSIBLE COMMUNITY MEMBERS IN ALL VISHAY LOCATIONS.

VISHAY INTERTECHNOLOGY: GLOBAL LEADER IN DESIGNING, MANUFACTURING, AND MARKETING PASSIVE ELECTRONIC COMPONENTS, DISCRETE SEMICONDUCTORS, AND SELECTED INTEGRATED CIRCUITS. Vishay Intertechnology, Inc., (NYSE:VSH) is the largest U.S. and European manufacturer of passive electronic components and a leading producer of discrete semiconductor components and selected ICs. Through internal research and development and an aggressive acquisition strategy, Vishay has established a unique position as the global manufacturer of the broadest line of discrete electronic components available.

Vishay's passive component products include resistors, resistive sensors, capacitors, and inductors. Its semiconductor components include diodes and transistors of all types, optoelectronic products, and power and analog switching integrated circuits. All of these components are vital to the operation of electronic circuits and can be found in computers, telephones, TVs, automobiles, household appliances, medical equipment, satellites, and military and aerospace equipment. You are likely to find Vishay components in electronic products made by every U.S. or European manufacturer and by many Asian manufacturers.

The Company serves its customers through a worldwide network of manufacturing facilities, inside sales and technical support offices, as well as independent distributorships and manufacturers' representatives located in all industrial countries. The Company's widespread operations enable its customers to do business with a single global manufacturer for essentially all of their discrete electronic component needs.

FOUNDED	1962
EMPLOYEES	OVER 20,000
PRODUCTS	PASSIVE COMPONENTS, DISCRETE SEMICONDUCTORS, AND SELECTED ICs
MANUFACTURING FACILITIES	69 PLANTS
GLOBAL PRESENCE	MANUFACTURING FACILITIES IN 14 COUNTRIES; SALES AND SERVICE LOCATIONS WORLDWIDE
MAJOR CUSTOMERS INCLUDE QUALCOMM,	AT&T, ALCATEL, BOSCH, DELCO, FORD, IBM, INTEL, LOCKHEED MARTIN, MOTOROLA, SAMSUNG, SIEMENS, SONY, SUN MICROSYSTEMS, TEXAS INSTRUMENTS

FINANCIAL HIGHLIGHTS

Vishay Intertechnology, Inc.

AS OF AND FOR THE YEAR ENDED DECEMBER 31

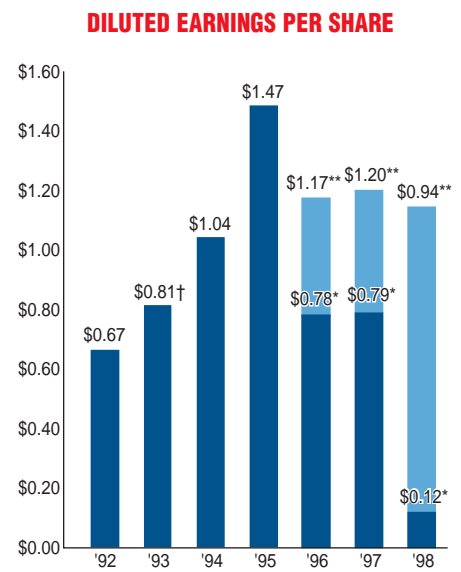
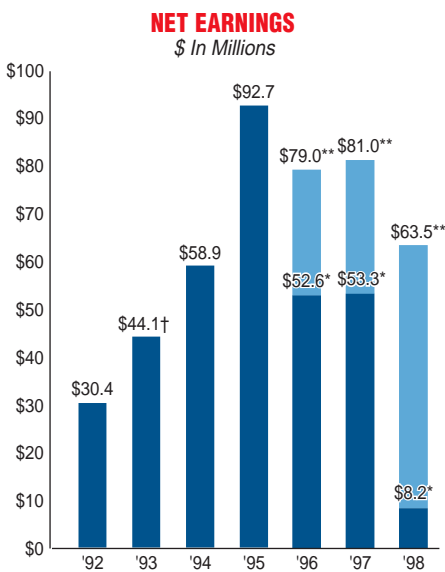
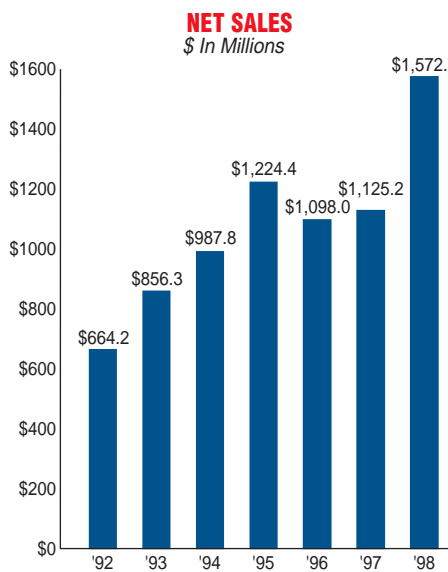
1998

1997

1996

(In thousands, except per share amounts)

Net sales	\$1,572,745	\$1,125,219	\$1,097,979
Operating profit	93,925	108,602	85,824
Net earnings	8,212*	53,302*	52,616*
Depreciation and amortization	127,947	81,874	77,247
Basic and diluted earnings per share	\$ 0.12*	\$ 0.79*	\$ 0.78*
Weighted average shares outstanding – diluted	67,625	67,682	67,582
Cash flows from operations	\$ 169,450	\$ 177,158	\$ 128,685
Working capital	639,783	455,134	434,199
Property and equipment – net	997,067	709,142	710,662
Long-term debt	814,838	347,463	229,885
Stockholders' equity	1,002,519	959,648	945,230
Book value per share	\$ 14.82	\$ 14.19	\$ 13.99



† Includes \$1.4 million for cumulative effect of accounting change for income taxes.

† Includes \$0.03 for cumulative effect of accounting change for income taxes.

* Includes restructuring expenses and unusual charges of \$55,335,000 (\$0.82 per share), \$27,692,000 (\$0.41 per share) and \$38,030,000 (\$0.39 per share) for the years ended December 31, 1998, 1997 and 1996 respectively.

** Excludes restructuring expenses and unusual charges of \$55,335,000 (\$0.82 per share), \$27,692,000 (\$0.41 per share) and \$38,030,000 (\$0.39 per share) in 1998, 1997 and 1996, respectively.

A MESSAGE FROM THE CHAIRMAN

To Our Stockholders, Employees, Customers and Vendors:

Nineteen ninety-eight has been an exciting and challenging year for Vishay. The Company started the year with a major step into the discrete semiconductor components arena with the March 2, 1998 acquisition of the semiconductor business unit of TEMIC TELEFUNKEN microelectronics GmbH of Heilbronn, Germany, and 80.4 percent of Siliconix Incorporated (NASDAQ: SILI), a TEMIC subsidiary located in Santa Clara, California.

Vishay paid \$550 million to TEMIC's parent company Daimler-Benz for the integrated circuits (IC) business and the discrete semiconductor business. Sales of the semiconductor business unit of TEMIC for calendar 1997 were approximately \$850,000,000. Following the closing of that transaction on March 2, 1998, Vishay sold most of the IC business, which had annual sales of \$300,000,000, to Atmel Corporation (NASDAQ: ATML) and others for approximately \$140,000,000. Vishay kept for itself all of the discrete semiconductor product lines and three integrated circuit (IC) lines; power ICs, IrDC transceiver ICs and analog switch ICs.

Vishay began its penetration of the semiconductor components business with its July 1997 acquisition of 65 percent of Lite-On Power Semiconductor Corporation (LPSC) of Taiwan, for a purchase price of \$130,000,000 and stock appreciation rights. LPSC is a joint venture between Vishay (65%) and shareholders of the Lite-On Group of Taiwan (35%).

We are very pleased with the 1998 performance of the Siliconix and Telefunken operations. Approximately \$474,000,000 of Vishay's sales in 1998 were due to the TEMIC acquisition, which was included in Vishay's results for ten months of 1998. The recovery in demand in Siliconix's major markets, telecommunications and portable computers, which began late last year is continuing, and the market environment is expected to be better in 1999 than in 1998. Our new power MOSFET and power ICs introductions are doing very well with sales and profits up strongly. The IrDC components (wireless communications) are also experiencing increased sales and profits; they are used in all Nokia, Ericsson and other portable phones. We are encouraged by

the success of our Siliconix and Telefunken acquisition and we believe that as a result, we are now positioned as a leader in discrete semiconductor component technologies. This, in turn, should benefit our passive components business since passives and discrete semiconductors are sold for the same applications.

Apart from our Siliconix and Telefunken business, 1998 has been a difficult year for us and our industry. Looking back, you can say that Vishay's high specialty products and cost reduction across all product lines helped the operations of the Company close a difficult year on a positive note. We maintain gross margins at the level of more than 24%, which we believe in an environment where selling prices have eroded at unusually high rates, was quite an achievement. However, we believe that because of our continuing cost cutting and job realignment, we are able to remain the most profitable among our peers in the commodity passive component field. Contributing to our profitability is the fact that over 50% of our sales are in specialty and high-tech products which have higher margins

than commodity products and a much slower rate of price erosion.

In light of the past year's financial crisis in Asia and our recent acquisitions of Siliconix, Telefunken and Lite-On Power Semiconductor, we have reassessed the extent of our investment in Asia. We have also opened our first capacitor facility in Shanghai, but we are proceeding more cautiously than we had originally planned.

Vishay had 21,500 employees as of December 31, 1998. 16,100 of them are outside the U.S., often in lower labor cost countries.

FINANCIAL HIGHLIGHTS. While the results for 1998 reflected a very difficult year for the commodity part of our business, we were pleased that we remained among the most profitable companies in relation to our peers. For the twelve months ended December 31, 1998, sales were \$1,572,745,000 compared with \$1,125,219,000 in the previous year. Net earnings before special charges for the year ended December 31, 1998 were \$63,547,000 or \$0.94 per share. After special charges of \$55,335,000 (essentially noncash) or \$0.82 per share, net

earnings for the year were \$8,212,000 or \$0.12 per share. Net earnings for the previous year were \$53,302,000 or \$0.79 per share (after special charges of \$27,692,000 or \$0.41 per share).

Sales of the passive components business were \$1,027,902,000 for the twelve months ended December 31, 1998 and net earnings were \$0.86 per share (before special charges). Sales of the semiconductor components business were \$544,843,000 for the twelve months ended December 31, 1998, resulting in net earnings of \$0.08 per share (before special charges).

Earnings per share amounts for all periods reflect a 5% stock dividend paid June 11, 1998.

During the year, Vishay recorded noncash charges of (i) \$13,300,000, which represented an allocation of the purchase price for in-process research and development expense related to the acquisition of TEMIC Telefunken micro-electronics GmbH and (ii) impairment losses of approximately \$23,057,000 related to joint ventures in China and Japan. The Company believes that the decision not to proceed with the joint venture in China will result in a more

streamlined organization in Asia and should provide benefits to the Company in the future. Also a \$5,944,000 charge was taken for workforce reductions in Europe. In addition, the Company also recorded a loss of \$6,269,000 relating to a forward exchange contract entered into to set the purchase price in connection with the TEMIC acquisition. Because of the non-tax deductibility of most of these charges and a \$10,000,000 non-cash charge against deferred tax assets, the tax effect of these charges was lower than normal.

Gross profits for the year ended December 31, 1998 were 24.4% of sales as compared to 23.7% in the prior year. Siliconix and Telefunken combined reported gross margins of 30.1% for the ten months ended December 31, 1998. The passive components business gross margin profit margins were 22.5% for the year ended December 31, 1998 as compared to 24.0% for the prior year. Profitability for the passive components business was negatively affected by price erosion and the depressed Asian market.

Selling, general and administrative expenses for the year ended December 31, 1998 were 14.9% of sales as com-

pared to 12.2% in the prior year. The increased expenses were primarily due to the acquisition of Siliconix and Telefunken for which selling, general and administrative expenses were 19.6% for the ten months ended December 31, 1998. Without the Siliconix and Telefunken acquisition, selling, general and administrative expenses were 12.9% of sales.

The Company is generating substantial cash and its financial condition is strong with a current ratio of 3.0 to 1.0. For the year ended December 31, 1998, the Company's cash flow from operations was \$169,450,000. Purchases of property and equipment for the year ended December 31, 1998 were \$151,682,000 as compared to \$78,074,000 in the prior year.

LOOKING AHEAD. During 1998, we believe Vishay became a stronger company, and throughout 1999 we will continue to build on that strength and our historical position as a leader in the U.S. and European electronics markets. We are focused on being a total solution provider – a complete manufacturer of passive electronic components and a

major producer of discrete semiconductors and selected integrated circuits. Vishay's components are vital to the operation of electronic products found in a broad range of industries worldwide. The Company is committed, through our state-of-the-art technology, our increasing research and development, and through an acquisition strategy targeting companies with advanced technology resources, to continually strive to introduce the best performing components in the industry to satisfy the ever-changing customer demands in today's dynamic marketplace.

We expect to continue to supply our products to customers such as AT&T, Alcatel, Bosch, Delco, Ford, IBM, Intel, Motorola, Qualcomm, Samsung, Siemens and Sony, to name but a few, with the utmost quality and service. Our valued customers are serviced by Vishay's worldwide network of manufacturing facilities, inside sales and technical support offices as well as distributorships and manufacturers' representatives located in all industrial countries. Our widespread manufacturing operations in 69 plants worldwide enable Vishay customers to do business with a single glob-

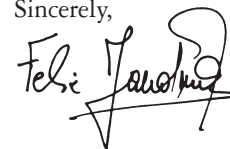
al manufacturer for their passive electronic component, discrete semiconductor and selected integrated circuit needs.

Electronic components technology is ever changing and Vishay is positioned to grow with it.

We invite and encourage you to read the profile that follows for an appreciation of the breadth of our products and new avenues of involvement in research and development.

To our fellow shareholders, we thank you for your investment and continued confidence in Vishay. We are extremely grateful to our employees worldwide for their loyalty, skill and energy which has significantly contributed to our rapid and solid growth. We value highly the relationship we have with our customers and suppliers. We hope that with your continued support, 1999 will be a prosperous year for Vishay.

Sincerely,



Dr. Felix Zandman

Chairman of the Board and Chief Executive Officer

April 1999

VISHAY'S BEGINNINGS



In the 1950s, as the electronics industry began its accelerated growth, Dr. Felix Zandman, a physicist, and current Chairman and CEO of Vishay, was issued patents for his PhotoStress® coatings and instruments. These devices are used to reveal and measure the distribution of stresses in structures under live load conditions. Dr. Zandman's



(Above left) Dr. Felix Zandman, Chairman of the Board, Scientific Director, and Chief Executive Officer.

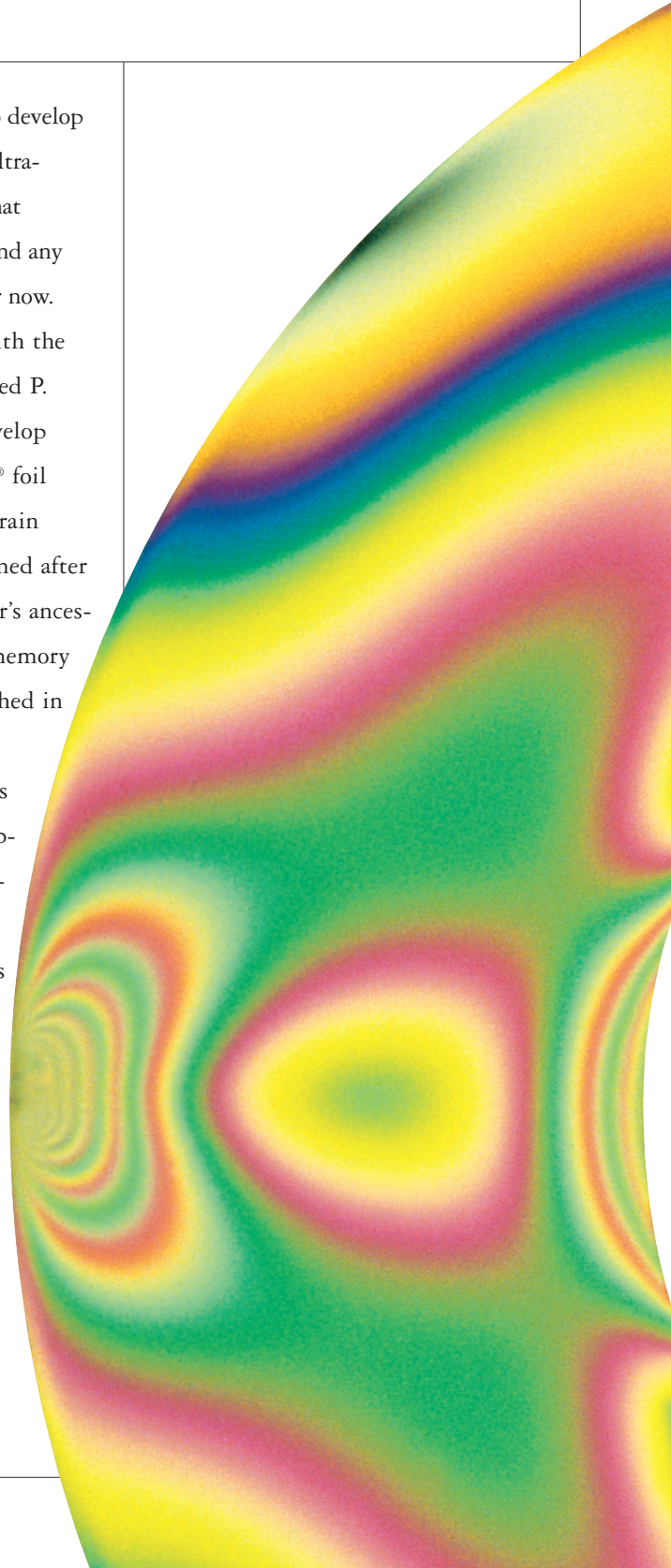
(Above center) The invention of the transistor in the 1940s enabled the advent of the transistor radio and ushered in the era of the electronics industry.

(Right) When special PhotoStress coatings are bonded to any structure and viewed through a polariscope, patterns like this one are revealed when the structure is stressed. Vishay's Measurements Group is a world leader in producing coatings, strain gages, and instruments for stress measurement.

research in this area led him to develop Bulk Metal® foil resistors — ultra-precise, ultra-stable resistors that provided performance far beyond any other resistor available, then or now.

In 1962, Dr. Zandman, with the financial help of the late Alfred P. Slaner, founded Vishay to develop and manufacture Bulk Metal® foil resistors and foil resistance strain gages. The Company was named after Dr. Zandman's and Mr. Slaner's ancestral village in Lithuania, in memory of family members who perished in the Holocaust.

Throughout the '60s and '70s, Vishay established itself as a technical and market leader in PhotoStress products, strain gages, and foil resistors.



INNOVATION AND VISION HAVE POWERED DRAMATIC GROWTH

From sales of \$59 million to \$1.6 billion — in 12 years.



By the early '80s, Vishay was positioned to grow significantly. Because the markets for resistance strain gages and ultra-precise resistors were relatively small, the Company moved to expand into high-volume resistors. Such resistors are used by the billions every year, in virtually every sector of the electronics industry.

Vishay's strategy was to enter the market through the acquisition of respected, well-positioned manufacturers.

The Company set strict acquisition criteria for technological strength, brand recognition, manufacturing capabilities, markets served, and management depth.

Beginning in 1985, Dale Electronics, Draloric Electronics, and Sfernice were acquired. These new operations helped produce dramatic sales growth — from \$59 million to more than \$400 million in just three years. Vishay quickly achieved a position as the largest fixed resistor manufacturer in the United States and Europe.

ENTERING NEW, MORE DIVERSE

PRODUCTS AND MARKETS. These acquisitions also brought other passive electronic components into Vishay, such as inductors, specialty capacitors, plasma displays, specialty connectors, transformers, thermistors, and oscillators — complementing its strength in resistors. In fact, this diversification underscores the strategy that Vishay continues to

VISHAY'S STRATEGIC ACQUISITIONS *(current manufacturing locations)*

1985	1987	1988	1992
DALE	DRALORIC	SFERNICE	SPRAGUE
United States Mexico Israel	Germany Czech Republic Israel	France Israel Czech Republic	United States France Israel China

pursue today — to be the manufacturer of the broadest line of discrete electronic components in the industry.

In the early '90s, Vishay applied its acquisition strategy to the high-volume capacitor market, extending its range of products and increasing penetration in passive components. Major acquisitions included Sprague Electric, the inventor and manufacturer of tantalum capacitors; Roederstein, a manufacturer of film, aluminum, and ceramic disc capacitors and thick film chip resistors; and Vitramon, a high-quality manufacturer of multilayer ceramic chip capacitors. By 1994, annual sales had reached \$988 million.

ADDING ACTIVE COMPONENTS TO

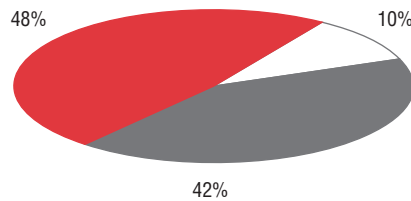
THE MIX. In 1997, Vishay entered the discrete semiconductor market, acquiring 65% of Lite-On Power Semiconductor, a manufacturer of diodes and rectifiers. In 1998, Vishay acquired the Semiconductor Business Group of TEMIC, which included Telefunken and 80.4% of Siliconix, producers of transistors, diodes, optoelectronics, power and

analog switching integrated circuits.

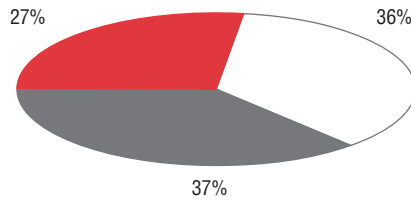
Vishay's growth to \$1.6 billion in sales reflects the evolution of the electronics industry. The Company and the industry have grown, driven by the emergence of new technologies, a commitment to solve customer and application problems, and an ongoing effort to make products better, more cost-efficient, and defect-free.

PERCENT OF SALES BY REGION

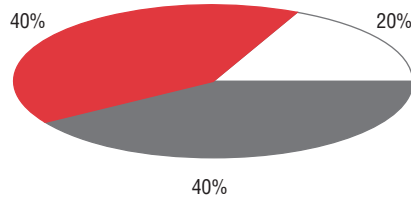
PASSIVES



DISCRETE SEMICONDUCTORS

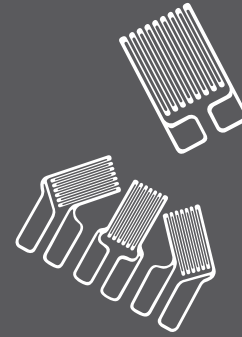


VISHAY TOTAL



■ United States □ Asia ■ Europe

PHOTOSTRESS AND STRAIN GAGES

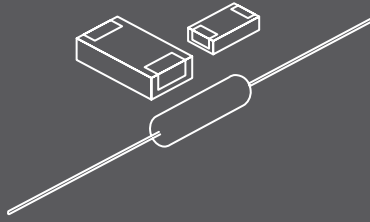


WHAT THEY DO. PHOTOSTRESS IS AN OPTICAL METHOD TO MEASURE STRESSES ON STRUCTURES. WHEN A STRUCTURE IS COATED WITH A PHOTOSTRESS COATING AND VIEWED THROUGH A POLARISCOPE, IT REVEALS THE STRESS DISTRIBUTION OF THE STRUCTURE IN THE FORM OF COLOR FRINGES (SEE PAGE 1). THESE COLORS ARE CONVERTED TO STRESS VALUES BY VISHAY INSTRUMENTS. STRAIN GAGES ARE RESISTIVE SENSORS WHICH ARE CEMENTED TO STRUCTURES AND CHANGE RESISTANCE WHEN THE STRUCTURE IS SUBJECT TO LOAD. THE MEASUREMENT IS ACCOMPLISHED WITH A RESISTANCE MEASURING SYSTEM. BOTH METHODS ARE USED TO MEASURE STRESSES ON AIRPLANES, CARS, AND OTHER STRUCTURES TO DETECT AREAS OF STRUCTURAL DANGER. STRAIN GAGES ARE ALSO USED AS WEIGHT SENSORS FOR ELECTRONIC SCALES.

MARKET AND VISHAY POSITION. VISHAY'S MEASUREMENTS GROUP IS THE WORLD'S LARGEST PRODUCER OF PHOTOSTRESS AND STRAIN GAGE PRODUCTS. THE MARKET INCLUDES TESTING LABORATORIES FOR ALL TYPES OF STRUCTURES, UNIVERSITIES, AND MANUFACTURERS OF ELECTRONIC SCALES.

1993	1994	1997	1998	1998
ROEDERSTEIN	VITRAMON	LITE-ON POWER SEMICONDUCTOR	TELEFUNKEN <i>(Formerly TEMIC of Daimler-Benz)</i>	SILICONIX
United States Germany Portugal Israel	United States Germany Israel	Taiwan China United States	Germany Austria China Philippines Hungary	United States Philippines China Taiwan Germany

RESISTORS



WHAT THEY DO. RESISTORS ARE THE MOST COMMON ELECTRONIC CIRCUIT COMPONENT. THEY CONTROL THE FLOW OF ELECTRICAL CURRENT, JUST AS VALVES CONTROL WATER FLOW.

WHAT THEY ARE. THE BASIC UNIT OF RESISTANCE IS AN OHM. RESISTORS ARE IDENTIFIED BY OHMIC VALUE, FROM SMALL FRACTIONS OF AN OHM TO MILLIONS OF OHMS. RESISTORS OF A CONSTANT OHMIC VALUE ARE CALLED FIXED RESISTORS. RESISTORS THAT CAN BE ADJUSTED TO ANY DESIRED OHMIC VALUE ARE CALLED VARIABLE RESISTORS. THESE INCLUDE RHEOSTATS, TRIMMERS, AND POTENTIOMETERS. RESISTORS THAT CHANGE VALUE WITH TEMPERATURE ARE KNOWN AS THERMISTORS. THE FUNDAMENTAL RESISTOR TECHNOLOGIES THAT MAKE UP THE MARKET ARE METAL OXIDE, METAL FILM, THIN FILM, CARBON, WIREWOUND, THICK FILM, AND FOIL.

MARKET AND VISHAY POSITION. VISHAY IS THE WORLD'S LARGEST AND BROADEST MANUFACTURER OF RESISTORS. THE COMPANY OFFERS A FULL RANGE OF RESISTOR TECHNOLOGIES TO MEET CUSTOMER NEEDS. THE COMPANY IS AT THE FRONT WITH THE NEWEST PRODUCT DEVELOPMENT AND TECHNOLOGIES, FROM HIGH POWER HANDLING RESISTORS FOR INDUSTRIAL CIRCUITS TO MINIATURE CHIP RESISTORS FOR HIGHLY SENSITIVE ELECTRONIC CIRCUITS.

AS INDUSTRY DEMANDS ACCELERATE, VISHAY IS READY WITH SOLUTIONS

Advanced electronics requires more and more components on smaller boards.

An established leader in the development and production of passive components and discrete semiconductors, Vishay is uniquely positioned to address the changing demands of the industry.

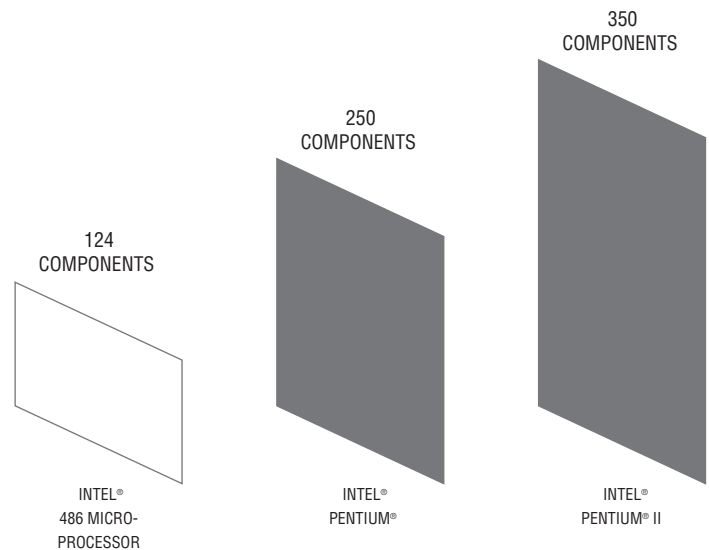
Product designers are striving to meet consumer demand for miniaturization and portability, together with demand for more features and capabilities. They must deliver more functions in the same or less board space and at higher levels of reliability. At the same time, manufacturers are seeking faster, more cost-effective assembly techniques.

To meet these needs, the industry has undergone a transition from traditional design and assembly techniques using leaded components to surface mount technology (SMT).

Throughout this period of change, Vishay maintained a strong position in traditional leaded products while also achieving a leadership position in surface mount technology.

Continuing investments in materials and packaging technology and development of new surface mount products are intended to ensure that Vishay will remain a leading manufacturer of discrete electronic components.

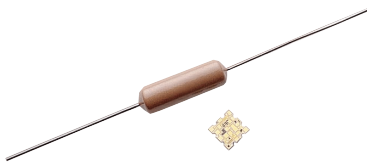
GROWTH OF "SUPPORTING ROLE" PASSIVE COMPONENTS



**MORE COMPUTING POWER —
AND MORE VISHAY COMPONENTS**

TO SUPPORT IT. Simultaneously with the industry's wide-scale adoption of SMT have come advances in the complexity and capabilities of integrated circuits. For example, computer processing speeds have jumped from 100 MHz to 500 MHz. Moreover, computer and other electronics manufacturers are offering a much wider range of features. Such changes result in the need for more passive components and discrete semi-conductors in almost every type of electronic product to help the central microprocessors deliver added features at optimum performance levels.

Consider a laptop PC and the number of passive components it requires. A few years ago, a specific laptop required 124 passive components to support its 486 processor. Today's laptop requires nearly 350 passive components in support of its more powerful Pentium® II processor.



A traditional leaded resistor (top) requires significant board space and complex assembly techniques to form, cut, and then insert the product. A surface-mount, four-resistor chip array (bottom), which delivers four times the functionality in less space, can be assembled with high-speed automated equipment — improving productivity, reducing product size, and lowering the total cost of the end product.

VISHAY AT A GLANCE

MARKETS

AEROSPACE	COMMERCIAL	ENTERTAINMENT	MEDICAL	SCALES
AUTOMOTIVE	COMPUTERS	GENERAL INDUSTRIAL	MILITARY	TELECOMMUNICATIONS

TRENDS

CONTINUOUSLY IMPROVED PERFORMANCE	JUST-IN-TIME DELIVERY	OFFSHORE PRODUCTION
HIGHER FREQUENCIES	LOWER PRICES	SMALLER CHIPS
INCREASED RELIABILITY	LOWER RESISTANCE VALUES	SURFACE MOUNT PACKAGES
	LOWER VOLTAGES	ZERO DEFECT QUALITY

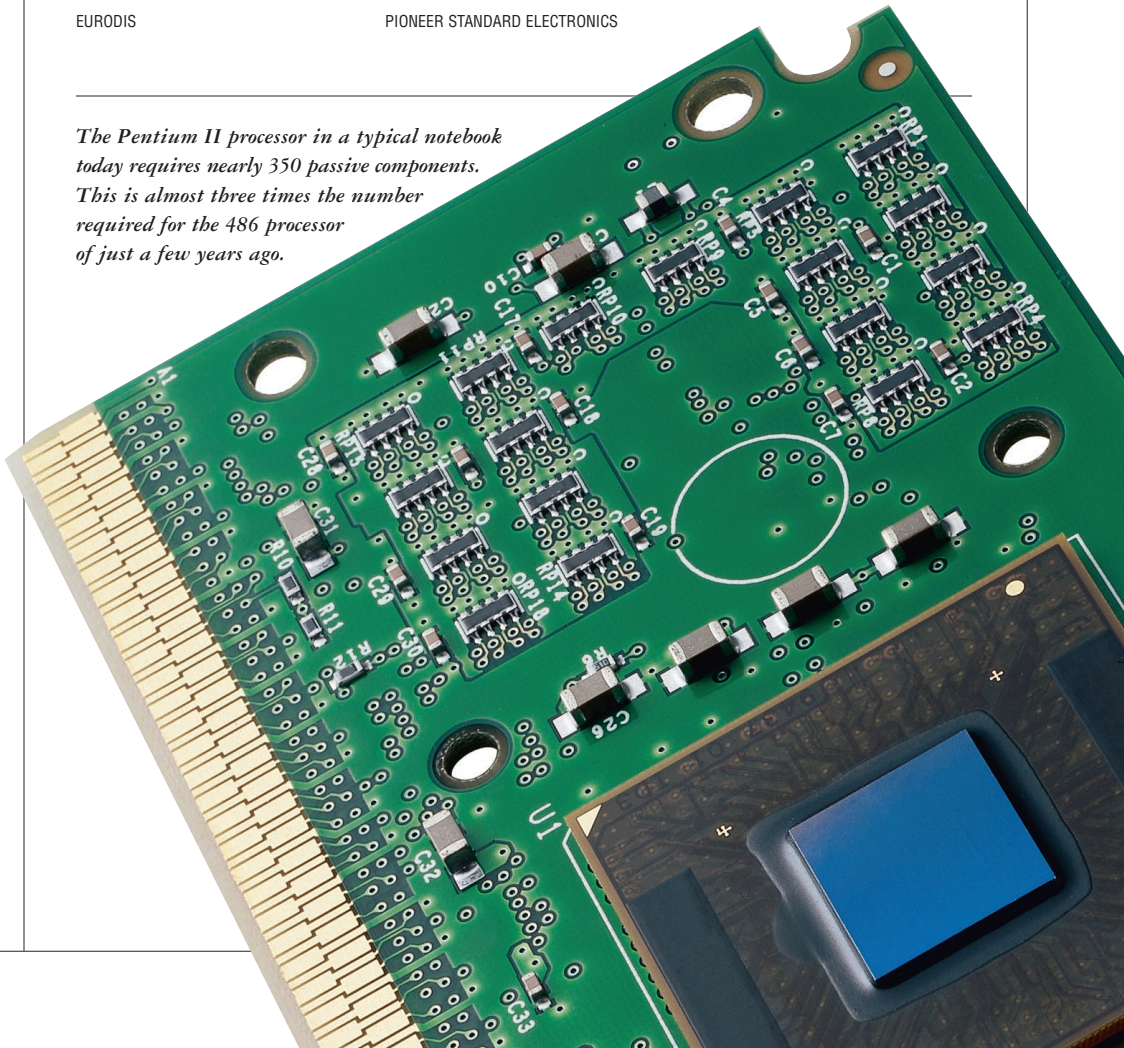
SOME MAJOR CUSTOMERS

AT&T	ERICSSON	INTEL	NOKIA	SEAGATE
ACER	FORD	IOMEGA	NORTHERN TELECOM	SIEMENS
ALCATEL	GM/HUGHES	LOCKHEED MARTIN	QUALCOMM	SOLECTRON
BOSCH	HEWLETT-PACKARD	LUCENT TECHNOLOGIES	RAYTHEON	SONY
COMPAQ/DEC	HONEYWELL	MATSUSHITA	ROCKWELL	SUN MICROSYSTEMS
DELCO	IBM	MOTOROLA	SAMSUNG	TEXAS INSTRUMENTS
			SCI	WESTERN DIGITAL

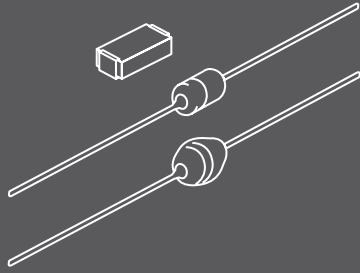
SOME MAJOR DISTRIBUTORS

ARROW ELECTRONICS	FUTURE ELECTRONICS	TOMEN
AVNET	HIGHLAND	TTI, INC.
BSYERLE	JACO ELECTRONICS, INC.	UPPERTECH
DYNAMAR	KENT ELECTRONICS	WORLD PEACE INDUSTRIAL
EBV	MARSHALL	
EURODIS	PIONEER STANDARD ELECTRONICS	

The Pentium II processor in a typical notebook today requires nearly 350 passive components. This is almost three times the number required for the 486 processor of just a few years ago.



DIODES



WHAT THEY DO. DIODES RECTIFY AC CURRENT TO DC CURRENT. THEY ACT LIKE GATES, BLOCKING A CURRENT AT A CERTAIN VOLTAGE LEVEL IN ONE DIRECTION, AND LETTING IT PASS IN THE OTHER. FOR EXAMPLE, A TYPE OF HIGH CURRENT DIODE IS USED IN YOUR CLOCK RADIO TO CHANGE THE AC VOLTAGE FROM THE OUTLET TO A SPECIFIC DC VOLTAGE.

WHAT THEY ARE. A DIODE IS A TWO TERMINAL SEMICONDUCTOR DEVICE THAT CONSISTS OF A POSITIVE TERMINAL, CALLED THE ANODE, AND A NEGATIVE TERMINAL, CALLED THE CATHODE.

THE MARKET AND VISHAY POSITION. DIODES ARE USED IN HIGH VOLUMES IN BOTH BATTERY-OPERATED AND AC-POWERED PRODUCTS. HIGH CURRENT DIODES KNOWN AS RECTIFIERS ARE NEEDED FOR ALL NORMAL AC-LINE-DRIVEN APPLIANCES.

VISHAY IS ONE OF THE WORLD'S TOP PRODUCERS, MANUFACTURING MORE THAN 10 BILLION DIODES AND RECTIFIERS PER YEAR, AND OFFERING LEADED, SURFACE MOUNT, PLASTIC, AND UNIQUE SMD QUADRO GLASS PACKAGES FOR VIRTUALLY ANY APPLICATION.

VISHAY PROVIDES A TOTAL DISCRETE COMPONENT SOLUTION

*From passives to discrete semiconductors,
Vishay is a complete manufacturing source.*

With the trend toward vendor reduction, Vishay is uniquely positioned to assist its customers through its broad product offering and technological leadership in discrete electronic components. This is a significant advantage in today's markets, as customers continue to consolidate their vendors and focus on suppliers that can help solve their design needs. It is more convenient and more cost effective for customers to do business with a few, highly efficient suppliers than to rely on many different sources. Customers can see the value of Vishay in the range of advanced technologies, and the advantage of one-stop shopping. A few examples of Vishay advanced technologies:

- *Special wet process for multilayer ceramic capacitors:* which provides higher quality, more rugged parts, and greater reliability
- *Conformal coated tantalum capacitors:* which provide the highest capacitance value (CV) per unit volume and the lowest equivalent series resistance (ESR) per unit

volume — both critical to battery-operated products

- *Power Metal Strip™ resistors:* which provide high-power handling in a small (surface mount) package plus exceptional thermal characteristics and high stability important to current-sensing applications
- *Bulk Metal® foil resistors:* which provide very high precision and stability for critical applications such as guidance systems, avionics, and instrumentation
- *Multilayer ceramic inductors:* designed specifically for the higher frequencies in today's important telecommunications and computing applications
- *Trench technology MOS transistors:* enabling higher transistor cell densities that result in smaller, more efficient power devices with lowest on-resistance
- *Powerconnect® packaging technology:* a technique which greatly reduces the contribution of the package to overall on-resistance of Power MOSFETs
- *Infrared data transmission transceiver modules:* for data exchange without cables in portable products

- *Integrated photo detector modules:*

for remote control applications.

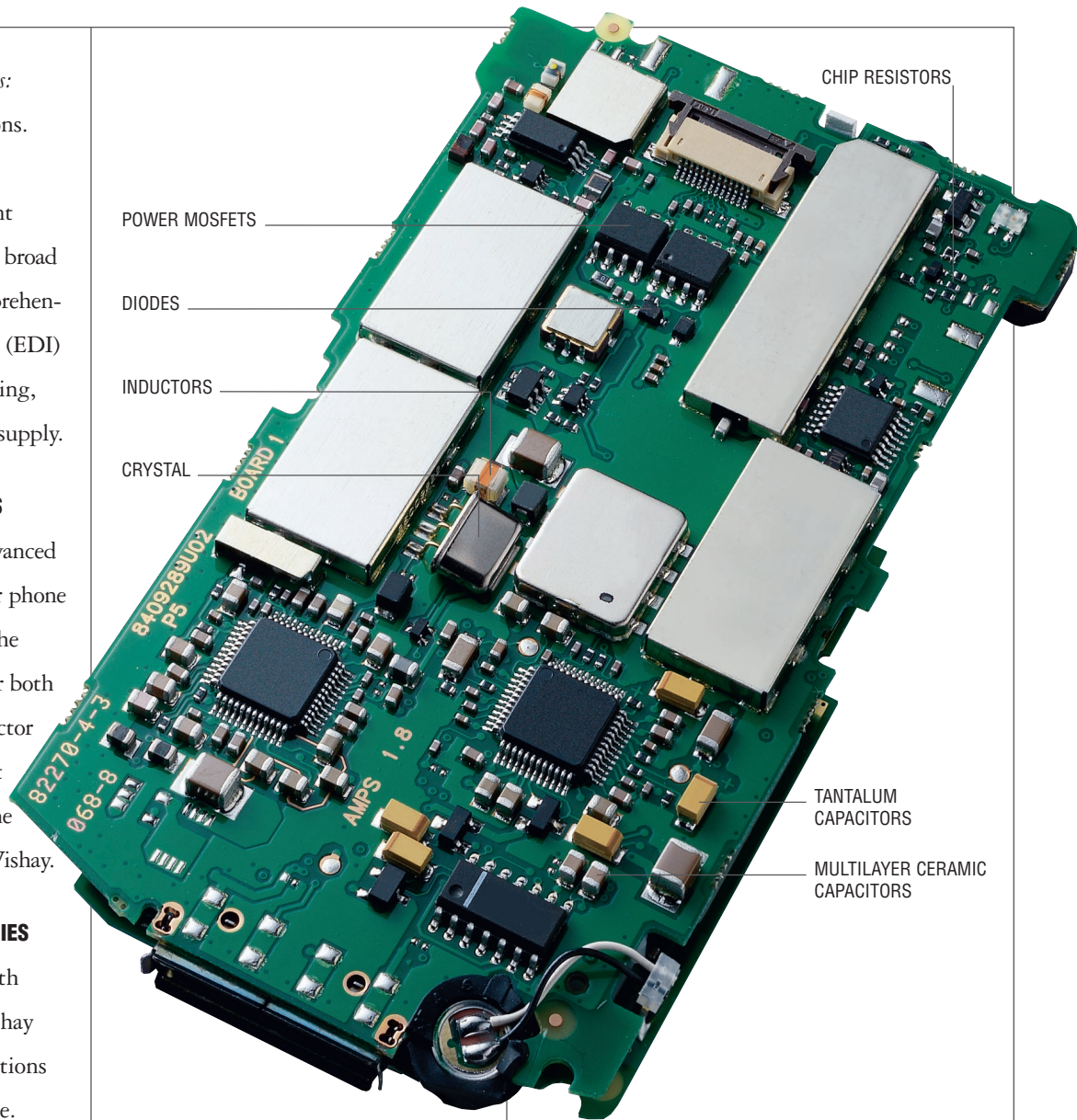
In addition to technological benefits, Vishay offers significant logistical advantages through a broad distribution network and comprehensive electronic data interchange (EDI) capabilities, ensuring fast ordering, delivery, and an uninterrupted supply.

AN APPLICATION DEMONSTRATES

THE VISHAY ADVANTAGE. In advanced applications such as the cellular phone shown here, Vishay can act as the single manufacturing source for both passive and discrete semiconductor components. Just take a look at the wide range and high volume of components available from Vishay.

VISHAY'S ADVANCED TECHNOLOGIES

SOLVE CUSTOMERS' NEEDS. With its wide range of products, Vishay offers electronic engineers solutions for almost any design challenge. Such advanced products as Trench MOSFET semiconductors, low ESR tantalum capacitors, power metal strip high stability resistors for battery power management, and the fastest IrDC transceiver modules and



other components capture the attention of designers. This ensures that Vishay is involved in the early stages of product development and design.

Whether assisting in the overall design or supplying production

A cellular phone contains not only a high number, but also a wide variety of the kinds of components manufactured by Vishay — typically 500 discrete components.

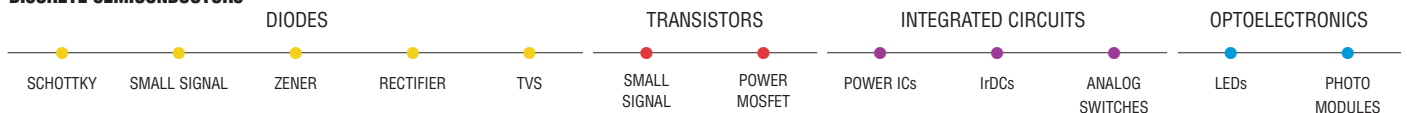
needs, Vishay can provide a total package of components to meet the specifications of the end product.

MANUFACTURER OF THE INDUSTRY'S BROADEST LINE OF COMPONENTS

PASSIVE COMPONENTS



DISCRETE SEMICONDUCTORS



COMPUTERS AND PERIPHERALS

*More than 15% average yearly growth of unit sales will drive the market through 2002.**



(Above) Miniaturization of computing devices is an ongoing trend that includes notebook computers and personal digital assistants (PDAs). Vishay has developed components to meet the latest miniaturization challenges.

Computers and peripherals helped drive the electronics industry. Worldwide shipments of personal computers reached nearly 97 million units in 1998, and are expected to grow to over 173 million by 2002.

The most dynamic and fastest growing segment of the computer market includes notebook and sub-notebook computers, plus personal digital assistants (PDAs) and other small devices. These products are becoming more popular as their power and capabilities increase and their size, weight, and price decreases.

WHAT THE MARKET NEEDS. The market follows consumer demand for more features and greater portability.

Designers and manufacturers are

(Left) Vishay components have long been a part of the desktop computer industry and the supporting peripherals such as printers and disk drives.

* In-Stat, 1998

confronted with significant problems to solve in order to gain a competitive edge. They are dealing with many factors, such as:

- The need to reduce size and weight
- The need to extend operating time and reduce recharge-time of batteries
- The need to handle sophisticated data processing and graphics
- The need for continued price reductions and
- The trend towards cordless connection of portable devices — for example, the communication of a notebook PC with a printer, cell phone, and fax.

THE VISHAY SOLUTION. Vishay surface mount components are designed to meet the market's needs. The Company has developed integrated devices, which save significant board space while offering optimized performance for a specific application or product.

An increasingly important consideration today is battery life. Consumers are now demanding

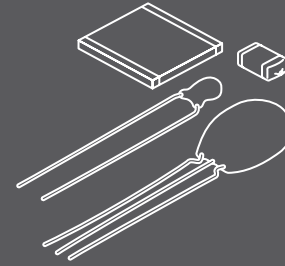
notebook PCs that operate on a single battery charge throughout a coast-to-coast flight. Vishay's answers to power-handling requirements include Power MOSFET technology, which is targeted to low-voltage applications and to battery charging and switching systems. In addition, low-ESR tantalum capacitors, low-resistance analog battery switches, low-ohmic-value power metal strip sensing resistors, and high frequency/high power-handling monolithic inductors offer advantages for power management systems.

Interconnectivity issues are one of the limiting factors in continuing miniaturization. Vishay is addressing these issues through a range of IrDC (infrared data communications) transceivers, which are beginning to replace cable connections between notebook PCs, cellular phones, digital cameras, and other peripheral devices. This rapidly emerging technology is helping designers deliver greater reliability and convenience, while further increasing the potential for miniaturization and portability.

VISHAY PRODUCTS USED IN A TYPICAL COMPUTER APPLICATION

ANALOG SWITCHES	OPTOCOUPLEDERS
DIODES	POWER ICs
IrDC TRANSCEIVERS	POWER METAL STRIP® RESISTORS
FILM RESISTORS	POWER MOSFETS
MULTILAYER AND WIREWOUND INDUCTORS	RFI SUPPRESSION CAPACITORS
MULTILAYER CERAMIC CAPACITORS	TANTALUM CAPACITORS
OPTICAL SWITCHES	THICK FILM CHIP RESISTORS

CAPACITORS



WHAT THEY DO. THEY ACT LIKE GATES OR FILTERS, STOPPING THE FLOW OF DC CURRENT BUT ALLOWING AC CURRENT TO FLOW. CAPACITORS ARE USED IN VIRTUALLY EVERY TYPE OF ELECTRONIC EQUIPMENT, FROM CONSUMER ELECTRONICS TO MEDICAL INSTRUMENTS AND AVIONICS.

WHAT THEY ARE. CAPACITORS ARE MADE OF TWO CONDUCTIVE LAYERS SEPARATED BY AN INSULATOR (DIELECTRIC). THEY ARE USED FOR ENERGY STORAGE, DISCHARGE, BYPASS FILTERING AND COUPLING, AND ARE COMMONLY FOUND IN TUNED CIRCUITS AND TIMING CONTROLS. THEY ARE CLASSIFIED BY THE MATERIALS USED IN THEIR CONSTRUCTION: TANTALUM, FILM, ALUMINUM, AND CERAMIC.

THE MARKET AND VISHAY POSITION. THE WORLDWIDE MARKET FOR CAPACITORS CONTINUES TO GROW, DRIVEN BY THE PROLIFERATION OF NEW END-PRODUCTS AND THEIR EVER-INCREASING ARRAY OF FEATURES AND FUNCTIONS.

VISHAY IS A MAJOR CAPACITOR MANUFACTURER IN EUROPE AND NORTH AMERICA. THE COMPANY HOLDS THE ORIGINAL PATENTS FOR TANTALUM CAPACITORS AND WAS THE FIRST TO OFFER SURFACE MOUNT TANTALUM CHIP CAPACITORS. VISHAY CERAMIC CAPACITORS ARE KNOWN FOR THEIR HIGH QUALITY AND VALUED IN THE AUTOMOTIVE INDUSTRY FOR THEIR HIGH RELIABILITY AND RUGGEDNESS.

TELECOMMUNICATIONS

One typical digital cellular phone contains about 450 passive components, about 20 discrete semiconductors, and an infrared transceiver (IrDC) device.



(Above) Pagers are adding more sophisticated capabilities, and becoming very affordable.

(Left) Smaller size, more functions, longer battery life for cell phones, Visbay components are making it possible. More and more cell phones are using Visbay Telefunken infrared transceivers for cordless communication with computers, printers, etc.

Today you're dialing longer phone numbers or more area codes. That is proof of the exponential growth in telecommunications, which has been fueled by the convenience of cellular phones and pagers. Production of these devices is expected to grow from 264 million units in 1998 to more than 400 million in the year 2001.*

The changes and advances in this market are driven by constantly improving services and falling prices, which in turn increase consumer demand. As the industry standardizes and manufacturers continue to shrink product size, new applications become available, such as pagers for children, child locators, and hand-held and automotive global positioning systems.

Another major force in the growth of this market is the impact of newly industrialized countries that are leapfrogging conventional telephone lines by adopting more cost-effective cellular telecommunications systems.

* Dataquest, September 28, 1998

WHAT THE MARKET NEEDS.

Manufacturers are responding to these trends by designing more sophisticated base stations and switching systems, as well as cellular phones and other devices with more functions, longer battery life, and faster recharge rates.

In each instance, the new designs require passive components and discrete semiconductors that are more efficient and available in smaller packages. They must handle higher and higher frequencies. They must operate more efficiently with fewer losses. And, they must provide interconnectivity with other portable electronic devices — so cell phones can communicate with portable computers without cord connections.

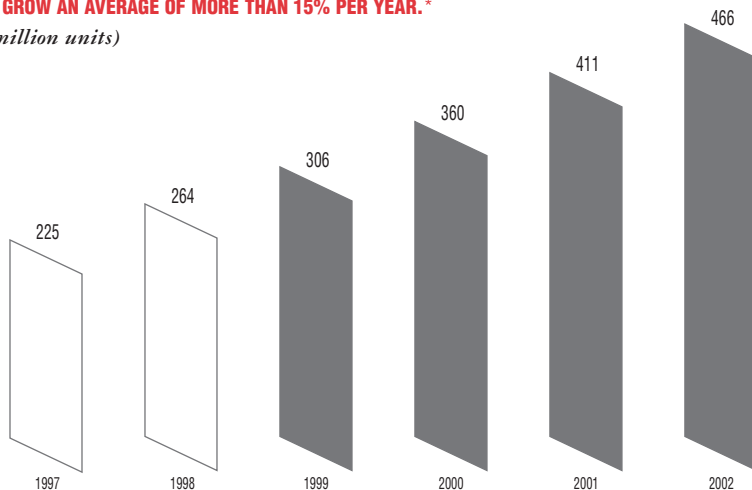
THE VISHAY SOLUTION. Vishay's product lines are continually evolving in order to deliver the capabilities required by the devices of today and tomorrow.

Highly miniaturized components and component networks allow designers to shrink product sizes, add functionality in the same space, and support the move to higher circuit speeds. For example, Vishay's development of monolithic inductors directly addresses demands for further miniaturization, higher speed circuits, and higher efficiencies. Also, Vishay's very high frequency bipolar transistors allow the reception of faint signals, making possible transmitted voice or data over a wide distance.

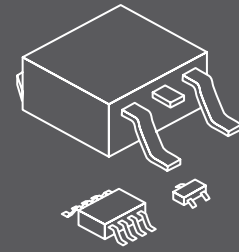
Vishay is meeting the important demands for longer battery life and faster recharge times with low-resistance components for optimum power efficiency, including tantalum capacitors, power metal strip resistors, and foil resistors. Also, Vishay's unique-design power ICs and Power MOSFETs make the most of energy-dense lithium ion cells, allowing longer run times and lighter batteries.

WORLDWIDE PRODUCTION OF WIRELESS SUBSCRIBER DEVICES WILL GROW AN AVERAGE OF MORE THAN 15% PER YEAR.*

(in million units)



POWER MOSFETS



WHAT THEY DO. A POWER MOSFET IS A SWITCH THAT TURNS A CIRCUIT ON OR OFF OR ADJUSTS THE VOLTAGE. IF A COMPONENT HEATS UP, THE POWER MOSFET MUST SHUT IT DOWN IMMEDIATELY. AS A BATTERY DRAINS, THE POWER MOSFET ADJUSTS THE VOLTAGE SO IT IS ALWAYS AT THE SAME LEVEL.

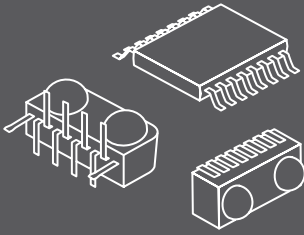
WHAT THEY ARE. POWER MOSFETS ARE SEMICONDUCTOR DEVICES MADE UP OF MANY INDIVIDUAL TRANSISTORS CONNECTED IN PARALLEL ON ONE PIECE OF SILICON. ONE DEVICE MAY CONTAIN AS MANY AS ONE MILLION TRANSISTORS.

THE POWER MOSFET MUST OPERATE EFFICIENTLY WITHOUT CONSUMING SIGNIFICANT POWER WHEN IT TURNS A CIRCUIT ON, THEREFORE, LOW *ON-RESISTANCE* IS CRITICAL TO COMPONENT SELECTION.

THE MARKET AND VISHAY POSITION. TODAY'S ICs ARE OPERATING AT LOWER AND LOWER VOLTAGES; BECAUSE OF THIS, LOW VOLTAGE POWER MOSFET PRODUCTS ARE BECOMING INCREASINGLY IMPORTANT.

VISHAY HAS A LEADERSHIP ROLE IN LOW-VOLTAGE POWER MOSFETS FOR BATTERY-POWERED DEVICES, DESKTOP COMPUTERS AND SERVERS, AND SELECT AUTOMOTIVE APPLICATIONS. THROUGH VISHAY'S PATENTED TRENCH TECHNOLOGY AND POWERCONNECT® PACKAGING TECHNOLOGY, THE COMPANY OFFERS THE LOWEST OPERATING VOLTAGE AND LOWEST *ON-RESISTANCE* PRODUCTS ON THE MARKET. THIS MEANS LONGER OPERATING TIMES AND EXTENDED BATTERY LIFE, WHICH ARE IMPORTANT TO TODAY'S DEMANDING CONSUMERS.

IrDC TRANSCEIVERS



WHAT THEY DO. SIMILAR TO THE TECHNOLOGY USED IN YOUR TELEVISION REMOTE CONTROL, INFRARED DATA COMMUNICATIONS ARE AN INEXPENSIVE AND RELIABLE WAY TO LINK ELECTRONIC DEVICES WITHOUT THE USE OF CABLES.

WHAT THEY ARE. IrDC DEVICES ARE SEMICONDUCTOR-BASED MODULES THAT CONSIST OF AN EMITTING AND A DETECTING DEVICE TO ALLOW A BIDIRECTIONAL DATA TRANSMISSION. COMMUNICATION DATA IS TRANSMITTED FROM ONE IR TRANSCEIVER TO ANOTHER VIA A FOCUSED BEAM OF INFRARED LIGHT, WHICH IS GENERATED BY A POWERFUL INFRARED-EMITTING DIODE. THE IR LIGHT IS DETECTED BY A PHOTO PIN DIODE. BOTH OF THEM ARE CONTROLLED BY A BUILT-IN INTEGRATED CIRCUIT.

THE MARKET AND VISHAY POSITION. THE COMPANY BELIEVES THE MARKET FOR IrDC DEVICES IS POISED FOR A GROWTH SURGE. MANUFACTURERS OF PRINTERS, PCs, PDAs, DIGITAL CAMERAS, NOTEBOOK COMPUTERS, AND CELLULAR PHONES ARE NOW INCLUDING IrDC PORTS IN THEIR DESIGNS. IN FACT, THE VAST MAJORITY OF NOTEBOOK COMPUTERS AND NOKIA, ERICSSON, AND OTHER CELL PHONES SHIPPED IN THE PAST FEW YEARS ALREADY INCLUDE IrDC WINDOWS.

VISHAY HAS A LEADING POSITION IN IrDC COMPONENTS, OFFERING SOME OF THE SMALLEST MODULES AND THE ABILITY TO LINK FROM LONGER DISTANCES THAN MANY OTHER AVAILABLE DEVICES.

AUTOMOTIVE ELECTRONICS

*The sales of electronics components for use in automobiles will reach \$60 billion by 2001.**

The market for automotive electronics continues to grow significantly. From about \$48 billion in 1998, it is expected to reach \$60 billion in 2001. More and more of a car's subsystems are being changed from mechanical operations to electronic systems, such as engine control, climate control, air bag sensors, and other safety devices.

Manufacturers are adding and enhancing capabilities with automatic braking systems, high-discharge lamps, remote security devices, and automatic transmission selection and throttle control — so-called drive-by-wire technology.

Additionally, there is an increased offering of convenience and comfort options, such as global positioning systems (GPS) and sophisticated audio/entertainment systems.

WHAT THE MARKET NEEDS. The automotive environment is almost the complete opposite of that for other consumer products such as desktop computers.

Most computers are used at room temperature, power usage is low, the trend is towards miniaturization, and product life cycles are relatively short. On the other hand, in the automotive market, environmental ranges and climate conditions are extreme, size restrictions are rarely a major factor, power ratings are much higher, and design and product life cycles are relatively long. Reliability is actually more critical than with computing, because the result of automotive component failure can be catastrophic and life threatening.

Essential characteristics of components for the automotive market are:

VISHAY PRODUCTS USED IN THE AUTOMOTIVE INDUSTRY

ANALOG SWITCHES

POWER MOSFETS

DIODES

TANTALUM CAPACITORS

MULTILAYER CERAMIC CAPACITORS

WIREWOUND AND THICK FILM RESISTORS

POWER METAL STRIP RESISTORS

RESISTANCE FUSES FOR AIR BAGS

* *Dataquest, May 12, 1997*

- High quality, high reliability, and robust design
- High power handling capability
- The ability to operate in an environment with a lot of electrical “noise”
- The ability to operate reliably at the high temperatures encountered under the hood.

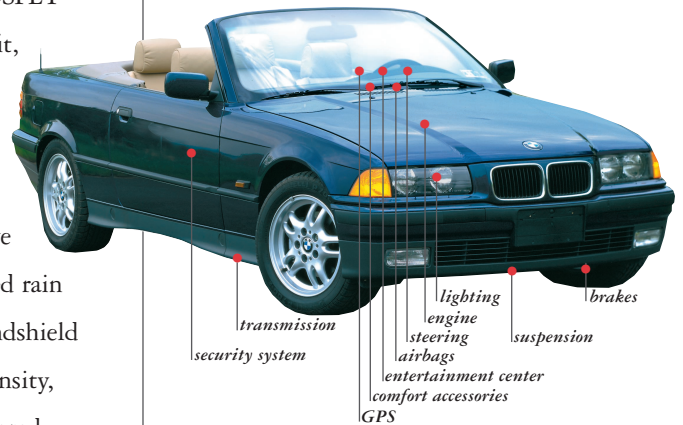
THE VISHAY SOLUTION. Vishay’s products have been highly successful in meeting the varied demands throughout the automobile industry.

The Company continues to offer both traditional leaded and surface mount products with the ruggedness, reliability, and quality required by the industry. Special strengths in this area include tantalum and multilayer ceramic capacitors, wirewound and airbag fuse resistors, power metal strip resistors, diodes, LEDs, infrared remote controls, and analog switches.

As electric motors proliferate — controlling everything from windows to trunk lids — Power MOSFET products find an excellent fit, with their low resistance ratings, high current capabilities, and rugged design.

For emerging automotive features, such as an advanced rain sensor that controls the windshield wipers for varying rain intensity, Vishay delivers custom-tailored infrared emitters and photo detectors.

In the wide range of automotive applications, Vishay’s extensive offering and high quality levels have positioned the Company as a preferred supplier.



Vishay components are at work in a wide range of subsystems in today's automobiles where the incorporation of electronics continues to increase.



INDUSTRIAL, MEDICAL, AND MILITARY PRODUCTS

*These market sectors represent more than 15% of the market for electronic components, and will grow nearly 60% in the next three years.**



Visbay components are used in such widely diverse products as industrial robots and pacemakers.

This market comprises industrial electronics, including large-scale control systems for processing plants; medical equipment, including highly sophisticated diagnostic equipment and instruments; and military and aerospace equipment, including weapons, highly accurate radar equipment and guidance systems. The total market for these products reached \$15 billion in 1998, and is expected to grow to \$26 billion in 2001.*

WHAT THE MARKET NEEDS. This market is characterized by diversity — from hand-held data acquisition devices to avionics systems, and everything in between.

* *Electronics Industry Outlook, 1998*

Trends are diverse, as well. In the industrial sector, one of the most important trends is a gradual transition from older assembly techniques to surface mount technology. With this change, manufacturers are able to increase the functionality and performance of their products, making them smaller, lighter, and less costly.

In the medical and military sectors, computerized control is increasing, so instruments and equipment are becoming more and more sophisticated. The essential criteria for component selection remain unchanged. They are performance, reliability, and size.

THE VISHAY SOLUTION. Vishay has a long relationship with, and commitment to, these markets.

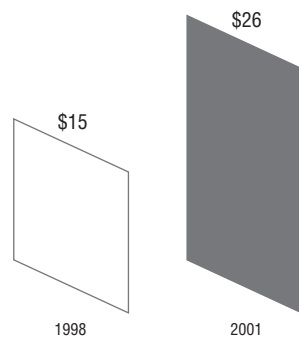
In the industrial sector, Vishay has a significant established business supplying through-hole components to handle high power requirements. Yet the Company also has an enormous range of surface mount

components to support the transition that is still in process.

For the critical applications in medical and military equipment, Vishay's products are recognized for their performance and reliability. For example, Vishay is a long-time supplier of ceramic capacitors to the leading manufacturer of pacemakers. The Company is also among the largest suppliers of military specification components to military equipment manufacturers.

Further, Vishay's extensive distribution system is a major factor in successfully reaching the wide range of customers in all of these markets.

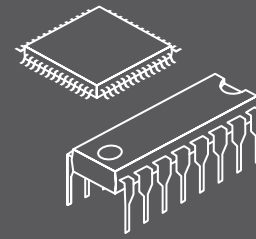
GROWTH OF INDUSTRIAL, MEDICAL, AND MILITARY MARKET*
(in billion dollars)



VISHAY PRODUCTS USED IN INDUSTRIAL, MEDICAL, MILITARY, AND AEROSPACE APPLICATIONS

ANALOG SWITCHES	IR LIGHT BARRIERS/LIGHT CURTAINS
CERAMIC CAPACITORS	OPTOCOUPLEDERS
DIODES	POWER RESISTORS
FILM CAPACITORS	RECTIFIERS
FOIL RESISTORS	TANTALUM CAPACITORS
HIGH VOLTAGE SWITCHING TRANSISTORS	THIN FILM RESISTORS
INDUCTORS	TRANSFORMERS

POWER ICs



WHAT THEY DO. POWER INTEGRATED CIRCUITS (ICs) ARE SEMICONDUCTOR DEVICES THAT CONTROL, REGULATE, OR SWITCH POWER.

WHAT THEY ARE. POWER ICs ARE USED FOR THE CONVERSION, MANAGEMENT, AND INTERFACE REQUIREMENTS OF DIFFERENT POWER SYSTEMS. THEY CAN ALSO BE USED FOR MOTOR CONTROL OF A WIDE RANGE OF END PRODUCTS, FROM DISK DRIVES TO WATER PUMPS. POWER CONVERSION ICs TAKE A DC OR AC INPUT, AND PROVIDE A CONTROLLED AND REGULATED DC OUTPUT. POWER MANAGEMENT AND INTERFACE ICs ARE USED TO MONITOR VOLTAGE, CURRENT, AND TEMPERATURE OF VARIOUS END-SYSTEMS, AND ALSO ALLOW BATTERY DATA COMMUNICATION AND PROTECTION. MOTOR CONTROL ICs CAN SUPPLY A LARGE SCALE OF FUNCTIONAL INTEGRATION FOR COMPLICATED PRECISION MOTOR CONTROLS, INCLUDING SUCH FEATURES AS ON-BOARD DATA CONVERTERS AND SENSORLESS 3-PHASE COMMUTATION.

THE MARKET AND VISHAY POSITION. THE APPLICATIONS THAT ARE FUELING THE DEMAND FOR POWER ICs ARE FOUND IN DESKTOP AND PORTABLE COMPUTING, AUTOMOTIVE INSTRUMENTATION, INDUSTRIAL CONTROL, AND WIRELESS COMMUNICATIONS. VISHAY ALREADY HAS A SIGNIFICANT POSITION IN SUCH SYSTEMS FOR DC TO DC CONVERSION FOR SOPHISTICATED DISC DRIVES AND CELL PHONES.

QUALITY ASSURANCE

Visbay meets the world's highest quality standards — MIL, ER, CECC, DIN, UL, VCE, SNQ, BS, NASA, ISO9001, QS9000, and more.

Visbay's close attention to quality is symbolized by this scanning electron microscope, used to analyze materials.

Vishay's commitment to quality: The Company states its primary goal is "to exceed the expectations of our customers." The entire organization, beginning with top management, has worked consistently to meet that objective.

Visbay's reputation for quality is based on a commitment to the newest and most effective design, manufacturing, testing, and management procedures — including both Statistical Process Control and continuous improvement methodologies.

To complement quality systems for each product line, Vishay maintains extensive testing laboratories at its facilities. As a result, the Company is well equipped to maintain qualifications to a wide range of specifications

vital to the commercial, defense, and aerospace markets, including:

- MIL (Military Specification)
- ER (Established Reliability)
- CECC (CENELEC Electronic Components Committee)
- DIN (German Industrial Standards)
- SNQ (Service National de la Qualité — French Standards)
- BS (British Standard)
- NASA (National Aeronautics and Space Administration standards)
- ISO 9001 (International Organization for Standardization)
- QS 9000 (Quality Systems).

Such assurances enable many customers to deploy ship-to-line programs with Vishay, eliminating the time and cost of receiving and inspection.

UNINTERRUPTED PRODUCT

AVAILABILITY. For many customers, dependability of supply is a major quality factor in selecting a vendor. Vishay seeks to ensure uninterrupted delivery of products through dual-location sourcing. This means customers' production schedules are protected, even if supply from a particular location is interrupted.

VALUE-ADDED CUSTOMER BENEFITS.

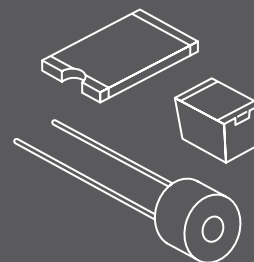
Vishay's customers realize these value-added benefits: state-of-the-art product design and manufacturing

techniques, new and improved products, faster and more dependable delivery of quality product supply at competitive prices, and responsive technical support anywhere in the world.

Vishay's Customer Service Policy includes:

- A commitment to provide world-class customer service which starts with the Chairman and CEO and extends through top management and the entire workforce
- Maintaining dual or triple production sites for most of its products to ensure an uninterrupted supply
- Continuous upgrading of product quality and customer service consistent with customer expectations
- Promoting supplier and customer partnerships to address changing requirements and problem-solving solutions
- Anticipating future product and service expectations of Vishay customers to ensure continued customer satisfaction
- A streamlined sales and marketing organization offering customers national and multinational support.

INDUCTORS



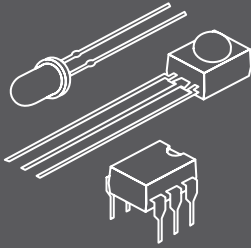
WHAT THEY DO. INDUCTORS ARE USED TO CONTROL AC CURRENTS AND VOLTAGE. FOR EXAMPLE, THEY CAN BE USED TO FILTER ELECTRONIC NOISE, BECAUSE THEY ALLOW LOW FREQUENCY CURRENT TO PASS WHILE BLOCKING THE HIGHER FREQUENCY SIGNALS WHICH CONSIST OF ELECTRONIC NOISE.

WHAT THEY ARE. INDUCTORS ARE OFTEN REFERRED TO AS AC RESISTORS OR CHOKES. THEY CONSIST OF A FERRITE CORE WITH A COIL OR OTHER CONDUCTIVE MATERIAL WRAPPED AROUND IT. WHEN CURRENT IS APPLIED TO THE CONDUCTOR, IT CREATES A MAGNETIC FIELD THAT RESISTS CHANGES OF CURRENT.

THE MARKET AND VISHAY POSITION. THE LARGEST USERS OF INDUCTORS ARE TELECOMMUNICATIONS, COMPUTING, MEDICAL EQUIPMENT, AVIONICS, AND INSTRUMENTATION.

VISHAY HAS A MAJOR ADVANTAGE BECAUSE IT OFFERS A BROAD RANGE OF INDUCTOR TYPES: LEADED DEVICES, CUSTOM AND SEMI-CUSTOM MAGNETICS, AND HIGH VOLUME MINIATURE SURFACE MOUNT PRODUCTS.

OPTOELECTRONICS



WHAT THEY DO. THE BASIC PRODUCTS ARE LIGHT EMITTING DIODES (LEDs) AND PHOTO-DETECTING DEVICES. THESE PRODUCTS ACT AS A TYPICAL DIODE, ALLOWING CURRENT TO FLOW IN ONE DIRECTION. AN ADDITIONAL PROPERTY IS THAT THE LED GENERATES A SPECIFIC WAVELENGTH OF LIGHT WHEN CURRENT IS FLOWING THROUGH IT AND THE PHOTODETECTORS TRANSLATE LIGHT INTO ELECTRICAL SIGNALS. THIS ALLOWS THEM TO BE USED AS LIGHT SOURCES, OR AS TRANSMITTERS AND RECEIVERS OF MESSAGES.

WHAT THEY ARE. LEDs ARE GALLIUM-ARSENIDE BASED SEMI-CONDUCTOR PRODUCTS MODIFIED WITH SPECIFIC MATERIALS TO GENERATE VARIOUS WAVELENGTHS (COLORS) OF LIGHT. THEY CAN ALSO BE MADE TO OPERATE IN THE NON-VISIBLE LIGHT RANGE, SUCH AS INFRARED, FOR USE IN TV REMOTE CONTROLS.

THE MARKET AND VISHAY POSITION. APPLICATIONS FOR THESE PRODUCTS ARE FOUND IN MANY ELECTRONIC PRODUCTS, FROM HOME ENTERTAINMENT TO INDUSTRIAL EQUIPMENT — FROM BACKLIGHTING FOR LCD DISPLAYS TO OPTICAL SENSORS FOR THE PAPER FEED IN COPIERS.

CUSTOMER SERVICE

Meeting ever-changing customer demands in today's dynamic markets. And tomorrow's.

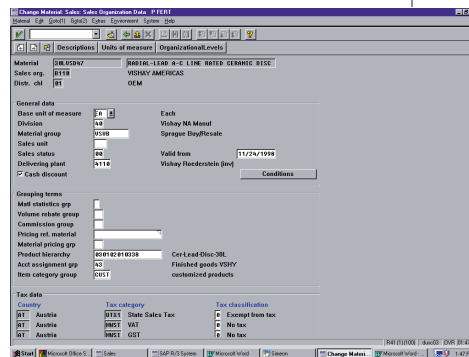
A focus on customer service is not a natural development within a company. It is a value that must be learned, lived with, and constantly reinforced.

For true service, the Company must match its entire way of doing business to the customers' needs.

That is an ongoing challenge, as customer demands are ever changing, due to today's dynamic markets.

Vishay's approach is to act as a partner with customers and distributors around the world. The Company focuses

its sales and customer service functions on customers. Plus Vishay's support of its distributors means customers also can rely on them for assistance.



Vishay's new VISIONS information systems will bring the Company and its customers even closer together.

ORGANIZED FOR CUSTOMER

SATISFACTION. Because Vishay serves its customers on a global basis, the Company has customer service centers and inventories strategically located where customers need them — in North America, Europe, and Asia.

These centers are being staffed by customer service specialists who understand the complete range of Vishay's product offering, and they will be supported by a computer system that integrates information throughout the corporation. That means a single call will result in the answers that a customer needs. In addition, Vishay also partners with global distributors that can support customers with a complete line of products.

SYSTEMS INTEGRATION STRENGTHENS THE COMPANY. Vishay is investing in the latest information technologies to create a seamless interface among Company locations and customers, distributors, and suppliers. Called VISIONS (Vishay Integrated Systems for Improved Operations and Service), this SAP-based Enterprise Resource Package is being implemented, as our CEO has stated, "...to enable Vishay to be a world-class manufacturer of discrete components with service second to none."

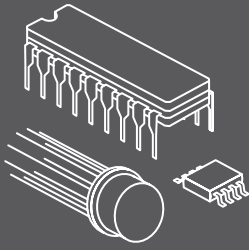
Fully implemented, VISIONS will provide advantages to Vishay and its customers that have never been available before. Distributors and customers will have direct access to manufacturing inventory, sales, and delivery information. OEMs will be able to view inventory through the Internet. Designers will be able to configure a product on the Internet and then determine component availability.

It's all just one more example of the ongoing commitment to bring Vishay and its customers closer together — for everyone's benefit.

All of Vishay's energies are focused on supplying customers the world over with the right products, on time, every time.



ANALOG SWITCHES



WHAT THEY DO. ANALOG SWITCHES ARE WIDELY USED TO PERFORM SIGNAL ROUTING, SIGNAL CONDITIONING, AND A TYPICAL SAMPLE-AND-HOLD (S/H) FUNCTION IN DATA CONVERSION APPLICATIONS.

WHAT THEY ARE. AN ANALOG SWITCH IS A TYPE OF INTEGRATED CIRCUIT THAT IS USED TO SWITCH (OR GATE) ANALOG SIGNALS. A BASIC ANALOG SWITCH CONFIGURATION CONSISTS OF AN ANALOG INPUT, A LOAD TO WHICH THE ANALOG SIGNAL IS TO BE CONNECTED, AND A CONTROL SIGNAL FOR TURNING THE SWITCH ON AND OFF.

THE MARKET AND VISHAY POSITION. THE MAIN MARKET FOR TRADITIONAL HIGH-VOLTAGE ANALOG SWITCHES IS IN INSTRUMENTATION AND MEASUREMENT EQUIPMENT. THE LOW-VOLTAGE ANALOG SWITCHES ARE ESSENTIALLY TARGETED AT PORTABLE APPLICATIONS SUCH AS CELLULAR PHONES.

VISHAY'S SILICONIX DIVISION WAS THE FIRST NAME IN THE INDUSTRY FOR ANALOG SWITCHES FOR MORE THAN 25 YEARS. THE COMPANY REMAINS ONE OF THE TOP SUPPLIERS IN THE MARKET — WORLDWIDE.

R&D AND THE FUTURE

Vishay invests substantial intellectual and material resources each year to develop new products.

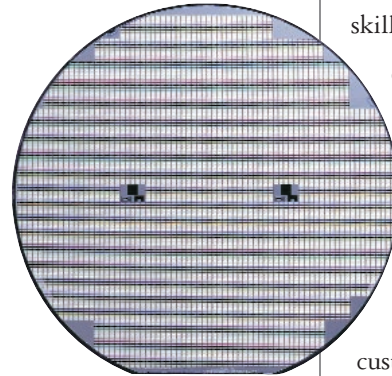
Vishay's drive to maintain technological leadership in its markets is supported by dedicated staff, facilities, and significant yearly investments.

The workforce includes highly skilled research and applications engineers, technicians, and PhDs, who are pursuing projects at more than 60 facilities around the world. Their efforts are ensuring that Vishay will continue to meet customer needs.

They work to:

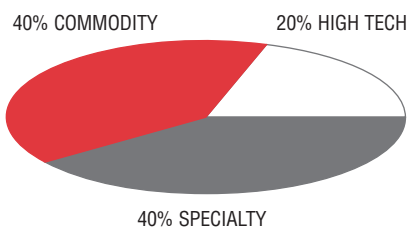
- Develop new products
- Adapt and modify materials
- Develop unique processing techniques
- Develop the packaging technologies to most effectively and cost efficiently connect the components with the circuit
- Develop new technologies.

A new product starts its existence in an R&D lab. When it is significantly different from its competition, Vishay calls it a high tech product. Initially the market for the product is small — it has to be created —



Vishay's commitment to research and development is symbolized by this silicon wafer engraved with thousands of complex semiconductor devices.

and the price of the high tech product is high. With time, the market increases and the price falls. Eventually the “new” product is copied and is no longer high tech. It becomes a “specialty product” if the market is restrained, or a “commodity product” if there are many competitors and a large market at lower and lower prices. Vishay products could be divided as shown below:

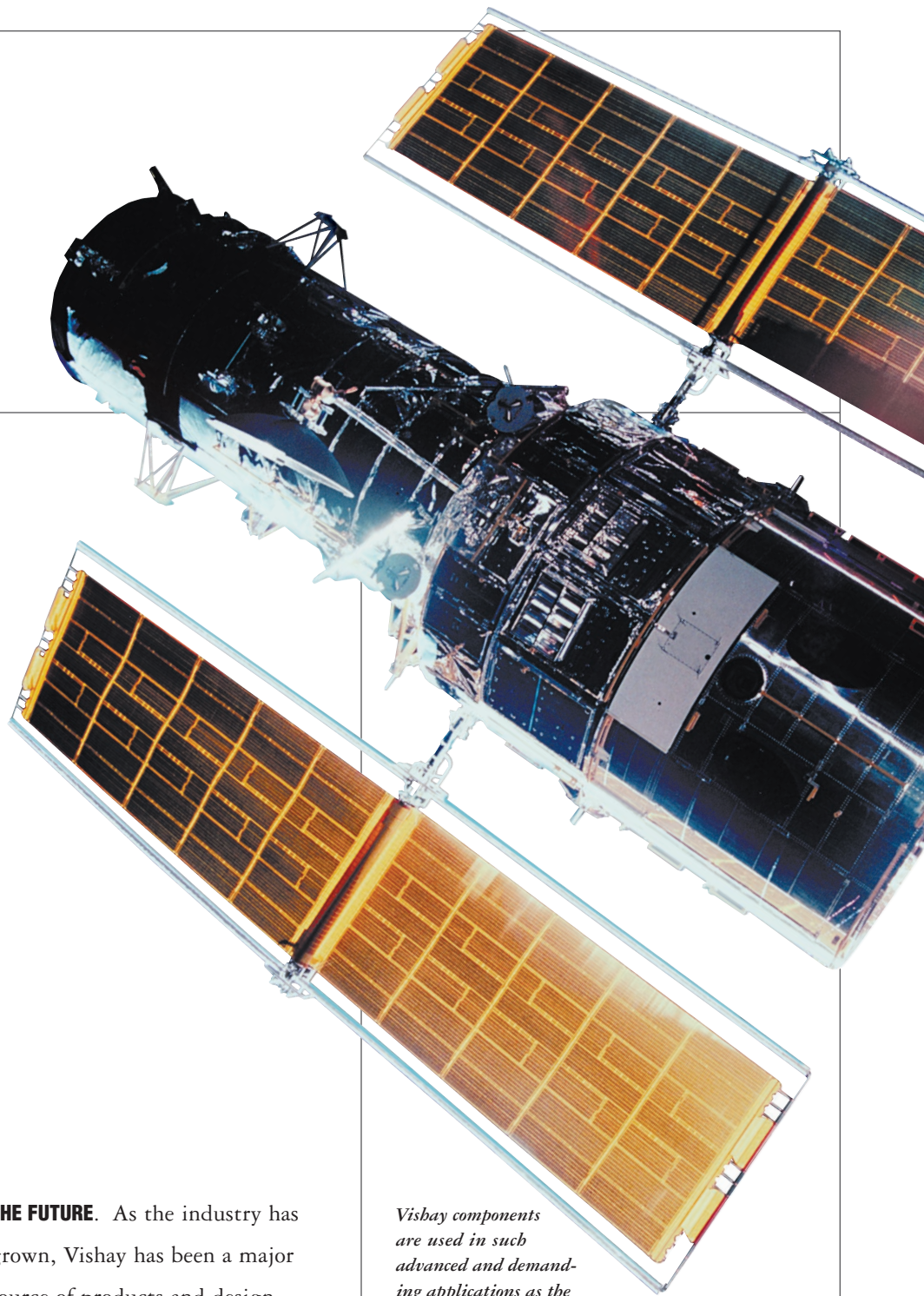


Each Vishay division has its own R&D staff and works closely with customers to meet their demands or to create new demands. New products are introduced continually. For example, in 1998, Vishay’s Siliconix Division introduced 52 new products and one new technology (Power-connect®). Vishay’s Sprague division introduced 27 new products and one new technology (polymer electrodes).

THE FUTURE. As the industry has grown, Vishay has been a major source of products and design solutions.

Vishay made a long-term commitment to stay ahead and to find success through innovation and acquisition. These strategies remain critical to sustain and grow the Company’s leadership position.

Vishay components are used in such advanced and demanding applications as the Hubble telescope.



MAJOR VISHAY PRODUCTS AND BRANDS

PASSIVE COMPONENTS

RESISTORS

Bulk Metal[®] Foil Resistors
Metal Film Resistors and Networks
Thick Film Resistors and Networks
Thick Film R/C Networks
Thin Film Resistors and Networks
Current Sensing Resistors
Wirewound Resistors
Power Metal[®] Strip Resistors
Panel Controls
Thermistors
Varistors
Fuse Resistors
Trimming Potentiometers
Panel Potentiometers

CAPACITORS

Tantalum (Solid) Capacitors
Tantalum (Wet) Capacitors
Ceramic Capacitors
Film Capacitors
Aluminum Capacitors

MAGNETICS

Custom Magnetics
Inductors
Transformers

DISCRETE SEMICONDUCTORS

DIODES

Diodes
Rectifiers
TVS

TRANSISTORS

RF Transistors
Bipolar Power Transistors
Power MOSFETs
JFETs

OPTOELECTRONIC COMPONENTS

Photo Detectors
Infrared Emitters
Optocouplers
Optosensors
Photo Modules
LEDs
Displays

INTEGRATED CIRCUITS

Power ICs
Analog Switches
Multiplexers
IrDC Infrared Data Transceivers

MAJOR VISHAY BRANDS

Vishay Dale
Vishay Draloric
Vishay Foil Resistors
Vishay Lite-On Power Semiconductor
Vishay Measurements Group
Vishay Roederstein
Vishay Sfernice
Vishay Siliconix
Vishay Sprague
Vishay Telefunken
Vishay Thin Film
Vishay Vitramon

TABLE OF CONTENTS

Consolidated Balance Sheets	28
Consolidated Statements of Operations	30
Consolidated Statements of Cash Flows	31
Consolidated Statements of Stockholders' Equity	32
Notes to Consolidated Financial Statements	33
Report of Independent Auditors	42
Management's Discussion and Analysis of Financial Condition and Results of Operations	42
Financial Summary	48
Corporate Information	50

CONSOLIDATED BALANCE SHEETS

	December 31	
(In thousands, except per share and share amounts)	1998	1997
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 113,729	\$ 55,263
Accounts receivable, less allowances of \$9,758 and \$4,143	276,270	186,687
Inventories:		
Finished goods	196,551	158,933
Work in process	136,393	84,245
Raw materials	113,194	96,193
Deferred income taxes	53,389	16,115
Prepaid expenses and other current assets	67,045	48,535
TOTAL CURRENT ASSETS	956,571	645,971
PROPERTY AND EQUIPMENT -- at cost		
Land	59,146	41,378
Buildings and improvements	270,095	230,772
Machinery and equipment	1,039,050	744,983
Construction in progress	69,534	50,400
	1,437,825	1,067,533
Less allowances for depreciation	(440,758)	(358,391)
	997,067	709,142
GOODWILL	432,558	286,923
OTHER ASSETS	76,548	77,612
	\$ 2,462,744	\$ 1,719,648

	December 31	
	1998	1997
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Notes payable to banks	\$ 20,253	\$ 29,926
Trade accounts payable	92,656	47,925
Payroll and related expenses	70,490	44,039
Other accrued expenses	111,420	52,485
Income taxes	17,425	12,003
Current portion of long-term debt	4,544	4,459
	<hr/>	<hr/>
TOTAL CURRENT LIABILITIES	316,788	190,837
LONG-TERM DEBT — less current portion	814,838	347,463
DEFERRED INCOME TAXES	68,933	41,701
DEFERRED INCOME	59,264	59,300
MINORITY INTEREST	51,858	17,930
OTHER LIABILITIES	25,174	38,287
ACCRUED PENSION COSTS	123,370	64,482
STOCKHOLDERS' EQUITY		
Preferred Stock, par value \$1.00 a share:		
Authorized -- 1,000,000 shares; none issued		
Common Stock, par value \$.10 a share:		
Authorized -- 75,000,000 shares;		
59,347,496 and 56,460,565 shares outstanding after		
deducting 17,191 and 14,127 shares in treasury	5,935	5,646
Class B convertible Common Stock, par value \$.10 a share:		
Authorized -- 15,000,000 shares;		
8,321,654 and 7,925,394 shares outstanding after		
deducting 149,677 and 205,649 shares in treasury	832	793
Capital in excess of par value	990,328	920,165
Retained earnings	14,354	75,587
Unearned compensation	(1,131)	(644)
Accumulated other comprehensive (loss)	(7,799)	(41,899)
	<hr/>	<hr/>
	1,002,519	959,648
	<hr/>	<hr/>
	\$ 2,462,744	\$ 1,719,648

See accompanying notes.

CONSOLIDATED STATEMENTS OF OPERATIONS

Visbay Intertechnology, Inc.

(In thousands, except per share and share amounts)	Year ended December 31		
	1998	1997	1996
Net sales	\$ 1,572,745	\$ 1,125,219	\$ 1,097,979
Costs of products sold	1,189,107	858,020	825,866
GROSS PROFIT	383,638	267,199	272,113
Selling, general, and administrative expenses	234,840	136,876	141,765
Amortization of goodwill	12,272	7,218	6,494
Unusual items	29,301	14,503	38,030
Purchased research and development	13,300	—	—
	93,925	108,602	85,824
Other income (expense):			
Interest expense	(49,038)	(18,819)	(17,408)
Other	(6,051)	(2,314)	1,941
	(55,089)	(21,133)	(15,467)
Earnings before income taxes	38,836	87,469	70,357
Income taxes	30,624	34,167	17,741
NET EARNINGS	\$ 8,212	\$ 53,302	\$ 52,616
Basic and diluted earnings per share	\$ 0.12	\$ 0.79	\$ 0.78
Weighted average shares outstanding — assuming dilution	67,625,000	67,682,000	67,582,000

See accompanying notes.

CONSOLIDATED STATEMENTS OF CASH FLOWS

Visbay Intertechnology, Inc.

(In thousands)	Year ended December 31		
	1998	1997	1996
OPERATING ACTIVITIES			
Net earnings	\$ 8,212	\$ 53,302	\$ 52,616
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization	127,947	81,874	77,247
Loss on disposal of property and equipment	712	1,245	174
Purchased research and development	13,300	—	—
Asset impairment losses	23,057	—	—
Loss on forward exchange contract	(5,295)	5,295	—
Changes in operating assets and liabilities, net of effects from acquisitions:			
Accounts receivable	13,827	(23,339)	10,073
Inventories	13,304	19,501	(11,575)
Prepaid expenses and other current assets	(23,206)	20,496	3,438
Accounts payable	1,575	6,882	(31,573)
Other current liabilities	(25,842)	5,897	1,526
Other	21,859	6,005	26,759
NET CASH PROVIDED BY OPERATING ACTIVITIES	169,450	177,158	128,685
INVESTING ACTIVITIES			
Purchases of property and equipment	(151,682)	(78,074)	(136,276)
Purchases of businesses, net of cash acquired	(423,031)	(122,468)	—
Proceeds from sale of property and equipment	11,650	959	5,793
NET CASH USED IN INVESTING ACTIVITIES	(563,063)	(199,583)	(130,483)
FINANCING ACTIVITIES			
Proceeds from long-term borrowings	5,030	4,100	3,476
Principal payments on long-term debt	(7,068)	(82,076)	(86,026)
Net proceeds on revolving credit lines	462,214	155,729	76,502
Net changes in short-term borrowings	(9,768)	(17,152)	10,066
NET CASH PROVIDED BY FINANCING ACTIVITIES	450,408	60,601	4,018
Effect of exchange rate changes on cash	1,671	(3,858)	(859)
INCREASE IN CASH AND CASH EQUIVALENTS	58,466	34,318	1,361
Cash and cash equivalents at beginning of year	55,263	20,945	19,584
CASH AND CASH EQUIVALENTS AT END OF YEAR	\$ 113,729	\$ 55,263	\$ 20,945

See accompanying notes.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

Visbay Intertechnology, Inc.

(In thousands, except share amounts)	Common Stock	Class B Convertible Common Stock	Capital in Excess of Par	Retained Earnings	Unearned Compensation	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
Balance at December 31, 1995	\$ 5,114	\$ 722	\$ 734,316	\$ 146,370	\$ (364)	\$ 21,695	\$ 907,853
Net earnings	—	—	—	52,616	—	—	52,616
Foreign currency translation adjustment	—	—	—	—	—	(19,381)	(19,381)
Pension liability adjustment	—	—	—	—	—	3,446	3,446
Comprehensive income							36,681
Stock issued (10,556 shares)	1	—	618	—	(262)	—	357
Stock dividends (2,558,069; 361,108 shares)	256	36	90,932	(91,224)	—	—	—
Conversions from Class B to common (19,423 shares)	2	(2)	—	—	—	—	—
Tax effects relating to stock plan	—	—	83	—	—	—	83
Amount expensed during the year	—	—	—	—	256	—	256
Balance at December 31, 1996	5,373	756	825,949	107,762	(370)	5,760	945,230
Net earnings	—	—	—	53,302	—	—	53,302
Foreign currency translation adjustment	—	—	—	—	—	(46,693)	(46,693)
Pension liability adjustment	—	—	—	—	—	(966)	(966)
Comprehensive income							5,643
Stock issued (28,486 shares)	3	—	778	—	(566)	—	215
Stock dividends (2,687,692; 378,187 shares)	269	38	85,170	(85,477)	—	—	—
Conversions from Class B to common (16,513 shares)	1	(1)	—	—	—	—	—
Stock appreciation rights	—	—	8,200	—	—	—	8,200
Tax effects relating to stock plan	—	—	68	—	—	—	68
Amount expensed during the year	—	—	—	—	292	—	292
Balance at December 31, 1997	5,646	793	920,165	75,587	(644)	(41,899)	959,648
Net earnings	—	—	—	8,212	—	—	8,212
Foreign currency translation adjustment	—	—	—	—	—	38,174	38,174
Pension liability adjustment	—	—	—	—	—	(4,074)	(4,074)
Comprehensive income							42,312
Stock issued (62,221 shares)	6	—	1,056	—	(1,062)	—	—
Stock dividends (2,824,701; 396,270 shares)	283	39	69,123	(69,445)	—	—	—
Conversions from Class B to common (10 shares)	—	—	—	—	—	—	—
Tax effects relating to stock plan	—	—	(16)	—	—	—	(16)
Amount expensed during the year	—	—	—	—	575	—	575
Balance at December 31, 1998	\$ 5,935	\$ 832	\$ 990,328	\$ 14,354	\$ (1,131)	\$ (7,799)	\$ 1,002,519

See accompanying notes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 1998

Visbay Intertechnology, Inc.

Visbay Intertechnology, Inc. is an international manufacturer and supplier of passive electronic components and discrete active electronic components, particularly resistors, capacitors, inductors, diodes, and transistors. Electronic components manufactured by the Company are used in virtually all types of electronic products, including those in the computer, telecommunications, military/aerospace, instrument, automotive, medical, and consumer electronics industries.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The consolidated financial statements of Visbay Intertechnology, Inc. include the accounts of the Company and its majority-owned subsidiaries, after elimination of all significant intercompany transactions, accounts, and profits. The Company's investments in 20% to 50%-owned companies, in which it has the ability to exercise significant influence over operating and financial policies, are accounted for on the equity method. Investments in other companies are carried at cost.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ significantly from those estimates.

Inventories

Inventories are stated at the lower of cost, determined by the first-in, first-out method, or market.

Depreciation

Depreciation is computed principally by the straight-line method based upon the estimated useful lives of the assets. Depreciation of capital lease assets is included in total depreciation expense. Depreciation expense was \$114,592,000, \$73,329,000, and \$68,688,000, for the years ended December 31, 1998, 1997, and 1996, respectively.

Construction In Progress

The estimated cost to complete construction in progress at December 31, 1998 is \$18,470,000.

Goodwill

Goodwill (excess of purchase price over net assets acquired) is being amortized over periods ranging from 30-40 years using the straight-line method. The recoverability of goodwill is evaluated at the operating unit level by an analysis of operating results and consideration of other significant events or changes in the business environment. If an operating unit has current operating losses and based upon projections there is a likelihood that such operating losses will continue, the Company will determine whether impairment exists on the basis of undiscounted expected future cash flows from operations before interest for the remaining amortization period. If impairment exists, goodwill will be reduced by the estimated shortfall of discounted cash flows. Accumulated amortization amounted to \$48,407,000 and \$35,273,000 at December 31, 1998 and 1997, respectively.

Cash Equivalents

For purposes of the Statement of Cash Flows, the Company considers demand deposits and all highly liquid investments with maturities of three months or less when purchased to be cash equivalents.

Research and Development Expenses

The amount charged to expense (exclusive of purchased in-process research and development) aggregated \$28,857,000, \$7,023,000, and \$10,429,000, for the years ended December 31, 1998, 1997, and 1996, respectively. The Company spends additional amounts for the development of machinery and equipment for new processes and for cost reduction measures.

Grants

Grants received from governments by certain foreign subsidiaries, primarily in Israel, are recognized as income in accordance with the purpose

of the specific contract and in the period in which the related expense is incurred. Grants from the government of Israel recognized as a reduction of costs of products sold were \$13,116,000, \$11,352,000, and \$8,943,000 for the years ended December 31, 1998, 1997, and 1996, respectively. Grants receivable of \$12,828,000 and \$8,909,000 are included in other current assets at December 31, 1998 and 1997, respectively. Deferred grant income is \$59,264,000 and \$59,300,000 at December 31, 1998 and 1997, respectively. The grants are subject to conditions, including maintaining specified levels of employment for periods up to ten years. Noncompliance with such conditions could result in repayment of grants, however, management expects that the Company will comply with all terms and conditions of grants.

Share and Per Share Amounts

Statement of Financial Accounting Standards No. 128, "Earnings Per Share," requires net earnings per share to be presented under two calculations, basic earnings per share and diluted earnings per share. Basic earnings per share is computed using the weighted average number of common shares outstanding during the periods presented. Diluted earnings per share is computed using common and dilutive potential common shares outstanding during the periods presented. The Company's potential common shares consist of stock options granted under the Company's 1995, 1997, and 1998 stock option plans (see Note 10) and stock appreciation rights issued in connection with the LPSC acquisition (see Notes 2 and 6). The number of shares used in the calculation of basic earnings per common share was 67,554,000 in 1998, 67,534,000 in 1997, and 67,537,000 in 1996. The number of shares used in the calculation of diluted earnings per common share was 67,625,000 in 1998, 67,682,000 in 1997, and 67,582,000 in 1996. Options to purchase 2,746,000 shares of common stock at prices ranging from \$20.42 to \$41.13 per share were outstanding during 1998, and options to purchase 1,218,000 shares at prices ranging from \$22.89 to \$41.13 per share were outstanding during 1997 and 1996, respectively, but were not included in the computation of diluted earnings per share because the options' exercise price was greater than the average market price of the common shares. Earnings per share amounts for all periods presented reflect 5% stock dividends paid on June 11, 1998, June 9, 1997, and June 7, 1996.

Stock-Based Compensation

Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation" ("SFAS 123"), encourages entities to record compensation expense for stock-based employee compensation plans at fair value but provides the option of measuring compensation expense using the intrinsic value method prescribed in Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB 25"). The Company accounts for stock-based compensation in accordance with APB 25. Pro forma results of operations as if SFAS 123 had been used to account for stock-based compensation plans are presented in Note 10.

Interest Rate Swap Agreements

The Company uses interest rate swap agreements for purposes other than trading and they are treated as off-balance sheet items. Interest rate swap agreements are used by the Company to modify variable rate obligations to fixed rate obligations, thereby reducing the exposure to market rate fluctuations. The interest rate swap agreements are designated as hedges, and effectiveness is determined by matching the principal balances and terms with that specific obligation. Such an agreement involves the exchange of amounts based on fixed interest rates for amounts based on variable interest rates over the life of the agreement without an exchange of the notional amount upon which payments are based. The differential to be paid or received as interest rates change is accounted for on the accrual method of accounting. The related amount payable to or receivable from counterparties is included as an adjustment to interest expense and to accrued interest in other accrued expenses. Gains and losses on terminations of interest rate swap agreements are deferred as an adjustment to interest expense related to the obligation over the term of the original contract life of the terminated swap agreement. In the event of early extinguishment of the obligation, any realized or unrealized gain or loss from the swap would be recognized in income at the time of extinguishment.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Other Comprehensive Income

Effective January 1, 1998, the Company adopted Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" ("SFAS 130"), which establishes new rules for the reporting and display of comprehensive income and its components; however, the adoption of SFAS 130 had no impact on the Company's net income or shareholders' equity. SFAS 130 requires the Company's pension liability adjustment, and foreign currency translation adjustments which prior to adoption were reported separately in shareholders' equity, to be included in accumulated other comprehensive income. Prior-year amounts have been reclassified to conform to the requirements of SFAS 130.

Segment Data

Effective January 1, 1998, the Company adopted the Financial Accounting Standards Board's Statement of Financial Accounting Standards No. 131, "Disclosures about Segments of an Enterprise and Related Information" ("SFAS 131"). SFAS 131 establishes new standards for the way that public business enterprises report information about operating segments in annual financial statements and requires that those enterprises report selected information about operating segments in interim financial statements. SFAS 131 also establishes standards for related disclosures about products and services, geographic areas, and major customers. The adoption of SFAS 131 did not affect results of operations or financial position, but did affect the disclosure of segment information (see Note 14).

Accounting Pronouncements Pending Adoption

In June 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 133, "Accounting for Derivative Instruments and Hedging Activities" ("SFAS 133"). SFAS 133 establishes accounting and reporting standards for derivative instruments and hedging activities. It requires entities to record all derivative instruments on the balance sheet at fair value. Changes in the fair value of derivatives are recorded each period in current earnings or other comprehensive income, depending on whether a derivative is designated as part of a hedge transaction and the type of hedge transaction. The ineffective portion of all hedges will be recognized in earnings. The Company is required to adopt SFAS 133 effective January 1, 2000. Based on current derivative usage and hedging activities, the Company does not expect the adoption of SFAS 133 to have a material impact on its future earnings or financial position.

Reclassifications

Certain prior-year amounts have been reclassified to conform with the current presentation.

2. ACQUISITIONS

On March 2, 1998, the Company purchased 80.4% of Siliconix Incorporated (NASDAQ:SIL) and 100% of TEMIC Semiconductor GmbH for a total of \$549,889,000 in cash. On March 4, 1998, the Company sold the Integrated Circuits division of TEMIC to Atmel Incorporated for a total of \$105,755,000 in cash.

The purchase of TEMIC and Siliconix ("TEMIC") was funded from the Company's \$1.1 billion revolving credit facilities made available to Vishay on March 2, 1998.

The acquisition was accounted for under the purchase method of accounting. Under purchase accounting, the assets and liabilities of TEMIC are required to be adjusted from historical amounts to their estimated fair values. Purchase accounting adjustments have been preliminarily estimated by management based upon currently available information.

Management estimated that \$13,300,000 of the TEMIC purchase price represents purchased in-process technology that had not reached technological feasibility and had no alternative future use. Accordingly, this amount was expensed with no tax benefit upon consummation of the acquisition. The value assigned to purchased in-process technology was determined by identifying research projects in areas for which technological feasibility had not been established. The value was determined by estimating the costs to develop the purchased in-process technology into commercially viable products, estimating the resulting net cash flows from such projects, and discounting the net

cash flows back to their present value. The discount rate included a factor that takes into account the uncertainty surrounding the successful development of the purchased in-process technology. If these projects are not successfully developed, future revenue and profitability of Vishay may be adversely affected. Additionally, the value of other intangible assets acquired may become impaired.

In connection with the TEMIC acquisition, the Company recorded restructuring liabilities of \$30,471,000 in connection with an exit plan that management began to formulate prior to the acquisition date. Approximately \$25,197,000 of these liabilities relates to employee termination costs covering approximately 498 technical, production, administrative, and support employees located in the United States, Europe, and the Pacific Rim. The remaining \$5,274,000 relates to provisions for contract cancellations and other costs. As of December 31, 1998, 86 employees have been terminated and \$10,651,000 of the termination costs were paid. Additionally, \$960,000 of contract cancellation charges and other costs were paid. The balance of \$18,860,000 is reflected in other accrued expenses and is expected to be paid in the next year.

The results of operations of TEMIC have been included in the Company's results from March 1, 1998. Excess of cost over the fair value of assets acquired (\$154,866,000) is being amortized principally over periods ranging from 30 to 40 years using the straight-line method.

In July 1997, the Company purchased 65% of the common stock of Lite-On Power Semiconductor Corporation (LPSC), a Republic of China (Taiwan) company, for \$130,000,000 in cash and stock appreciation rights with a fair value (at the time of issuance) of \$8,200,000. LPSC is a producer of discrete active electronic components with manufacturing facilities in Taiwan, China and the United States. LPSC also owns 40.2% of Diodes, Inc. (AMEX: DIO). The Company utilized existing credit facilities to finance the cash portion (\$130,000,000) of the purchase price. The acquisition was accounted for under the purchase method of accounting.

The results of operations of LPSC have been included in the Company's results from July 1, 1997. Excess of cost over the fair value of net assets acquired (\$110,978,000) is being amortized on a straight-line method over an estimated useful life of forty years.

Had the TEMIC and LPSC acquisitions been made at the beginning of the respective periods, the Company's pro forma unaudited results would have been (in thousands, except per share amounts):

Year ended December 31	1998	1997
Net sales	\$ 1,655,197	\$ 1,723,818
Net earnings	\$ 6,528	\$ 41,394
Basic and diluted earnings per share	\$ 0.10	\$ 0.61

The pro forma information includes adjustments for interest expense that would have been incurred to finance the acquisitions, additional depreciation based on the fair value of property, plant, and equipment acquired, writeoff of purchased in-process research and development, amortization of goodwill, and related tax effects.

The unaudited pro forma results are not necessarily indicative of the results that would have been attained had the acquisitions occurred at the beginning of the periods presented.

3. UNUSUAL ITEMS

Unusual items in 1998 consist of the following components:

Impairment losses:	
China	\$ 19,556,000
Nikkohm	3,501,000
Restructuring of European operations	5,944,000
Closing of two U.S. sales offices	300,000
	<hr/>
	\$ 29,301,000

In May 1996, the Company signed letters of intent with the China National Non-Ferrous Metals Industry Corporation Nanchang Branch (CNNC) and United Development, Inc. to enter into joint ventures to mine, process, and refine tantalum at a site in China and to build a plant in China to manufacture dipped radial and chip tantalum capacitors. Management viewed this investment in China as strategic as it would provide a presence in the Far East, another source of low-cost labor, and a stable, low-cost supply of tantalum. Through March 31, 1998, the Company continued to negotiate the terms of the joint ventures with the CNNC and conduct feasibility tests on the mine. As of March 31, 1998, the Company had removed from existing production lines and packaged for shipment to China \$18.9 million of equipment to be used in the manufacture of dipped radial and chip tantalum capacitors at the proposed plant. In addition, the Company had deferred \$1.7 million in consulting costs incurred in evaluating the potential joint venture. During fiscal 1998, several events occurred which led to the eventual abandonment of the projects in China. First, the CNNC was disbanded by the Chinese government and replaced by a smaller organization which had much less control over the various Chinese partners that would be involved in the joint ventures. The individual Chinese partners, no longer under the central control of the CNNC, began demanding to renegotiate the joint venture agreements in ways that were not acceptable to the Company. Second, the Asian economy experienced a significant downturn and demand for the Company's tantalum capacitors dropped significantly. The reduction in demand for the Company's tantalum capacitors made the building of a large factory financially impractical. Instead, the Company downsized its plans and opened a small finishing plant for tantalum capacitors in one of the Company's existing Shanghai facilities that it had acquired in 1997. Third, suppliers of tantalum outside of China were forced to lower prices due to a significant increase in supply primarily due to competition from Chinese suppliers. Fourth, in 1997 and 1998, Vishay acquired two companies that had established facilities in China with approximately 2,000 employees in five factories. These factories served to establish Vishay as a major components manufacturer in China without additional investment by the Company. During the fourth quarter of fiscal 1998, management evaluated the proposed joint ventures and concluded that, due to the factors described above, the Company would discontinue negotiations and abandon the proposed joint ventures. Management also concluded that the equipment had a net realizable value of \$1 million and the deferred costs were not recoverable and in accordance with the Company's accounting policy, recorded an impairment loss of \$19.6 million. Management expects to have disposed of this equipment by December 31, 1999.

In March 1995, the Company acquired a 49% interest in Nikkohm, a Japanese manufacturer and distributor of passive electronic components. The Company's investment in Nikkohm totaled \$4 million. Like the proposed Chinese joint ventures, management considered its investment in Nikkohm strategic because it provided the Company with an entry into certain Far East markets. Following the acquisition of its interest, Vishay worked with the management of Nikkohm to build Nikkohm's business and improve its profitability. Through December 31, 1997, the Company recognized a cumulative loss on its investment in Nikkohm of \$499,800 (1995—\$304,000; 1996—\$141,800; 1997—\$54,000). Management had been encouraged by Nikkohm's trend in earnings and had proposed certain marketing programs intended to further improve operating results. However, Nikkohm's results of operations began to deteriorate in fiscal 1998 due to a decrease in demand for the Company's products, particularly thin film resistors, and a downturn in the Asian economy. In addition, a significant member of Nikkohm's management resigned due to health concerns. Also, the Company's acquisitions in 1997 and 1998 had established Vishay as a major electronics components manufacturer in the Far East. During the fourth quarter of fiscal 1998, management evaluated these recent developments and concluded that the carrying amount of the investment in Nikkohm was not recoverable and in accordance with the Company's accounting policy, recorded an impairment loss of \$3.5 million.

Restructuring of European operations consists of \$5,694,000 of employee termination costs covering approximately 182 technical, production, administrative, and support employees located in Germany and the United Kingdom. The remaining \$250,000 relates to lease buyout expense associated with the closing of a facility in the United Kingdom. The restructuring plan is expected to be completed by the end of 1999. At December 31, 1998, approximately 15 employees had been terminated and \$471,000 of this severance had been paid. The remainder is included in other accrued expenses.

The remaining \$300,000 of restructuring expense consists of employee termination costs of \$130,000 and lease buyout and other expenses of \$170,000 relating to the closing of two U.S. sales offices.

Unusual items expense of \$14,503,000 in 1997 consists of restructuring expense of \$12,605,000 and a settlement with the United States government in the amount of \$1,898,000 representing reimbursements for overcharges relating to military products produced prior to 1993 at one of the Company's U.S. subsidiaries.

Restructuring expense of \$12,605,000 in 1997 results from a downsizing of the Company's European operations. Approximately \$10,357,000 of this expense relates to employee termination costs covering approximately 324 technical, production, administrative, and support employees located in Germany and France. Approximately \$623,000 of the restructuring expense relates to facility closure costs in France. The remaining \$1,625,000 relates to additional payments to certain employees laid off in the last half of fiscal 1996 in connection with Vishay's fiscal 1996 restructuring program. The payments were a result of a judgment rendered by a French court against a subsidiary of the Company. The court ruled that these employees were due additional payments under France's mandated social plan. At December 31, 1998, approximately 173 employees had been terminated and \$6,158,000 of termination costs were paid. The remaining \$5,824,000 of termination costs are included in other accrued expenses at December 31, 1998. This remaining accrual is considered adequate to complete the restructuring program and is expected to be paid by December 31, 1999.

Unusual items in 1996 represents restructuring expense of \$38,030,000 which resulted from a downsizing of the Company's worldwide operations. Approximately \$9,077,000 of restructuring expense relates to facility closure costs in North America and Europe. The remaining \$28,953,000 of these expenses relate to employee termination costs covering approximately 2,600 technical, production, administrative, and support employees located in the United States, Canada, France, and Germany. This downsizing was completed during the year ended December 31, 1998.

4. INCOME TAXES

Earnings before income taxes consists of the following components (in thousands):

Year ended December 31	1998	1997	1996
Domestic	\$ (45,337)	\$ 45,832	\$ 42,406
Foreign	84,173	41,637	27,951
	\$ 38,836	\$ 87,469	\$ 70,357

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Significant components of income taxes are as follows (in thousands):

Year ended December 31	1998	1997	1996
Current:			
U.S. Federal	\$ 1,590	\$ 20,296	\$ 13,836
Foreign	12,370	6,494	8,098
State	987	2,103	1,586
	14,947	28,893	23,520
Deferred:			
U.S. Federal	(44)	1,476	1,632
Foreign	15,708	3,547	(7,793)
State	13	251	382
	15,677	5,274	(5,779)
	\$ 30,624	\$ 34,167	\$ 17,741

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts for income tax purposes. Significant components of the Company's deferred tax liabilities and assets are as follows (in thousands):

December 31	1998	1997
Deferred tax assets:		
Pension and other retiree obligations	\$ 27,839	\$ 23,150
Net operating loss carryforwards	109,545	82,510
Tax credit carryforwards	8,535	—
Restructuring reserves	7,937	5,283
Other accruals and reserves	40,643	22,767
Total deferred tax assets	194,499	133,710
Less: Valuation allowance	(59,329)	(40,447)
Net deferred tax assets	135,170	93,263
Deferred tax liabilities:		
Tax over book depreciation	99,890	71,122
Other—net	11,645	12,031
Total deferred tax liabilities	111,535	83,153
Net deferred tax assets	\$ 23,635	\$ 10,110

A reconciliation of income tax expense at the U.S. federal statutory income tax rate to actual income tax expense is as follows (in thousands):

Year ended December 31	1998	1997	1996
Tax at statutory rate	\$ 13,593	\$ 30,612	\$ 24,625
State income taxes, net of U.S. federal tax benefit	649	1,619	1,413
Effect of foreign operations	(228)	(10,325)	(9,717)
Benefit of net operating loss carryforwards	—	(207)	(817)
Provision for estimated tax uncertainties ..	—	10,000	—
Increase in valuation allowance for foreign net operating loss carryforwards	10,000	—	—
Purchased research and development expense	4,655	—	—
Other	1,955	2,468	2,237
	\$ 30,624	\$ 34,167	\$ 17,741

At December 31, 1998, the Company has the following net operating loss carryforwards for tax purposes:

		Expires
U.S. Federal	\$ 54,000,000	2018
Germany	145,020,000	No expiration
France	21,042,000	2000 to unlimited
Portugal	4,712,000	1999 - 2001
Austria	8,110,000	No expiration

Approximately \$70,892,000 of the carryforward in Germany resulted from the Company's acquisition of Roederstein, GmbH in 1993 and \$7,667,000 of the carryforward in Austria resulted from the Company's acquisition of TEMIC. Valuation allowances of \$57,054,000 and \$40,447,000 have been recorded at December 31, 1998 and 1997, respectively, for deferred tax assets related to foreign net operating loss carryforwards. In 1998, tax benefits recognized through reductions of the valuation allowance had the effect of reducing goodwill of acquired companies by \$446,000. If additional tax benefits are recognized in the future through further reduction of the valuation allowance, \$27,523,000 of such benefits will reduce goodwill.

At December 31, 1998, no provision has been made for U.S. federal and state income taxes on approximately \$339,959,000 of foreign earnings which are expected to be reinvested indefinitely. Upon distribution of those earnings in the form of dividends or otherwise, the Company would be subject to U.S. income taxes (subject to an adjustment for foreign tax credits) and withholding taxes payable to the various foreign countries. Determination of the amount of unrecognized deferred U.S. income tax liability is not practicable because of the complexities associated with its hypothetical calculation.

Income taxes paid were \$36,488,000, \$24,879,000, and \$22,141,000 for the years ended December 31, 1998, 1997, and 1996, respectively.

5. LONG-TERM DEBT

Long-term debt consists of the following (in thousands):

December 31	1998	1997
Multicurrency revolving credit loans	\$ 777,400	\$ 284,666
Deutsche Mark revolving credit loans	—	22,365
Other debt and capital lease obligations	41,982	44,891
	819,382	351,922
Less current portion	4,544	4,459
	\$ 814,838	\$ 347,463

At December 31, 1997, two facilities were available under the Company's amended and restated Revolving Credit and Term Loan and Deutsche Mark Revolving Credit and Term Loan agreements with a group of banks; a multicurrency revolving credit loan (interest 6.25% on U.S. Dollar borrowings and 3.95% on Deutsche Mark borrowings at December 31, 1997), and a Deutsche Mark revolving credit loan (interest 3.95% at December 31, 1997).

On March 2, 1998, the Company entered into two revolving credit agreements with a group of banks, which replaced the agreements in effect at December 31, 1997. The Company entered into the new loan agreements with the banks to finance the Siliconix and TEMIC acquisitions (see Note 2). The first agreement provides for an \$825,000,000 loan comprising a revolving credit facility and a swing line facility that mature on March 2, 2003, subject to Vishay's right to request year-to-year renewals. Interest is payable at prime or other interest rate options. The Company is required to pay certain facility fees on this facility. The second agreement provides for a \$275,000,000 364-day multicurrency revolving credit facility which matures on March 1, 1999. This agreement was amended on December 29, 1998 to extend the maturity date to June 1, 1999, at which time, the Company can request year-to-year renewals. Interest is payable at prime or other interest rate options. The

Company is required to pay certain facility fees on this facility. As of December 31, 1998, the Company had \$777,400,000 outstanding under the five-year revolving credit facility (interest 5.87%). After giving effect to interest rate swaps, the interest rate on \$300,000,000 of the Company's five-year multicurrency revolving credit facility was 6.35% at December 31, 1998.

Borrowings under the loan agreements are secured by certain pledges of stock in certain significant subsidiaries and indirect subsidiaries of Vishay and certain guaranties by significant subsidiaries. The Company is restricted from paying cash dividends and must comply with other covenants, including the maintenance of specific financial ratios.

Other debt and capital lease obligations include borrowings under short-term credit lines of \$10,470,000 and \$12,141,000 at December 31, 1998 and 1997, respectively, which are classified as long-term based on the Company's intention and ability to refinance the obligations on a long-term basis.

Aggregate annual maturities of long-term debt are as follows: 1999—\$4,544,000; 2000—\$4,212,000; 2001—\$6,160,000; 2002—\$1,873,000; 2003—\$778,458,000; thereafter—\$24,135,000.

At December 31, 1998, the Company has committed and uncommitted short-term credit lines with various U.S. and foreign banks aggregating \$171,388,000, of which \$140,665,000 was unused. The weighted average interest rate on short-term borrowings outstanding as of December 31, 1998 and 1997 was 6.11% and 6.50%, respectively.

Interest paid was \$48,105,000, \$18,699,000, and \$17,736,000 for the years ended December 31, 1998, 1997, and 1996, respectively.

6. STOCKHOLDERS' EQUITY

On May 19, 1997, the Company's shareholders approved an increase in the number of shares of Common Stock, \$.10 par value, which the Company is authorized to issue, from 65,000,000 shares to 75,000,000 shares.

The Company's Class B Stock carries ten votes per share while the Common Stock carries one vote per share. Class B shares are transferable only to certain permitted transferees while the Common Stock is freely transferable. Class B shares are convertible on a one-for-one basis at any time to Common Stock.

In connection with the acquisition of LPSC (see Note 2), the Company issued stock appreciation rights (SARs) to the former owners of LPSC. The SARs represent the right to receive in stock the increase in value on the equivalent of 1,706,000 shares of the Company's stock above \$21.90 per share. The SARs may be exercised at any time prior to July 17, 2007 at the option of the former owners of LPSC. The Company may force redemption of the SARs if the Company's stock trades above the "Strike Price" (\$45.05 per share effective July 17, 1998). The Strike Price increases by 10% each year. At a market price of \$45.05 per share for the Company's stock, the SARs would entitle the former owners of LPSC to 876,668 shares of the Company's Common Stock. The fair value of the SARs as of July 17, 1998 was determined to be \$8,200,000 using the binomial option pricing model.

Unearned compensation relating to Common Stock issued under employee stock plans is being amortized over periods ranging from three to five years. At December 31, 1998, 166,868 shares are available for issuance under stock plans.

7. OTHER INCOME (EXPENSE)

Other income (expense) consists of the following (in thousands):

Year ended December 31	1998	1997	1996
Foreign exchange gains	\$ 495	\$ 3,657	\$ 371
Loss on forward exchange contract	(6,269)	(5,295)	—
Investment income	4,687	2,353	1,586
Minority interest in income of subsidiaries	(3,810)	(2,092)	(489)
Equity in net income of affiliates	1,084	1,090	318
Loss on sale of fixed assets	(712)	(1,245)	(174)
Other	(1,526)	(782)	329
	\$ (6,051)	\$ (2,314)	\$ 1,941

In connection with the Company's acquisition of all of the common stock of TEMIC Semiconductor GmbH and 80.4% of the common stock of Siliconix Incorporated, the Company entered into a forward exchange contract in December 1997 to protect against the impact of fluctuations in the exchange rate between the U.S. Dollar and the Deutsche Mark since the purchase price was denominated in Deutsche Marks and payable in U.S. Dollars. At December 31, 1997, the Company had an unrealized loss on this contract of \$5,295,000, which resulted from marking the contract to market value. On March 2, 1998, the forward exchange contract was settled and the Company recognized an additional loss of \$6,269,000.

8. OTHER COMPREHENSIVE INCOME

The income tax effects allocated to and the cumulative balance of each component of other comprehensive income (loss) are as follows (in thousands):

	Beginning Balance	Before-Tax Amount	Tax (Benefit) Expense	Net-of-Tax Amount	Ending Balance
December 31, 1998					
Pension liability adjustment	\$ (4,312)	\$ (9,090)	\$ (5,016)	\$ (4,074)	\$ (8,386)
Currency translation adjustment	(37,587)	38,174	—	38,174	587
	\$ (41,899)	\$ 29,084	\$ (5,016)	\$ 34,100	\$ (7,799)
December 31, 1997					
Pension liability adjustment	\$ (3,346)	\$ (2,714)	\$ (1,748)	\$ (966)	\$ (4,312)
Currency translation adjustment	9,106	(46,693)	—	(46,693)	(37,587)
	\$ 5,760	\$ (49,407)	\$ (1,748)	\$ (47,659)	\$ (41,899)
December 31, 1996					
Pension liability adjustment	\$ (6,792)	\$ 3,446	\$ —	\$ 3,446	\$ (3,346)
Currency translation adjustment	28,487	(19,381)	—	(19,381)	9,106
	\$ 21,695	\$ (15,935)	\$ —	\$ (15,935)	\$ 5,760

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

9. PENSIONS AND OTHER POSTRETIREMENT BENEFITS

The Company maintains several defined benefit pension and nonpension postretirement plans which cover substantially all full-time U.S. employees. The following table sets forth a reconciliation of the benefit obligation, plan assets and accrued benefit cost related to these plans (in thousands):

	Pension Benefits			Other Benefits		
	1998	1997		1998	1997	
Change in benefit obligation:						
Benefit obligation at beginning of year	\$ 98,991	\$ 87,740		\$ 7,796	\$ 6,977	
Service cost	3,828	2,999		287	252	
Interest cost	6,726	6,266		494	499	
Employee contributions	1,782	1,969		—	—	
Actuarial losses (gains)	7,057	5,850		(94)	356	
Benefits paid	(7,419)	(5,833)		(506)	(288)	
Benefit obligation at end of year	\$ 110,965	\$ 98,991		\$ 7,977	\$ 7,796	
Change in plan assets:						
Fair value of plan assets at beginning of year	\$ 98,388	\$ 87,368				
Actual return on plan assets	707	12,753				
Company contributions	2,070	2,114				
Plan participants' contributions	1,782	1,969				
Benefits paid	(7,412)	(5,816)				
Fair value of plan assets at end of year	\$ 95,535	\$ 98,388				
Funded status	\$ (15,430)	\$ (603)		\$ (7,977)	\$ (7,796)	
Unrecognized net actuarial loss	15,184	370		547	641	
Unrecognized transition obligation	27	137		2,993	3,207	
Unamortized prior service cost	173	368		279	310	
Net amount recognized	\$ (46)	\$ 272		\$ (4,158)	\$ (3,638)	
Amounts recognized in consolidated balance sheet consist of:						
Prepaid benefit cost	\$ 4,452	\$ 3,984		\$ —	\$ —	
Accrued benefit liability	(7,816)	(3,712)		(4,158)	(3,638)	
Accumulated other comprehensive income	3,318	—		—	—	
Net amount recognized	\$ (46)	\$ 272		\$ (4,158)	\$ (3,638)	
Weighted-average assumptions as of December 31:						
Discount rate	6.50%	6.75%		6.50%	6.75%	
Expected return on plan assets	8.50% - 9.50%	8.50% - 9.50%				
Rate of compensation increase	4.50%	4.50%				
Components of net periodic benefit cost:						
Annual service cost	\$ 5,830	\$ 4,849	\$ 5,091	\$ 287	\$ 252	\$ 236
Less employee contribution	2,002	1,850	1,842	—	—	—
Net service cost	3,828	2,999	3,249	287	252	236
Interest cost	6,726	6,266	6,014	494	499	485
Expected return on plan assets	(8,463)	(7,511)	(6,634)	—	—	—
Amortization of prior service cost	195	233	—	31	31	31
Amortization of transition obligation	311	311	311	214	214	214
Amortization of (gains) losses	(201)	(201)	(201)	—	5	19
Net periodic benefit cost	\$ 2,396	\$ 2,097	\$ 2,739	\$ 1,026	\$ 1,001	\$ 985

The projected benefit obligation, accumulated benefit obligation, and fair value of plan assets for the pension plans with accumulated benefit obligations in excess of plan assets were \$98,043,000, \$91,596,000, and \$83,739,000, respectively, as of December 31, 1998 and \$1,266,889, \$1,184,489, and \$0, respectively, as of December 31, 1997.

The projected benefit obligation, accumulated benefit obligation, and fair value of plan assets for the pension plans with projected benefit obligations in excess of plan assets were \$110,965,000, \$101,414,000, and \$95,535,000, respectively, as of December 31, 1998 and \$79,852,000, \$70,565,000, and \$77,023,000, respectively, as of December 31, 1997.

The Company's nonpension postretirement plan is funded as costs are incurred. The plan is contributory, with employee contributions adjusted for general inflation or inflation in costs under the plan. The plan was amended in 1993 to cap employer contributions at 1993 levels. The impact of a one-percentage-point change in assumed health care cost trend rates on the net periodic benefit cost and postretirement benefit obligation is immaterial.

Many of the Company's U.S. employees are eligible to participate in 401(k) savings plans, some of which provide for Company matching under various formulas. The Company's matching expense for the plans was \$4,672,000, \$2,126,000, and \$2,250,000 for the years ended December 31, 1998, 1997, and 1996, respectively. The Company's matching expense for 1998 reflects \$2,920,000 of expense related to Siliconix Incorporated, which was acquired effective March 2, 1998.

The Company provides pension and similar benefits to employees of certain foreign subsidiaries consistent with local practices. German subsidiaries of the Company have defined benefit pension plans. The Company acquired 100% of TEMIC Semiconductor GmbH on March 2, 1998, including its pension plan. The following table sets forth a reconciliation of the benefit obligation, plan assets, and accrued benefit cost related to the German plans (in thousands):

	1998	1997
Change in benefit obligation:		
Benefit obligation at beginning of year	\$ 64,758	\$ 70,398
Service cost	510	107
Interest cost	6,025	4,261
Actuarial losses	6,855	3,177
Acquisition	34,536	—
Benefits paid	(5,036)	(3,273)
Foreign currency translation	4,122	(9,912)
Benefit obligation at end of year	\$ 111,770	\$ 64,758
Change in plan assets:		
Fair value of plan assets at beginning of year ...	\$ 13,735	\$ 13,734
Actual return on plan assets	624	259
Company contributions	2,754	2,551
Benefits paid	(2,872)	(2,426)
Foreign currency translation	986	(383)
Fair value of plan assets at end of year	\$ 15,227	\$ 13,735
Funded status	\$ (96,543)	\$ (51,023)
Unrecognized net actuarial losses	7,002	4,657
Unrecognized transition obligation/(asset)	(19)	(21)
Unamortized prior service cost	168	254
Net amount recognized	\$ (89,392)	\$ (46,133)
Amounts recognized in the consolidated balance sheet consist of:		
Accrued benefit liability	\$ (99,476)	\$ (52,193)
Accumulated other comprehensive income	10,084	6,060
Net amount recognized	\$ (89,392)	\$ (46,133)

	1998	1997
Weighted-average assumptions as of December 31:		
Discount rate	6.50%	7.00%
Rate of compensation increase	3.00%	2.50%

Year ended December 31 (In thousands)	1998	1997	1996
Components of net periodic benefit cost:			
Service cost	\$ 510	\$ 107	\$ 126
Interest cost	6,025	4,261	5,082
Expected return on plan assets	(476)	(1,179)	(1,174)
Amortization of prior service cost	86	106	133
Amortization of transition obligation	(2)	(4)	—
Amortization of (gains)losses	62	—	—
Net periodic benefit cost	\$ 6,205	\$ 3,291	\$ 4,167

The projected benefit obligation, accumulated benefit obligation, and fair value of plan assets for the German pension plans with accumulated benefit obligations and projected benefit obligations in excess of plan assets were \$111,770,000, \$111,871,000, and \$15,227,000, respectively, as of December 31, 1998 and \$64,758,000, \$64,449,000, and \$13,735,000, respectively, as of December 31, 1997.

10. STOCK OPTIONS

The Company has three stock option programs. Under the 1995 Stock Option Program, certain key executives of the Company were granted options on March 3, 1995, to purchase 1,218,000 shares of the Company's common stock. The options were fully vested on the date of grant and expire March 1, 2000, with one-third exercisable at \$22.89, one-third exercisable at \$28.79, and one-third exercisable at \$41.13. At December 31, 1998, all 1,218,000 options remain outstanding.

Under the 1997 Stock Option Program, certain executive officers and key employees, and consultants of the Company were granted options on May 21, 1998, to purchase 1,528,000 shares of the Company's common stock. The options were fully vested on the date of grant and expire June 1, 2008, with one-third exercisable at \$20.42, one-third exercisable at \$23.48, and one-third exercisable at \$25.52. At December 31, 1998, all 1,528,000 options remain outstanding.

Under the 1998 Stock Option Program, certain executive officers and key employees were granted options on October 6, 1998 to purchase 852,000 shares of the Company's common stock. The options, which are exercisable at \$10.50, vest evenly over a six-year period and expire March 16, 2008. At December 31, 1998, all 852,000 options remain outstanding and 648,000 options are available for grant under the Program.

The following table summarizes information concerning outstanding options at December 31, 1998:

Range of Exercise Prices	Number of Options Outstanding at 12/31/98	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price
\$ 10.50	852,000	9.76	\$ 10.50
\$ 20.42 - \$ 28.79	2,340,000	6.52	\$ 24.07
\$ 41.13	406,000	1.17	\$ 41.13
Total	3,598,000	6.70	\$ 22.79

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The following is provided to comply with the disclosure requirements of SFAS 123. If compensation cost for these programs had been determined using the fair-value method prescribed by SFAS 123, the Company's results for the year ended December 31, 1998 would have been reduced to the pro forma amounts indicated below (in thousands, except per share amount):

Net (loss)	\$ (1,906)
Basic and diluted (loss) per share	(0.03)

The weighted average fair value of the options granted in 1998 was estimated using the Black-Scholes option pricing model, with the assumptions presented below. For options granted in 1998 with an exercise price equal to the market value, the weighted average fair value was \$6.52 and the weighted average exercise price was \$14.51. For options granted with an exercise price greater than the market value, the weighted average fair value was \$7.22 and the weighted average exercise price was \$25.87.

	1998 Stock Option Program	1997 Stock Option Program
Expected dividend yield	—	—
Risk-free interest rate	4.2%	5.7%
Expected volatility	48.3%	48.3%
Expected life (in years)	4.5	8

11. LEASES

Total rental expense under operating leases was \$23,703,000, \$9,413,000, and \$9,679,000, for the years ended December 31, 1998, 1997, and 1996, respectively.

Future minimum lease payments for operating leases with initial or remaining noncancelable lease terms in excess of one year are as follows: 1999—\$20,097,000; 2000—\$17,026,000; 2001—\$14,288,000; 2002—\$12,523,000; 2003—\$12,182,000; thereafter—\$61,512,000.

12. FINANCIAL INSTRUMENTS

The Company uses financial instruments in the normal course of its business, including derivative financial instruments, for purposes other than trading. These financial instruments include debt and interest rate swap agreements. The notional or contractual amounts of these commitments and other financial instruments are discussed below.

Concentration of Credit Risk

Financial instruments with potential credit risk consist principally of accounts receivable. Concentrations of credit risk with respect to receivables are limited due to the Company's large number of customers and their dispersion across many countries and industries. At December 31, 1998 and 1997, the Company had no significant concentrations of credit risk.

Interest Rate Swap Agreements

In connection with its multicurrency revolving line of credit, the Company entered into several interest rate swap agreements in August 1998 to exchange variable and fixed rate interest payment obligations without the exchange of the underlying principal amounts. As of December 31, 1998, the Company was a party to five interest rate swap agreements with a notional amount of \$300,000,000. Under these agreements, the Company paid a fixed rate of 6.35% and received a variable rate of 5.83% at December 31, 1998. These interest rate swap agreements mature in August 2003. There were no interest rate swap agreements outstanding at December 31, 1997. The fair value of the interest rate swap agreements at December 31, 1998 was (\$7,572,000).

Cash and Cash Equivalents, Notes Payable, and Long-Term Debt

The carrying amounts reported in the consolidated balance sheet

approximate fair value.

13. CURRENT VULNERABILITY DUE TO CERTAIN CONCENTRATIONS

Sources of Supply

Although most materials incorporated in the Company's products are available from a number of sources, certain materials (particularly tantalum and palladium) are available only from a relatively limited number of suppliers. Tantalum, a metal, is the principal material used in the manufacture of tantalum capacitor products. It is purchased in powder form primarily under annual contracts with domestic suppliers at prices that are subject to periodic adjustment. The Company is a major consumer of the world's annual tantalum production. There are currently three major suppliers that process tantalum ore into capacitor grade tantalum powder. Although the Company believes that there is currently a surplus of tantalum ore reserves and a sufficient number of tantalum processors relative to foreseeable demand, and that the tantalum required by the Company has generally been available in sufficient quantities to meet requirements, the limited number of tantalum powder suppliers could lead to increases in tantalum prices that the Company may not be able to pass on to its customers. Palladium is primarily purchased on the spot and forward markets, depending on market conditions. Palladium is considered a commodity and is subject to price volatility. Although palladium is currently found in South Africa and Russia, the Company believes that there are a sufficient number of domestic and foreign suppliers from which the Company can purchase palladium. However, an inability on the part of the Company to pass on increases in palladium costs to its customers could have an adverse effect on the margins of those products using the metal.

Geographic Concentration

To address the increasing demand for its products and in order to lower its costs, the Company has expanded, and plans to continue to expand, its manufacturing operations in Israel in order to take advantage of that country's lower wage rates, highly skilled labor force, government-sponsored grants, as well as various tax abatement programs. These incentive programs have contributed substantially to the growth and profitability of the Company. The Company might be materially and adversely affected if these incentive programs were no longer available to the Company or if hostilities were to occur in the Middle East that materially interfere with the Company's operations in Israel.

14. BUSINESS SEGMENT AND GEOGRAPHIC AREA DATA

Vishay Intertechnology, Inc. designs, manufactures, and markets electronic components that cover a wide range of products and technologies. The Company has two reportable segments: Passive Electronic Components (Passives) consisting principally of fixed resistors, solid tantalum surface mount chip capacitors, solid tantalum leaded capacitors, wet/foil tantalum capacitors, multi-layer ceramic chip capacitors, film capacitors, and inductors and Active Electronic Components (Actives) consisting principally of diodes, transistors, power MOSFETS, power conversion and motor control integrated circuits.

The Company evaluates performance and allocates resources based on several factors, of which the primary financial measure is business segment operating income excluding amortization of intangibles and special charges. The accounting policies of the business segments are the same as those described in the summary of significant accounting policies (Note 1). The operating results of Actives reflect the acquisition of 80.4% of Siliconix, Incorporated and 100% of TEMIC Semiconductor GmbH as of March 2, 1998 and Lite-On Power Semiconductor as of July 1, 1997. Business segment assets are the owned or allocated assets used by each business.

The corporate component of operating income represents corporate selling, general, and administrative expenses. Corporate assets include corpo-

rate cash, property, plant, and equipment, and certain other assets.

Business Segment Information (in thousands)

Year ended December 31	1998	1997	1996
Net Sales:			
Passives	\$ 1,027,902	\$ 1,086,929	\$ 1,097,979
Actives	544,843	38,290	—
	\$ 1,572,745	\$ 1,125,219	\$ 1,097,979
Operating Income:			
Passives	\$ 114,747	\$ 138,185	\$ 146,212
Actives	51,516	2,959	—
Corporate	(17,465)	(10,821)	(15,864)
Unusual items	(29,301)	(14,503)	(38,030)
Purchased research and development	(13,300)	—	—
Amortization of goodwill	(12,272)	(7,218)	(6,494)
	\$ 93,925	\$ 108,602	\$ 85,824
Depreciation Expense:			
Passives	\$ 74,173	\$ 69,716	\$ 68,513
Actives	40,210	3,409	—
Corporate	209	204	175
	\$ 114,592	\$ 73,329	\$ 68,688
Total Assets:			
Passives	\$ 1,693,554	\$ 1,506,191	\$ 1,556,311
Actives	750,875	211,684	—
Corporate	18,315	1,773	2,204
	\$ 2,462,744	\$ 1,719,648	\$ 1,558,515

Year ended December 31	1998	1997	1996
Capital Expenditures:			
Passives	\$ 87,168	\$ 69,617	\$ 135,757
Actives	59,969	8,285	—
Corporate	4,545	172	519
	\$ 151,682	\$ 78,074	\$ 136,276

The following geographic area data includes net sales based on revenues generated by subsidiaries located within that geographic area and property, plant, and equipment based on physical location:

Geographic Area Information (in thousands)

Year ended December 31	1998	1997	1996
Net Sales:			
United States	\$ 659,845	\$ 624,377	\$ 557,935
Germany	519,114	249,298	286,253
Asia Pacific	185,784	44,647	8,439
France	119,992	114,704	152,525
Other	88,010	92,193	92,827
	\$ 1,572,745	\$ 1,125,219	\$ 1,097,979
Property, Plant, and Equipment (net):			
United States	\$ 352,007	\$ 205,784	\$ 227,471
Germany	153,423	110,827	156,944
Israel	283,691	271,180	254,171
Asia Pacific	67,051	42,522	94
France	45,461	43,071	61,863
Other	95,434	35,758	10,119
	\$ 997,067	\$ 709,142	\$ 710,662

15. SUMMARY OF QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

Quarterly financial information for the years ended December 31, 1998 and 1997 is as follows:

(In thousands, except per share amounts)

	First Quarter		Second Quarter		Third Quarter		Fourth Quarter		Total Year	
	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997
Net sales	\$ 348,744	\$ 273,262	\$ 412,844	\$ 272,661	\$ 399,499	\$ 285,352	\$ 411,658	\$ 293,944	\$ 1,572,745	\$ 1,125,219
Gross profit	85,204	65,604	102,392	65,630	97,595	70,392	98,447	65,573	383,638	267,199
Net earnings (loss)	16,536 (1)	19,658	16,766	19,948	12,121	20,695	(37,211) (2)	(6,999) (3)	8,212	53,302
Basic and diluted earnings (loss) per share (4)	\$.24 (1)	\$.29	\$.25	\$.30	\$.18	\$.30	\$ (.55) (2)	\$ (.10) (3)	\$.12	\$.79

(1) A forward exchange contract loss (\$6,269,000) reduced net earnings by \$3,924,000 or \$.06 per share in the first quarter of 1998.

(2) Charges for restructuring (\$6,244,000), impairment losses (\$23,057,000), purchased research and development (\$13,300,000), reduction of a deferred tax asset (\$10,000,000), and other noncash charges (\$1,815,000), reduced net earnings by \$51,411,000 or \$.76 per share in the fourth quarter of 1998.

(3) Charges for restructuring (\$12,605,000), various tax uncertainties (\$10,000,000), forward exchange contract loss (\$5,295,000), inventory reserves (\$5,576,000), and a government settlement (\$1,898,000) reduced net earnings by \$27,692,000 or \$.41 per share in the fourth quarter of 1997.

(4) Adjusted to give retroactive effect to 5% stock dividends in June 1998 and 1997.

16. SUBSEQUENT EVENTS

On March 26, 1999, the Company finalized the sale of Nicolitch, S.A., its French manufacturer of printed circuit boards to Leonische Drahtwerke AG. In connection with the sale, the Company received proceeds of approximately \$9,824,000 and recorded a noncash book loss of approximately (\$11,500,000). Nicolitch had net sales of \$24,000,000 and a net loss of (\$105,000) for 1998.

REPORT OF INDEPENDENT AUDITORS

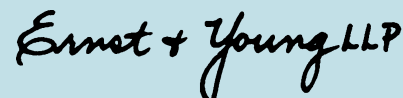
Board of Directors and Stockholders Vishay Intertechnology, Inc.

We have audited the accompanying consolidated balance sheets of Vishay Intertechnology, Inc. as of December 31, 1998 and 1997, and the related consolidated statements of operations, cash flows, and stockholders' equity for each of the three years in the period ended December 31, 1998. 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 in accordance with generally accepted auditing standards. Those standards 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Vishay Intertechnology, Inc. at December 31, 1998 and 1997, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 1998, in conformity with generally accepted accounting principles.

Philadelphia, Pennsylvania
February 8, 1999, except for Note 16,
as to which the date is March 26, 1999



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

INTRODUCTION AND BACKGROUND

The Company's sales and net earnings increased significantly through 1995 primarily as a result of its acquisitions. Following each acquisition, the Company implemented programs to take advantage of distribution and operating synergies among its businesses. This implementation was reflected in increases in the Company's sales and in the decline in selling, general, and administrative expenses as a percentage of the Company's sales.

However, beginning with the last quarter of 1995 and through 1998, the Company experienced a decline in demand for its commodity-related products (fixed resistors, MLCC and tantalum capacitors) which account for approximately 50% of the Company's revenues. Such decline in demand has resulted in a decrease in revenues, earnings and backlogs of these products. The Company believes this may be primarily a result of the worldwide slowdown in demand for tantalum and multi-layer ceramic chip capacitors, and the oversupply of such products resulting in price erosion.

In order to address the slowdown in demand and price erosion resulting from an oversupply of tantalum and multi-layer ceramic chip capacitors, the Company implemented a restructuring program beginning in 1996 that included the downsizing and closing of manufacturing facilities in North America and Europe. In connection with the restructuring, the Company incurred \$38,030,000 of pretax charges for the year ended December 31, 1996 relating to employee termination and facility closure costs. In 1997, the Company incurred \$12,605,000 of restructuring expenses relating to employee termination and facility closure costs in Europe. In 1998, the Company incurred \$6,244,000 of restructuring expenses. Depending on future economic conditions, the Company may continue to downsize or close existing facilities in North America, Europe or elsewhere.

The Company's strategy contemplates transferring some of its manufacturing operations from countries with high labor costs and tax rates, such as the United States, France and Germany, to Israel, Mexico, Portugal, the Czech Republic, Taiwan and the People's Republic of China in order to benefit from lower labor costs and, in the case of Israel, to take advantage of various government incentives, including government grants and tax incentives. The Company may further reduce its costs in the face of a decline in demand by accelerating the transfer of production to countries with lower labor costs and more favorable tax environments.

The Company realizes approximately 67.3% of its revenues outside the United States. As a result, fluctuations in currency exchange rates can significantly

affect the Company's reported sales and, to a lesser extent, earnings. Currency fluctuations impact the Company's net sales and other income statement amounts, as denominated in U.S. dollars, including other income as it relates to foreign exchange gains or losses. Generally, in order to minimize the effect of currency fluctuations on profits, the Company endeavors to:

1. borrow money in the local currencies and markets where it conducts business, and
2. minimize the time for settling intercompany transactions.

In connection with its day-to-day operations, the Company does not purchase foreign currency exchange contracts or other derivative instruments to hedge foreign currency exposures.

As a result of the increased production by the Company's operations in Israel over the past several years, the low tax rates in Israel (as compared to the statutory rate in the United States) have had the effect of increasing the Company's net earnings. The more favorable Israeli tax rates are applied to specific approved projects and normally continue to be available for a period of ten years or, if the investment in the project is over \$20 million, for a period of 15 years, which has been the case for most of the Company's projects in Israel since 1994. New projects are continually being introduced. In addition, the Israeli government offers certain incentive programs in the form of grants designed to increase employment in Israel. However, the Israeli government has recently scaled back or discontinued some of its incentive programs. Accordingly, there can be no assurance that in the future the Israeli government will continue to offer new incentive programs applicable to the Company or that, if it does, such programs will provide the same level of benefits the Company has historically received or that the Company will continue to be eligible to take advantage of them. Although the Company might be materially adversely affected if these incentive programs were no longer available to the Company for new projects, because a majority of the Company's projects in Israel already benefit from government incentive programs, the Company does not anticipate that any cutbacks in the incentive programs would have an adverse impact on its earnings and operations for at least several years.

Israeli government grants, recorded as a reduction of costs of products sold, were \$13,116,000 for the year ended December 31, 1998, as compared to \$11,352,000 for the prior year. If the Israeli government continues its grant and incentive programs, future benefits offered to the Company by the Israeli government will likely depend on the Company's continuing to increase capital investment and the number of the Company employees in Israel.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (CONTINUED)

Visbay Intertechnology, Inc.

RESULTS OF OPERATIONS

Income statement captions as a percentage of sales and the effective tax rates were as follows:

Year Ended December 31	1998	1997	1996
Costs of products sold	75.6%	76.3%	75.2%
Gross profit	24.4	23.7	24.8
Selling, general, and administrative expenses	14.9	12.2	12.9
Operating income	6.0	9.7	7.8
Earnings before income taxes	2.5	7.8	6.4
Effective tax rate	78.9	39.1	25.2
Net earnings	0.1	4.7	4.8

Year ended December 31, 1998 compared to

Year ended December 31, 1997

Net Sales

Net sales for the year ended December 31, 1998 increased \$447,526,000 or 39.8% from the prior year. The increase in net sales relates primarily to the acquisition of TEMIC, which became effective March 1, 1998. Net sales of TEMIC for the ten months ended December 31, 1998 included in the Company's reported sales were \$474,188,000. LPSC was acquired by Vishay effective July 1, 1997. LPSC's sales for the year ended December 31, 1998 were \$70,655,000 compared to \$38,290,000 for the six months ended December 31, 1997. Exclusive of TEMIC and LPSC, net sales would have decreased by \$97,317,000 or 8.6%. The strengthening of the U.S. dollar against foreign currencies for the year ended December 31, 1998 in comparison to the prior year, resulted in decreases in reported sales of \$16,131,000. Moreover, the Company's net sales of passive components and semiconductor components were negatively affected by substantial price erosion resulting from oversupply of tantalum and multi-layer chip capacitors and the economic downturn in Asia.

Costs of Products Sold

Costs of products sold for the year ended December 31, 1998 were 75.6% of net sales, as compared to 76.3% for the prior year. Gross profit, as a percentage of net sales, for the year ended December 31, 1998 increased from the comparable prior-year period mainly due to the acquisition of TEMIC. TEMIC reported gross profit margins of 30.1% for the ten months ended December 31, 1998. The passive components business gross profit margins were 22.5% for the year ended December 31, 1998 as compared to 24.0% for the prior year reflecting a weakness in the passive components business. Profitability for the passive components business was negatively affected by price erosion from an oversupply of tantalum and multi-layer chip capacitors and the depressed Asian market. The results for semiconductor components were also negatively affected by a decrease in demand for products in the semiconductor industry, adjustments of high inventory levels at distributors, the depressed Asian market, and a substantial price erosion.

Israeli government grants, recorded as a reduction of costs of products sold, were \$13,116,000 for the year ended December 31, 1998, as compared to \$11,352,000 for the prior year. Future grants and other incentive programs offered to the Company by the Israeli government will likely depend on the Company's continuing to increase capital investment and the number of the Company's employees in Israel. Deferred income at December 31, 1998 relating to Israeli government grants was \$59,264,000 as compared to \$59,300,000 at December 31, 1997.

Selling, General, and Administrative Expenses

Selling, general, and administrative expenses for the year ended December 31, 1998 were 14.9% of net sales, as compared to 12.2% for the prior year. The increased selling, general, and administrative expenses were prima-

rily due to the acquisition of TEMIC, for which selling, general, and administrative expenses were 19.6% for the ten months ended December 31, 1998.

Unusual Items

The Company incurred unusual items of \$29,301,000 for the year ended December 31, 1998. Approximately \$23,057,000 of these expenses relate to impairment losses related to certain joint ventures in China and Japan. The remaining \$6,244,000 of unusual items relate to the Company's restructuring of European operations (\$5,944,000) and closing of two U.S. sales offices (\$300,000). See Note 3 of the Notes to Consolidated Financial Statements for additional information on the Company's impairment losses and restructuring programs.

Purchased In-Process Technology

In connection with the acquisition of TEMIC, the Company expensed \$13.3 million representing purchased in-process technology that had not yet reached technological feasibility and had no alternative future use (see Note 2 of Notes to Consolidated Financial Statements).

The in-process technology acquired in the TEMIC acquisition was segmented into two categories, process technology and product technology. Process technology is the process by which multiple products can be manufactured. Three separate process technologies were identified: (i) Bondwireless, (ii) 178M Cell, and (iii) PIC .8 micron 15V. Product technology is the technology behind the development of products. TEMIC has three primary product categories, (i) Power MOS, (ii) Power IC, and (iii) Standard Products. Introduction of these processes, if successful, is expected to improve the efficiency and effectiveness of TEMIC's MOSFET products and introduce new IC technology which will reduce die size by approximately 66%. This should lower production costs per unit and increase margins. Introduction of the product technologies, if successful, is expected to optimize the performance of certain MOSFETs, diodes and power ICs and introduce new applications for certain of TEMIC's products. These research and development projects are expected to reach completion and begin generating revenues during periods ranging from 1999 to 2003. At the acquisition date, TEMIC's research and development projects ranged in completion from approximately 1% to 86% with total continuing research and development commitments to complete the projects of approximately \$7.4 million. These estimates are subject to change and, given the uncertainties of the development process, no assurances can be given that the deviations from these estimates will not occur. Additionally, these projects will require maintenance expenditures when and if they reach a state of technological and commercial feasibility.

Management believes the Company is positioned to complete each of the major research and development programs. However, there is risk associated with the completion of the projects, and there is no assurance that any project will meet either technological or commercial success. The substantial delay or outright failure of the TEMIC research and development could adversely impact the Company's financial condition.

The value assigned to purchased in-process research and development was determined by estimating the costs to develop TEMIC's purchased in-process technology into commercially viable products, estimating the resulting net cash flows from such projects, and discounting the net cash flows back to their present values. The revenue estimates used to value the in-process research and development were based on estimates of the relevant market sizes and growth factors, expected trends in technology and the nature and expected timing of new product introductions by the Company and its competitors. The estimates for costs of products sold, research and development, selling, general, and administrative expenses and income taxes were calculated as a percentage of revenue and were based on historical amounts and were adjusted to reflect competition and advancing technology in the industry.

The rates utilized to discount the net cash flows to their present value are based on weighted average cost of capital and venture capital rates of return. Given the nature of the risks associated with the estimated growth, prof-

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (CONTINUED)

itability and development projects, a discount rate of 20% was deemed appropriate for TEMIC's in-process projects. This discount rate is intended to be commensurate with the specific risks of achieving technological feasibility and the uncertainties in the economic estimates described above.

The estimates used by the Company in valuing in-process research and development were based on assumptions the Company believes to be reasonable but which are inherently uncertain and unpredictable. The Company's assumptions may be incomplete or inaccurate, and no assurances can be given that unanticipated events and circumstances will not occur. Accordingly, actual results may vary from the projected results. Any such variance may result in a material adverse effect on the financial condition and results of operations of the Company.

Interest Expense

Interest costs increased by \$30,219,000 for the year ended December 31, 1998, from the prior year due to the increase in bank borrowings necessary to fund the TEMIC and LPSC acquisitions. The Company had net borrowings of \$444,000,000 and \$130,000,000, respectively, from a group of banks to finance the acquisitions of TEMIC and LPSC.

Other Income

Other income decreased by \$3,737,000 for the year ended December 31, 1998 as compared to the prior year primarily due to reduced foreign exchange gains. Foreign exchange gains for the year ended December 31, 1998 were \$495,000 compared to \$3,657,000 for the year ended December 31, 1997. The Company also incurred losses of \$6,269,000 and \$5,295,000, in 1998 and 1997, respectively, relating to a forward exchange contract, which was entered into to set the purchase price in connection with the TEMIC acquisition, since the purchase price was denominated in German Marks and payable in U.S. Dollars.

Income Taxes

The effective tax rate for the year ended December 31, 1998 was 78.9% as compared to 39.1% for the prior year. The higher tax rate for the year ended December 31, 1998 was incurred primarily due to the nontax deductibility of the in-process research and development expense in the fourth quarter 1998 and a \$10,000,000 increase in a valuation allowance for a deferred tax asset for net operating loss carryforwards in Germany. Exclusive of the effect of special charges, the tax rate for the year ended December 31, 1998 would have been 29.0%. The continuing effect of low tax rates in Israel, as compared to the statutory rate in the United States, resulted in increases in net earnings of \$15,166,000 and \$10,685,000 for the years ended December 31, 1998 and 1997, respectively. The more favorable Israeli tax rates are applied to specific approved projects and normally continue to be available for a period of ten years or fifteen years.

Year ended December 31, 1997 compared to

Year ended December 31, 1996

Net Sales

Net sales for the year ended December 31, 1997 increased \$27,240,000 or 2.5% from the prior year. The increase in net sales relates primarily to the acquisition of LPSC, which became effective on July 1, 1997. Net sales of Vishay LPSC for the six months ended December 31, 1997 were \$38,290,000. Exclusive of LPSC, net sales would have decreased by \$11,050,000 or 1.0%. The strengthening of the U.S. dollar against foreign currencies for the year ended December 31, 1997 in comparison to the prior year, resulted in a decrease in reported sales of \$55,424,000. Net sales, exclusive of foreign currency fluctuations and the acquisition of LPSC, would have increased by 4.0% over the prior year.

Costs of Products Sold

Costs of products sold for the year ended December 31, 1997 were 76.3% of net sales, as compared to 75.2% for the prior year. Gross profit, as a percentage of net sales, for the year ended December 31, 1997 decreased

from the prior year mainly due to a difficult pricing environment and also, as part of the Company's fourth quarter 1997 restructuring program, recorded inventory writeoffs of \$5,576,000. Exclusive of the inventory writeoff, the gross profit, as a percentage of net sales, would have been 24.2% for the year ended December 31, 1997. The acquisition of LPSC did not have a significant impact on the gross margin percentage.

Israeli government grants, recorded as a reduction of costs of products sold, were \$11,352,000 for the year ended December 31, 1997, as compared to \$8,943,000 for the prior year. Future grants and other incentive programs offered to the Company by the Israeli government will likely depend on the Company's continuing to increase capital investment and the number of the Company's employees in Israel. Deferred income at December 31, 1997 relating to Israeli government grants was \$59,300,000.

Selling, General, and Administrative Expenses

Selling, general, and administrative expenses for the year ended December 31, 1997 were 12.2% of net sales, as compared to 12.9% for the prior year. LPSC's selling, general and administrative expenses did not have a significant impact on the percentage. Exclusive of LPSC's selling, general, and administrative expenses, the expenses decreased by \$8,611,000 as compared to the prior year. This decrease relates to the cost reduction program instituted in 1996.

Unusual Items

The Company incurred unusual items of \$14,503,000 for the year ended December 31, 1997. Approximately \$10,357,000 of these expenses relate to employee termination costs covering approximately 324 employees located in Germany and France. In addition, the Company recorded a charge of \$1,625,000 resulting from a judgment rendered by a French court against Sprague France, S.A. The Vishay subsidiary was ordered to make additional payments to certain workers laid off in the last half of 1996 as part of Vishay's restructuring programs. As of December 31, 1998, no payment has been made to the former employees. The Company also incurred an unusual item of \$1,898,000 relating to a settlement with the United States government representing reimbursements for overcharges relating to military products produced prior to 1993 at one of the Company's U.S. subsidiaries. The remaining \$623,000 relates to closing a facility in France. At December 31, 1997, \$11,982,000 of restructuring costs are included in other accrued expenses.

When fully implemented, the 1997 restructuring program is expected to reduce the Company's costs by approximately \$10,000,000 annually.

Interest Expense

Interest costs increased by \$1,411,000 for the year ended December 31, 1997 from the prior year due to the acquisition of LPSC. The Company borrowed \$130,000,000 from a group of banks to finance the acquisition of LPSC.

Other Income

Other income decreased by \$4,255,000 for the year ended December 31, 1997 from the prior year due to an unrealized noncash loss of \$5,295,000 relating to a forward exchange contract, which was entered into in connection with the TEMIC acquisition, the purchase price of which was denominated in German Marks and payable in U.S. Dollars.

Income Taxes

The effective tax rate for the year ended December 31, 1997 was 39.1% as compared to 25.2% for the prior year. The higher tax rate for the year ended December 31, 1997 was due to a charge of \$10,000,000 for various tax uncertainties in the fourth quarter of 1997. Without this charge, the effective tax rate for 1997 would have been 27.6%. The continuing effect of low tax rates in Israel, as compared to the statutory rate in the United States, has been to increase net earnings by \$10,685,000 and \$10,109,000 for the years ended December 31, 1997 and 1996, respectively. The more favorable Israeli tax rates are applied to specific approved projects and normally continue to be available for periods of either ten or fifteen years.

FINANCIAL CONDITION AND LIQUIDITY

Cash flows from operations were \$169,450,000 for the year ended December 31, 1998 compared to \$177,158,000 for the prior year. The decrease in cash flows from operations is primarily attributable to a decrease in net earnings for the year ended December 31, 1998 as compared to the year ended December 31, 1997. Net purchases of property and equipment for the year ended December 31, 1998 were \$151,682,000 compared to \$78,074,000 in the prior year. The increase in expenditures for property, plant, and equipment is primarily due to capital expenditures by TEMIC. Net cash provided by financing activities of \$450,408,000 for the year ended December 31, 1998 includes approximately \$550,000,000 used to finance the acquisition of TEMIC. In March 1998, the Company finalized the sale of the IC Division of TEMIC and received \$105,755,000.

The Company incurred restructuring expense of \$12,605,000 for the year ended December 31, 1997. Approximately \$10,357,000 of this expense related to employee termination costs covering approximately 324 employees located in Germany and France. As of December 31, 1998, approximately 173 of such employees have been terminated and \$6,158,000 of the termination costs have been paid. The restructuring plan is expected to be completed by December 31, 1999. In connection with the TEMIC acquisition, Vishay recorded restructuring liabilities of \$30,471,000 in connection with an exit plan that management began to formulate prior to the acquisition date. Approximately \$25,197,000 of these liabilities relates to employee termination costs covering approximately 498 technical, production, administrative and support employees located in the United States, Europe, and the Pacific Rim. The remaining \$5,274,000 relates to provisions for contract cancellations and other costs. As of December 31, 1998, 86 employees have been terminated and \$10,651,000 of the termination costs were paid. Additionally, \$960,000 of contract cancellation charges and other costs were paid. The balance of \$18,860,000 is reflected in other accrued expenses and is expected to be paid in the next year.

The Company's financial condition at December 31, 1998 is strong, with a current ratio of 3.02 to 1. The Company's ratio of long-term debt, less current portion, to stockholders' equity was .81 to 1 at December 31, 1998 and .36 to 1 at December 31, 1997.

On March 2, 1998, the Company and certain of its subsidiaries obtained a \$1.1 billion revolving credit facility made available to Vishay under the:

1. Vishay Intertechnology, Inc. \$825,000,000 Long-Term Revolving Credit Agreement, dated as of March 2, 1998 (the "LT Agreement"), and
2. Vishay Intertechnology, Inc. \$275,000,000 Short-Term Revolving Credit Agreement, dated as of March 2, 1998 (the "ST Agreement" and collectively with the LT Agreement, the "Loan Agreements") each by and among Vishay, Comerica Bank, NationsBanc Montgomery Securities LLC and the other banks signatory thereto (collectively, the "Banks"), and Comerica Bank, as administrative agent for the Banks (the "Agent"). The Loan Agreements replace all prior loans made to Vishay by the Banks.

The LT Agreement provides for an \$825,000,000 loan, comprising a revolving credit facility and a swing line facility that mature on March 2, 2003, subject to Vishay's right to request year-to-year renewals. The 364-day ST Agreement provides for a \$275,000,000 revolving credit facility that matures on March 1, 1999. This agreement was amended on December 29, 1998 to extend the maturity date to June 1, 1999, at which time the Company can request year-to-year renewals. Borrowings under the Loan Agreements will bear interest at variable rates based, at the option of Vishay, on the prime rate or a eurocurrency rate and in the case of any swing line advance, the quoted rate. The borrowings under the Loan Agreements are secured by certain pledges of stock in certain significant subsidiaries and indirect subsidiaries of Vishay and certain guaranties by significant subsidiaries. The Company is restricted from

paying cash dividends and must comply with certain financial covenants.

Management believes that available sources of credit, together with cash expected to be generated from operations, will be sufficient to satisfy the Company's anticipated financing needs for working capital and capital expenditures during the next twelve months.

YEAR 2000 COMPLIANCE

Many existing computer systems and software products, including hardware platforms and software applications used by the Company in its various divisions worldwide (a portion of which are provided by outside suppliers), accept only two-digit entries in the date code field. As a result, computer programs or hardware that have date-sensitive software or embedded chips may not properly distinguish 21st century dates from 20th century dates. This could result in system failure or miscalculations causing disruption of operations.

The Company has accorded to each of its divisions, including those in its U.S., Asian, Israeli and European facilities, responsibility for (i) assessment of each division's business information systems and related business processes used in its operations for year 2000 readiness and (ii) implementation of remediation in those areas where year 2000 issues exist. Since each of the Company's divisions has its own unique hardware and software applications, different approaches to the year 2000 issue have been required based upon the circumstances and requirements of each specific division. In some instances, for example, specific divisions have hired external contractors to assist in addressing the year 2000 issues while in other instances, internal staff have focused on remediation of the systems. Where necessary, upgrades to year 2000 compliant versions of third-party software have been purchased. In addition, the Company has begun to use the business application software of SAP for its Roederstein (U.S.) operations and for TELEFUNKEN's operations to address some of the issues of year 2000 compliance. While the Company has not yet fully tested all its systems to determine whether they are year 2000 compliant, each division is on track in bringing its systems into compliance. The Company is also well underway in bringing its Asian and Israeli computer systems into year 2000 compliance. Management does not believe the Company will suffer any material loss of customers or other material adverse effects as a result of any modifications that are being implemented to make its systems year 2000 compliant.

The Company is also assessing the possible effect on its operations of the year 2000 readiness of critical suppliers of products and services. The Company's reliance on its key suppliers, and therefore on the proper functioning of their information systems and software, is increasing, and there can be no assurance that another company's failure to address year 2000 issues could not have an adverse effect on the Company.

The Company currently estimates the total cost of its Year 2000 project to be \$1,400,000. At December 31, 1998, the Company has incurred approximately \$1,000,000 of costs in connection with its Year 2000 project.

The Company believes that it is unlikely to experience a material adverse impact on its financial condition or results of operations due to year 2000 compliance issues. However, since the assessment process is ongoing, year 2000 complications are not fully known, and potential liability issues are not clear, the full potential impact of the year 2000 on the Company is not known at this time.

Management of the Company believes it has an effective program in place to resolve the year 2000 issues in a timely manner. As noted above, the Company has not yet completed all necessary phases of the year 2000 program. In the event that the Company's systems are not rendered year 2000 compliant in a timely manner, the Company may experience significant disruptions in its operations including taking customer orders, manufacturing and shipping products, invoicing customers or collecting payments. In addition, disruptions in the economy generally resulting from year 2000 issues could also materially affect the Company. The Company could be subject to litigation

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (CONTINUED)

for computer systems product failure, for example, equipment shutdown or failure to properly date business records. The amount of potential liability and lost revenue cannot be reasonably estimated at this time.

The Company has contingency plans for certain critical applications and is working on such plans for others. These contingency plans involve, among other actions, manual workarounds and adjusting staffing strategies.

EURO CONVERSION

On January 1, 1999, 11 of the 15 member countries of the European Union adopted the euro as their common legal currency and established fixed conversion rates between their existing sovereign currencies and the euro. The Company is currently evaluating issues raised by the introduction and initial implementation of the euro on January 1, 2002. The Company does not expect costs of system modifications to be material, nor does it expect the introduction and use of the euro to materially and adversely affect its financial condition or results of operations. The Company will continue to evaluate the impact of the euro introduction.

INFLATION

Normally, inflation does not have a significant impact on the Company's operations. The Company's products are not generally sold on long-term contracts. Consequently, selling prices, to the extent permitted by competition, can be adjusted to reflect cost increases caused by inflation.

MARKET RISK AND RISK MANAGEMENT POLICIES

The Company's cash flows and earnings are subject to fluctuations resulting from changes in foreign currency exchange rates and interest rates. The Company manages its exposure to these market risks through internally established policies and procedures and, when deemed appropriate, through the use of derivative financial instruments. The Company's policy does not allow speculation in derivative instruments for profit or execution of derivative instrument contracts for which there are no underlying exposures. The Company does not use financial instruments for trading purposes and is not a party to any leveraged derivatives. The Company monitors its underlying market risk exposures on an ongoing basis and believes that it can modify or adapt its hedging strategies as needed.

The Company is exposed to changes in U.S. dollar LIBOR interest rates on its floating rate revolving credit facility. At December 31, 1998, the outstanding balance under this facility was \$777,400,000. On a selective basis, the Company from time-to-time, enters into interest rate swap or cap agreements to reduce the potential negative impact increases in interest rates could have on its outstanding variable rate debt. The impact of interest rate instruments on the Company's results of operations in each of the three years ended December 31, 1998 was not significant. See Notes 5 and 12 of the Notes to Consolidated Financial Statements for components of the Company's long-term debt and interest rate swap arrangements.

In 1998, the Company entered into an interest rate swap transaction with a term of five years, beginning in August 1998. Pursuant to these agreements, the Company paid a fixed interest rate of 6.35% on a notional amount of \$300,000,000 and received interest on the \$300,000,000 notional amount based on a three-month LIBOR rate set quarterly beginning in 1998. The fair value of these swap transactions at December 31, 1998 was (\$7,572,000).

The Company is exposed to foreign currency exchange rate risks. The Company's significant foreign subsidiaries are located in Germany, France, Israel and the Far East. The Company continues to reduce its exposure to foreign currencies by borrowing funds in local currency to balance its foreign assets and liabilities. The Company in most locations, has introduced a "netting" policy where subsidiaries pay all intercompany balances within thirty days.

However, in the normal course of business, the financial position of the Company is routinely subjected to a variety of risks, including market risks

associated with interest rate movements, currency rate movements on non-U.S. dollar denominated assets and liabilities and collectibility of accounts receivable. The Company does not anticipate material losses in these areas.

SAFE HARBOR STATEMENT

From time to time, information provided by the Company, including but not limited to statements in this report, or other statements made by or on behalf of the Company, may contain "forward-looking" information within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Such statements involve a number of risks and uncertainties. The Company's actual results could differ materially from those discussed in the forward-looking statements. The cautionary statements set forth below identify important factors that could cause actual results to differ materially from those in any forward-looking statements made by or on behalf of the Company.

- The Company offers a broad variety of products and services to its customers. Changes in demand for, or in the mix of, products and services comprising revenues could cause actual operating results to vary from those expected.
- The Company's future operating results are dependent, in part, on its ability to develop, produce and market new and innovative products, to convert existing products to surface mount devices and to customize certain products to meet customer requirements. There are numerous risks inherent in this complex process, including the need for the Company to timely bring to market new products and applications to meet customers' changing needs.
- The Company operates in a highly competitive environment, which includes significant competitive pricing pressures and intense competition for entry into new markets.
- A slowdown in demand for passive electronic components or recessionary trends in the global economy in general or in specific countries or regions where the Company sells the bulk of its products, such as the U.S., Germany, France or the Pacific Rim, could adversely impact the Company's results of operations. This factor was particularly evident in 1998 and appears to be continuing in early 1999.
- Many of the orders in the Company's backlog may be canceled by its customers without penalty. Customers may on occasion double and triple order components from multiple sources to ensure timely delivery when backlog is particularly long. The Company's results of operations may be adversely impacted if customers were to cancel a material portion of such orders.
- Approximately 67% of the Company's revenues are derived from operations and sales outside the United States. As a result, currency exchange rate fluctuations, inflation, changes in monetary policy and tariffs, potential changes in laws and regulations affecting the Company's business in foreign jurisdictions, trade restrictions or prohibitions, intergovernmental disputes, increased labor costs and reduction or cancellation of government grants, tax benefits or other incentives could impact the Company's results of operations.
- Specifically, as a result of the increased production by the Company's operations in Israel over the past several years, the low tax rates in Israel, as compared to the statutory rates in the U.S., have had the effect of increasing the Company's net earnings. In addition, the Company takes advantage of certain incentive programs in Israel in the form of grants designed to increase employment in Israel. Any significant increase in the Israeli tax rates or reduction or elimination of any of the Israeli grant programs could have an adverse impact on the Company's results of operations.
- The Company may experience underutilization of certain plants and factories in high labor cost regions and capacity constraints in plants and factories located in low labor cost regions, resulting initially in production inefficiencies and higher costs. Such costs include those associated with work

force reductions and plant closings in the higher labor cost regions and start-up expenses, manufacturing and construction delays, and increased depreciation costs in connection with the start of production in new plants and expansions in lower labor cost regions. Moreover, capacity constraints may limit the Company's ability to continue to meet demand for any of the Company's products. During 1998, restructuring costs were particularly high as a result of the Company's accelerated effort to streamline operations in response to the continued weakness in the international electronic components market.

- When the Company restructures its operations in response to changing economic conditions, particularly in Europe, labor unrest or strikes may occur, which could have an adverse effect on the Company.
- The Company's results of operations may be adversely impacted by:
 1. difficulties in obtaining raw materials, supplies, power, natural resources and any other items needed for the production of the Company's products;
 2. the effects of quality deviations in raw materials, particularly tantalum powder, palladium and ceramic dielectric materials; and
 3. the effects of significant price increases for tantalum or palladium, or an inability to obtain adequate supplies of tantalum or palladium from the limited number of suppliers.
- The Company's historic growth in revenues and net earnings has resulted in large part from its strategy to expand through acquisitions. However, there is no assurance that the Company will find or consummate transactions with suitable acquisition candidates in the future. From time to time, when the Company is in the process of pursuing a strategic acquisition, the Company or the acquisition target may feel compelled for securities and other legal reasons to announce the potential acquisition or the Company's desire to enter into a certain market prior to entering into formal agreements. As a result, there can be no assurance that the Company will consummate any such acquisition.
- The Company's strategy also focuses on the reduction of selling, general, and administrative expenses through the integration or elimination of redundant sales offices and administrative functions at acquired companies and achievement of significant production cost savings through the transfer and expansion of manufacturing operations to lower cost regions such as Israel, Mexico, Portugal, the Czech Republic, Taiwan and the People's Republic of China. The Company's inability to achieve any of these goals could have an adverse effect on the Company's results of operations.
- The Company may be adversely affected by the costs and other effects associated with:
 1. legal and administrative cases and proceedings, whether civil, such as environmental and product-related, or criminal;
 2. settlements, investigations, claims, and changes in those items;
 3. developments or assertions by or against the Company relating to intellectual property rights and intellectual property licenses; and
 4. adoption of new, or changes in, accounting policies and practices and the application of such policies and practices.
- The Company's results of operations may also be affected by:
 1. changes within the Company's organization, particularly at the executive officer level, or in compensation and benefit plans; and
 2. the amount, type and cost of the financing which the Company maintains, and any changes to the financing.
- The inherent risk of environmental liability and remediation costs associated with the Company's manufacturing operations may result in large and unforeseen liabilities.
- The Company's operations may be adversely impacted by:
 1. the effects of war or severe weather or other acts of God on the Company's operations, including disruptions at manufacturing facilities;
 2. the effects of a disruption in the Company's computerized ordering systems; and

3. the effects of a disruption in the Company's communications systems.
- Management of the Company believes it has an effective program in place to resolve the year 2000 issues in a timely manner. As noted previously, the Company has not yet completed all necessary phases of the year 2000 program. In the event that the Company's systems are not rendered year 2000 compliant in a timely manner, the Company may experience significant disruptions in its operations including taking customer orders, manufacturing and shipping products, invoicing customers or collecting payments. In addition, disruptions in the economy generally resulting from year 2000 issues could also materially affect the Company. The Company could be subject to litigation for computer systems' product failure, for example, equipment shutdown or failure to properly date business records. The amount of potential liability and lost revenue cannot be reasonably estimated at this time.

COMMON STOCK MARKET PRICES

	Calendar 1998		Calendar 1997	
	High	Low	High	Low
First Quarter	\$ 22.92	\$ 18.75	\$ 23.81	\$ 19.62
Second Quarter	\$ 23.45	\$ 17.26	\$ 29.36	\$ 19.50
Third Quarter	\$ 18.38	\$ 10.00	\$ 30.36	\$ 22.09
Fourth Quarter	\$ 17.19	\$ 9.19	\$ 26.67	\$ 17.62

The Company's Common Stock is listed on the New York Stock Exchange under the symbol VSH. The table shown above sets forth the high and low sales prices for the Company's Common Stock as reported on the New York Stock Exchange Composite Tape for the quarterly periods within the 1998 and 1997 calendar years indicated. Stock prices have been restated to reflect stock dividends. The Company does not currently pay cash dividends on its capital stock. Its policy is to retain earnings to support the growth of the Company's business and the Company does not intend to change this policy at the present time. In addition, the Company is restricted from paying cash dividends under the terms of the Company's revolving credit agreements (see Note 5 to the consolidated financial statements). Holders of record of the Company's Common Stock totaled approximately 2,030 at March 26, 1999.

On November 27, 1995, the Company commenced a stock repurchase program pursuant to which the Company was authorized to repurchase up to 750,000 shares of its Common Stock for an aggregate amount not to exceed \$30 million. The purchases of Common Stock by the Company under the repurchase program are made in accordance with the rules of the Securities and Exchange Commission and at the discretion of management. As of December 31, 1995, the Company had repurchased 110,000 shares at an approximate cost of \$3,578,000. No repurchases were made in 1996, 1997, or 1998.

FINANCIAL SUMMARY

Summary of Operations (in thousands, except per share amounts)	As of and for the Year ended December 31			
	1998	1997	1996	1995
Net sales	\$ 1,572,745	\$ 1,125,219	\$ 1,097,979	\$ 1,224,416
Costs of products sold	1,189,107	858,020	825,866	902,518
Gross profit	383,638	267,199	272,113	321,898
Selling, general, and administrative expenses	234,840	136,876	141,765	158,821
Amortization of goodwill	12,272	7,218	6,494	6,461
Unusual items	42,601	14,503	38,030	4,200
Operating margin	93,925	108,602	85,824	152,416
Other income (expense):				
Interest expense	(49,038)	(18,819)	(17,408)	(29,433)
Other	(6,051)	(2,314)	1,941	(9)
Total other income (expense)	(55,089)	(21,133)	(15,467)	(29,442)
Earnings before income taxes and cumulative effect of accounting change	38,836	87,469	70,357	122,974
Income taxes	30,624	34,167	17,741	30,307
Earnings before cumulative effect of accounting change	8,212	53,302	52,616	92,667
Cumulative effect of accounting change	—	—	—	—
Net earnings	\$ 8,212	\$ 53,302	\$ 52,616	\$ 92,667
Earnings per share:				
Basic	\$ 0.12	\$ 0.79	\$ 0.78	\$ 1.47
Diluted	\$ 0.12	\$ 0.79	\$ 0.78	\$ 1.47
Shares used in computing earnings per share:				
Basic	67,554	67,534	67,537	62,857
Diluted	67,625	67,682	67,582	62,892

Financial Data (in thousands, except ratios)

Cash and cash equivalents	\$ 113,729	\$ 55,263	\$ 20,945	\$ 19,584
Working capital	639,783	455,134	434,199	411,286
Current ratio	3.02	3.38	3.27	2.80
Property and equipment — net	997,067	709,142	710,662	669,228
Capital expenditures	151,682	78,074	136,276	165,699
Depreciation and amortization	127,947	81,874	77,247	69,547
Total assets	2,462,744	1,719,648	1,558,515	1,543,331
Long-term debt	814,838	347,463	229,885	228,610
Stockholders' equity	1,002,519	959,648	945,230	907,853

Note: This table should be read in conjunction with the related consolidated financial statements and accompanying notes and management's discussion and analysis of financial condition and results of operations. Includes the results of TEMIC from March 1, 1998, the results of Lite-On Power Semiconductor Corporation from July 1, 1997, the results of Vitramon from July 1, 1994, the results of Roederstein from January 1, 1993 and the results of the businesses acquired from Sprague Technologies, Inc. from January 1, 1992. Earnings per share amounts and weighted average shares outstanding have been retroactively restated for stock dividends and a 2-for-1 stock split in June 1995. Basic and diluted earnings per share for 1993 includes \$0.03 for the cumulative effect of an accounting change for income taxes.

As of and for the Year ended December 31						As of and for the Six Months ended December 31	As of and for the Year ended June 30
1994	1993	1992	1991	1990	1989	1988	1988
\$ 987,837	\$ 856,272	\$ 664,226	\$ 442,283	\$ 445,596	\$ 415,619	\$ 175,820	\$ 108,951
748,135	663,239	508,018	318,166	312,925	290,801	123,802	68,552
239,702	193,033	156,208	124,117	132,671	124,818	52,018	40,399
137,124	118,906	101,327	75,973	77,740	75,423	33,712	26,430
4,609	3,294	2,380	1,695	1,552	1,502	551	—
—	(562)	—	3,700	2,441	1,846	—	—
97,969	71,395	52,501	42,749	50,938	46,047	17,755	13,969
(24,769)	(20,624)	(19,110)	(15,207)	(19,426)	(21,068)	(9,577)	(2,351)
916	123	4,533	(289)	2,344	1,439	3,462	9,778
(23,853)	(20,501)	(14,577)	(15,496)	(17,082)	(19,629)	(6,115)	7,427
74,116	50,894	37,924	27,253	33,856	26,418	11,640	21,396
15,169	8,246	7,511	6,363	10,655	8,651	3,557	5,879
58,947	42,648	30,413	20,890	23,201	17,767	8,083	15,517
—	1,427	—	—	—	—	—	—
\$ 58,947	\$ 44,075	\$ 30,413	\$ 20,890	\$ 23,201	\$ 17,767	\$ 8,083	\$ 15,517
\$ 1.04	\$ 0.81	\$ 0.69	\$ 0.49	\$ 0.59	\$ 0.48	\$ 0.22	\$ 0.42
\$ 1.04	\$ 0.81	\$ 0.67	\$ 0.49	\$ 0.58	\$ 0.48	\$ 0.22	\$ 0.42
56,838	54,183	44,081	42,499	39,052	36,640	36,866	36,829
56,838	54,183	49,433	42,499	45,846	36,640	36,866	36,829
\$ 26,876	\$ 10,949	\$ 15,994	\$ 14,438	\$ 16,306	\$ 27,779	\$ 29,761	\$ 23,476
328,322	205,806	145,327	128,733	120,384	115,945	118,990	52,501
2.41	2.09	2.02	2.65	2.42	2.35	2.50	2.21
543,402	422,668	271,619	171,951	166,346	150,912	145,723	35,135
91,571	79,377	49,801	26,660	28,999	21,605	13,585	864
57,742	48,578	36,062	27,056	26,157	22,288	9,494	4,492
1,345,070	950,670	661,643	448,771	440,656	419,958	409,487	179,353
402,337	266,999	139,540	127,632	140,212	186,182	202,551	26,974
565,088	376,503	346,625	201,366	177,839	117,984	104,488	94,529

VISHAY INTERTECHNOLOGY, INC.

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CORPORATE DIRECTORY

BOARD OF DIRECTORS

Dr. Felix Zandman

Chairman of the Board
Chief Executive Officer
Vishay Intertechnology, Inc.

Avi D. Eden

Vice Chairman of the Board
Executive Vice President
Vishay Intertechnology, Inc.

Robert A. Freece

Senior Vice President
Vishay Intertechnology, Inc.

Richard N. Grubb

Executive Vice President
Treasurer, Chief Financial Officer
Vishay Intertechnology, Inc.

Eliyahu Hurvitz

President and Chief Executive Officer
Teva Pharmaceutical Industries, Ltd.

Abraham Inbar

Senior Vice President
Vishay Intertechnology, Inc.

Dr. Gerald Paul

President
Chief Operating Officer
Vishay Intertechnology, Inc.

Luella B. Slaner

Investor

Dr. Edward B. Shils

George W. Taylor Professor Emeritus
of Entrepreneurial Studies
The Wharton School
University of Pennsylvania

Mark I. Solomon

Founder and Chairman
CMS Companies

Jean-Claude Tiné

Investor and
Former Chairman of the Board
Sfernice, S.A.

HONORARY CHAIRMAN OF THE BOARD

Alfred P. Slaner

(Deceased March 14, 1996)

CORPORATE OFFICERS

Dr. Felix Zandman

Chairman of the Board
Chief Executive Officer

Avi D. Eden

Vice Chairman of the Board
Executive Vice President

Dr. Gerald Paul

President
Chief Operating Officer

Richard N. Grubb

Executive Vice President
Treasurer, Chief Financial Officer

Robert A. Freece

Senior Vice President

Abraham Inbar

Senior Vice President

Henry V. Landau

Vice President

William J. Spires

Vice President, Secretary

ANNUAL MEETING

May 20, 1999 at 10:30 a.m.
Four Seasons Hotel
South Ballroom
Lobby Level
One Logan Square
Philadelphia, PA 19103

QUARTERLY REPORT MAILINGS

Shareholders owning Vishay stock indirectly (through a bank, broker, or nominee who is a registered holder) can receive our reports directly and promptly from the Company at the same time we mail to shareholders of record. To be placed on Vishay's mailing list, call 610/644-1300, Ext. 2314. Shareholders with access to the Internet can find the quarterly report, press releases, and other financial documents at <http://www.vishay.com>.

STOCKHOLDERS' INFORMATION

Independent Auditors

Ernst & Young LLP
Philadelphia, PA

Transfer Agent and Registrar

American Stock Transfer & Trust Company
New York, NY

Stock Exchange Listings

New York Stock Exchange
Symbol: VSH
Midwest Stock Exchange
Chicago Board of Options Exchange

SEC FORM 10-K

A copy of the Company's Form 10-K Annual Report for the year ended December 31, 1998, filed with the Securities and Exchange Commission, may be obtained by stockholders without charge by writing to the Investor Relations Department, Vishay Intertechnology, Inc., 63 Lincoln Highway, Malvern, PA 19355-2120 or through Vishay's website at <http://www.vishay.com>.



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