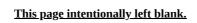
# UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

## FORM 10-K

⋈ ANNUAL REPORT PURSUANT	TO SECTION 13 OR 15(d) Of For the fiscal year ended Decen		CHANGE	ACT OF 1934
☐ TRANSITION REPORT PURSUAN Fo	or TT TO SECTION 13 OR 15(d) r the transition period from		EXCHANG	GE ACT OF 1934
	Commission file number	1-7416		
	Vishay Intertechnol kact name of registrant as specifi			
<b>Delaware</b> (State or other jurisdiction of incorporation or organization)		3 (IRS employ	<b>8-1686453</b> yer identifi	
	63 Lancaster Avenu Malvern, Pennsylvania 19 (Address of principal executi	355-2143		
(Re	(610) 644-1300 gistrant's telephone number, inc	uding area code)		
Securi <b>Common Stock, \$0.10 par value</b> (Title of class)	ities registered pursuant to Secti	` '	k Stock Ex	9
Securities	s registered pursuant to Section 1	2(g) of the Act: <b>None</b>		
Indicate by check mark if the registrant is a well-known seasoned issuer, a	s defined in Rule 405 of the Securiti	es Act. Yes 🗵 No 🗌		
Indicate by check mark if the registrant is not required to file reports pursu <b>Note</b> – Checking the box above will not relieve any registrant required to			eir obligatior	ns under those Sections.
Indicate by check mark whether the registrant (1) has filed all reports requishorter period that the registrant was required to file such reports), and (2)				
Indicate by check mark whether the registrant has submitted electronical Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding			-	
Indicate by check mark if disclosure of delinquent filers pursuant to Item registrant's knowledge, in definitive proxy or information statements income				
Indicate by check mark whether the registrant is a large accelerated filer "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the B		ated filer, or a smaller reportin	ig company.	See definitions of "large accelerated filer,"
Large accelerated filer	$\boxtimes$	Accelerated filer		
Non-accelerated filer		Smaller reporting company	7	
Indicate by checkmark whether the registrant is a shell company (as define	ed in Rule 12b-2 of the Act). <b>Yes</b>	No ⊠		
The aggregate market value of the voting stock held by non-affiliates comrecently completed second fiscal quarter (\$9.43 on June 30, 2012), ass \$1,234,000,000. There is no non-voting stock outstanding.				
As of February 18, 2013, registrant had 131,266,088 shares of its common	a stock and 12,129,227 shares of its	Class B common stock outstand	ding.	
DOC	CUMENTS INCORPORATED E	Y REFERENCE		
Portions of the registrant's definitive proxy statement, which will	· ·	mber 31, 2012, are incorpo	rated by re	ference into Part III.
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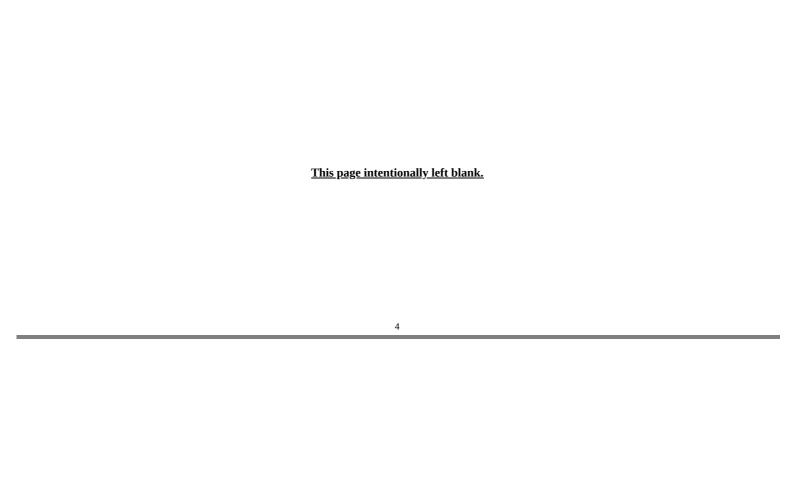


# **Vishay Intertechnology, Inc.** Form 10-K for the year ended December 31, 2012

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#### PART I

## Item 1. BUSINESS

#### **Our Business**

Vishay Intertechnology, Inc. ("Vishay," the "Company," "we," "us," or "our") is a leading global manufacturer and supplier of discrete semiconductors and passive components. Semiconductors include MOSFETs, diodes, and optoelectronic components. Passive components include resistive products, capacitors, and inductors. Discrete semiconductors and passive components are essential elements of virtually every type of electronic circuit. They support the microprocessor chips and other integrated circuits ("ICs") that coordinate and control the functions of electronic devices and equipment. We offer our customers "one-stop shop" access to one of the most comprehensive electronic component product lines of any manufacturer in the United States, Europe, and Asia.

Our semiconductor components are used for a wide variety of functions, including power control, power conversion, power management, signal switching, signal routing, signal blocking, signal amplification, two-way data transfer, one-way remote control, and circuit isolation. Our passive components are used to restrict current flow, suppress voltage increases, store and discharge energy, control alternating current ("AC") and voltage, filter out unwanted electrical signals, and perform other functions. Our components are used in virtually every type of product that contains electronic circuitry, in the industrial, computing, automotive, consumer, telecommunications, power supplies, military, aerospace, and medical markets.

On July 6, 2010, we completed the spin-off of our measurements and foil resistor businesses into an independent, publicly-traded company named Vishay Precision Group, Inc. ("Vishay Precision Group" or "VPG") through a tax- free stock dividend to our stockholders.

## The Vishay Story

In the 1950's, the late Dr. Felix Zandman, Vishay's founder, was issued patents for his PhotoStress® coatings and instruments, used to reveal and measure the distribution of stresses in structures such as airplanes and cars under live load conditions. His research in this area led him to develop Bulk Metal® foil resistors – ultra-precise, ultra-stable resistors with performance far beyond any other resistor available to date.

In 1962, Dr. Zandman, with a loan from the late Alfred P. Slaner, founded Vishay to develop and manufacture Bulk Metal foil resistors. Concurrently, J.E. Starr developed foil resistance strain gages, which also became part of Vishay. Throughout the 1960's and 1970's, Vishay established itself as a technical and market leader in foil resistors, PhotoStress products, and strain gages. These products became part of Vishay Precision Group, which was spun off on July 6, 2010.

In 1985, Vishay began to expand its product line through various strategic acquisitions, including the resistor companies Dale Electronics, Draloric Electronic, and Sfernice. In the early 1990's, Vishay applied its acquisition strategy to the capacitor market, with the major acquisitions of Sprague Electric, Roederstein, and Vitramon. In 2002, Vishay acquired BCcomponents, the former passive components business of Philips Electronics and Beyschlag, which greatly enhanced Vishay's global market position in passive components. Over the years, we have made several smaller passive components acquisitions to gain market share, penetrate different geographic markets, enhance new product development, round out our product lines, or grow our high margin niche businesses. These include Electro-Films, Cera-Mite, and Spectrol in 2000; Tansitor and North American Capacitor Company (Mallory) in 2001; the thin film interconnect business of Aeroflex in 2004; Phoenix do Brasil in 2006; the wet tantalum capacitor business of KEMET Corporation in 2008; and the resistor businesses of Huntington Electric in 2011. On January 13, 2012, we acquired HiRel Systems, a leading supplier of high reliability transformers, inductors, coils, and power conversion products.

In the late 1990's, Vishay began expanding its product lines to include discrete semiconductors. In 1998, Vishay acquired the Semiconductor Business Group of TEMIC, which included Telefunken and an 80.4% interest in Siliconix, producers of MOSFETs, RF transistors, diodes, optoelectronics, and power and analog switching integrated circuits. Vishay's next semiconductor acquisition came in 2001, with the purchase of the infrared components business of Infineon Technologies, which was followed the same year by Vishay's acquisition of General Semiconductor, a leading global manufacturer of rectifiers and diodes. In 2005, Vishay made a successful tender offer for the minority interest in Siliconix. In 2007, Vishay acquired the Power Control Systems business of International Rectifier, further enhancing our product offerings. These acquisitions propelled Vishay into the top ranks of discrete semiconductor manufacturers.

We also acquired several businesses as part of our Measurements Group's strategy of vertical market integration. The measurements business became part of VPG, which was spun off on July 6, 2010.

We continue to implement the vision, strategy, and culture articulated by Dr. Zandman as we continue to work tirelessly to enhance value for our stockholders.

Vishay was incorporated in Delaware in 1962 and maintains its principal executive offices at 63 Lancaster Avenue, Malvern, Pennsylvania 19355-2143. Our telephone number is (610) 644-1300.

## **Our Competitive Strengths**

#### Global Technology Leader

We were founded based on the inventions of Dr. Felix Zandman and we continue to emphasize technological innovation as a driver of growth. Many of our products and manufacturing techniques, technologies, and packaging methods have been invented, designed, and developed by Dr. Zandman, our engineers, and our scientists. We are currently a worldwide technology and market leader in wirewound and other power resistors, leaded film resistors, thin film SMD resistors, wet and conformal-coated tantalum capacitors, capacitors for power electronics, power rectifiers, low-voltage power MOSFETs, and infrared components.

## Research and Development Provides Customer-Driven Growth Solutions

We maintain strategically placed application and product support centers where proximity to customers and our manufacturing locations enables us to more easily gauge and satisfy the needs of local markets. The breadth of our product portfolio along with the proximity of our field application engineers to customers provides increased opportunities to have our components selected and designed into new end products by customers in all relevant market segments. We also maintain research and development personnel and promote programs at a number of our production facilities to develop new products and new applications of existing products, and to improve manufacturing processes and technologies. We plan to grow our business and increase earnings per share, in part, through accelerating the development of new products and technologies and increasing design-in opportunities by expanding our technical resources for providing solutions to customers.

## **Operational Excellence**

We are a leading manufacturer in our industry, with a broad product portfolio, access to a wide range of end markets and sales channels, and geographic diversity. We have solid, well-established relationships with our customers and strong distribution channels. Our senior management team is highly experienced, with deep industry knowledge. Over the past two decades, our management team has successfully restructured our company and integrated several acquisitions. We can adapt our operations to changing economic conditions, as demonstrated by our ability to remain profitable and generate cash through the volatile economic cycle of the recent past.

## **Broad Market Penetration**

We have the broadest product line of discrete semiconductors and passive components among our competitors. Our broad product portfolio allows us to penetrate markets in all industry segments and all regions, which reduces our exposure to a particular end market or geographic location. We plan to grow our business and increase earnings per share, in part, through improving market penetration by expanding manufacturing facilities for our most successful products, increasing technical resources, and developing markets for specialty products in Asia. Our net revenues, excluding VPG, for the following applicable periods were attributable to customers in the following regions:

	Years	Years Ended December 31,			
	2012	2011	2010		
Europe	37%	40%	36%		
Asia	37%	38%	41%		
Americas	26%	22%	23%		

The share of net revenues, excluding VPG, by end market was as follows:

	Years	Years Ended December 31,		
	2012	2011	2010	
Industrial	29%	28%	24%	
Automotive	20%	18%	15%	
Computing	15%	18%	21%	
Telecommunications	11%	12%	12%	
Power Supplies	7%	8%	10%	
Consumer Products	7%	7%	9%	
Military and Aerospace	7%	6%	6%	
Medical	4%	3%	3%	

## Strong Track Record of Growth through Acquisitions

Since 1985, we have expanded our product line through various strategic acquisitions, growing from a small manufacturer of precision resistors and resistance strain gages to one of the world's largest manufacturers and suppliers of a broad line of electronic components. We have successfully integrated the acquired companies within our existing management and operational structure, reducing selling, general, and administrative expenses through the integration or elimination of redundant sales and administrative functions, creating manufacturing synergies, while improving customer service. We plan to grow our business and increase earnings per share, in part, through targeted acquisitions. We often target high margin niche business acquisitions, such as Huntington Electric and HiRel Systems, which we acquired in 2011 and 2012, respectively. These acquisitions accounted for 2.8% of 2012 revenues and have margins above our corporate average.

## Strong Free Cash Flow Generation

We refer to the amount of cash generated from operations in excess of our capital expenditure needs and net of proceeds from the sale of assets as "free cash." Due to our strong operational management, cost control measures, efficient capital expenditures, broad product portfolio, and strong market position, we have generated positive "free cash" in each of the past 16 years and "free cash" in excess of \$80 million in each of the past 11 years. We expect the benefits of our restructuring and other cost cutting measures in prior periods and continued cost control activities (see "Cost Management" included in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations") will continue our "free cash" generation going forward.

#### Financial Strength and Flexibility

As of December 31, 2012, our cash and short-term investment balance exceeded our debt balance by \$599.6 million. We also maintain a credit facility, which provides a revolving commitment of up to \$528 million through December 1, 2015, of which \$431.3 million was available as of December 31, 2012. Our net cash position and short-term investment balance, available revolving commitment, and strong "free cash" flow generation provide financial strength and flexibility and reduces our exposure to future economic uncertainties.

## **Our Key Challenges**

#### **Economic Environment**

Our business and operating results have been and will continue to be impacted by the global economy and the local economies in which our customers operate. Our revenues are dependent on end markets that are impacted by consumer and industrial demand, and our operating results can be adversely affected by reduced demand in those markets.

## Competition

Our business is highly competitive worldwide, with low transportation costs and few import barriers. Our major competitors, some of which are larger than us, have significant financial resources and technological capabilities. To continue to grow our business successfully, we need to continually develop, introduce, and market new and innovative products, to modify existing products, to respond to technological change, and to customize certain products to meet customer requirements.

#### Continuous Innovation and Protection of Intellectual Property

Our ability to compete effectively with other companies depends, in part, on our ability to maintain the proprietary nature of our technology. Although we have been awarded, have filed applications for, or have licenses to use, numerous patents in the United States and other countries, there can be no assurance concerning the degree of protection afforded by these patents or the likelihood that pending patents will be issued.

For a more detailed discussion of the risks and uncertainties inherent in our business, which could materially and adversely affect our business, results of operations or financial condition, see "Risk Factors" in Item 1A.

## Continuing to Grow through Acquisitions

Our long-term historical growth in revenues and net earnings has resulted in large part from our strategy of growth through acquisitions. For this strategy to remain successful, we need to continue to identify attractive and available acquisition candidates, complete acquisitions on favorable terms, and integrate new businesses, manufacturing processes, employees, and logistical arrangements into our existing management and operating infrastructure.

#### **Key Business Strategies**

Since our first acquisition in 1985, we have pursued a business strategy that principally consists of the following elements:

## Invest in Innovation to Drive Growth

We plan to continue to use our research and development ("R&D"), engineering, and product marketing resources to continually roll out new and innovative products. As part of our plan to foster intensified internal growth, we have increased our R&D and engineering technical staff by 15% since 2009 and plan to further increase it and we are increasing our technical field sales force in Asia by about 25% to increase the design-in of our products in local markets. Our ability to react to changing customer needs and industry trends will continue to be key to our success. We intend to leverage our insights into customer demand to continually develop new innovative products within our existing lines and to modify our existing core products to make them more appealing, addressing changing customer needs and industry trends.

## Cost Management

Over the past several years we implemented programs to optimize our labor distribution across the globe. After successfully realigning our labor distribution, our focus is directed to controlling fixed costs and reducing variable costs.

## **Growth through Strategic Acquisitions**

We plan to continue to expand within the electronic components industry, through the acquisition of other manufacturers of electronic components that have established positions in major markets, reputations for product innovation, quality, and reliability, strong customer bases, and product lines with which we have substantial marketing and technical expertise.

#### Customer Service Excellence

We maintain significant production facilities in those regions where we market the bulk of our products in order to enhance the service and responsiveness that we provide to our customers. We aim to further strengthen our relationships with customers and strategic partners by providing broad product lines that allow us to provide "one-stop shop" service, whereby they can streamline their design and purchasing processes by ordering multiple types of products.

Our growth plan was designed based on the tenets of the key business strategies listed above.

## **Products**

Infrared Data Transceiver Modules

**Custom Products** 

We design, manufacture, and market electronic components that cover a wide range of functions and technologies. Our product portfolio includes:

MOSFETs Segment	Resistors & Inductors Segment
MOSFETs	Film Resistors
• Low-Voltage TrenchFET® Power MOSFETs	Metal Film Resistors
Medium-Voltage Power MOSFETs	• Thin Film Resistors
High-Voltage Planar MOSFETs	Thick Film Resistors
High-Voltage Super Junction MOSFETs	Power Thick Film Resistors
Automotive-Grade MOSFETs	Metal Oxide Film Resistors
ICs	Carbon Film Resistors
Power Management and Power Control ICs	Wirewound Resistors
Smart Load Switches	Vitreous, Cemented, and Housed Resistors
Analog Switches and Multiplexers	Braking and Neutral Grounding Resistors
	Custom Load Banks
<u>Diodes Segment</u>	Power Metal Strip® Resistors
Rectifiers	Battery Management Shunts
Schottky Rectifiers	Chip Fuses
Ultra-Fast Recovery Rectifiers	Variable Resistors
Standard and Fast Recovery Rectifiers	Cermet Variable Resistors
High-Power Rectifiers/Diodes	Wirewound Variable Resistors
Bridge Rectifiers	Conductive Plastic Variable Resistors
Small-Signal Diodes	Contactless Potentiometers
Schottky and Switching Diodes	Networks/Arrays
• Zener Diodes	Non-Linear Resistors
Tuner/Capacitance Diodes	NTC Thermistors
Bandswitching Diodes	• PTC Thermistors
• RF PIN Diodes	• Varistors
Protection Diodes	Magnetics
• TVS Diodes or TRANSZORB® (uni-directional, bi-	• Inductors
directional)	• Transformers
• ESD Protection Diodes (including arrays)	• Coils
Thyristors/SCR	Connectors
Phase-Control Thyristors	
• Fast Thyristors	<u>Capacitors Segment</u>
Power Modules	Tantalum Capacitors
• Input Modules (diodes and thyristors)	Molded Chip Tantalum Capacitors
<ul> <li>Output &amp; Switching Modules (contain MOSFETs, IGBTs,</li> </ul>	Coated Chip Tantalum Capacitors
and diodes)	Solid Through-Hole Tantalum Capacitors
Custom Modules	Wet Tantalum Capacitors
	Ceramic Capacitors
Optoelectronic Components Segment	Multilayer Chip Capacitors
Infrared Emitters and Detectors	Disc Capacitors
Optical Sensors	Film Capacitors
Infrared Remote Control Receivers	Power Capacitors
Optocouplers	Heavy-Current Capacitors
Phototransistor, Photodarlington	Aluminum Capacitors
• Linear	
• Phototriac	
• High Speed	
IGBT and MOSFET Driver	
Solid-State Relays	
LEDs and 7-Segment Displays	

We promote our ability to provide "one-stop shop" service to customers, whereby they can streamline their design and purchasing processes by ordering multiple types of products from Vishay. Our technical sales force consisting of field application engineers offers customers the complete breadth of the Vishay portfolio for their applications. We aim to use this broad portfolio to increase opportunities to have our components selected and "designed in" to new end products.

#### **Product Segments**

Our products can be divided into two general classes: semiconductors and passive components. Semiconductors are sometimes referred to as "active components" because they require power to function whereas passive components do not require power to function. Our semiconductor and passive components products are further categorized based on their functionality for financial reporting purposes. See Note 15 to our consolidated financial statements for additional information on revenues, income, and total assets by segment.

#### Semiconductors

Our semiconductor products include MOSFETs, Diodes, and Optoelectronic Components. Semiconductors are typically used to perform functions such as switching, amplifying, rectifying, routing, or transmitting electrical signals, power conversion, and power management.

#### **MOSFETs Segment**

Our MOSFETs business is a growing business in both the commodity and non-commodity markets in which we believe that we enjoy a good reputation and strong brand recognition (Siliconix). MOSFETs function as solid-state switches to control power in multiple applications, including mobile phones, notebook and desktop computers, tablet computers, digital cameras, televisions, DC/DC and AC/DC switch mode power supplies, solar inverters, automotive and industrial systems. We are a leader in low-voltage TrenchFET MOSFETs and also offer high-voltage MOSFETs. Our MOSFETs product line includes low-and medium-voltage TrenchFET MOSFETs, high-voltage planar MOSFETs, high voltage Super Junction MOSFETs, power integrated circuits (power ICs), and integrated function power devices. We are one of the technology leaders in MOSFETs, with a tradition of innovation in wafer design, packaging, and performance.

## **Diodes Segment**

Our Diodes business is a solid business with a strong market presence in both the commodity and non-commodity markets. The products that comprise our Diodes business represent our broadest product line and include rectifiers, small signal diodes, protection diodes, thyristors/SCRs and power modules. The primary application of rectifiers, found inside the power supplies of virtually all electronic equipment, is to derive DC power from the AC supply. Vishay is the worldwide leader in rectifiers, having a broad technology base and a good position in automotive, industrial, computing and consumer markets. Our rectifier innovations include TMBS® using Trench MOS barrier Schottky rectifier technology, which reduces power loss and improves the efficiency of end systems and eSMP®, the best in class high-current density surface mount packages. Our wide selection of small signal diodes consist of the following functions: switching, tuning, band-switching, RF attenuation and voltage regulation (Zener). They are available in various glass and plastic packaging options and generally are used in electronic circuits, where small currents and high frequencies are involved. Vishay is also one of the market leaders for TVS (transient voltage suppressor) diodes. The portfolio of protection diodes includes ESD protection and EMI filter. Our thyristors or SCR (silicon-controlled rectifiers) are very popular in the industrial high-voltage AC power control applications. The fast growing markets of solar inverter and HEV/EV are the focus of our power modules business (IGBT or MOSFET modules). These modules can be customized to fit in different customer design requirements.

#### Optoelectronics Components Segment

Our Optoelectronic Components business has a strong market presence in both the commodity and non-commodity markets. Optoelectronic components emit light, detect light, or do both. Our broad range of standard and customer specific optoelectronic components includes infrared ("IR") emitters and detectors, IR remote control receivers, optocouplers, solid-state relays, optical sensors, light-emitting diodes ("LEDs"), 7-segment displays, and IR data transceiver modules (IrDA®). Our IR remote control receivers are designed for use in infrared remote control, data transmission, and light barrier applications in end products including televisions, set-top boxes, notebook computers, and audio systems. We are the leading manufacturer of IR remote control receivers. Our optocouplers electrically isolate input and output signals. Uses include switch-mode power supplies, consumer electronics, telecommunications equipment, solar inverters, and industrial systems. Our IR data transceiver modules are used for short range, two-way, high-speed, and secure wireless data transfer between electronic devices such as home medical appliances, mobile phones, industrial data loggers, and metering. Our LEDs are designed for backlighting and illumination in automotive and other applications. Our LEDs include ultra-bright as well as small surface-mount packages, with products available in all standard colors including white.

## Passive components

Our passive components include resistors, capacitors, and magnetics such as inductors and transformers. Passive components are used to store electrical charges, to limit or resist electrical current, and to help in filtering, surge suppression, measurement, timing, and tuning applications.

## Resistors and Inductors Segment

Our Resistors and Inductors business is our original business. We maintain the broadest portfolio of resistor products worldwide. The business is solid, predictable, and growing at stable selling prices. We are a market leader with a strong technology base, many specialty products, and strong brand recognition (such as our Dale, Draloric, Beyschlag, Sfernice, and HiRel Systems brands). We focus on higher value markets in specialized industries, while maintaining a complete portfolio of commodity products. We do not aim to be the volume leader in commodity markets.

Resistors are basic components used in all forms of electronic circuitry to adjust and regulate levels of voltage and current. They vary widely in precision and cost, and are manufactured from numerous materials and in many forms. Linear resistive components are classified as variable or fixed, depending on whether or not their resistance is adjustable. Non-linear resistors function by varying in resistance under influence of temperature (thermistors) or voltage (varistors). They can be used in temperature-measuring applications or as current or voltage-limiting devices. We manufacture virtually all types of fixed resistors, both in discrete and network forms, as well as many variable types.

Vishay resistor innovations include Power Metal Strip® technology. These resistors feature very low resistance and are used to measure changes in current flow (current sensing) or divert current flow (shunting).

Inductors use an internal magnetic field to change AC current phase and resist AC current. Inductor applications include controlling AC current and voltage, filtering out unwanted electrical signals, and energy storage. Vishay inductor innovations include IHLP® low-profile, high-current inductor technology with industry-leading specifications, which is patented and generates royalty revenue. Our low-profile, high-current inductors save circuit board space and power in voltage regulator module ("VRM") and DC to DC converter applications. In addition, we are a worldwide leader in custom magnetic solutions focusing on high performance and high reliability. This field has been substantially strenghtened, with the 2012 acquisition of HiRel Systems, broadening our portfolio, customer, and market segment reach.

#### Capacitors Segment

Our Capacitors business consists of a broad range of reliable, high-quality products. We have a strong presence worldwide in specialty markets based on our product performance and reliability and strong brand recognition (including our Sprague, Vitramon, Roederstein, BCcomponents, and ESTA brands). We focus on higher value markets in specialized industries, while maintaining a complete portfolio of commodity products. We do not aim to be the volume leader in commodity markets. Capacitors are used in almost all electronic circuits. They store energy and discharge it when needed. Important applications for capacitors include electronic filtering for linear and switching power supplies; decoupling and bypass of electronic signals for integrated circuits and circuit boards; and frequency control, timing and conditioning of electronic signals for a broad range of applications.

We manufacture products based on all major capacitor technologies: tantalum (molded chip tantalum, coated chip tantalum, solid through-hole tantalum, and wet tantalum), ceramic (multilayer chip and ceramic disc), film, power, heavy-current, and aluminum electrolytic. Our capacitors range from tiny surface-mount devices for hearing aids and mobile devices to large power correction capacitors used in renewable energy, heavy industry, and electrical power grids. We are a recognized technology leader in many product ranges, securing our strong position in military and medical markets, and in a wide range of industrial and automotive applications. Our wet tantalum and MicroTan<sup>TM</sup> technologies are market leaders.

## **Military Qualifications**

We have qualified certain of our products under various military specifications approved and monitored by United States government agencies, and under certain European military specifications. Qualification levels are based in part upon the rate of failure of products. In order to maintain the classification level of a product, we must continuously perform tests on the product and the results of these tests must be reported to the government agencies. If the product fails to meet the requirements for the applicable classification level, the product's classification may be reduced to a lower level. During the time that the classification level is reduced for a product with military application, net revenues and earnings attributable to that product may be adversely affected.

#### **Manufacturing Operations**

In order to better serve our customers, we maintain production facilities in locations where we market the bulk of our products, such as the United States, Germany, and Asia. To optimize production efficiencies, we have whenever practicable established manufacturing facilities in countries, such as the Czech Republic, India, Israel, Malaysia, Mexico, the People's Republic of China, and the Philippines, where we can benefit from lower labor and tax costs and also benefit from various government incentives, including grants and tax relief.

One of our most sophisticated manufacturing operations is the production of power semiconductor components. This manufacturing process involves two phases of production: wafer fabrication and assembly (or packaging). Wafer fabrication subjects silicon wafers to various thermal, metallurgical, and chemical process steps that change their electrical and physical properties. These process steps define cells or circuits within numerous individual devices (termed "dies" or "chips") on each wafer. Assembly is the sequence of production steps that divides the wafer into individual chips and encloses the chips in structures (termed "packages") that make them usable in a circuit. Both wafer fabrication and assembly phases incorporate wafer level and device level electrical testing to ensure that device design integrity has been achieved.

In the United States, our manufacturing facilities are located in California, Indiana, Minnesota, Nebraska, New Hampshire, New York, Rhode Island, South Dakota, Vermont, and Wisconsin. In Asia, our main manufacturing facilities are located in the People's Republic of China, the Republic of China (Taiwan), India, and Malaysia. In Europe, our main manufacturing facilities are located in Germany, France, and the Czech Republic. We have substantial manufacturing facilities in Israel (see "Israeli Operations" below). We also have manufacturing facilities in Austria, Dominican Republic, Hungary, Italy, Mexico, the Netherlands, Portugal, and the Philippines. Over the past several years, we have invested substantial resources to increase the efficiency of our plants, which we believe will further reduce production costs.

The majority of our manufacturing operations have received ISO 9001 certification and others are actively pursuing such approval. ISO 9001 is a comprehensive set of quality program standards developed by the International Standards Organization.

See Note 15 to our consolidated financial statements for financial information by geographic area.

## **Sources of Supplies**

Although most materials incorporated in our products are available from a number of sources, certain materials, including plastics and metals, are available only from a relatively limited number of suppliers or are subject to significant price volatility.

Silicon wafers are the most important raw material for the manufacturing of our semiconductor products. Silicon wafers are manufactured from high-purity silicon, a metalloid. There have at times been industry-wide shortages of high-purity silicon resulting primarily from growing demand of the electronic component and solar power industries, and limited growth in high-purity silicon manufacturing capacities. Shifts in demand for high-purity silicon and in turn, silicon wafers, have resulted in significant fluctuation in prices of silicon wafers.

We are a major consumer of the world's annual production of tantalum, a metal used in the manufacturing of tantalum capacitors. There are few suppliers that process tantalum ore into capacitor grade tantalum powder. We acquire tantalum powder and wire from all of them under short-term commitments.

Palladium, a metal used to produce multi-layer ceramic capacitors, is currently found primarily in South Africa and Russia. Palladium is a commodity metal that is subject to price volatility. We periodically enter into short-term commitments to purchase palladium.

Certain metals used in the manufacture of our products, such as copper, are traded on active markets, and can be subject to significant price volatility. Our policy is to enter into short-term commitments to purchase defined portions of annual consumption of these metals if market prices decline below budget.

## **Israeli Operations**

We have substantial manufacturing operations in Israel, where we benefit from the government's grant and tax incentive programs. These programs have contributed substantially, predominantly in previous years, to our growth and profitability.

The current benefits derived under these programs are not material to our consolidated results. Because of our significant presence in Israel, the availability of these incentive programs could have a significant positive effect on us if we relocate manufacturing capacity or develop new product lines there. However, there are no substantial plans that would allow us to earn additional benefits.

We could be materially adversely affected if events were to occur in the Middle East that interfered with our operations in Israel. However, we have not experienced any material interruption in our Israeli operations during our 42 years of operations there, in spite of several Middle East crises, including wars.

## **Inventory and Backlog**

We manufacture both standardized products and those designed and produced to meet customer specifications. We maintain an inventory of standardized components and monitor the backlog of outstanding orders for our products.

We include in our backlog only open orders that we expect to ship in the next twelve months. Many of our customers encounter uncertain and changing demand for their products. They typically order products from us based on their forecasts. If demand falls below customers' forecasts, or if customers do not control their inventory effectively, they may cancel or reschedule the shipments included in our backlog, in many instances without the payment of any penalty. Therefore, our backlog at any point in time is not necessarily indicative of the results to be expected for future periods.

## **Customers and Marketing**

We sell our products to original equipment manufactures ("OEMs"), electronic manufacturing services ("EMS") companies, which manufacture for OEMs on an outsourcing basis, and independent distributors that maintain large inventories of electronic components for resale to OEMs and EMS companies. The distribution of sales by customer type for 2012 is shown below:

Distri		52%
OEM	[s 42	12%
EMS	companies	6%

Our sales organizations are regionally based. While our sales and support procedures are typically similar across all regions, we remain flexible in our ability to offer programs tailored to our customers' specific support requirements in each local area. The aim of our sales organizations is supporting our customers across all product lines, developing new design wins, negotiating pricing and contracts, and providing general commercial support as would normally be expected of a large multi-national sales force.

We have an established Strategic Global Account program, which provides each of our top customers with a dedicated Strategic Global Account Manager. Our Strategic Global Account Managers are typically highly experienced salesmen or saleswomen who are capable of providing key customers with the coordination and management visibility required in a complex multi-product business relationship. They typically coordinate the sales, pricing, contract, logistic, quality, and other aspects of the customer's business requirements. The Strategic Global Account Manager normally is the focal point of communication between Vishay and our main customers. We maintain a similar program for our strategic distributors as well.

We work with our customers so that our products are incorporated into the design of electronic equipment at the earliest stages of development and to provide technical and applications support. In addition to our staff of direct field sales personnel, independent manufacturers' representatives, and distributors, our Business Development group maintains teams of dedicated Field Application Engineers ("FAEs") to assist our customers in solving technical problems and in developing products to meet specific customer application needs using our entire product portfolio to provide support for our customers' engineering needs. Organized by market segment, our Business Development FAEs bring specific knowledge of component applications in their areas of expertise in the automotive, telecommunications, computer, consumer/entertainment, industrial, peripherals, digital consumer, and other market segments. With the ultimate goal of a Vishay "design-in" – the process by which our customers specify a Vishay component in their products – this program offers our customers enhanced access to all Vishay technologies while at the same time increasing design wins, and ultimately sales, for us. Most importantly, the process is closely monitored via a proprietary database developed by our Business Development group. Our database captures specific design activities and allows for real-time measurement of new business potential for our management team.

Our top 30 customers have been relatively stable despite not having long-term commitments to purchase our products. With selected customers, we have signed longer term (greater than one year) contracts for specific products. Net revenues from our top 30 customers represent approximately 70% of our total net revenues. No single customer comprises more than 10% of our total net revenues.

In certain areas we also work with sales representatives. The commission expense for these sales representatives is not material.

## Competition

We face strong competition in various product lines from both domestic and foreign manufacturers. Our primary competitors by product type include:

- · MOSFETs: Fairchild Semiconductor, Infineon, International Rectifier, NXP Semiconductors, ON Semiconductor, Rohm, STMicroelectronics, Toshiba.
- · Diodes: Fairchild Semiconductor, Infineon, NXP Semiconductors, ON Semiconductor, Rohm, STMicroelectronics, Toshiba.
- · Optoelectronic Components: Avago, Rohm, Sharp, Toshiba.
- · Resistors and Inductors: KOA, Murata, Panasonic, Rohm, TDK-EPCOS, Yageo.
- · Capacitors: AVX, KEMET, Murata, Nichicon, Panasonic, TDK-EPCOS, Yageo.

There are many other companies that produce products in the markets in which we compete.

Our competitive position depends on our ability to maintain a competitive advantage on the basis of product quality, know-how, proprietary data, market knowledge, service capability, technological innovation, business reputation, and price competitiveness. Our sales and marketing programs aim to compete by offering our customers a broad range of world-class technologies and products, superior global sales and distribution support, and a secure and multi-location source of product supply.

## **Research and Development**

Many of our products and manufacturing techniques, technologies, and packaging methods have been invented, designed, and developed by Dr. Felix Zandman, our engineers, and our scientists. We maintain strategically placed design centers where proximity to customers enables us to more easily gauge and satisfy the needs of local markets. These design centers are located predominantly in the United States, Germany, Italy, Israel, the People's Republic of China, France, and the Republic of China (Taiwan).

We also maintain research and development personnel and promote programs at a number of our production facilities to develop new products and new applications of existing products and to improve manufacturing processes and technologies. This decentralized system encourages product development at individual manufacturing facilities, closer to our customers.

#### **Patents and Licenses**

We have made a significant investment in securing intellectual property protection for our technology and products. We seek to protect our technology by, among other things, filing patent applications for technology considered important to the development of our business. We also rely upon trade secrets, unpatented know-how, continuing technological innovation, and the aggressive pursuit of licensing opportunities to help develop and maintain our competitive position.

Our ability to compete effectively with other companies depends, in part, on our ability to maintain the proprietary nature of our technology. Although we have been awarded, have filed applications for, or have been licensed under, numerous patents in the United States and other countries, there can be no assurance concerning the degree of protection afforded by these patents or the likelihood that pending patents will be issued.

We require all of our technical, research and development, sales and marketing, and management employees and most consultants and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information developed or made known to the entity or individual during the course of the entity's or individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. Substantially all of our technical, research and development, sales and marketing, and management employees have entered into agreements providing for the assignment to us of rights to inventions made by them while employed by us.

When we believe other companies are misappropriating our intellectual property rights, we vigorously enforce those rights through legal action, and we intend to continue to do so. See Item 3, "Legal Proceedings."

Although we have numerous United States and foreign patents covering certain of our products and manufacturing processes, no particular patent is considered individually material to our business.

## **Environment, Health and Safety**

We have adopted an Environmental Health and Safety Corporate Policy that commits us to achieve and maintain compliance with applicable environmental laws, to promote proper management of hazardous materials for the safety of our employees and the protection of the environment, and to minimize the hazardous materials generated in the course of our operations. This policy is implemented with accountability directly to the Board of Directors. In addition, our manufacturing operations are subject to various federal, state, and local laws restricting discharge of materials into the environment.

We are involved in environmental remediation programs at various sites currently or formerly owned by us and our subsidiaries both within and outside of the U.S., in addition to involvement as a potentially responsible party ("PRP") at Superfund sites. Certain obligations as a PRP have arisen in connection with business acquisitions. The remediation programs are on-going and the ultimate cost of site cleanup is difficult to predict given the uncertainties regarding the extent of the required cleanup, the interpretation of applicable laws and regulations and alternative cleanup methods. See Item 3, "Legal Proceedings."

We are not involved in any pending or threatened proceedings that would require curtailment of our operations. We continually expend funds to ensure that our facilities comply with applicable environmental regulations. While we believe that we are in material compliance with applicable environmental laws, we cannot accurately predict future developments and do not necessarily have knowledge of all past occurrences on sites that we currently occupy. More stringent environmental regulations may be enacted in the future, and we cannot determine the modifications, if any, in our operations that any such future regulations might require, or the cost of compliance with such regulations. Moreover, the risk of environmental liability and remediation costs is inherent in the nature of our business and, therefore, there can be no assurance that material environmental costs, including remediation costs, will not arise in the future.

With each acquisition, we attempt to identify potential environmental concerns and to minimize, or obtain indemnification for, the environmental matters we may be required to address. In addition, we establish reserves for specifically identified potential environmental liabilities. We believe that the reserves we have established are adequate. Nevertheless, we have in the past and may in the future inherit certain pre-existing environmental liabilities, generally based on successor liability doctrines. Although we have never been involved in any environmental matter that has had a material adverse impact on our overall operations, there can be no assurance that in connection with any past or future acquisition we will not be obligated to address environmental matters that could have a material adverse impact on our operations.

## **Employees**

As of December 31, 2012, we employed approximately 21,600 full time employees, of whom approximately 88% were located outside the United States. Our future success is substantially dependent on our ability to attract and retain highly qualified technical and administrative personnel. Some of our employees outside the United States are members of trade unions, and employees at one U.S. facility are represented by a trade union. Our relationship with our employees is generally good. However, no assurance can be given that, if we continue to restructure our operations and/or reduce employee hours in response to changing economic conditions, labor unrest or strikes will not occur.

## **Company Information and Website**

We file annual, quarterly, and current reports, proxy statements, and other documents with the Securities and Exchange Commission ("SEC") under the Securities Exchange Act of 1934. The public may read and copy any materials that we file with the SEC at the SEC's Public Reference Room at Station Place, 100 F Street, N.E., Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Also, the SEC maintains an Internet website that contains reports, proxy and information statements, and other information regarding issuers, including us, that file electronically with the SEC. The public can obtain any documents that we file with the SEC at http://www.sec.gov.

In addition, our company website can be found on the Internet at www.vishay.com. The website contains information about us and our operations. Copies of each of our filings with the SEC on Form 10-K, Form 10-Q, and Form 8-K, and all amendments to those reports, can be viewed and downloaded free of charge as soon as reasonably practicable after the reports and amendments are electronically filed with or furnished to the SEC. To view the reports, access ir.vishay.com and click on "SEC Filings."

The following corporate governance related documents are also available on our website:

- · Corporate Governance Principles
- · Code of Business Conduct and Ethics
- · Code of Ethics Applicable to the Company's Chief Executive Officer, Chief Financial Officer, Principal Accounting Officer or Controller and Financial Managers
- · Audit Committee Charter
- · Nominating and Corporate Governance Committee Charter
- · Compensation Committee Charter
- · Strategic Affairs Committee Charter
- · Policy on Director Attendance at Annual Meetings
- · Nominating and Corporate Governance Committee Policy Regarding Qualification of Directors
- · Procedures for Securityholders' Submissions of Nominating Recommendations
- Securityholder Communications with Directors and Interested Party Communication with Non-Management Directors
- · Whistleblower and Ethics Hotline Procedures
- · Related Party Transaction Policy

To view these documents, access ir.vishay.com and click on "Corporate Governance."

Any of the above documents can also be obtained in print by any stockholder upon request to our Investor Relations Department at the following address:

Corporate Investor Relations Vishay Intertechnology, Inc. 63 Lancaster Avenue Malvern. PA 19355-2143

#### **Item 1A.** RISK FACTORS

From time to time, information provided by us, including but not limited to statements in this report, or other statements made by or on our behalf, may contain "forward-looking" information within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements involve a number of risks, uncertainties, and contingencies, many of which are beyond our control, which may cause actual results, performance, or achievements to differ materially from those anticipated. Set forth below are important factors that could cause our results, performance, or achievements to differ materially from those in any forward-looking statements made by us or on our behalf. You should understand that it is not possible to predict or identify all such factors. Consequently, you should not consider the following to be a complete discussion of all potential risks or uncertainties.

### Risks relating to our business generally

Our business is cyclical and the periods of decline we are presently experiencing may continue and may become more pronounced.

The electronic component industry is highly cyclical and experiences periods of decline from time to time. We and others in the electronic component industry are presently experiencing a decline in product demand on a global basis. This decline may continue and may become more pronounced. A decline in product demand on a global basis could result in order cancellations and deferrals, lower average selling prices, and a material and adverse impact on our results of operations. These declines in demand are driven by market conditions in the end markets for our products. Changes in the demand mix, needed technologies, and these end markets may adversely affect our ability to match our products, inventory, and capacity to meet customer demand and could adversely affect our operating results and financial condition. A slowdown in demand or recessionary trends in the global economy makes it more difficult for us to predict our future sales and manage our operations, and could adversely impact our results of operations.

## We have incurred and may continue to incur restructuring costs and associated asset write-downs.

Our long-term strategy includes growing through the integration of acquired businesses, and GAAP requires plant closure and employee termination costs that we incur in connection with our acquisition activities to be recorded as expenses in our consolidated statement of operations, as such expenses are incurred. For this reason, we expect to have some level of future restructuring expenses due to acquisitions.

To remain competitive, particularly when business conditions are difficult, we sometimes attempt to reduce our cost structure by restructuring our existing businesses, where we seek to eliminate redundant facilities and staff positions and move operations, where possible, to jurisdictions with lower labor costs. Our business is cyclical, and in periods of a rising economy we may experience intense demand for our products. If our restructuring activities result in us not being able to satisfy the intense demand from our customers during a rising economy and our competitors sufficiently expand production, we could lose customers and/or market share. These losses could have an adverse effect on our operations, financial condition, and results of operations.

## In the past we have grown through successful integration of acquired businesses, but this may not continue.

Our long-term historical growth in revenues and net earnings has resulted in large part from our strategy of expansion through acquisitions. Despite our plan to continue to grow, in part, through targeted acquisitions, we may be unable to continue to identify, have the financial capabilities to acquire, or successfully complete transactions with suitable acquisition candidates. Also, if an acquired business fails to operate as anticipated or cannot be successfully integrated with our other businesses, our results of operations, financial condition, enterprise value, market value, and prospects could all be materially adversely affected.

#### Significant fluctuations in interest rates could adversely affect our results of operations and financial position.

We are exposed to changes in interest rates as a result of our borrowing activities and our cash balances. Our credit facility and our exchangeable unsecured notes due 2102 bear interest at variable rates based on LIBOR. A significant increase in LIBOR would significantly increase our interest expense. A general increase in interest rates would be largely offset by an increase in interest income earned on our cash and short-term investment balances, which are currently greater than our debt balances. However, there can be no assurance that the interest rate earned on cash and short-term investments will move in tandem with the interest rate paid on our variable rate debt.

## Our debt levels have increased and may continue to increase, which could adversely affect the perception in the financial markets of our financial condition.

The recorded value of our outstanding debt increased from approximately \$347 million as of December 31, 2008 to approximately \$393 million as of December 31, 2012, primarily due to the issuance of convertible senior debentures, the proceeds from the sale of which we used to fund repurchases of our common stock. The carrying value of our convertible senior debentures will continue to increase as the discount associated with the debentures is amortized. Additionally, we and our subsidiaries may incur substantial additional debt in the future, subject to the conditions contained in our existing debt instruments, some of which may be secured debt. The marketplace could react negatively to our current debt levels which in turn could affect our share price and also make it more difficult to obtain financing in the future.

## Future acquisitions could require us to issue additional indebtedness or equity.

If we were to undertake a substantial acquisition for cash, the acquisition would likely need to be financed in part through bank borrowings or the issuance of public or private debt. This acquisition financing would likely decrease our ratio of earnings to fixed charges and adversely affect other leverage criteria. Under our existing credit facility, we are required to obtain the lenders' consent for certain additional debt financing and to comply with other covenants including the application of specific financial ratios. We cannot make any assurances that the necessary acquisition financing would be available to us on acceptable terms if and when required. If we were to undertake an acquisition for equity, the acquisition may have a dilutive effect on the interests of the holders of our common stock.

## Our existing credit facility restricts our current and future operations and requires compliance with certain financial covenants.

Our existing credit facility includes restrictions on, among other things, incurring indebtedness, incurring liens on assets, making investments and acquisitions, making asset sales, and paying cash dividends and making other restricted payments. Our existing credit facility also requires us to comply with other covenants, including the maintenance of specific financial ratios. If we are not in compliance with all of such covenants, the credit facility could be terminated by the lenders, and all amounts outstanding pursuant to the credit facility could become immediately payable. Additionally, our exchangeable unsecured notes due 2102 and our convertible senior debentures due 2040, due 2041, and due 2042 have cross-default provisions that could accelerate repayment in the event the indebtedness under the credit facility is accelerated.

## To remain successful, we must continue to innovate, and our investments in new technologies may not prove successful.

Our future operating results are dependent on our ability to continually develop, introduce, and market new and innovative products, to modify existing products, to respond to technological change, and to customize certain products to meet customer requirements. There are numerous risks inherent in this process, including the risks that we will be unable to anticipate the direction of technological change or that we will be unable to develop and market new products and applications in a timely fashion to satisfy customer demands. If this occurs, we could lose customers and experience adverse effects on our financial condition and results of operations.

In addition to our own research and development initiatives, we periodically invest in technology start-up enterprises, in which we may acquire a controlling or noncontrolling interest but whose technology would be available to be commercialized by us. There are numerous risks in investments of this nature including the limited operating history of such start-up entities, their need for capital, and their limited or absence of production experience, as well as the risk that their technologies may prove ineffective or fail to gain acceptance in the marketplace. Certain of our historical investments in start-up companies have not succeeded, and there can be no assurance that our current and future investments in start-up enterprises will prove successful.

## Our results are sensitive to raw material availability, quality, and cost.

Many of our products require the use of raw materials that are produced in only a limited number of regions around the world or are available from only a limited number of suppliers. Our results of operations may be materially adversely affected if we have difficulty obtaining these raw materials, the quality of available raw materials deteriorates, or there are significant price increases for these raw materials. The determination that any of the raw materials used in our products are conflict minerals originating from the Democratic Republic of the Congo and adjoining countries could increase the probability that we will encounter the challenges noted above, incur additional expenses to comply with government regulations, and face public scrutiny. For periods in which the prices of these raw materials are rising, we may be unable to pass on the increased cost to our customers, which would result in decreased margins for the products in which they are used. For periods in which the prices are declining, we may be required to write down our inventory carrying cost of these raw materials, because we record our inventory at the lower of cost or market. Depending on the extent of the difference between market price and our carrying cost, this write-down could have a material adverse effect on our results of operations.

From time to time there have been short-term market shortages of certain raw materials used in our products. While these shortages have not historically adversely affected our ability to increase production of products containing these materials, they have historically resulted in higher raw material costs for us. We cannot make any assurances that any of these market shortages in the future would not adversely affect our ability to increase production, particularly during periods of growing demand for our products. To assure availability of raw materials in times of shortage, we may enter into long-term supply contracts for these materials, which may prove costly, unnecessary, and burdensome when the shortage abates.

## We may not have adequate facilities to satisfy future increases in demand for our products.

Our business is cyclical and in periods of a rising economy, we may experience intense demand for our products. During such periods, we may have difficulty expanding our manufacturing to satisfy demand. Factors which could limit such expansion include delays in procurement of manufacturing equipment, shortages of skilled personnel, and physical constraints on expansion of our facilities. If we are unable to meet our customers' requirements and our competitors sufficiently expand production, we could lose customers and/or market share. These losses could have an adverse effect on our financial condition and results of operations. Also, capacity that we add during upturns in the business cycle may result in excess capacity during periods when demand for our products recede, resulting in inefficient use of capital which could also adversely affect us.

## Our ability to compete effectively with other companies depends, in part, on our ability to maintain the proprietary nature of our technology.

Protection of intellectual property often involves complex legal and factual issues. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies are covered by valid and enforceable patents or are effectively maintained as trade secrets. We have applied, and will continue to apply, for patents covering our technologies and products, as we deem appropriate. However, our applications may not result in issued patents. Also, our existing patents and any future patents may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products. Others may independently develop similar or alternative technologies, design around our patented technologies, or may challenge or seek to invalidate our patents. Also, the legal system in certain countries in which we operate may not provide or may not continue to provide sufficient, intellectual property legal protections and remedies.

Litigation regarding patent and other intellectual property rights is prevalent in the electronic components industry, particularly the discrete semiconductor sector. We have on occasion been notified that we may be infringing on patent and other intellectual property rights of others. In addition, customers purchasing components from us have rights to indemnification under certain circumstances if such components violate the intellectual property rights of others. Further, we have observed that in the current business environment, electronic component and semiconductor companies have become more aggressive in asserting and defending patent claims against competitors. We will continue to vigorously defend our intellectual property rights, and may become party to disputes regarding patent licensing and cross patent licensing. Although licenses are generally offered in such situations and we have successfully resolved these situations in the past, there can be no assurance that we will not be subject to future litigation alleging intellectual property rights infringement, or that we will be able to obtain licenses on acceptable terms. An unfavorable outcome regarding one of these matters could have a material adverse effect on our business and results of operations.

#### We face intense competition in our business, and we market our products to an increasingly concentrated group of customers.

Our business is highly competitive worldwide, with low transportation costs and few import barriers. We compete principally on the bases of product quality and reliability, availability, customer service, technological innovation, timely delivery, and price. The electronic component industry has become increasingly concentrated and globalized in recent years and our major competitors, some of which are larger than us, have significant financial resources and technological capabilities.

Our customers have become increasingly concentrated in recent years, and as a result, their buying power has increased and they have had greater ability to negotiate favorable pricing and terms. This trend has adversely affected our average selling prices, particularly for commodity components.

## Our backlog is subject to customer cancellation.

Many of the orders that comprise our backlog may be canceled by our customers without penalty. Our customers may on occasion double and triple order components from multiple sources to ensure timely delivery when demand exceeds global supply. They often cancel orders when business is weak and inventories are excessive, a situation that we experienced during the current period of economic slowdown. Therefore, we cannot be certain that the amount of our backlog does not exceed the level of orders that we will ultimately deliver. Our results of operations could be adversely impacted if customers cancel a material portion of orders in our backlog.

## Future changes in our environmental liability and compliance obligations may harm our ability to operate or increase our costs.

Our operations, products and/or product packaging are subject to environmental laws and regulations governing air emissions, wastewater discharges, the handling, disposal and remediation of hazardous substances, wastes and certain chemicals used or generated in our manufacturing processes, employee health and safety labeling or other notifications with respect to the content or other aspects of our processes, products or packaging, restrictions on the use of certain materials in or on design aspects of our products or product packaging, and responsibility for disposal of products or product packaging. We establish reserves for specifically identified potential environmental liabilities. Nevertheless, we have in the past and may in the future inherit certain pre-existing environmental liabilities, generally based on successor liability doctrines, or otherwise incur environmental liabilities. We are involved in remediation programs and related litigation at various current and former properties and at third-party disposal sites both within and outside of the U.S., including involvement as a potentially responsible party at Superfund sites. Although we have never been involved in any environmental matter that has had a material adverse impact on our overall operations, there can be no assurance that in connection with any past or future acquisition, future developments, including related to our remediation programs, or otherwise, we will not be obligated to address environmental matters that could have a material adverse impact on our results of operations. In addition, more stringent environmental regulations may be enacted in the future, and we cannot presently determine the modifications, if any, in our operations that any such future regulations might require, or the cost of compliance with these regulations. In order to resolve liabilities at various sites, we have entered into various administrative orders and consent decrees, some of which may be, under certain conditions, reopened or subject to renegotiati

Our products are sold to or used in goods sold to the U.S. government and other governments. By virtue of such sales, we are subject to various regulatory requirements and risks in the event of non-compliance.

We sell products under prime and subprime contracts with the U.S. government and other governments. Many of these products are used in military applications. Government contractors must comply with specific procurement regulations and other requirements. These requirements, although customary in government contracts, impact our performance and compliance costs. Failure to comply with these regulations and requirements could result in contract modifications or termination, and the assessment of penalties and fines, which could negatively impact our results of operations and financial condition. Our failure to comply with these regulations and requirements could also lead to suspension or debarment, for cause, from government contracting or subcontracting for a period of time. Among the causes for debarment are violations of various statutes, including those related to procurement integrity, export control, government security regulations, employment practices, protection of the environment, accuracy of records and the recording of costs, and foreign corruption. The termination of a government contract as a result of any of these acts could have a negative impact on our results of operations and financial condition and could have a negative impact on our reputation and ability to procure other government contracts in the future.

We have qualified certain of our products under various military specifications approved and monitored by the United States Defense Electronic Supply Center and under certain European military specifications. These products are assigned certain classification levels. In order to maintain the classification level of a product, we must continuously perform tests on the products and the results of these tests must be reported to governmental agencies. If a product fails to meet the requirements of the applicable classification level, its classification may be reduced to a lower level. A decrease in the classification level for a product with a military application could have an adverse impact on the net revenues and earnings attributable to that product.

Our future success is substantially dependent on our ability to attract and retain highly qualified technical, managerial, marketing, finance, and administrative personnel.

Rapid changes in technologies, frequent new product introductions, and declining average selling prices over product life cycles require us to attract and retain highly qualified personnel to develop and manufacture products that feature technological innovations and bring them to market on a timely basis. Our complex operations also require us to attract and retain highly qualified administrative personnel in functions such as legal, tax, accounting, financial reporting, auditing, and treasury. The market for personnel with such qualifications is highly competitive. While we have employment agreements with certain of our executives, we have not entered into employment agreements with all of our key personnel.

The loss of the services of or the failure to effectively recruit qualified personnel could have a material adverse effect on our business.

## <u>Interruptions in our information technology systems could adversely affect our business.</u>

We rely on the efficient and uninterrupted operation of complex information technology systems and networks to operate our business. Any significant system or network disruption, including, but not limited to, new system implementations, computer viruses, security breaches, facility issues or energy blackouts could have a material adverse impact on our operations and results of operations. Such network disruption could result in a loss of the confidentiality of our intellectual property or the release of sensitive competitive information or customer or employee personal data. Any loss of such information could harm our competitive position, result in a loss of customer confidence, and cause us to incur significant costs to remedy the damages caused by the disruptions or security breaches. We have implemented protective measures to prevent against and limit the effects of system or network disruptions, but there can be no assurance that such measures will be sufficient to prevent or limit the damage from any future disruptions and any such disruption could have a material adverse impact on our business and results of operations.

Third-party service providers, such as foundries, subcontractors, distributors, and vendors have access to certain portions of our sensitive data. In the event that these service providers do not properly safeguard our data that they hold, security breaches and loss of our data could result. Any such loss of data by our third-party service providers could have a material adverse impact on our business and results of operations.

#### Risks relating to Vishay's operations outside the United States

We are subject to the risks of political, economic, and military instability in countries outside the United States in which we operate.

We have substantial operations outside the United States, and approximately 74% of our revenues during 2012 were derived from sales to customers outside the United States. Certain of our assets are located, and certain of our products are produced, in countries which are subject to risks of social, political, economic, and military instability. This instability could result in wars, riots, nationalization of industry, currency fluctuation, and labor unrest. These conditions could have an adverse impact on our ability to operate in these regions and, depending on the extent and severity of these conditions, could materially and adversely affect our overall financial condition, results of operations, and our ability to access our liquidity.

Our business has been in operation in Israel for 42 years, where we have substantial manufacturing operations. Although we have never experienced any material interruption in our operations attributable to these factors, in spite of several Middle East crises, including wars, our financial condition and results of operations might be adversely affected if events were to occur in the Middle East that interfered with our operations in Israel.

#### Our global operations are subject to extensive anti-corruption laws and other regulations.

The U.S. Foreign Corrupt Practices Act and similar foreign anti-corruption laws generally prohibit companies and their intermediaries from making improper payments or providing anything of value to improperly influence foreign government officials for the purpose of obtaining or retaining business, or obtaining an unfair advantage. Recent years have seen a substantial increase in the global enforcement of anti-corruption laws. Our continued operation and expansion outside the United States, including in developing countries, could increase the risk of such violations or violations under other regulations relating to limitations on or licenses required for sales made to customers located in certain countries. Violations of these laws may result in severe criminal or civil sanctions, could disrupt our business, and result in a material adverse effect on our reputation, business and results of operations or financial condition.

## We obtain substantial benefits by operating in Israel, but these benefits may not continue.

We have substantial manufacturing operations in Israel, where we benefit from the Israeli government's grant and tax incentive programs. These programs have contributed substantially, predominantly in previous years, to our growth and profitability. There can also be no assurance that in the future the Israeli government will continue to offer new grant and tax incentive programs applicable to us or that, if it does, such programs will provide the same level of benefits we have historically received or that we will continue to be eligible to benefit from them. Any significant increase in the Israeli tax rates or reduction or elimination of the Israeli grant programs that have benefited us could have an adverse impact on our results of operations.

#### We attempt to improve profitability by controlling labor costs, but these activities could result in labor unrest or considerable expense.

Historically, our primary labor cost controlling strategy was to transfer manufacturing operations to countries with lower production costs, such as the Czech Republic, India, Israel, Malaysia, Mexico, the People's Republic of China, and the Philippines. Because we believe that our manufacturing footprint is suitable to serve our customers and end markets, we do not anticipate further transferring any significant existing operations to lower-labor-cost countries; however, acquired operations may be transferred to lower-labor-cost countries when integrated into Vishay. Currently, our primary labor cost controlling strategy involves reducing hours and limiting the use of subcontractors and foundries when demand for our products decreases. Shifting operations to lower-labor-cost countries, reducing hours, or limiting the use of subcontractors and foundries could result in production inefficiencies, higher costs, and/or strikes or other types of labor unrest.

#### We are subject to foreign currency exchange rate risks which may impact our results of operations.

We are exposed to foreign currency exchange rate risks, particularly due to market values of transactions in currencies other than the functional currencies of certain subsidiaries. From time to time, we utilize forward contracts to hedge a portion of projected cash flows from these exposures. As of December 31, 2012, we did not have any outstanding foreign currency forward exchange contracts.

Our significant foreign subsidiaries are located in Germany, Israel, and Asia. We finance our operations in Europe and certain locations in Asia in local currencies. Our operations in Israel and most significant locations in Asia are largely financed in U.S. dollars, but these subsidiaries also have significant transactions in local currencies. Our exposure to foreign currency risk is mitigated to the extent that the costs incurred and the revenues earned in a particular currency offset one another. Our exposure to foreign currency risk is more pronounced in situations where, for example, production labor costs are predominantly paid in local currencies while the sales revenue for those products is denominated in U.S. dollars. This is particularly the case for products produced in Israel, the Czech Republic, and China.

A change in the mix of the currencies in which we transact our business could have a material effect on results of operations. Furthermore, the timing of cash receipts and disbursements could have a material effect on our results of operations, particularly if there are significant changes in exchange rates in a short period of time.

## Approximately 98% of our cash and cash equivalents and short-term investments balances were held by our non-U.S. subsidiaries.

We generate a significant amount of cash and profits from our non-U.S. subsidiaries. As of December 31, 2012, \$974 million of our cash and cash equivalents and short-term investments were held in countries outside of the United States. At the present time, we expect the cash and profits generated by foreign subsidiaries will continue to be reinvested outside of the United States indefinitely. Accordingly, no provision has been made for U.S. federal and state income taxes on these foreign earnings. If cash is needed to be repatriated to the United States, in addition to various foreign country laws regulating the exportation of the cash and profits, we would be subject to additional U.S. income taxes (subject to an adjustment for foreign tax credits), state income taxes, incremental foreign income taxes, and withholding taxes payable to various foreign countries.

#### Risks related to our capital structure

#### The holders of our Class B common stock have effective voting control of our company.

We have two classes of common stock: common stock and Class B common stock. The holders of common stock are entitled to one vote for each share held, while the holders of Class B common stock are entitled to 10 votes for each share held. At December 31, 2012, the holders of Class B common stock held approximately 48.0% of the voting power of Vishay. The ownership of Class B common stock is highly concentrated, and holders of Class B common stock effectively can cause the election of directors and approve other actions as stockholders without the approval of our other stockholders. As a result of the passing of our founder and former Executive Chairman, Dr. Felix Zandman, Mrs. Ruta Zandman (a member of our Board of Directors) controls the voting of, solely or on a shared basis with Marc Zandman (our Executive Chairman) and Ziv Shoshani (a member of our Board of Directors), approximately 89.5% of our Class B common stock, representing 43.1% of the total voting power of our capital stock as of December 31, 2012.

## We have a staggered board of directors which could make a takeover of Vishay difficult.

Our staggered board of directors might discourage, delay, or prevent a change in control of our company by a third party and could discourage proxy contests and make it more difficult for stockholders to elect directors and take other corporate actions. Also, as a consequence of our staggered board, directors may not be removed without cause, even though a majority of stockholders may wish to do so.

## Our reluctance to issue substantial additional shares in order not to dilute the interests of our existing stockholders could impede growth.

Our overall long-term business strategy has historically included a strong focus on acquisitions financed alternatively through cash on hand, the incurrence of indebtedness, and the issuance of equity, directly or indirectly by refinancing acquisition debt. We may in the future be presented with attractive investment or strategic opportunities that, because of their size and our financial condition at the time, would require the issuance of substantial additional amounts of our common stock. As a result of the passing of our founder and Executive Chairman, Dr. Felix Zandman, Mrs. Ruta Zandman (a member of our Board of Directors) controls the voting of, solely or on a shared basis with Marc Zandman (our Executive Chairman) and Ziv Shoshani (a member of our Board of Directors), approximately 89.5% of our Class B common stock, representing 43.1% of the total voting power of our capital stock as of December 31, 2012. Such holders may exert considerable influence over our policies, business and affairs, and in any corporate transaction or other matter, including those described above. If such opportunities were to arise, our Board of Directors may consider the potentially dilutive effect on the interests and voting power of our existing stockholders, including our Class B stockholders. Any resulting reluctance to issue additional shares could impede our future growth.

## Our outstanding convertible debentures and exchangeable notes may impact the trading price of our common stock.

We believe that many investors in, and potential purchasers of, convertible or exchangeable debt instruments employ, or seek to employ, a convertible arbitrage strategy with respect to these instruments. Investors that employ a convertible arbitrage strategy with respect to convertible or exchangeable debt instruments typically implement that strategy by selling short the common stock underlying the convertible or exchangeable instrument and dynamically adjusting their short position while they hold the instrument. The implementation of this strategy by investors in our convertible debentures and exchangeable notes, as well as related market regulatory actions, could have a significant impact on the trading prices of our common stock, and the trading prices and liquidity of our convertible debentures and exchangeable notes. The price of our common stock and our convertible debentures and exchangeable notes could also be affected by possible sales of our common stock by investors who view our convertible debentures or exchangeable notes as more attractive means of equity participation in us.

## Risks related to the spin-off of the Vishay Precision Group

If the VPG spin-off transaction is determined to be taxable for income tax purposes, we and our stockholders that are subject to U.S. federal, state or local income tax could incur substantial income tax liabilities.

The VPG spin-off transaction was conditioned upon Vishay's receipt of a private letter ruling from the Internal Revenue Service (the "IRS") and an opinion of tax counsel (the "Opinion") confirming that the VPG spin-off transaction should qualify as tax-free to us and our stockholders. The ruling and opinions rely on certain facts, assumptions, and representations from us regarding the past and future conduct of the companies' businesses and other matters. Any inaccuracy in these facts, assumptions, or representations could invalidate the ruling, and we and our stockholders could be subject to substantial income tax liabilities.

Notwithstanding the private letter ruling and Opinion, the IRS or state or local tax authorities (collectively with the IRS, the "Tax Authorities") could determine on audit that the VPG spin-off transaction should be treated as a taxable transaction if the Tax Authorities determine that any of these facts, assumptions, or representations are not correct or have been violated, or for other reasons, including as a result of significant changes in the stock ownership of our company or VPG after the spin-off.

Under the tax matters agreement between our company and VPG, VPG generally would be required to indemnify our company against its taxes resulting from the failure of the VPG spin-off transaction to qualify as tax-free ("Transaction Taxes") as a result of (i) any action by VPG or any of its affiliates following the completion of the spin-off from qualifying as a tax-free transaction to us and our stockholders (ii) any action by VPG or its affiliates following the completion of the spin-off that would be inconsistent with any material information or representation made in connection with the private letter ruling obtained by us from the IRS and/or with the Opinion or (iii) certain other actions taken by VPG. However, in the event that Transaction Taxes are incurred for any other reason, we would not be entitled to indemnification.

In addition, due to the potential impact of significant stock ownership changes on the taxability of the spin-off to us, we and VPG may determine not to enter into transactions that might otherwise be advantageous, such as issuing equity securities to satisfy financing needs or acquiring businesses or assets with equity securities, if such issuances would exceed certain thresholds and such actions could be considered part of a plan or series of related transactions that include the spin-off.

<u>Vishay Precision Group is using the Vishay name under license from us, which could result in product and market confusion or the loss of certain of our rights to the Vishay name.</u>

VPG has a worldwide, perpetual and royalty-free license from us to use the "Vishay" mark as part of its corporate name and in connection with the manufacture, sale, and marketing of the products and services that comprise its measurements and foil resistors businesses. The license of the Vishay name to VPG is important because we anticipate that the success of VPG will depend in no small measure on the reputation of the Vishay brand for these products and services built over many years. Nonetheless, there exists the risk that the use by VPG could cause confusion in the marketplace over the products of the two companies, that any negative publicity associated with a product or service of VPG following the spin-off could be mistakenly attributed to our company or that we could lose our own rights to the "Vishay" mark if we fail to impose sufficient controls on VPG's use of the mark.

#### General Economic and Business Risks

In addition to the risks relating specifically to our business, a variety of other factors relating to general conditions could cause actual results, performance, or achievements to differ materially from those expressed in any of our forward-looking statements. These factors include:

- · overall economic and business conditions;
- · competitive factors in the industries in which we conduct our business;
- · changes in governmental regulation;
- · changes in tax requirements, including tax rate changes, new tax laws, and revised tax law interpretations;
- · changes in generally accepted accounting principles or interpretations of those principles by governmental agencies and self-regulatory groups;
- · interest rate fluctuations, foreign currency rate fluctuations, and other capital market conditions; and
- · economic and political conditions in international markets, including governmental changes and restrictions on the ability to transfer capital across borders.

Our common stock, traded on the New York Stock Exchange, has in the past experienced, and may continue to experience, significant fluctuations in price and volume. We believe that the financial performance and activities of other publicly traded companies in the electronic component industry could cause the price of our common stock to fluctuate substantially without regard to our operating performance.

We operate in a continually changing business environment, and new factors emerge from time to time. Other unknown and unpredictable factors also could have a material adverse effect on our future financial condition and results of operations.

## Item 1B. UNRESOLVED STAFF COMMENTS

None.

## Item 2. PROPERTIES

At December 31, 2012, our business had 49 manufacturing locations. Our manufacturing facilities include owned and leased locations. Some locations include both owned and leased facilities in the same location. The list of manufacturing facilities below excludes manufacturing facilities that are presently idle due to our restructuring activities. See Note 4 to our consolidated financial statements for further information related to our restructuring efforts, as well as additional information in "Cost Management" included in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

In the opinion of management, our properties and equipment generally are in good operating condition and are adequate for our present needs. We do not anticipate difficulty in renewing existing leases as they expire or in finding alternative facilities.

The principal locations of our owned manufacturing facilities, along with available space including administrative offices, are as follows:

		Approx. Available
Owned Locations	Business Segment	<u>Space (Square Feet)</u>
<u>United States</u>		
Santa Clara, CA	MOSFETs	227,000
Columbus, NE	Resistors & Inductors	158,000
Yankton, SD	Resistors & Inductors	58,000
Warwick, RI	Resistors & Inductors	55,000
Bennington, VT	Capacitors	54,000
Niagara Falls, NY	Resistors & Inductors	38,000
Marshall, MN	Resistors & Inductors	22,000
Non-U.S.		
Israel		
Dimona	Resistors & Inductors and Capacitors	404,000
Migdal Ha'Emek	Resistors & Inductors and Capacitors	288,000
Be'er Sheva	Resistors & Inductors and Capacitors	276,000
People's Republic of China		
Tianjin	Diodes	374,000
Shanghai	Optoelectronic Components	195,000
Xi'an	MOSFETS and Diodes	121,000
Germany		
Selb	Resistors & Inductors and Capacitors	306,000
Heide	Resistors & Inductors	161,000
Landshut	Capacitors	72,000
Fichtelberg	Resistors & Inductors	24,000
Czech Republic		
Blatna	Capacitors	191,000
Dolni Rychnov	Resistors & Inductors and Capacitors	182,000
Prachatice	Resistors & Inductors	91,000
Volary	Resistors & Inductors	35,000
Melaka, Malaysia	Optoelectronic Components	480,000
Republic of China (Taiwan)		
Taipei	Diodes	366,000
Kaohsiung	MOSFETs	52,000
Loni, India	Resistors & Inductors and Capacitors	350,000
Zwolle, Netherlands	Capacitors	283,000
France	-	
Nice	Resistors & Inductors	215,000
Heyres	Resistors & Inductors	65,000

		<u>Approx. Available</u>
Owned Locations (continued)	Business Segment	<u>Space (Square Feet)</u>
Famalicao, Portugal	Capacitors	167,000
Vocklabruck, Austria	Diodes	153,000
Manila, Philippines	Diodes and Optoelectronic Components	144,000
Turin, Italy	Diodes	127,000
Budapest, Hungary	Diodes	116,000
Juarez, Mexico	Resistors & Inductors	57,000

The principal locations of our leased manufacturing facilities, along with available space including administrative offices, are as follows:

		Approx. Available
<u>Leased Locations</u>	Business Segment	Space (Square Feet)
<u>United States</u>	-	
Ontario, CA	Resistors & Inductors	46,000
Milwaukee, WI	Resistors & Inductors	42,000
Dover, NH	Resistors & Inductors	35,000
Huntington, IN	Resistors & Inductors	16,000
Duluth, MN	Resistors & Inductors	10,000
Non-U.S.		
People's Republic of China		
Danshui	Capacitors	446,000
Shanghai	MOSFETS	217,000
Zhuhai	Resistors & Inductors	129,000
Klagenfurt, Austria	Capacitors	130,000
Juarez, Mexico	Resistors & Inductors	128,000
Germany		
Itzehoe	MOSFETs	207,000
Heilbronn	Diodes and Optoelectronic Components	48,000
Mumbai, India	Diodes	34,000
Santo Domingo, Dominican Republic	Resistors & Inductors	16,000
Prestice, Czech Republic	Resistors & Inductors	13,000

## Item 3. LEGAL PROCEEDINGS

From time to time we are involved in routine litigation incidental to our business. Management believes that such matters, either individually or in the aggregate, should not have a material adverse effect on our business or financial condition.

## **Intellectual Property Matters**

We are engaged in discussions with various parties regarding patent licensing and cross patent licensing issues. In addition, we have observed that in the current business environment, electronic component and semiconductor companies have become more aggressive in asserting and defending patent claims against competitors. We will continue to vigorously defend our intellectual property rights, and we may become party to disputes regarding patent licensing and cross patent licensing. An unfavorable outcome regarding one of these intellectual property matters could have a material adverse effect on our business and operating results.

When we believe other companies are misappropriating our intellectual property rights, we vigorously enforce those rights through legal action, and we intend to continue to do so. During the past few years, we settled several suits which we had initiated to enforce our intellectual property rights. We are receiving royalties on sales of these companies' products which use our technology. We are continuing to assert our legal rights against other parties which we believe are misappropriating our intellectual property rights.

#### Siliconix Stockholder Matters

#### **Proctor Litigation**

In January 2005, an amended class action complaint was filed in the Superior Court of California on behalf of all non-Vishay stockholders of Siliconix against Vishay, Ernst & Young LLP (the independent registered public accounting firm that audits the Company's financial statements), Dr. Felix Zandman, former Executive Chairman and Chief Technical and Business Development Officer of Vishay, and as a nominal defendant, Siliconix. The suit made various claims against Vishay and the other defendants for actions allegedly taken in respect of Siliconix during the period when Vishay owned an 80.4% interest in Siliconix. The action, which we refer to as the Proctor litigation on account of the lead plaintiff, sought injunctive relief and unspecified damages.

In May 2005, Vishay successfully completed a tender offer to acquire all shares of Siliconix that were not already owned by Vishay. Following the announcement of Vishay's intent to make this tender offer, several purported class-action complaints were filed in the Delaware Court of Chancery. These actions were consolidated into a single class action and a settlement agreement was reached with the plaintiffs, who effectively represented all non-Vishay stockholders of Siliconix. The settlement agreement was approved by the Delaware Court of Chancery in October 2005.

The plaintiffs in the Proctor litigation filed an amended complaint in the Superior Court of California in November 2005. In June 2006, the Delaware Court of Chancery issued a permanent injunction restraining the Proctor plaintiffs from prosecuting the Proctor action. An appeal of the injunction order brought by a former stockholder of Siliconix was dismissed by the Delaware Supreme Court in January 2007.

In June 2006, the Proctor litigation was removed from the Superior Court of California to federal District Court. The District Court granted a motion by Ernst & Young to dismiss the complaint and a motion by Vishay for summary judgment, effective October 15, 2007. The plaintiffs appealed to the Ninth Circuit Court of Appeals and on October 9, 2009, the Court of Appeals affirmed the dismissal of Proctor's class action claim and remanded the remaining two claims to state court. On July 26, 2011, the Superior Court dismissed the remaining claims against Vishay with prejudice. On September 20, 2011, the plaintiffs filed a notice of appeal. On December 11, 2012, the Court of Appeal of the State of California, Sixth Appellate District, heard oral arguments from the parties on the matter. On February 19, 2013, the Court of Appeal affirmed the Superior Court's dismissal of the remaining claims.

#### **Environmental Matters**

Vishay is involved in environmental remediation programs at various sites currently or formerly owned by Vishay and its subsidiaries both within and outside of the U.S., in addition to involvement as a potentially responsible party ("PRP") at Superfund sites. Certain obligations as a PRP have arisen in connection with business acquisitions. The remediation programs are on-going and the ultimate cost of site cleanup is difficult to predict given the uncertainties regarding the extent of the required cleanup, the interpretation of applicable laws and regulations, and alternative cleanup methods. See also Note 13 to our consolidated financial statements.

### Item 4. MINE SAFETY DISCLOSURES

None.

#### **EXECUTIVE OFFICERS OF THE REGISTRANT**

The following table sets forth certain information regarding our executive officers as of February 20, 2013:

<u>Name</u>	<u>Age</u>	Positions Held
Marc Zandman*	51	Executive Chairman of the Board, Chief Business Development
		Officer, and President, Vishay Israel Ltd.
Dr. Gerald Paul*	64	Chief Executive Officer, President, and Director
Lori Lipcaman	54	Executive Vice President and Chief Financial Officer
Dieter Wunderlich	60	Executive Vice President and Chief Operating Officer
Johan Vandoorn	56	Executive Vice President and Chief Technical Officer
David Valletta	52	Executive Vice President Worldwide Sales

<sup>\*</sup> Member of the Executive Committee of the Board of Directors.

Marc Zandman was appointed Executive Chairman of the Board and Chief Business Development Officer effective June 5, 2011. Mr. Zandman has served as a Director of Vishay since 2001 and President of Vishay Israel Ltd. since 1998. Mr. Zandman previously was Vice Chairman of the Board from 2003 to June 2011, and Chief Administration Officer from 2007 to June 2011. Mr. Zandman was Group Vice President of Vishay Measurements Group from 2002 to 2004. Mr. Zandman has served in various other capacities with Vishay since 1984. He is the son of the late Dr. Felix Zandman, Vishay's Founder. Mr. Zandman controls, on a shared basis with Ruta Zandman and Ziv Shoshani, approximately 43.1% of the total voting power of our capital stock as of December 31, 2012. He also is non-executive Chairman of Vishay Precision Group, Inc., an independent, publicly-traded company spun-off from Vishay Intertechnology in 2010.

Dr. Gerald Paul was appointed Chief Executive Officer effective January 1, 2005. Dr. Paul has served as a Director of the Company since 1993, and has been President of the Company since March 1998. Dr. Paul also was Chief Operating Officer from 1996 to 2006. Dr. Paul previously was an Executive Vice President of the Company from 1996 to 1998, and President of Vishay Electronic Components, Europe from 1994 to 1996. Dr. Paul has been Managing Director of Vishay Electronic GmbH, a subsidiary of the Company, since 1991. Dr. Paul has been employed by Vishay and a predecessor company since 1978.

Lori Lipcaman was appointed Executive Vice President and Chief Financial Officer of the Company effective September 1, 2011. Ms. Lipcaman had been appointed Executive Vice President Finance and Chief Accounting Officer in September 2008. Previously, she served as Vishay's Corporate Senior Vice President, Operations Controller, from March 1998 to September 2008. Prior to that, she served in various positions of increasing responsibility in finance and controlling since joining the Company in May 1989.

Dieter Wunderlich was appointed Executive Vice President and Chief Operating Officer effective August 1, 2011. Mr. Wunderlich has held various positions of increasing responsibility since Vishay's acquisition of Draloric Electronic GmbH ("Draloric") in 1987, including Executive Vice President – Semiconductors (2009 – 2012). Mr. Wunderlich's experience with Vishay includes worldwide or regional operations leadership roles within each of Vishay's five business reporting segments. Mr. Wunderlich had been employed by Draloric since 1975.

Johan Vandoorn was appointed Executive Vice President and Chief Technical Officer effective August 1, 2011. Mr. Vandoorn is responsible for Vishay's technical development and internal growth programs. Mr. Vandoorn has held various positions of increasing responsibility since Vishay's acquisition of BCcomponents Holdings BV ("BCcomponents") in 2002, including Executive Vice President – Passive Components (2006 – 2012). Mr. Vandoorn had been Vice President – Global Operations of BCcomponents from 2000 until its acquisition by Vishay, and previously worked for Philips Components ("Philips") from 1980 until Philips sold the BCcomponents business to a private equity firm in 1998.

David Valletta serves as Vishay's Executive Vice President – Worldwide Sales, a position he has held since 2007. Mr. Valletta has held various positions of increasing responsibility since Vishay's acquisition of Vitramon in 1994. Prior to joining Vitramon, Mr. Valletta also worked for AVX Corporation. His experience with Vishay includes various positions within the Americas region in direct and distribution sales management and global sales responsibility for the Company's key strategic customers.

## PART II

# <u>Item 5.</u> <u>MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES</u>

Our common stock is listed on the New York Stock Exchange under the symbol VSH. The following table sets forth the high and low sales prices for our common stock as reported on the New York Stock Exchange composite tape for the indicated fiscal quarters. We do not currently pay cash dividends on our capital stock. In addition, we are restricted from paying cash dividends under the terms of our revolving credit agreement. See Note 6 to our consolidated financial statements. Holders of record of our common stock totaled approximately 1,200 at February 18, 2013. Because many of the shares of our common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of beneficial owners represented by these stockholders of record.

The following table sets forth, for the indicated periods, the high and low sales prices of our common stock.

	2012			2011			
	High		Low		High		Low
Fourth quarter	\$ 10.63	\$	8.21	Fourth quarter	\$ 11.60	\$	7.94
Third quarter	\$ 11.04	\$	8.10	Third quarter	\$ 16.29	\$	8.33
Second quarter	\$ 12.65	\$	8.76	Second quarter	\$ 19.36	\$	13.64
First quarter	\$ 13.52	\$	9.14	First quarter	\$ 18.99	\$	14.62

At February 18, 2013, we had outstanding 12,129,227 shares of Class B common stock, par value \$.10 per share, each of which entitles the holder to ten votes. The Class B common stock generally is not transferable except in certain very limited instances, and there is no market for those shares. The Class B common stock is convertible, at the option of the holder, into common stock on a share for share basis. As a result of the passing of our founder and former Executive Chairman, Dr. Felix Zandman, Mrs. Ruta Zandman (a member of our Board of Directors) controls the voting of, solely or on a shared basis with Marc Zandman (our Executive Chairman) and Ziv Shoshani (a member of our Board of Directors), approximately 89.5% of our Class B common stock, representing 43.0% of the total voting power of our capital stock.

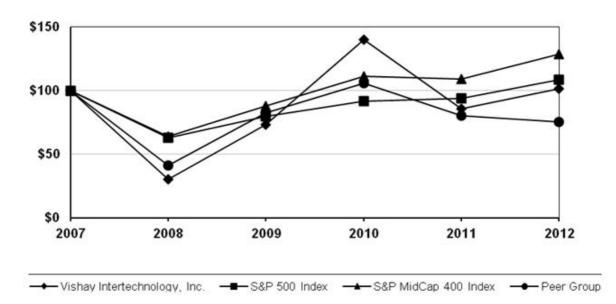
## **Stock Performance Graph**

The line graph below compares the cumulative total stockholder return on Vishay's common stock over a 5-year period with the returns on the Standard & Poor's MidCap 400 Stock Index (of which Vishay is a component), the Standard & Poor's 500 Stock Index, and a peer group of companies selected by our management. The peer group is made up of five publicly-held manufacturers of semiconductors, resistors, capacitors, and other electronic components.\* Management believes that the product offerings of the companies contained in the peer group are more similar to our product offerings than those of the companies contained in any published industry index. The return of each peer issuer has been weighted according to the respective issuer's stock market capitalization. The line graph assumes that \$100 had been invested at December 31, 2007 and assumes that all dividends were reinvested. The cash equivalent of the shares received in the spin-off of VPG are included in Vishay's results below.

		INDEXED RETURNS								
	Base	Years Ending December 31,								
Company Name / Index	Period									
	2007	2008	2009	2010	2011	2012				
Vishay Intertechnology, Inc.	100	29.97	73.18	139.88	85.66	101.29				
S&P 500 Index	100	63.00	79.67	91.68	93.61	108.59				
S&P MidCap 400 Index	100	63.77	87.61	110.94	109.02	128.51				
Peer Group*	100	41.03	82.45	105.72	80.01	75.51				

<sup>\*</sup> AVX Corporation, Fairchild Semiconductor International Inc., International Rectifier Corporation, KEMET Corporation, and ON Semiconductor Corporation.

## Comparison of Cumulative Five Year Total Return



## <u>Item 6.</u> <u>SELECTED FINANCIAL DATA</u>

The following table sets forth selected consolidated financial information as of and for the fiscal years ended December 31, 2012, 2011, 2010, 2009, and 2008. This table should be read in conjunction with our consolidated financial statements and the related notes thereto included elsewhere in this Form 10-K (in thousands, except per share amounts):

As of and for the years ended December 31.

		As of and for the years ended December 31,								
0		2012 (1)		<b>2011</b> (2)		<b>2010</b> (3)		2009 (4)		<b>2008</b> (5)
Statement of Operations Data:										
Net revenues	\$	2,230,097	\$	2,594,029	\$	2,725,092	\$	2,042,033	\$	2,822,211
Costs of products sold		1,703,424		1,874,043		1,917,607		1,653,872		2,219,220
Loss on purchase commitments				-						6,024
Gross profit		526,673		719,986		807,485		388,161		596,967
Selling, general, and administrative expenses		349,625		367,623		389,547		359,162		450,879
Gain on sale of property		(12,153)		507,025				555,102		430,073
Executive compensation charges		(12,133)		5,762		_		57,824		-
Restructuring and severance costs				5,702				37,874		62,537
Asset write-downs		_		_		_		681		5,073
Impairment of goodwill and indefinite-lived intangibles								-		1,723,174
Unusual items		_		_		_		(28,195)		4,000
Operating income (loss)		189,201	_	346,601	_	417,938	_	(39,185)	_	(1,648,696)
Operating income (1055)		103,201		340,001		417,550		(55,165)		(1,040,030)
Other income (expense)										
Interest expense		(22,604)		(19,277)		(11,036)		(10,321)		(38,668)
Other		3,440		3,792		(1,369)		9,791		14,876
Total other income (expense)		(19,164)		(15,485)		(12,405)		(530)		(23,792)
Income (loss) from continuing operations										
before taxes and noncontrolling interest		170,037		331,116		405,533		(39,715)		(1,672,488)
Income taxes		46,506		91,119		45,240		16,800		11,187
Income (loss) from continuing operations		123,531		239,997		360,293		(56,515)		(1,683,675)
Loss from discontinued operations, net of tax		-		-		-		-		(47,826)
Net earnings (loss)		123,531		239,997		360,293		(56,515)		(1,731,501)
Noncontrolling interest		793		1,176		1,187		673		718
Net earnings (loss) attributable to Vishay stockholders	\$	122,738	\$	238,821	\$	359,106	\$	(57,188)	\$	(1,732,219)
Income (loss) from continuing operations										
attributable to Vishay stockholders, net of tax	\$	122,738	\$	238,821	\$	359,106	\$	(57,188)	\$	(1,684,393)
Basic earnings (loss) per share attributable to Vishay stockholders:*	\$	0.82	\$	1.49	\$	1.96	\$	(0.31)	\$	(9.04)
Continuing operations	\$	0.02	\$	1.49	\$	1.90	\$	(0.31)	\$	(9.04)
Discontinued operations	\$	0.82	\$	1.49	\$	1.96	\$	(0.31)		
Net earnings (loss)	Þ	0.02	Þ	1.49	Ф	1.90	Ф	(0.31)	Ф	(9.29)
Diluted earnings (loss) per share attributable to Vishay stockholders:*										
Continuing operations	\$	0.79	\$	1.42	\$	1.89	\$	(0.31)	\$	(9.04)
Discontinued operations	\$	-	\$	-	\$	-	\$	-	\$	(0.26)
Net earnings (loss)	\$	0.79	\$	1.42	\$	1.89	\$	(0.31)	\$	(9.29)
XIV. 1		1.40.020		160.004		102.610		106.605		100 400
Weighted average shares outstanding – basic		149,020		160,094		183,618		186,605		186,403
Weighted average shares outstanding – diluted		155,844		168,514		190,227		186,605		186,403
Balance Sheet Data:										
Total assets	\$	3,016,277	\$	2,993,730	\$	2,966,093	\$	2,719,546		2,815,960
Long-term debt, less current portion		392,931		399,054		431,682		320,052		333,631
Working capital		1,379,093		1,390,888		1,267,343		1,000,042		866,405
Total Vishay stockholders' equity		1,623,328		1,603,006		1,491,731		1,516,446		1,544,858
* May not add due to rounding.										
		34								
		3/1								

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- (1) Includes the results of HiRel Systems LLC from January 13, 2012. Also includes net pretax gain on the sale of property in Belgium vacated as a result of restructuring in prior years of \$12,153,000 and a \$4,036,000 one-time tax benefit related to the release of deferred tax valuation allowances in Israel following a merger of several of our wholly-owned subsidiaries in Israel which will allow for the realization of these tax benefits. These items, net of their related tax consequences, had a positive \$0.08 effect on earnings per share from continuing operations attributable to Vishay stockholders. These items are more fully described in the notes to the consolidated financial statements.
- (2) Includes the results of the resistor businesses of Huntington Electric from September 28, 2011. Also includes net pretax charges of \$5,762,000 to accelerate the recognition of certain executive compensation expenses upon the passing of our founder and former Executive Chairman of the Board, Dr. Zandman, and for elements of executive compensation payable upon the resignation of our former Chief Financial Officer, Dr. Lior Yahalomi. Also includes \$10,024,000 of one-time tax expense related to the write-down of deferred tax assets in Israel to reflect the lower corporate income tax rate enacted in January 2011 on certain types of income earned after December 31, 2010 and \$6,538,000 of one-time tax benefits recorded in the fourth fiscal quarter primarily related to the release of deferred tax valuation allowances in various jurisdictions. These items, net of their related tax consequences, had a negative \$0.04 effect on earnings per share from continuing operations attributable to Vishay stockholders. These items are more fully described in the notes to the consolidated financial statements.
- (3) Includes the results of operations of VPG through the date of the spin-off, July 6, 2010. VPG contributed \$101,089,000 of net revenues, \$9,716,000 of income before taxes, \$5,811,000 of net earnings attributable to Vishay stockholders, and \$0.03 per diluted share attributable to Vishay stockholders to our results in 2010. Also includes a \$59,484,000 one-time tax benefit recorded in the fourth fiscal quarter of 2010, which had a \$0.31 effect on earnings per share from continuing operations attributable to Vishay stockholders. These items are more fully described in the notes to the consolidated financial statements.
- (4) Includes net pretax charges of \$96,379,000 for restructuring and severance costs, asset write-downs, and executive compensation charges. These charges were partially offset by a \$28,195,000 settlement agreement gain. These items, net of their related tax consequences, had a negative \$0.33 effect on earnings per share from continuing operations attributable to Vishay stockholders. VPG contributed \$171,991,000 of net revenues, \$6,778,000 of income before taxes, \$1,704,000 of net earnings attributable to Vishay stockholders, and \$0.01 per share attributable to Vishay stockholders to our results in 2009.
- (5) Includes the results of Vishay Transducers India Limited from June 30, 2008, of Powertron GmbH from July 23, 2008, and of the wet tantalum business of KEMET Corporation from September 15, 2008. Also includes net pretax charges of \$1,796,298,000 for impairment of goodwill and indefinite-lived intangible assets, restructuring and severance costs, asset write-downs, terminated tender offer expenses, and losses on adverse purchase commitments, partially offset by a gain on sale of a building. Also includes additional tax expenses for one-time tax items totaling \$36,935,000. These items, net of their related tax consequences, had a negative \$9.49 effect on earnings per share from continuing operations attributable to Vishay stockholders. VPG contributed \$241,700,000 of net revenues, \$(68,426,000) of loss before taxes, \$(74,130,000) of net loss attributable to Vishay stockholders, and \$(0.39) per share attributable to Vishay stockholders to our results in 2008. VPG represented \$93,465,000 of the goodwill impairment charge.

Management believes that stating the impact on net earnings of items such as businesses that have been spun off, goodwill and indefinite-lived intangible asset impairment charges, restructuring and severance costs, asset write-downs, inventory write-downs and write-offs, gains or losses on purchase commitments, special tax items, and other items is meaningful to investors because it provides insight with respect to intrinsic operating results of the Company.

#### Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

#### Overview

Vishay Intertechnology, Inc. is a global manufacturer and supplier of semiconductors and passive components, including power MOSFETs, power integrated circuits, transistors, diodes, optoelectronic components, resistors, capacitors, and inductors. Discrete semiconductors and passive components manufactured by Vishay are used in virtually all types of electronic products, including those in the industrial, computing, automotive, consumer electronic products, telecommunications, power supplies, military/aerospace, and medical industries.

On July 6, 2010, we completed the spin-off of Vishay Precision Group, Inc. ("VPG") through a tax-free stock dividend to our stockholders. Our common stockholders received 1 share of VPG common stock for every 14 shares of Vishay common stock they held on the record date, June 25, 2010, and our Class B common stockholders received 1 share of VPG Class B common stock for every 14 shares of Vishay Class B common stock they held on the record date. Until July 6, 2010, VPG was part of Vishay and its results of operations and cash flows are included in the balances reported in our consolidated financial statements for periods prior to the spin-off.

Prior to the completion of the spin-off of VPG, we operated in six product segments, MOSFETs, Diodes, Optoelectronic Components, Resistors & Inductors, Capacitors, and Vishay Precision Group. Following the spin-off we operate in five product segments.

Since 1985, we have pursued a business strategy of growth through focused research and development and acquisitions. Through this strategy, we have grown to become one of the world's largest manufacturers of discrete semiconductors and passive components. We expect to continue our strategy of acquisitions while also maintaining a prudent capital structure.

We are focused on enhancing stockholder value and improving earnings per share. In addition to our growth plan, we also have opportunistically repurchased our stock. In the second fiscal quarter of 2012, we completed the repurchase of 13.9 million shares of our common stock for \$150 million. Including this most recent repurchase, we have repurchased 44.3 million shares of our common stock since the fourth fiscal quarter of 2010, representing 24% of our shares outstanding before we began this initiative. Beginning in 2012, the permitted capacity to repurchase shares of stock under our credit facility began to increase each quarter by an amount equal to 20% of net income. At December 31, 2012, our total capacity to repurchase shares of stock under our credit facility was \$174.5 million. Although we have no current plans, we will continue to evaluate attractive stock repurchase opportunities.

Our business and operating results have been and will continue to be impacted by worldwide economic conditions. Our revenues are dependent on end markets that are impacted by consumer and industrial demand, and our operating results can be adversely affected by reduced demand in those global markets. For several years, we implemented aggressive cost reduction programs. We continue to monitor the current economic environment and its potential effects on our customers and the end markets that we serve. Additionally, we continue to closely monitor our costs, inventory, and capital resources to respond to changing conditions and to ensure we have the management, business processes, and resources to meet our future needs. See additional information regarding our competitive strengths and key challenges as disclosed in Part 1.

We utilize several financial metrics, including net revenues, gross profit margin, segment operating income, end-of-period backlog, book-to-bill ratio, inventory turnover, change in average selling prices, net cash and short-term investments (debt), and free cash generation to evaluate the performance and assess the future direction of our business. (See further discussion in "Financial Metrics" and "Financial Condition, Liquidity, and Capital Resources.") Both 2011 and 2012 were characterized by stronger first halves and weaker second halves. The first half of 2011 was stronger than the first half of 2012, which resulted in a reduction of nearly all key financial metrics compared with the prior year.

Net revenues for the year ended December 31, 2012 were \$2.230 billion, compared to net revenues of \$2.594 billion and \$2.725 billion for the years ended December 31, 2011 and 2010, respectively. The net earnings attributable to Vishay stockholders for the year ended December 31, 2012 were \$122.7 million, or \$0.79 per diluted share, compared to net earnings attributable to Vishay stockholders of \$238.8 million, or \$1.42 per share, and \$359.1 million, or \$1.89 per share, for the years ended December 31, 2011 and 2010, respectively.

The results of operations for the years ended December 31, 2012, 2011, and 2010 include items affecting comparability as listed in the reconciliation below. The reconciliation below includes certain financial measures which are not recognized in accordance with generally accepted accounting principles ("GAAP"), including adjusted net earnings and adjusted net earnings per share. These non-GAAP measures should not be viewed as an alternative to GAAP measures of performance. Non-GAAP measures such as adjusted net earnings and adjusted net earnings per share do not have uniform definitions. These measures, as calculated by Vishay, may not be comparable to similarly titled measures used by other companies. Management believes that these measures are meaningful because they provide insight with respect to our intrinsic operating results. Reconciling items to arrive at adjusted net earnings represent significant charges or credits that are important to understanding our intrinsic operations.

The items affecting comparability are (in thousands, except per share amounts):

	Years ended December 31,					
		2012		2011		2010
GAAP net earnings attributable to Vishay stockholders	\$	122,738	\$	238,821	\$	359,106
Reconciling items affecting operating margin:						
Gain on sale of property	\$	(12,153)	\$	-	\$	-
Executive compensation charges		-		5,762		-
Reconciling items affecting tax expense (benefit):						
Tax effects of items above and other one-time tax expense (benefit)	\$	95	\$	1,383	\$	(59,484)
Adjusted net earnings	\$	110,680	\$	245,966	\$	299,622
Adjusted weighted average diluted shares outstanding		155,844		168,514		190,227
Adjusted earnings per diluted share *	\$	0.71	\$	1.46	\$	1.58

<sup>\*</sup> Includes add-back of interest on exchangeable notes in periods where the notes are dilutive.

Our results for the year ended December 31, 2012 represent the effects of a deteriorating business environment in most of our markets that began in the third fiscal quarter of 2012. This period of business environment deterioration followed a period of improvement in the business environment experienced in the first six fiscal months of 2012 compared to the last six fiscal months of 2011. We believe that the business environment in most of our markets is being negatively impacted by macroeconomic anxiety that has started to influence the end consumers and the supply chain. Our results for 2012 demonstrate our ability to react quickly to changing economic environments and successfully implement temporary cost reduction measures when necessary to sustain earnings. Despite the relatively low revenues, our pre-tax results were as we would expect based on our business model. Our results for the year ended December 31, 2011 were also affected by macroeconomic concerns, which reduced demand for our products in the last six fiscal months of the year. This period of macroeconomic concern followed a period of favorable business conditions through the first six fiscal months of 2011 in which we achieved significantly higher annualized earnings than before the beginning of the 2008-2009 global economic recession at the same sales volume. Our results for the year ended December 31, 2010 represent a period of favorable business conditions.

#### **Financial Metrics**

We utilize several financial metrics to evaluate the performance and assess the future direction of our business. These key financial measures and metrics include net revenues, gross profit margin, operating margin, segment operating income, end-of-period backlog, and the book-to-bill ratio. We also monitor changes in inventory turnover and average selling prices ("ASP").

Gross profit margin is computed as gross profit as a percentage of net revenues. Gross profit is generally net revenues less costs of products sold, but also deducts certain other period costs, particularly losses on purchase commitments and inventory write-downs. Losses on purchase commitments and inventory write-downs have the impact of reducing gross profit margin in the period of the charge, but result in improved gross profit margins in subsequent periods by reducing costs of products sold as inventory is used. Gross profit margin is clearly a function of net revenues, but also reflects our cost management programs and our ability to contain fixed costs.

Operating margin is computed as gross profit less operating expenses as a percentage of net revenues. We evaluate business segment performance on segment operating margin. Only dedicated, direct selling, general, and administrative expenses of the segments are included in the calculation of segment operating income. Segment operating margin is computed as operating income less items such as restructuring and severance costs, asset write-downs, goodwill and indefinite-lived intangible asset impairments, inventory write-downs, gain or losses on purchase commitments, global operations, sales and marketing, information systems, finance and administrative groups, and other items, expressed as a percentage of net revenues. We believe that evaluating segment performance excluding such items is meaningful because it provides insight with respect to intrinsic operating results of the segment. Operating margin is clearly a function of net revenues, but also reflects our cost management programs and our ability to contain fixed costs.

End-of-period backlog is one indicator of future revenues. We include in our backlog only open orders that we expect to ship in the next twelve months. If demand falls below customers' forecasts, or if customers do not control their inventory effectively, they may cancel or reschedule the shipments that are included in our backlog, in many instances without the payment of any penalty. Therefore, the backlog is not necessarily indicative of the results to be expected for future periods.

An important indicator of demand in our industry is the book-to-bill ratio, which is the ratio of the amount of product ordered during a period as compared with the product that we ship during that period. A book-to-bill ratio that is greater than one indicates that our backlog is building and that we are likely to see increasing revenues in future periods. Conversely, a book-to-bill ratio that is less than one is an indicator of declining demand and may foretell declining revenues.

We focus on our inventory turnover as a measure of how well we are managing our inventory. We define inventory turnover for a financial reporting period as our costs of products sold for the four fiscal quarters ending on the last day of the reporting period divided by our average inventory (computed using each fiscal quarter-end balance) for this same period. A higher level of inventory turnover reflects more efficient use of our capital.

Pricing in our industry can be volatile. We analyze trends and changes in average selling prices to evaluate likely future pricing. The erosion of average selling prices of established products is typical for semiconductor products. We attempt to offset this deterioration with ongoing cost reduction activities and new product introductions. Our specialty passive components are more resistant to average selling price erosion.

The quarter-to-quarter trends in these financial metrics can also be an important indicator of the likely direction of our business. The following table shows net revenues, gross profit margin, operating income, end-of-period backlog, book-to-bill ratio, inventory turnover, and changes in ASP for our business as a whole during the five fiscal quarters beginning with the fourth fiscal quarter of 2011 through the fourth fiscal quarter of 2012 (dollars in thousands):

	4tl	1 Quarter 2011	19	st Quarter 2012		and Quarter 2012	3	rd Quarter 2012	4	th Quarter 2012
Net revenues	\$	551,391	\$	538,547	\$	588,199	\$	572,781	\$	530,570
Gross profit margin		22.8%		25.4%	)	25.1%		23.3%		20.5%
Operating margin (1)		6.1%		9.3%	)	12.4%		7.8%		4.1%
End-of-period backlog <sup>(2)</sup>	\$	530,200	\$	607,100	\$	593,300	\$	525,900	\$	506,000
Book-to-bill ratio		0.80		1.11		1.01		0.87		0.95
Inventory turnover		3.86		3.66		4.01		4.00		3.99
Change in ASP vs. prior quarter		-0.5%		-1.0%	)	-1.4%		-0.7%		-1.6%

<sup>(1)</sup> Operating margin for the second fiscal quarter of 2012 includes a \$12.2 million gain recognized on the sale of a vacated property in Belgium (see Note 4 to our consolidated financial statements). (2) End-of-period backlog for the first fiscal quarter of 2012 reflects a total of \$12.2 million related to the backlog of HiRel Sytems LLC as of the date of acquisition.

See "Financial Metrics by Segment" below for net revenues, book-to-bill ratio, and gross profit margin broken out by segment.

Like many of the companies in our industry, our results for the second half, and in particular, the fourth fiscal quarter, of 2012 were impacted by low demand from distributors which led to a further reduction in revenues compared to the prior fiscal quarters. The low distributor demand, deteriorating business environment in most of our markets, and macroeconomic anxieties that affected end consumers and the supply chain has resulted in a decrease in the backlog. The low distributor inventory levels in the supply chain and continued strength of the automotive market resulted in an increase in distributor orders and, as a result, the book-to-bill ratio, in the fourth fiscal quarter of 2012. Competitive pricing pressure for commodity products has resulted in the continued decline of average selling prices versus the prior quarter and prior year periods.

Lower sales volume led to a reduction in gross margins for the fourth fiscal quarter versus the prior year period and the previous fiscal quarters.

Due to the increase in orders, the book-to-bill ratio increased to 0.95 in the fourth fiscal quarter of 2012 from 0.87 in the third fiscal quarter of 2012. The book-to-bill ratios for distributors and original equipment manufacturers ("OEM") were 1.00 and 0.90, respectively, versus ratios of 0.79 and 0.94, respectively, during the third fiscal quarter of 2012.

# **Financial Metrics by Segment**

The following table shows net revenues, book-to-bill ratio, gross profit margin, and segment operating margin broken out by segment for the five fiscal quarters beginning with the fourth fiscal quarter of 2011 through the fourth fiscal quarter of 2012 (dollars in thousands):

	4tl	Quarter 2011	1s	t Quarter 2012	2n	d Quarter 2012	31	rd Quarter 2012	4t	h Quarter 2012
MOSFETs	¢	100 071	¢	04.020	¢	111 262	¢	122 225	¢	104 156
Net revenues	\$	109,871	\$	94,838	\$	111,363	\$	123,325	\$	104,156
Book-to-bill ratio		0.77		1.18		1.20		0.70		0.90
Gross profit margin		14.5%	, )	11.2%		16.8%	ó	14.1%		9.6%
Segment operating margin		5.5%	, )	1.4%	)	7.8%	ó	5.8%		0.1%
<u>Diodes</u>										
Net revenues	\$	127,470	\$	120,134	\$	136,008	\$	124,108	\$	116,494
Book-to-bill ratio		0.70		1.01		0.95		0.88		1.01
Gross profit margin		19.8%	, )	20.9%	5	21.1%	ó	20.3%		17.3%
Segment operating margin		14.8%	, )	16.1%	, )	16.7%	ó	15.7%		12.2%
Optoelectronic Components										
Net revenues	\$	52,258	\$	50,639	\$	58,083	\$	50,205	\$	50,267
Book-to-bill ratio		0.91		1.12		0.91		0.95		1.03
Gross profit margin		29.7%	D	34.2%	, )	32.0%	o O	31.0%		32.8%
Segment operating margin		22.8%	, )	27.7%	D	26.2%	ó	24.7%		25.8%
Resistors & Inductors										
Net revenues	\$	141,757	\$	159,010	\$	166,398	\$	163,712	\$	153,200
Book-to-bill ratio		0.90		1.13		0.99		0.94		0.94
Gross profit margin		29.9%	, D	34.1%	, )	33.1%	ó	31.3%		28.4%
Segment operating margin		24.6%	, )	29.3%	, )	28.1%	ó 0	26.6%		23.1%
<u>Capacitors</u>										
Net revenues	\$	120,035	\$	113,926	\$	116,347	\$	111,431	\$	106,453
Book-to-bill ratio		0.75		1.12		0.97		0.87		0.93
Gross profit margin		22.2%	, )	25.9%	, )	22.8%	, 0	21.7%		17.5%
Segment operating margin		17.1%	)	21.0%	)	18.0%	o O	17.1%		12.2%
		40								

#### **Acquisition and Divestiture Activity**

As part of our growth strategy, we seek to expand through targeted acquisitions of other manufacturers of electronic components that have established positions in major markets, reputations for product quality and reliability, and product lines with which we have substantial marketing and technical expertise. This includes exploring opportunities to acquire targets to gain market share, penetrate different geographic markets, enhance new product development, round out our existing product lines, or grow our high margin niche market businesses. Acquisitions of passive components businesses would likely be made to strengthen and broaden our position as a specialty product supplier; acquisitions of discrete semiconductor businesses would be made to increase market share and to generate synergies. To limit our financial exposure, we have implemented a policy not to pursue acquisitions if our post-acquisition debt would exceed 2.5x our pro forma earnings before interest, taxes, depreciation, and amortization ("EBITDA"). For these purposes, we calculate pro forma EBITDA as the adjusted EBITDA of Vishay and the target for Vishay's four preceding fiscal quarters, with a pro forma adjustment for savings which management estimates would have been achieved had the target been acquired by Vishay at the beginning of the four fiscal quarter period.

Our growth plan targets adding, through acquisitions, an average of approximately \$100 million of revenues per year. Depending on the opportunities available, we might make several smaller acquisitions or a few larger acquisitions. We intend to make such acquisitions using mainly cash, rather than debt or equity, although we do have capacity under our revolving credit facility if necessary. We are not currently targeting acquisitions larger than \$500 million.

There is no assurance that we will be able to identify and acquire additional suitable acquisition candidates at price levels and on terms and conditions we consider acceptable.

#### 2012 Activities

On January 13, 2012, we acquired HiRel Systems LLC, a leading supplier of high reliability transformers, inductors, coils, and power conversion products, for approximately \$85.5 million. The products and technology portfolio acquired will further enhance our inductors portfolio, particularly in the field of custom magnetics for medical, military, aerospace and aviation, and applications in the industrial and commercial field such as renewable energy and test and measurement equipment. For financial reporting purposes, the results of operations for this business have been included in the Resistors & Inductors segment from January 13, 2012.

#### 2011 Activities

On September 28, 2011, we acquired the resistor businesses of Huntington Electric, Inc., for approximately \$19.3 million. The businesses acquired will further enhance our broad resistor portfolio, particularly in the high power and high current ranges, as well as with resistor assemblies for industrial applications. For financial reporting purposes, the results of operations for these businesses have been included in the Resistors & Inductors segment from September 28, 2011.

# Spin-off of Vishay Precision Group, Inc.

On July 6, 2010, we completed the spin-off of our measurements and foil resistors businesses into an independent, publicly-traded company named Vishay Precision Group, Inc. through a tax-free stock dividend to our stockholders. Our common stockholders received 1 share of VPG common stock for every 14 shares of Vishay common stock they held on the record date, June 25, 2010, and our Class B common stockholders received 1 share of VPG Class B common stock for every 14 shares of Vishay Class B common stock they held on the record date. Upon completion of the spin-off, certain executive officers received bonuses aggregating approximately \$2.1 million, which is reflected in the results for the year ended December 31, 2010.

Until July 6, 2010, VPG was part of Vishay and its assets, liabilities, results of operations, and cash flows are included in the balances reported in our consolidated financial statements for periods prior to the spin-off. The product lines that comprise VPG are included in the VPG reporting segment. See Note 15 to our consolidated financial statements for further information on the effect that VPG had on our consolidated results.

#### **Cost Management**

We place a strong emphasis on controlling our costs.

The erosion of average selling prices of established products, particularly our semiconductor products, that is typical of our industry and inflation drive us to continually seek ways to reduce our variable costs. Our variable cost reduction efforts include expending capital to increase automation and maximize the efficiency in our production facilities, consolidating materials purchasing across regions and divisions to achieve economies of scale, materials substitution, maintaining an appropriate mix of in-house production and subcontractor production, increasing wafer size and shrinking dies to maximize efficiency in our semiconductor production processes, and other yield improvement activities.

Our cost management strategy also includes a focus on controlling fixed costs. We seek to maintain selling, general, and administrative expenses at current quarterly levels, excluding foreign currency exchange effects and substantially independent of sales volume changes. Our fixed cost control efforts include automating administrative processes through the expansion of IT systems, gradually migrating to common IT systems across our organization, streamlining our legal entity structure, and reducing our external resource needs by utilizing more cost-effective in-house personnel, while utilizing external resources when day-to-day expertise is not required in-house.

Historically, our primary cost reduction technique was through the transfer of production to the extent possible from high-labor-cost countries, such as the United States and Western Europe, to lower-labor-cost countries, such as the Czech Republic, Israel, India, Malaysia, Mexico, the People's Republic of China, and the Philippines. Between 2001 and 2009, we recorded, in the consolidated statements of operations, restructuring and severance costs totaling \$320 million and related asset write-downs totaling \$89 million in order to reduce our cost structure going forward. We also incurred significant costs to restructure and integrate acquired businesses, which was included in the cost of the acquisitions under then-applicable GAAP. We believe that our workforce is now appropriately located to serve our customers, while maintaining lower manufacturing costs.

We did not initiate any new restructuring projects in 2010 - 2012 and thus did not record any restructuring and severance expenses during such periods.

Because we believe that our manufacturing footprint is suitable to serve our customers and end markets, we do not anticipate any material restructuring expenses in 2013. We currently plan to keep our trained workforce even at lower manufacturing activity levels by reducing hours and limiting the use of subcontractors and foundries. However, the recurrence of a significant economic downturn may require us to implement additional restructuring initiatives.

Our long-term strategy includes growth through the integration of acquired businesses, and GAAP requires plant closure and employee termination costs that we incur in connection with our acquisition activities to be recorded as expenses in our consolidated statement of operations, as such expenses are incurred. We have not incurred any material plant closure or employee termination costs related to our acquisitions of Huntington Electric and HiRel Systems, LLC, but we expect to have some level of future restructuring expenses due to acquisitions.

Even as we seek to manage our costs, we continue to pursue our growth plans through investing in capacities for strategic product lines, and through increasing our resources for R&D, technical marketing, and field application engineering; supplemented by opportunistic acquisitions of specialty businesses.

#### **Growth Plan**

We are focused on enhancing stockholder value and improving earnings per share by growing our business and opportunistically repurchasing our stock. We plan to grow our business through intensified internal growth supplemented by opportunistic acquisitions, while at the same time maintaining a prudent capital structure. To foster intensified internal growth, we have increased our R&D and engineering technical staff by 15% since 2009 and plan to further increase it; we are expanding critical manufacturing capacities; and we are increasing our technical field sales force in Asia by about 25% to increase the design-in of our products in local markets. Our growth plan also targets adding, through acquisitions, \$100 million of revenues per year on average. Since 2011, we have acquired the specialty product businesses of Huntington Electric and HiRel Systems, LLC and we continue to explore additional acquisition opportunities despite the current economic volatility.

#### **Foreign Currency Translation**

We are exposed to foreign currency exchange rate risks, particularly due to transactions in currencies other than the functional currencies of certain subsidiaries. While we have in the past used forward exchange contracts to hedge a portion of our projected cash flows from these exposures, we generally have not done so in recent periods.

GAAP requires that entities identify the "functional currency" of each of their subsidiaries and measure all elements of the financial statements in that functional currency. A subsidiary's functional currency is the currency of the primary economic environment in which it operates. In cases where a subsidiary is relatively self-contained within a particular country, the local currency is generally deemed to be the functional currency. However, a foreign subsidiary that is a direct and integral component or extension of the parent company's operations generally would have the parent company's currency as its functional currency. We have both situations among our subsidiaries.

#### Foreign Subsidiaries which use the Local Currency as the Functional Currency

We finance our operations in Europe and certain locations in Asia in local currencies, and accordingly, these subsidiaries utilize the local currency as their functional currency. For those subsidiaries where the local currency is the functional currency, assets and liabilities in the consolidated balance sheets have been translated at the rate of exchange as of the balance sheet date. Translation adjustments do not impact the results of operations and are reported as a separate component of stockholders' equity.

For those subsidiaries where the local currency is the functional currency, revenues and expenses are translated at the average exchange rate for the year. While the translation of revenues and expenses into U.S. dollars does not directly impact the consolidated statement of operations, the translation effectively increases or decreases the U.S. dollar equivalent of revenues generated and expenses incurred in those foreign currencies. The dollar generally was stronger in the year ended December 31, 2012 compared to the prior year, with the translation of foreign currency revenues and expenses into U.S. dollars decreasing reported revenues and expenses versus the comparable prior year periods.

These subsidiaries incur gains and losses on transactions denominated in currencies other than the local currency, especially in periods of rapidly changing foreign currency exchange rates. The sudden rapid changes in the Euro exchange rates experienced in 2012 resulted in modest transactional losses.

# Foreign Subsidiaries which use the U.S. Dollar as the Functional Currency

Our operations in Israel and most significant locations in Asia are largely financed in U.S. dollars, and accordingly, these subsidiaries utilize the U.S. dollar as their functional currency. For those foreign subsidiaries where the U.S. dollar is the functional currency, all foreign currency financial statement amounts are remeasured into U.S. dollars. Exchange gains and losses arising from remeasurement of foreign currency-denominated monetary assets and liabilities are included in the results of operations. While these subsidiaries transact most business in U.S. dollars, they may have significant costs, particularly payroll-related, which are incurred in the local currency. The cost of products sold and selling, general, and administrative expense for the year ended December 31, 2012 have been slightly favorably impacted (compared to the prior year) by local currency transactions of subsidiaries which use the U.S. dollar as their functional currency.

See Item 7A for additional discussion of foreign currency exchange risk.

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

Our significant accounting policies are summarized in Note 1 to our consolidated financial statements. We identify here a number of policies that entail significant judgments or estimates.

# Revenue Recognition

We recognize revenue on product sales during the period when the sales process is complete. This generally occurs when products are shipped to the customer in accordance with terms of an agreement of sale, title and risk of loss have been transferred, collectibility is reasonably assured, and pricing is fixed or determinable. For a small percentage of sales where title and risk of loss passes at point of delivery, we recognize revenue upon delivery to the customer, assuming all other criteria for revenue recognition are met. We historically have had agreements with distributors that provided limited rights of product return. We have modified these arrangements to allow distributors a limited credit for unsaleable products, which we term a "scrap allowance." Consistent with industry practice, we also have a "stock, ship and debit" program whereby we consider, and grant at our discretion, requests by distributors for credits on previously purchased products that remain in distributors' inventory, to enable the distributors to offer more competitive pricing. In addition, we have contractual arrangements whereby we provide distributors with protection against price reductions that we initiate after the sale of product to the distributor and prior to resale by the distributor.

We record end of period accruals for each of the programs based upon our estimate of future credits under the programs that will be attributable to sales recorded through the end of the period. We calculate reductions of revenue attributable to each of the programs during any period by computing the change in the accruals from the prior period and adding the credits actually given to distributors during the period under the programs. These procedures require the exercise of significant judgments, but we believe they enable us to reasonably estimate future credits under the programs.

Recording and monitoring of these accruals takes place at our subsidiaries and divisions, with input from sales and marketing personnel and review, assessment, and, if necessary, adjustment by corporate management. While our subsidiaries and divisions utilize different methodologies based on their individual experiences, all of the methodologies take into account certain elements that management considers relevant, such as sales to distributors during the relevant period, inventory levels at the distributors, current and projected market trends and conditions, recent and historical activity under the relevant programs, changes in program policies, and open requests for credits. In our judgment, the different methodologies provide us with equally reliable estimates upon which to base our accruals. We do not track the credits that we record against specific products sold from distributor inventories, so as to directly compare revenue reduction for credits recorded during any period with credits ultimately awarded in respect of products sold during that period. Nevertheless, we believe that we have an adequate basis to assess the reasonableness and reliability of our estimates.

We recognize royalty revenue in accordance with agreed upon terms when performance obligations are satisfied, the amount is fixed or determinable, and collectibility is reasonably assured. We earn royalties at the point of sale of products which incorporate licensed intellectual property. The amount of royalties recognized is determined based on our licensees' periodic reporting to us and judgments and estimates by our management that we believe are reasonable. However, it is possible that actual results may differ from our estimates.

#### **Inventories and Purchase Commitments**

We value our inventories at the lower of cost or market, with cost determined under the first-in, first-out method and market based upon net realizable value. The valuation of our inventories requires our management to make market estimates. For work in process goods, we are required to estimate the cost to completion of the products and the prices at which we will be able to sell the products. For finished goods, we must assess the prices at which we believe the inventory can be sold. Inventories are also adjusted for estimated obsolescence and written down to net realizable value based upon estimates of future demand, technology developments and market conditions.

Certain metals used in the manufacture of our products are traded on active markets, and can be subject to significant price volatility. Our policy is to enter into short-term commitments to purchase defined portions of annual consumption of these metals if market prices decline below budget. We record losses and related liabilities when the contractually obligated purchase price under our purchase commitments exceed quoted market prices for the metals.

#### Goodwill

Goodwill represents the excess of the cost of a business acquired over the fair value of the related net assets at the date of acquisition. Goodwill is not amortized but rather tested for impairment at least annually. These impairment tests must be performed more frequently whenever events or changes in circumstances indicate that the asset might be impaired.

When testing goodwill for impairment, we have the option of performing a qualitative assessment before performing the two-step quantitative impairment test. If we determine, on the basis of qualitative factors, that the fair value of the reporting unit is not more likely than not less than the carrying amount, the two-step impairment test is not required. If we determine that the fair value of the reporting unit is more likely than not less than the carrying amount, the two-step impairment test is required. In the first step of the quantitative impairment test, we determine the fair value of the reporting unit and compare the fair value to the net book value of the reporting unit. The fair value of the reporting unit is determined using various valuation techniques, including a comparable companies market multiple approach and a discounted cash flow analysis (an income approach). The comparable companies utilized in our evaluation are generally the members of our peer group included in the presentation of our stock performance graph in Item 5 of our Annual Report on Form 10-K.

In step two of the quantitative impairment test, we determine the implied fair value of goodwill in the same manner as if we had acquired those business units. Specifically, we must allocate the fair value of the reporting unit to all of the assets of that unit, including any unrecognized intangible assets, in a hypothetical calculation that would yield the implied fair value of goodwill. The impairment loss is measured as the difference between the book value of the goodwill and the implied fair value of the goodwill computed in step two.

Fair value of reporting units, and the underlying assets and liabilities of those reporting units, is measured at a point in time, and reflects specific market conditions as of the measurement date. We perform our annual impairment test as of the first day of the fourth fiscal quarter.

The determination of the fair value of the reporting units and the allocation of that value to individual assets and liabilities within those reporting units requires us to make significant estimates and assumptions. These estimates and assumptions primarily include, but are not limited to: the selection of appropriate peer group companies; control premiums appropriate for acquisitions in the industries in which we compete; the discount rate; terminal growth rates; and forecasts of revenue, operating income, depreciation and amortization, and capital expenditures. The allocation requires several analyses to determine fair value of assets and liabilities including, among others, completed technology, tradenames, in-process research and development, customer relationships, and certain property and equipment (valued at replacement costs).

Due to the inherent uncertainty involved in making these estimates, actual financial results could differ from those estimates. In addition, changes in assumptions concerning future financial results or other underlying assumptions could have a significant impact on either the fair value of the reporting unit or the amount of the goodwill impairment charge.

#### Impairment of Long-Lived Assets and Indefinite-Lived Intangible Assets

We assess the impairment of our long-lived assets, other than goodwill and tradenames, including property and equipment, long-term prepaid assets, and identifiable intangible assets subject to amortization, whenever events or changes in circumstances indicate the carrying value may not be recoverable. Long-lived assets are grouped at the lowest level of independent cash flows and evaluated as a group. Factors we consider important, which could trigger an impairment review, include significant changes in the manner of our use of the assets, changes in historical or projected operating performance, and significant negative economic trends. The carrying value of a long-lived asset group is considered impaired when the total projected undiscounted cash flows from such asset group are separately identifiable and are less than the carrying value. In that event, a loss is recognized based on the amount by which the carrying value exceeds the fair market value of the long-lived asset group, primarily determined using discounted future cash flows.

Indefinite-lived intangible assets (which for us are comprised entirely of tradenames) are not amortized, but similar to goodwill, are tested for impairment at least annually. These tests are performed more frequently if there are triggering events. When testing an indefinite-lived intangible asset for impairment we have the option of performing a qualitative assessment before calculating the fair value of the asset. If we determine, on the basis of qualitative factors, that the fair value of the indefinite-lived intangible asset is not more likely than not impaired, we would not need to calculate the fair value of the asset. The fair value of the tradenames is measured as the discounted cash flow savings realized from owning such tradenames and not having to pay a royalty for their use.

The evaluation of the recoverability of long-lived assets, and the determination of their fair value, requires us to make significant estimates and assumptions. These estimates and assumptions primarily include, but are not limited to: the identification of the asset group at the lowest level of independent cash flows and the principal asset of the group; the discount rate; terminal growth rates; and forecasts of revenue, operating income, depreciation and amortization, and capital expenditures.

The evaluation of the fair value of indefinite-lived trademarks also requires us to make significant estimates and assumptions. These estimates and assumptions primarily include, but are not limited to: the assumed market-royalty rate; the discount rate; terminal growth rates; and forecasts of revenue.

Due to the inherent uncertainty involved in making these estimates, actual results could differ from those estimates. In addition, changes in underlying assumptions would have a significant impact on the conclusion that an asset group's carrying value is recoverable, that an indefinite-lived asset is not impaired, or the determination of any impairment charge if it was determined that the asset values were indeed impaired.

#### Accounts Receivable

Our accounts receivable represent a significant portion of our current assets. We are required to estimate the collectibility of our receivables and to establish allowances for the amount of receivables that will prove uncollectible. We base these allowances on our historical collection experience, the length of time our receivables are outstanding, the financial circumstances of individual customers, and general business and economic conditions. Due to our large number of customers and their dispersion across many countries and industries, we have limited exposure to concentrations of credit risk. As of December 31, 2012, one customer comprised 14.7% of our accounts receivable balance. This customer comprised 10.9% of our accounts receivable balance as of December 31, 2012 or December 31, 2011. We continually monitor the credit risks associated with our accounts receivable and adjust the allowance for uncollectible accounts accordingly. We believe that our accounts receivable credit risk exposure beyond such allowance is not material to the financial statements.

#### Pension and Other Postretirement Benefits

Accounting for defined benefit pension and other postretirement plans involves numerous assumptions and estimates. The discount rate at which obligations could effectively be settled and the expected long-term rate of return on plan assets are two critical assumptions in measuring the cost and benefit obligations of our pension and other postretirement benefit plans. Other important assumptions include the anticipated rate of future increases in compensation levels, estimated mortality, and for certain postretirement medical plans, increases or trends in health care costs. Management reviews these assumptions at least annually. We use independent actuaries and investment advisers to assist us in formulating assumptions and making estimates. These assumptions are updated periodically to reflect the actual experience and expectations on a plan specific basis as appropriate.

Our defined benefit plans are concentrated in the United States, Germany, and the Republic of China (Taiwan). Plans in these countries comprise approximately 95% of our retirement obligations at December 31, 2012. In the U.S., we utilize published long-term high quality bonds to determine the discount rate at the measurement date. In Germany and the Republic of China (Taiwan), we utilize published long-term government bond rates to determine the discount rate at the measurement date. We utilize bond yields at various maturity dates that reflect the timing of expected future benefit payments. We believe the discount rates selected are the rates at which these obligations could effectively be settled.

Within the U.S., we establish strategic asset allocation percentage targets and appropriate benchmarks for significant asset classes with the aim of achieving a prudent balance between return and risk. Many of our non-U.S. plans are unfunded based on local laws and customs. For those non-U.S. plans that do maintain investments, their asset holdings are primarily cash and fixed income securities, based on local laws and customs. We set the expected long-term rate of return based on the expected long-term average rates of return to be achieved by the underlying investment portfolios. In establishing this rate, we consider historical and expected returns for the asset classes in which the plans are invested, advice from pension consultants and investment advisors, and current economic and capital market conditions. The expected return on plan assets is incorporated into the computation of pension expense. The difference between this expected return and the actual return on plan assets is deferred. The net deferral of past asset losses (gains) affects the calculated value of plan assets and, ultimately, future pension expense (income).

We expect net periodic pension cost in 2013 to approximate net period pension cost recognized in 2012, with an increase in the amortization of unrecognized losses offset by lower interest cost due to lower discount rates.

During the fourth fiscal quarter of 2008, we adopted amendments to our principal U.S. defined benefit pension plans, such that effective January 1, 2009, the plans were frozen. Pursuant to these amendments, no new employees may participate in the plans, no further participant contributions will be required or permitted, and no further benefits shall accrue after December 31, 2008. Accordingly, net periodic pension cost for U.S. plans no longer include any service cost.

We believe that the current assumptions used to estimate plan obligations and annual expenses are appropriate. However, if economic conditions change or if our investment strategy changes, we may be inclined to change some of our assumptions, and the resulting change could have a material impact on the consolidated statements of operations and on the consolidated balance sheet.

#### **Income Taxes**

We are subject to income taxes in the U.S. and numerous foreign jurisdictions. Significant judgment is required in evaluating our tax positions and determining our provision for income taxes. During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. We establish reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due. These reserves are established when we believe that certain positions might be challenged despite our belief that our tax return positions are fully supportable. We adjust these reserves in light of changing facts and circumstances and the provision for income taxes includes the impact of reserve provisions and changes to reserves that are considered appropriate.

These accruals are based on management's best estimate of potential tax exposures. When particular matters arise, a number of years may elapse before such matters are audited and finally resolved. Favorable resolution of such matters could be recognized as a reduction to our effective tax rate in the year of resolution. Unfavorable resolution of any particular issue could increase the effective tax rate and may require the use of cash in the year of resolution.

We and our subsidiaries file U.S. federal income tax returns, as well as income tax returns in multiple U.S. state and foreign jurisdictions. The U.S. Internal Revenue Service concluded its examinations of our U.S. federal tax returns for all tax years through 2002. Because of net operating losses, which were fully utilized on the 2010 tax return, our U.S. federal tax return for 2003 and subsequent years remain subject to examination. Examinations of most principal subsidiaries in Israel through the 2007 tax year were concluded in 2010, and these principal subsidiaries are currently under audit for tax years 2008 through 2010. The tax returns of other significant non-U.S. subsidiaries are currently under examination in Germany (2005 through 2008), India (2004 through 2009), China (2007 through 2011), and the Republic of China (Taiwan) (2006 through 2011). We and our subsidiaries are also subject to income taxes in other taxing jurisdictions in the U.S. and around the world, many of which are still open to examinations.

We account for uncertainty in income tax positions using the minimum recognition threshold a tax position is required to meet before being recognized in the financial statements as prescribed in GAAP. For a tax benefit to be recognized, a tax position must be "more likely than not" to be sustained upon examination by taxing authorities.

We have recorded deferred tax assets representing future tax benefits, but may not be able to realize these future tax benefits in certain jurisdictions. Significant judgment is required in determining the expected future realizability of these deferred tax assets. We periodically evaluate the realizability of our deferred tax assets by assessing the valuation allowance and by adjusting the amount of such allowance, if necessary. The factors used to assess the likelihood of realization include deferred tax liabilities, our forecast of future taxable income, and available tax planning strategies that could be implemented to realize the net deferred tax assets.

Substantially all earnings generated by our non-U.S. subsidiaries are deemed to be reinvested outside of the United States indefinitely. Accordingly, no provision has been made for U.S. federal and state income taxes on these foreign earnings. Upon distribution of those earnings in the form of dividends or otherwise, we would be subject to U.S. income taxes (subject to an adjustment for foreign tax credits), state income taxes, incremental foreign income taxes, and withholding taxes payable to various foreign countries.

Additional information about income taxes is included in Note 5 to our consolidated financial statements.

#### **Results of Operations**

Statement of operations' captions as a percentage of net revenues and the effective tax rates were as follows:

	Years ended December 31,						
	2012	2011	2010				
		_					
Costs of products sold	76.4%	72.2%	70.4%				
Gross profit	23.6%	27.8%	29.6%				
Selling, general, and administrative expenses	15.7%	14.2%	14.3%				
Operating income	8.5%	13.4%	15.3%				
Income before taxes and noncontrolling interest	7.6%	12.8%	14.9%				
Net earnings attributable to Vishay stockholders	5.5%	9.2%	13.2%				
Effective tax rate	27.4%	27.5%	11.2%				

#### Net Revenues

Net revenues were as follows (dollars in thousands):

	Years ended December 31,						
	 2012		2011		2010		
Net revenues	\$ 2,230,097	\$	2,594,029	\$	2,725,092		
Change versus prior year	\$ (363,932)	\$	(131,063)				
Percentage change versus prior year	-14.0%	)	-4.8%				

Changes in net revenues were attributable to the following:

	2012 vs. 2011	2011 vs. 2010
Change attributable to:		
Decrease in volume	-11.5%	-3.6%
Change in average selling prices	-3.7%	1.1%
Foreign currency effects	-2.1%	1.5%
Acquisitions	2.3%	0.1%
Absence of VPG	0.0%	-3.7%
Other	1.0%	-0.2%
Net change	-14.0%	-4.8%

Our revenue results for the year ended December 31, 2012 were negatively affected by the reduced demand for our products that we began to experience in the last six fiscal months of 2011, which significantly reduced our backlog, and the deterioration of the business environment of most of our markets in the last six fiscal months of 2012 following an improving business environment in the first six fiscal months of 2012. Our cost management and the adaptation of our manufacturing capacities enabled us to sustain earnings at the lower sales volume. Our revenue results for the year ended December 31, 2011 represent the effects of macroeconomic concerns, which reduced demand for our products in the last six fiscal months of the year, and the resulting quick adaptation of our manufacturing capacities in response thereto. This period of macroeconomic concerns followed a period of favorable business conditions through the first six fiscal months of the year in which we achieved significantly higher annualized earnings than before the beginning of the 2008-2009 global economic recession at the same sales volume.

The recovery of our business and revenues that we began experiencing in the second half of 2009 continued throughout 2010 due to historically high overall demand for electronic components and a favorable pricing environment.

We deduct, from the sales that we record to distributors, allowances for future credits that we expect to provide for returns, scrapped product, and price adjustments under various programs made available to the distributors. We make deductions corresponding to particular sales in the period in which the sales are made, although the corresponding credits may not be issued until future periods. We estimate the deductions based on sales levels to distributors, inventory levels at the distributors, current and projected market trends and conditions, recent and historical activity under the relevant programs, changes in program policies, and open requests for credits. We recorded deductions from gross sales under our distributor incentive programs of \$72.7 million, \$80.3 million, and \$71.8 million, for the years ended December 31, 2012, 2011, and 2010, respectively, or, as a percentage of gross sales, 3.2%, 3.0%, and 2.6%, respectively. Actual credits issued under the programs for the years ended December 31, 2012, 2011, and 2010 were approximately \$76.9 million, \$82.3 million, and \$60.9 million, respectively. Increases and decreases in these incentives are largely attributable to the then-current business climate.

Royalty revenues, included in net revenues on the consolidated statements of operations, were \$7.1 million, \$6.6 million, and \$5.8 million, for the years ended December 31, 2012, 2011, and 2010, respectively.

## **Gross Profit and Margins**

Gross profit margins for the year ended December 31, 2012 were 23.6%, as compared to 27.8% for year ended December 31, 2011. This decrease in gross profit margin reflects significantly lower volume and lower average selling prices.

Gross profit margins for the year ended December 31, 2011 were 27.8%, as compared to 29.6% for year ended December 31, 2010. The gross profit margin for the year ended December 31, 2010 was 29.4% excluding VPG. This decrease in gross profit margin reflects lower volume and slightly higher materials prices.

#### Segments

Analysis of revenues and gross profit margins for our segments is provided below.

## **MOSFETs**

Net revenues of the MOSFETs segment were as follows (dollars in thousands):

	Years ended December 31,						
	2012		2011		_	2010	
Net revenues	\$	433,682	\$	537,980	\$	626,698	
Change versus comparable prior year period	\$	(104,298)	\$	(88,718)			
Percentage change versus comparable prior year period		-19.4%		-14.2%			

Changes in MOSFETs segment net revenues were attributable to the following:

	2012 vs. 2011	2011 vs. 2010
Change attributable to:		
Decrease in volume	-10.9%	-10.2%
Decrease in average selling prices	-9.9%	-5.4%
Foreign currency effects	-0.7%	0.5%
Other	2.1%	0.9%
Net change	-19.4%	-14.2%

Gross profit as a percentage of net revenues for the MOSFETs segment was as follows:

	Year	Years ended December 31,				
	2012	2011	2010			
Gross margin percentage	13.1%	23.3%	30.2%			

The MOSFETs segment has been negatively affected by the low demand from distributors in Asia. The decrease in gross profit margin from 2011 to 2012 is primarily due to decreases in sales volume and average selling prices. Also, a non-recurring manufacturing issue associated with purchased materials affected the 2012 results. The MOSFETs segment was the segment most adversely affected by the decreased demand for consumer goods and the reduction in distribution orders in the second half of 2011. The decrease in gross profit margin from 2010 to 2011 reflects significantly lower volume and average selling prices from the historically high prices of 2010.

We have experienced a significant decline in average selling prices versus the prior years. The decline in 2012 is partially due to selective volume based pricing for our MOSFETs products that we implemented in the second fiscal quarter of 2012.

Customer qualification of next generation high voltage MOSFETs is currently on-going. These new and innovative products have received a good reception by the market thus far. We continue to make capital and R&D investments in this business. Accordingly, while the current environment is challenging, we are optimistic about the long-term prospects of the MOSFETs segment.

## <u>Diodes</u>

Net revenues of the Diodes segment were as follows (dollars in thousands):

	Years ended December 31,						
	2012		2011		_	2010	
Net revenues	\$	496,744	\$	607,493	\$	596,354	
Change versus comparable prior year period	\$	(110,749)	\$	11,139			
Percentage change versus comparable prior year period		-18.2%		1.9%			

Changes in Diodes segment net revenues were attributable to the following:

	2012 vs. 2011	2011 vs. 2010
Change attributable to:		
Decrease in volume	-14.9%	-1.0%
Change in average selling prices	-2.8%	1.3%
Foreign currency effects	-1.4%	1.6%
Other	0.9%	0.0%
Net change	-18.2%	1.9%

Gross profit as a percentage of net revenues for the Diodes segment was as follows:

	Years	Years ended December 31,				
	2012	2011	2010			
Gross margin percentage	20.0%	23.7%	23.2%			

The Diodes segment has been negatively affected by the low demand from distributors in Asia. The decrease in the Diodes segment gross profit margin from 2011 to 2012 is primarily due to the decrease in sales volume. The increase in gross profit margin from 2010 to 2011 is primarily due to increased average selling prices, partially offset by a decrease in sales volume.

After a period of increasing average selling prices in 2010 and early 2011, typical pricing pressure for our established Diodes products has returned. We have experienced a moderate price decline in 2012 versus 2011. Average selling prices were moderately higher in 2011 versus 2010 due to the higher average selling prices in the first six fiscal months of 2011 versus 2010.

#### Optoelectronic Components

Net revenues of the Optoelectronic Components segment were as follows (dollars in thousands):

		Years ended December 31,						
	2012		2011		201			
Net revenues	\$	209,194	\$	229,886	\$	226,498		
Change versus comparable prior year period	\$	(20,692)	\$	3,388		,		
Percentage change versus comparable prior year period		-9.0%		1.5%	)			

Changes in Optoelectronic Components segment net revenues were attributable to the following:

	2012 vs. 2011	2011 vs. 2010
Change attributable to:		
Change in volume	-3.1%	1.2%
Decrease in average selling prices	-3.5%	-1.6%
Foreign currency effects	-2.8%	1.9%
Other	0.4%	0.0%
Net change	-9.0%	1.5%

Gross profit as a percentage of net revenues for the Optoelectronic Components segment was as follows:

	Years	ended December 31	.,
	2012	2011	2010
Gross margin percentage	32.5%	32.5%	33.5%

The Optoelectronic Components segment has been relatively stable due to the continued strong demand of the automotive and industrial markets despite being negatively affected by the low demand from distributors in Asia. The segment gross profit margin remained high despite a decrease in sales volume and average selling prices in 2012. The Optoelectronic Components segment was adversely affected by the decreased demand for consumer goods in the second half of 2011, but benefited from strong demand from the automotive and industrial markets. Despite some fluctuations in demand, gross profit margin remained relatively steady in 2011. The slight decrease in gross profit margin versus 2010 is primarily due to a reduction from historically high average selling prices versus the prior periods.

After a period of historically high average selling prices in 2010, typical pricing pressure for our established Optoelectronic Components products has returned.

#### Resistors & Inductors

Net revenues of the Resistors & Inductors segment were as follows (dollars in thousands):

	Years ended December 31,						
	 2012		2011 20		2010		
Net revenues	\$ 642,320	\$	640,854	\$	628,304		
Change versus comparable prior year period	\$ 1,466	\$	12,550				
Percentage change versus comparable prior year period	0.2%		2.0%	)			

Changes in Resistors & Inductors segment net revenues were attributable to the following:

	2012 vs. 2011	2011 vs. 2010
Change attributable to:		
Decrease in volume	-4.3%	-0.7%
Change in average selling prices	-1.5%	0.1%
Foreign currency effects	-3.1%	2.2%
Acquisitions	9.3%	0.4%
Other	-0.2%	0.0%
Net change	0.2%	2.0%

Gross profit as a percentage of net revenues for the Resistors & Inductors segment was as follows:

	Years	ended December 3	1,
	2012	2011	2010
Gross margin percentage	31.8%	33.4%	35.5%

The Resistors & Inductors segment has been negatively affected by a slowing of demand in Europe. The segment gross profit margin remained high, but decreased slightly from 2011 to 2012 due to decreases in sales volume. The Resistors & Inductors segment was adversely affected by the economic slowdown in the second half of 2011, but continued to produce strong results. The decrease in gross profit margin from 2010 to 2011 is primarily due to a slight decrease in volume.

We further enhanced the segment's product portfolio in 2012 by acquiring HiRel Systems. Specifically, HiRel Systems expands our magnetic and power conversion specialty product portfolio. The integration of Huntington Electric, acquired in the third fiscal quarter of 2011, and HiRel Systems continues as planned. Our results for 2012 were positively impacted by the acquisitions of Huntington Electric and HiRel Systems and we expect HiRel Systems' revenue growth to out-perform our corporate average. More opportunities for acquisitions exist and are being evaluated.

Average selling prices declined slightly from 2011 to 2012 partially due to unfavorable customer mix. Average selling prices remained relatively consistent from 2010 to 2011.

## **Capacitors**

Net revenues of the Capacitors segment were as follows (dollars in thousands):

	Years ended December 31,						
	2012			2011	2010		
Net revenues	\$	448,157	\$	577,816	\$	546,149	
Change versus comparable prior year period	\$	(129,659)	\$	31,667			
Percentage change versus comparable prior year period		-22.4%		5.8%	ı		

Changes in Capacitors segment net revenues were attributable to the following:

	2012 vs. 2011	2011 vs. 2010
Change attributable to:		
Decrease in volume	-19.6%	-5.3%
Change in average selling prices	-0.9%	10.2%
Foreign currency effects	-2.8%	1.9%
Other	0.9%	-1.0%
Net change	-22.4%	5.8%

Gross profit as a percentage of net revenues for the Capacitors segment was as follows:

	Yea	rs ended December 3	31,
	2012	2011	2010
Gross margin percentage	22.0%	28.0%	26.4%

The Capacitors segment was negatively affected by the economic slow-down in the second half of 2012 and a reduction in demand for renewable energies. The decrease in gross profit margin from 2011 to 2012 is primarily due to the decrease in sales volume and some temporary inefficiencies. The Capacitors segment was adversely affected by high distributor inventory levels in the second half of 2011. The increase in gross profit margin from 2010 to 2011 is primarily due to increased average selling prices, which more than offset the lower volume.

Average selling prices have remained relatively stable, substantially higher than 2010.

#### Vishay Precision Group

We completed the spin-off of VPG on July 6, 2010. Net revenues and gross margin percentage for the periods that VPG was included in our consolidated results were as follows (dollars in thousands):

	Year ended December 3 2010	
Net revenues	\$ 101,0	189
Gross margin percentage	36	6.6%

#### Selling, General, and Administrative Expenses

Selling, general, and administrative ("SG&A") expenses are summarized as follows (dollars in thousands):

		Years ended December 31,						
	<u></u> -	2012		2011		2010		
Total SG&A expenses	¢	349,625	¢	367.623	<b>¢</b>	389,547		
Total 3G&A expenses	Ψ	343,023	Ψ	307,023	Ф	303,347		
as a percentage of sales		15.7%	)	14.2%	)	14.3%		

The overall decrease in SG&A expenses in the year ended December 31, 2012 versus the year ended December 31, 2011 is primarily attributable to cost containment initiatives and certain temporary cost reduction programs, lower bonus accruals for 2012, and a positive exchange rate impact, partially offset by SG&A expenses of acquired businesses. The increase in SG&A as a percentage of revenues is primarily due to the decrease in revenues. VPG accounted for \$35.4 million (including \$8.4 million of costs associated with the spin-off) of SG&A expenses for the year ended December 31, 2010. The overall increase in SG&A expenses, excluding VPG, in the year ended December 31, 2011 versus the year ended December 31, 2010 is primarily attributable to foreign currency effects. The increase in SG&A as a percentage of revenues is primarily due to the decrease in revenues. Several items included in SG&A expenses impact the comparability of these amounts, as summarized below (in thousands):

	Years ended December 31,					
	 2012		2011		2010	
Amortization of intangible assets	\$ 14,754	\$	14,684	\$	19,817	
Net losses (gains) on sales of assets	(741)		(930)		574	
Costs associated with VPG spin-off	-		-		8,400	

The acquisitions of the resistor businesses of Huntington Electric in the third fiscal quarter of 2011 and HiRel Systems LLC in the first fiscal quarter of 2012 increased our amortizable intangible assets balance by \$51.1 million. See Note 3 to our consolidated financial statements for an estimate of our annual amortization expense through 2017. Additional acquisition activity will increase these amounts. Amortization expense remained stable in 2012 versus 2011 principally due to certain intangible assets becoming fully amortized, which was offset by the amortization of intangible assets recognized in the aforementioned acquisitions in the third fiscal quarter of 2011 and first fiscal quarter of 2012.

The decrease in amortization expense in 2011 versus 2010 is principally due to certain intangible assets becoming fully amortized, partially offset by the amortization of intangible assets recognized in the aforementioned acquisition of the resistor businesses of Huntington Electric in the third fiscal quarter of 2011.

We also recorded a \$12.2 million gain on the sale of vacated property in Belgium in the second fiscal quarter of 2012 that is reported on a separate line in the consolidated statement of operations for the year ended December 31, 2012.

## Other Income (Expense)

#### 2012 Compared to 2011

Interest expense for the year ended December 31, 2012 increased by \$3.3 million versus the year ended December 31, 2011. The increase is primarily due to interest on convertible senior debentures due 2041 and due 2042 that were issued on May 13, 2011 and May 31, 2012, respectively.

The following table analyzes the components of the line "Other" on the consolidated statements of operations (in thousands):

	Years ended December 31,					
		2012 2011		Change		
Foreign exchange gain (loss)	\$	(3,654)	\$	(8,249)	\$	4,595
Interest income		7,626		10,386		(2,760)
Sale of investments		-		1,396		(1,396)
Other		(532)		259		(791)
	\$	3,440	\$	3,792	\$	(352)

In the year ended December 31, 2011, we sold ancillary investments in the equity of two companies located outside of the U.S. for a total gain of \$1.4 million. The increase in interest income in 2011 is primarily due to the interest earned on the short-term investments purchased in 2011.

The decrease in interest income in the year ended December 31, 2012 versus the year ended December 31, 2011 is primarily due to lower interest rates on the short-term investments in 2012 versus 2011.

# 2011 Compared to 2010

Interest expense for the year ended December 31, 2011 increased by \$8.2 million versus the year ended December 31, 2010. The increase is primarily due to interest on convertible senior debentures due 2040 and due 2041 that were issued on November 9, 2010 and May 13, 2011, respectively.

The following table analyzes the components of the line "Other" on the consolidated statements of operations (in thousands):

	Years ended December 31,						
		2011		2010		Change	
Foreign exchange gain (loss)	\$	(8,249)	\$	(2,792)	\$	(5,457)	
Interest income		10,386		2,888		7,498	
Loss on early extinguishment of debt		-		(1,659)		1,659	
Sale of investments		1,396		-		1,396	
Other		259		194		65	
	\$	3,792	\$	(1,369)	\$	5,161	

In the year ended December 31, 2010, we recorded a \$1.7 million loss on the early extinguishment of debt equal to the balance of unamortized deferred financing costs associated with a revolving credit commitment and term loan at the date of termination.

The increase in interest income in the year ended December 31, 2011 versus the year ended December 31, 2010 is primarily due to the interest earned on the short-term investments purchased in 2011.

#### **Income Taxes**

For the years ended December 31, 2012, 2011, and 2010, the effective tax rates were 27.4%, 27.5%, and 11.2%, respectively. The effective tax rates are less than the U.S. statutory rate primarily because of earnings in foreign jurisdictions and the release of deferred tax asset valuation allowances.

Income tax expense for the years ended December 31, 2012, 2011, and 2010 include certain discrete tax items for changes in uncertain tax positions, valuation allowances, tax rates, and other related items. These items total \$(4.0) million (tax benefit), \$3.5 million, and \$(59.5) million (tax benefit) in 2012, 2011, and 2010, respectively. For the year ended December 31, 2012, the discrete item is the reduction of a valuation allowance on a deferred tax asset in Israel due to a merger of several of our wholly-owned subsidiaries in Israel in the fourth fiscal quarter which will allow for the realization of these tax benefits that likely otherwise would have been forgone. For the year ended December 31, 2011, the discrete items included a \$10.0 million expense for the effect of a tax rate change on deferred taxes in Israel recorded in the first fiscal quarter, reduced by \$1.0 million for a 2010 tax return filing in the fourth fiscal quarter, and partially offset by benefits related to reductions of valuation allowances in various jurisdictions of \$5.5 million recorded in the fourth fiscal quarter. The reductions of valuation allowances were principally in Belgium due to expected future income from a pending real estate sale. The discrete items for the year ended December 31, 2010 were recorded in the fourth fiscal quarter and related primarily to the release of valuation allowances in the U.S. and Israel.

We operate in a global environment with significant operations in various locations outside the United States. Accordingly, the consolidated income tax rate is a composite rate reflecting our earnings and the applicable tax rates in the various locations where we operate. Part of our strategy is to achieve cost savings through the transfer and expansion of manufacturing operations to countries where we can take advantage of lower labor costs and available tax and other government-sponsored incentives. Accordingly, our effective tax rate is generally less than the U.S. statutory tax rate. Changes in the effective tax rate are largely attributable to changes in the mix of pretax income among our various taxing jurisdictions.

Additional information about income taxes is included in Note 5 to our consolidated financial statements.

#### Financial Condition, Liquidity, and Capital Resources

We focus on our ability to generate cash flows from operations. The cash generated from operations is used to fund our capital expenditure plans, and cash in excess of our capital expenditure needs is available to fund our acquisition strategy and to reduce debt levels. We have generated cash flows from operations in excess of \$200 million in each of the past 11 years, and cash flows from operations in excess of \$100 million in each of the past 18 years. A portion of the cash flows from operations was generated by VPG which was spun off on July 6, 2010.

We refer to the amount of cash generated from operations in excess of our capital expenditure needs and net of proceeds from the sale of assets as "free cash," a measure which management uses to evaluate our ability to fund acquisitions, repay debt, and otherwise enhance stockholder value through stock repurchases or dividends. Vishay has generated positive "free cash" in each of the past 16 years, and "free cash" in excess of \$80 million in each of the past 11 years. In this volatile economic environment, we continue to focus on the generation of free cash, including an emphasis on cost controls.

We continued to generate positive cash flows from operations and free cash in line with our history despite the difficult economic environment during the year ended December 31, 2012. There is no assurance, however, that we will be able to continue to generate cash flows from operations and free cash at the same levels, or at all, going forward if the current economic environment worsens.

Beginning in the fourth fiscal quarter of 2010, we reacted to favorable market conditions to significantly reshape the company's capital structure. These initiatives continued in 2012. On May 31, 2012, we completed the offering of \$150 million principal amount of 2.25% convertible senior debentures due 2042 to qualified institutional investors. We used the net proceeds from this offering, together with cash on hand, to repurchase 13,948,687 shares of common stock at \$10.75 per share for an aggregate purchase price of \$150 million. We believe that the use of low-coupon, long-dated convertible debentures was a more efficient means to finance the repurchase versus repatriation of non-U.S. cash. See Note 6 to our consolidated financial statements.

Including the most recent issuance of convertible debentures described above, we have completed three issuances of low-coupon convertible debentures since the fourth fiscal quarter of 2010, each of which matures thirty years from the date of issuance. We utilized the proceeds of those debenture offerings to repurchase 44.3 million shares of our common stock, representing approximately 24% of our outstanding stock prior to implementing these initiatives.

Substantially all of our December 31, 2012 cash and cash equivalents and short-term investments balances were held by our non-U.S. subsidiaries. During the third fiscal quarter of 2012, we repatriated \$72.1 million of cash to the U.S., which substantially completed the \$112.5 million cash repatriation program we initiated in 2008. This repatriated cash was used to reduce the amount outstanding under our revolving credit facility. Following this reduction in the amount outstanding under the facility, the carrying value of our long-term debt is approximately the same as the carrying value of debt prior to the May 2012 issuance of the convertible debentures due 2042. The tax effect of this repatriation was recorded during the fourth fiscal quarter of 2008. At the present time, we expect the remaining cash and profits generated by foreign subsidiaries will continue to be reinvested outside of the United States indefinitely. If additional cash is needed to be repatriated to the United States, we would be subject to additional U.S. income taxes (subject to an adjustment for foreign tax credits), state income taxes, incremental foreign income taxes, and withholding taxes payable to various foreign countries.

We also entered into a new, larger, revolving credit facility in December 2010, which has been favorably amended at minimal cost. On April 3, 2012, we amended our credit agreement and entered into an incremental facility agreement that increases the total revolving commitment from \$450 million to \$528 million. The incremental commitments provide us with additional flexibility to pursue our growth plan. The incremental revolving commitments have terms and conditions identical to the terms and conditions of the existing commitments under the credit facility. Other significant terms and conditions of the credit agreement have not been changed. Following the expansion, we have the ability to request up to an additional \$22 million of incremental commitments, subject to the satisfaction of certain conditions. At December 31, 2012 and 2011, \$89 million and \$155 million, respectively, was outstanding under the credit facility. The credit facility provides a revolving commitment through December 1, 2015.

Borrowings under the credit facility bear interest at LIBOR plus an interest margin. The applicable interest margin is based on our leverage ratio. Based on our current leverage ratio, borrowings bear interest at LIBOR plus 1.95%. The interest rate on our borrowings will increase if our leverage ratio equals or exceeds 2.00 to 1 and will decrease if our leverage ratio decreases below 1.50 to 1. We are also required to pay facility commitment fees of 0.35% per annum on the entire commitment amount. Such facility commitment fees will increase if our leverage ratio equals or exceeds 2.50 to 1.

The borrowings under the credit facility are secured by a lien on substantially all assets located in the United States, including accounts receivable, inventory, machinery and equipment, and general intangibles (but excluding real estate, intellectual property registered or licensed for use in, or arising under the laws of, any country other than the United States, and bank and securities accounts) of Vishay and certain significant domestic subsidiaries, and pledges of stock in certain significant domestic and foreign subsidiaries and are guaranteed by certain significant subsidiaries. Certain of our subsidiaries are permitted to borrow under the credit facility, subject to the satisfaction of specified conditions. Any borrowings by these subsidiaries under the credit facility will be guaranteed by Vishay.

The credit facility includes limits or restrictions on, among other things, incurring indebtedness, incurring liens on assets, making investments and acquisitions, making asset sales, repurchasing our common stock, and paying cash dividends and making other restricted payments. The credit facility also requires us to comply with other covenants, including the maintenance of specific financial ratios.

The financial maintenance covenants include (a) an interest expense coverage ratio of not less than 2.00 to 1; and (b) a leverage ratio of not more than 3.25 to 1 (and a pro forma ratio of 2.75 to 1 on the date of incurrence of additional debt). The computation of these ratios is prescribed in Article 6 of the Credit Agreement between Vishay Intertechnology, Inc. and JPMorgan Chase Bank, N.A., which has been filed with the SEC as Exhibit 10.1 to our current report on Form 8-K filed December 1, 2010.

We were in compliance with all covenants under the credit facility at December 31, 2012. Our interest expense coverage ratio and leverage ratio were 10.38 to 1 and 1.90 to 1, respectively. We expect to continue to be in compliance with these covenants based on current projections.

If we are not in compliance with all of the required financial covenants, the credit facility could be terminated by the lenders, and all amounts outstanding pursuant to the credit facility could become immediately payable. Additionally, our exchangeable unsecured notes due 2102 and our convertible senior debentures due 2040, due 2041, and due 2042 have cross-default provisions that could accelerate repayment in the event the indebtedness under the credit facility is accelerated.

Beginning in 2012, our permitted capacity to repurchase shares of our outstanding common stock under the credit facility began to increase each quarter by an amount equal to 20% of net income. At December 31, 2012, our credit facility allowed us to repurchase up to \$174.5 million of our common stock. The amount and timing of any future stock repurchases remains subject to authorization of our Board of Directors.

In 2011, we began investing a portion of our excess cash in highly liquid, high-quality instruments with maturities greater than 90 days, but less than 1 year, which we classify as short-term investments on our consolidated balance sheets. As these investments were funded using a portion of excess cash and represent a significant aspect of our cash management strategy, we include the investments in the calculation of net cash and short-term investments (debt).

At December 31, 2012, the interest rates on our short-term investments average 0.9% and are approximately 60 basis points higher than interest rates on our cash accounts. Transactions related to these investments are classified as investing activities on our consolidated statements of cash flows.

The following table summarizes the components of net cash and short-term investments (debt) at December 31, 2012 and 2011, respectively (in thousands):

	December 31, 2012		December 31, 2011	
Credit Facility	\$	89,000	\$	155,000
Exchangeable unsecured notes, due 2102		95,042		95,042
Convertible senior debentures, due 2040*		100,166		98,463
Convertible senior debentures, due 2041*		51,399		50,549
Convertible senior debentures, due 2042*		57,324		-
Total debt		392,931		399,054
Cash and cash equivalents		697,595		749,088
Short-term investments		294,943		249,139
Net cash and short-term investments (debt)	\$	599,607	\$	599,173

<sup>\*</sup>Represents the carrying amount of the convertible debentures, which is comprised of the principal amount of the debentures, net of the unamortized discount and the associated embedded derivative liability.

Measurements such as "free cash" and "net cash and short-term investments (debt)" do not have uniform definitions and are not recognized in accordance with GAAP. Such measures should not be viewed as alternatives to GAAP measures of performance or liquidity. However, management believes that "free cash" is a meaningful measure of our ability to fund acquisitions, repay debt, and otherwise enhance stockholder value through stock repurchases or dividends, and that an analysis of "net cash and short-term investments (debt)" assists investors in understanding aspects of our cash and debt management. These measures, as calculated by us, may not be comparable to similarly titled measures used by other companies.

The balance of our revolving credit facility was \$89 million at December 31, 2012. We borrowed \$128 million and repaid \$194 million on our credit facility during the year ended December 31, 2012. The average outstanding balance on our credit facility calculated at fiscal month-ends was \$123.6 million and the highest amount outstanding on our credit facility at a month end was \$160 million during the year ended December 31, 2012.

Management expects to continue to maintain the outstanding balance on the credit facility around its current level, and may periodically pay down the balance with available cash or use the credit facility to meet short-term financing needs. We expect that cash on-hand and cash flows from operations will be sufficient to meet our longer-term financing needs related to normal operating requirements and our research and development and capital expenditure plans. Acquisition activity or share repurchases may require additional borrowing under our credit facility or may otherwise require us to incur additional debt.

Our financial condition as of December 31, 2012 continued to be strong, with a current ratio (current assets to current liabilities) of 4.3 to 1, as compared to 4.2 to 1 as of December 31, 2011. The slight increase is primarily due to a reduction in accounts payable and other accrued expenses in 2012. Our ratio of total debt to Vishay stockholders' equity was 0.24 to 1 at December 31, 2012 as compared to a ratio of 0.25 to 1 at December 31, 2011. This slight decrease is primarily due to the net repayment of \$66 million on our credit facility in 2012 partially offset by the carrying amount of the convertible senior debentures due 2042 issued in the second fiscal quarter of 2012.

Cash flows provided by operating activities were \$287.5 million for the year ended December 31, 2012, as compared to cash flows provided by operations of \$376.0 million for the year ended December 31, 2011. This decrease is principally due to \$116.5 million less net earnings generated in 2012, partially offset by changes in working capital.

Cash paid for property and equipment for the year ended December 31, 2012 was \$150.3 million, as compared to \$168.6 million for the year ended December 31, 2011. We expect capital spending of approximately \$165 million in 2013.

#### **Contractual Commitments and Off-Balance Sheet Arrangements**

As of December 31, 2012 we had contractual obligations as follows (in thousands):

	_	Payments due by period						-
	Total	Year 1		Years 2-3		Years 4-5	More than 5	-
Long-term debt	\$ 759,042	\$	\$	89,000	\$	- \$	670,042	)
Interest payments on long-term debt	406,449	17,091		33,860		26,464	329,034	ļ
Operating and capital leases	104,119	25,019	)	38,236		22,925	17,939	)
Letters of credit	7,705			7,705		-	-	-
Expected pension and postretirement plan funding	383,202	31,901		75,535		74,594	201,172	2
Estimated costs to complete construction in progress	40,903	40,903	,	-		-	-	-
Uncertain tax positions	60,284	9,147	•	-		-	51,137	7
Purchase commitments	203,889	36,776	,	85,349		81,764	-	-
Other long-term liabilities	56,231	1,400	)	3,200		3,800	47,831	L
Executive employment agreement	20,000	10,000	1	10,000		-	-	-
Total contractual cash obligations	\$ 2,041,824	\$ 172,237	\$	342,885	\$	209,547 \$	3 1,317,155	5

Daymente due by period

Commitments for long-term debt are based on the amount required to settle the obligation. Accordingly, the discounts associated with our convertible debentures due 2040, due 2041, and due 2042 are excluded from the calculation of long-term debt commitments in the table above.

Commitments for interest payments on long-term debt are cash commitments based on the stated maturity dates of each agreement, one of which bears a maturity date of 2102, and include commitment fees under our revolving credit facility, which expires on December 1, 2015. Commitments for interest payments on long-term debt exclude non-cash interest expense related to the amortization of the discount associated with our convertible debentures due 2040, due 2041, and due 2042.

Various factors could have a material effect on the amount of future principal and interest payments. Among other things, approximately \$670 million of our outstanding debt instruments are convertible into or exchangeable for common stock at the option of the holder. Also, although we intend to net share settle our convertible senior debentures due 2040, due 2041, and due 2042, we have the option to settle these instruments in shares of common stock pursuant to the indenture governing these debentures. Additionally, interest commitments for our variable-rate exchangeable notes due 2102 and revolving credit facility are based on the rate prevailing at December 31, 2012, but actual rates are variable and are certain to change over time.

Our consolidated balance sheet at December 31, 2012 includes approximately \$60.3 million of liabilities associated with uncertain tax positions in multiple taxing jurisdictions where we conduct business. We expect to pay \$9.1 million of the liabilities in 2013 due to the settlement of tax audits. Due to the uncertain and complex application of tax regulations, combined with the difficulty in predicting when tax audits throughout the world may be concluded, we cannot make reliable estimates of the timing of the remaining cash outflows relating to these liabilities. Accordingly, the remaining uncertain tax positions are classified as payments due after five years, although actual timing of payments may be sooner.

There are certain guarantees and indemnifications extended among Vishay and VPG in accordance with the terms of the Master Separation and Distribution Agreement and the Tax Matters Agreement. The guarantees primarily relate to certain contingent tax liabilities included in the Tax Matters Agreement. See Note 5 to our consolidated financial statements for further discussion of the Tax Matters Agreement. These obligations were not material to us as of December 31, 2012, and are included in the uncertain tax positions disclosed above.

We maintain long-term foundry agreements with subcontractors to ensure access to external front-end capacity for our semiconductor products. The purchase commitments in the table above represent the estimated minimum commitments for silicon wafers under these agreements and include commitments that arose subsequent to the balance sheet date due to amendments to the agreements. Our actual purchases in future periods are expected to be greater than these minimum commitments.

GAAP requires that management evaluate if purchase commitments are at prices in excess of current market prices. The purchase commitments for silicon wafers described above are for the manufacture of proprietary products using Vishay Siliconix-owned technology licensed to these subcontractors by Siliconix, and accordingly, management can only estimate the "market price" of the wafers which are the subject of these commitments. Management believes that these commitments are at prices which are not in excess of estimated current market prices.

Other long-term liabilities in the table above include obligations that are reflected on our consolidated balance sheets as of December 31, 2012 and known obligations that arose subsequent to the balance sheet date. Other long-term liabilities for which we are unable to reasonably estimate the timing of the settlement are classified as payments due after five years in the table above, although actual timing of payments may be sooner.

As more fully described in Note 13 to our consolidated financial statements, on May 13, 2009, we entered into an amended and restated employment agreement with the late Dr. Felix Zandman, our founder and former Executive Chairman, Chief Technical and Business Development Officer. Pursuant to the amended and restated employment agreement, Dr. Zandman received \$10 million upon signing the agreement and five additional annual payments of \$10 million each, two of which remain to be paid to his estate as of December 31, 2012. Dr. Zandman's passing in June 2011 had no effect on the timing of these payments.

For a further discussion of our long-term debt, pensions and other postretirement benefits, leases, uncertain tax positions, executive employment agreements, and purchase commitments, see Notes 5, 6, 11, and 13 to our consolidated financial statements.

We do not participate in, nor have we created, any off-balance sheet variable interest entities or other off-balance sheet financing, other than the operating leases described above.

#### **Inflation**

Normally, inflation does not have a significant impact on our operations as our products are not generally sold on long-term contracts. Consequently, we can adjust our selling prices, to the extent permitted by competition, to reflect cost increases caused by inflation.

See also "Commodity Price Risk" included in Item 7A, "Quantitative and Qualitative Disclosures About Market Risk" for additional related information.

#### **Recent Accounting Pronouncements**

As more fully described in Note 1 to our consolidated financial statements, new accounting guidance became effective for us in 2012. There is no effective accounting guidance pending adoption as of December 31, 2012 that is expected to have a material effect on our future financial position, results of operations, or liquidity.

The adoption of the new guidance in Note 1 to our consolidated financial statements is not expected to have a material effect on our financial position, results of operations, or liquidity.

#### Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

#### **Market Risk Disclosure**

We are exposed to certain financial risks, including fluctuations in foreign currency exchange rates, interest rates, and commodity prices. We manage our exposure to these market risks through internally established policies and procedures and, when deemed appropriate, through the use of derivative financial instruments. Our policies do not allow speculation in derivative instruments for profit or execution of derivative instrument contracts for which there are no underlying exposures. We do not use financial instruments for trading purposes and we are not a party to any leveraged derivatives. We monitor our underlying market risk exposures on an ongoing basis and believe that we can modify or adapt our hedging strategies as needed.

#### **Interest Rate Risk**

We are exposed to changes in interest rates as a result of our borrowing activities and our cash balances. On a selective basis, we have in the past entered into interest rate swap or cap agreements to reduce the potential negative impact that increases in interest rates could have on our outstanding variable rate debt. As of December 31, 2012, 2011, and 2010 we did not have any outstanding interest rate swap or cap agreements.

We are exposed to changes in interest rates on our exchangeable notes due 2102. The exchangeable notes, of which \$95 million are outstanding, bear interest at LIBOR (reset quarterly).

The interest paid on our credit facility is based on a LIBOR spread. At December 31, 2012, we had \$89 million outstanding under the revolving credit facility. The present amounts outstanding under the revolving credit commitment bears interest at LIBOR plus 1.95%.

Our convertible senior debentures due 2040, due 2041, and due 2042 bear interest at a fixed rate, and accordingly are not subject to interest rate fluctuation risks.

At December 31, 2012, we have \$697.6 million of cash and cash equivalents and \$294.9 million of short-term investments, which earn interest at various variable rates.

Based on the debt and cash positions at December 31, 2012, we would expect a 50 basis point increase or decrease in interest rates to increase or decrease our annualized net earnings by approximately \$2.9 million.

See Note 6 to our consolidated financial statements for additional information about our long-term debt. Also see "Economic Outlook and Impact on Operations and Future Financial Results" included in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" for additional discussion of market risks.

#### Foreign Exchange Risk

We are exposed to foreign currency exchange rate risks, particularly due to market values of transactions in currencies other than the functional currencies of certain subsidiaries. From time to time, we utilize forward contracts to hedge a portion of projected cash flows from these exposures. As of December 31, 2012, we did not have any outstanding foreign currency forward exchange contracts.

Our significant foreign subsidiaries are located in Germany, Israel, and Asia. We finance our operations in Europe and certain locations in Asia in local currencies. Our operations in Israel and most significant locations in Asia are largely financed in U.S. dollars, but these subsidiaries also have significant transactions in local currencies. Our exposure to foreign currency risk is mitigated to the extent that the costs incurred and the revenues earned in a particular currency offset one another. Our exposure to foreign currency risk is more pronounced in Israel, the Czech Republic, and China because the percentage of expenses denominated in Israeli shekels, Czech koruna, and Chinese renminbi to total expenses is much greater than the percentage of sales denominated in Israeli shekels, Czech koruna, and Chinese renminbi to total sales. Therefore, if the Israeli shekel, Czech koruna, and Chinese renminbi strengthen against all or most of our other major currencies, our operating profit is reduced. We also have a higher percentage of Euro-denominated sales than expenses. Therefore, when the Euro strengthens against all or most of our other major currencies, our operating profit is increased. Accordingly, we monitor several important cross-rates.

We have performed sensitivity analyses as of December 31, 2012 and 2011, using a model that measures the change in the values arising from a hypothetical 10% adverse movement in foreign currency exchange rates relative to the U.S. dollar, with all other variables held constant. The foreign currency exchange rates we used were based on market rates in effect at December 31, 2012 and 2011. The sensitivity analyses indicated that a hypothetical 10% adverse movement in foreign currency exchange rates would impact our net earnings by approximately \$4.1 million and \$9.8 million at December 31, 2012 and December 31, 2011, respectively, although individual line items in our consolidated statement of operations would be materially affected. For example, a 10% weakening in all foreign currencies would increase the U.S. dollar equivalent of operating income generated in foreign currencies, which would be offset by foreign exchange losses of our foreign subsidiaries that have significant transactions in U.S. dollars or have the U.S. dollar as their functional currency.

A change in the mix of the currencies in which we transact our business could have a material effect on the estimated impact of the hypothetical 10% movement in the value of the U.S. dollar. Furthermore, the timing of cash receipts and disbursements could result in materially different actual results versus the hypothetical 10% movement in the value of the U.S. dollar, particularly if there are significant changes in exchange rates in a short period of time.

#### **Commodity Price Risk**

Although most materials incorporated in our products are available from a number of sources, certain materials are available only from a relatively limited number of suppliers or are subject to significant price volatility. Our results of operations may be materially and adversely affected if we have difficulty obtaining these raw materials, the quality of available raw materials deteriorates, or there are significant price changes for these raw materials. The determination that any of the raw materials used in our products are conflict minerals originating from the Democratic Republic of the Congo and adjoining countries could increase the probability that we will encounter the challenges noted above, incur additional expenses to comply with government regulations, and face public scrutiny. For periods in which the prices of these raw materials are rising, we may be unable to pass on the increased cost to our customers which would result in decreased margins for the products in which they are used. For periods in which the prices are declining, we may be required to write down our inventory carrying cost of these raw materials, since we record our inventory at the lower of cost or market. Depending on the extent of the difference between market price and our carrying cost, this write-down could have a material adverse effect on our net earnings. We also may need to record losses for adverse purchase commitments for these materials in periods of declining prices.

Silicon wafers are the most important raw material for the manufacturing of our semiconductor products. Silicon wafers are manufactured from high-purity silicon, a metalloid. There have at times been industry-wide shortages of high-purity silicon resulting primarily from growing demand of the electronic component and solar power industries, and limited growth in high-purity silicon manufacturing capacities. Shifts in demand for high-purity silicon and in turn, silicon wafers, have resulted in significant fluctuation in prices of silicon wafers.

We are a major consumer of the world's annual production of tantalum, a metal used in the manufacturing of tantalum capacitors. There are few suppliers that process tantalum ore into capacitor grade tantalum powder. We acquire tantalum powder and wire from all of them under short-term commitments.

Palladium, a metal used to produce multi-layer ceramic capacitors, is currently found primarily in South Africa and Russia. Palladium is a commodity metal that is subject to price volatility. We periodically enter into short-term commitments to purchase palladium.

Certain metals used in the manufacture of our products, such as copper, are traded on active markets, and can be subject to significant price volatility. Our policy is to enter into short-term commitments to purchase defined portions of annual consumption of these metals if market prices decline below budget.

We estimate that a 10% increase or decrease in the costs of raw materials subject to commodity price risk would decrease or increase our net earnings by \$7.0 million, assuming that such changes in our costs have no impact on the selling prices of our products and that we have no pending commitments to purchase metals at fixed prices.

#### Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial statements required by this Item are included herein, commencing on page F-1 of this report.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

#### Item 9A. CONTROLS AND PROCEDURES

## **Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures**

An evaluation was performed under the supervision and with the participation of our management, including the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) and Rule 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective as of the end of the period covered by this annual report to ensure that information required to be disclosed in reports that we file or submit under the Exchange Act is: (1) recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms; and (2) accumulated and communicated to our management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

#### Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our CEO and CFO, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2012 based on the framework set forth in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2012.

Ernst & Young LLP has issued an attestation report on the effectiveness of our internal control over financial reporting, as stated in their report which is included herein on page F-3.

# **Changes in Internal Control Over Financial Reporting**

There were no changes in our internal control over financial reporting during our last fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

#### Certifications

The certifications of our CEO and CFO pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 are filed as Exhibits 31.1 and 31.2 to this Annual Report on Form 10-K. We have also filed with the New York Stock Exchange the most recent Annual Certification as required by Section 303A.12(a) of the New York Stock Exchange Listed Company Manual.

#### Item 9B. OTHER INFORMATION

None.

#### **PART III**

# Item 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

We have a code of ethics applicable to our Chief Executive Officer, Chief Financial Officer, Principal Accounting Officer or Controller, and financial managers. The text of this code has been posted on our website. To view the code, go to our website at ir.vishay.com and click on Corporate Governance. You can obtain a printed copy of this code, free of charge, by contacting us at the following address:

Corporate Investor Relations Vishay Intertechnology, Inc. 63 Lancaster Avenue Malvern, PA 19355-2143

It is our intention to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding any amendment to, or any waiver from, a provision of this code by posting such information on our website, at the aforementioned address and location.

Certain information required under this Item with respect to our Executive Officers is set forth in Part I hereof under the caption "Executive Officers of the Registrant."

Other information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2012, our most recent fiscal year end, and is incorporated herein by reference.

## Item 11. EXECUTIVE COMPENSATION

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2012, our most recent fiscal year end, and is incorporated herein by reference.

# Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2012, our most recent fiscal year end, and is incorporated herein by reference.

## Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2012, our most recent fiscal year end, and is incorporated herein by reference.

# Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2012, our most recent fiscal year end, and is incorporated herein by reference.

## **PART IV**

# <u>Item 15.</u> <u>EXHIBITS, FINANCIAL STATEMENT SCHEDULES</u>

December 23, 2002.

## (a) Documents Filed as Part of Form 10-K

# 1. <u>Financial Statements</u>

The Consolidated Financial Statements for the year ended December 31, 2012 are filed herewith. See Index to the Consolidated Financial Statements on page F-1 of this report.

# 2. <u>Financial Statement Schedules</u>

All financial statement schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and therefore have been omitted.

# 3. <u>Exhibits</u>

3.1	Corrected Amended and Restated Certificate of Incorporation of Vishay Intertechnology, Inc. dated June 5, 2012. Incorporated
	by reference to Exhibit 3.1 to our current report on Form 8-K filed June 5, 2012.
3.2	Amended and Restated Bylaws dated June 1, 2011. Incorporated by reference to Exhibit 3.2 to our current report on Form 8-K filed June 2, 2011.
4.1	Warrant Agreement between Vishay Intertechnology, Inc. and American Stock Transfer & Trust Co., dated December 13, 2002.
	Incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed December 23, 2002.
4.2	Note Instrument, dated as of December 13, 2002. Incorporated by reference to Exhibit 4.3 to our current report on Form 8-K filed December 23, 2002.
4.3	Indenture, dated as of November 9, 2010, by and between Vishay Intertechnology, Inc. and Wilmington Trust Company, as
	Trustee. Incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed November 9, 2010.
4.4	Indenture, dated as of May 13, 2011, by and between Vishay Intertechnology, Inc. and Wilmington Trust Company, as Trustee.
	Incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed May 13, 2011.
4.5	Indenture, dated as of May 31, 2012, by and between Vishay Intertechnology, Inc. and Union Bank, N.A., as Trustee.
	Incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed May 31, 2012.
10.1†	Vishay Intertechnology Section 162(m) Cash Bonus Plan as amended and restated on February 21, 2012. Incorporated by
	reference to Annex A to our Proxy Statement, dated April 5, 2012, for our 2012 Annual Meeting of Stockholders, filed April 5,
	2012.
10.2†	Vishay Intertechnology Senior Executive Phantom Stock Plan. Incorporated by reference to Annex C to our Proxy Statement,
	dated April 7, 2004, for our 2004 Annual Meeting of Stockholders.
10.3†	Vishay Intertechnology, Inc. 1998 Stock Option Program. Incorporated by reference to our Proxy Statement, dated April 16,
	1998, for our 1998 Annual Meeting of Stockholders.
10.4†	Amendment to Section 4.1 of Vishay's 1998 Stock Option Program. Incorporated by reference to Proposal Three, included in
	our Proxy Statement, dated April 16, 2007, for our 2007 Annual Meeting of Stockholders.
10.5†	Vishay Intertechnology, Inc. 2007 Stock Incentive Program (as amended and restated effective February 2011). Incorporated by
	reference to Exhibit 10.1 to our current report on Form 8-K filed on February 28, 2011.
10.6	Securities Investment and Registration Rights Agreement by and among Vishay Intertechnology, Inc. and the Original Holders

(as defined), dated as of December 13, 2002. Incorporated by reference to Exhibit 4.4 to our current report on Form 8-K filed

10.7	Note Purchase Agreement between Vishay Intertechnology, Inc. and Subscribers (as defined), dated as of December 13, 2002. Incorporated by reference to Exhibit 4.2 to our current report on Form 8-K filed December 23, 2002.
10.8	Put and Call Agreement between Vishay Intertechnology, Inc. and the Initial Holders (as defined), dated as of December 13, 2002. Incorporated by reference to Exhibit 4.5 to our current report on Form 8-K filed December 23, 2002.
10.9	Press release, dated July 21, 2010, announcing the terms of the replacement notes to be issued to holders of Vishay's exchangeable floating-rate unsecured notes due 2102 and revised terms of its outstanding warrants as required due to the spin-off of Vishay Precision Group, Inc. on July 6, 2010. Incorporated by reference to Exhibit 99 to our current report on Form 8-K filed July 22, 2010.
10.10†	Amended and Restated Employment Agreement between Vishay Intertechnology, Inc. and Dr. Felix Zandman. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K/A filed May 15, 2009.
10.11†	Amendment to Employment Agreement, dated August 8, 2010, between Vishay Intertechnology, Inc. and Dr. Felix Zandman. Incorporated by reference to Exhibit 10.4 to our quarterly report on Form 10-Q for the fiscal quarter ended July 3, 2010.
10.12†	Employment agreement, between Vishay Europe GmbH (an indirect wholly owned subsidiary of Vishay Intertechnology, Inc.) and Dr. Gerald Paul. Incorporated by reference to Exhibit 10.3 to our quarterly report on Form 10-Q for the fiscal quarter ended October 2, 2004.
10.13†	Amendment to Employment Agreement, dated August 8, 2010, between Vishay Europe GmbH (an indirect wholly owned subsidiary of Vishay Intertechnology, Inc.) and Dr. Gerald Paul. Incorporated by reference to Exhibit 10.5 to our quarterly report on Form 10-Q for the fiscal quarter ended July 3, 2010.
10.14†	Amendment to Employment Agreement, dated August 28, 2011, between Vishay Europe GmbH (an indirect wholly owned subsidiary of Vishay Intertechnology, Inc.) and Dr. Gerald Paul. Incorporated by reference to Exhibit 10.3 to our quarterly report on Form 10-Q for the fiscal quarter ended October 1, 2011.
10.15†	Employment Agreement between Vishay Israel Ltd. (a wholly owned subsidiary of Vishay Intertechnology, Inc.) and Marc Zandman. Incorporated by reference to Exhibit 10.2 to our quarterly report on Form 10-Q for the fiscal quarter ended October 2, 2004.
10.16†	Amendment to Employment Agreement, dated August 8, 2010, between Vishay Israel Ltd. (a wholly owned subsidiary of Vishay Intertechnology, Inc.) and Marc Zandman. Incorporated by reference to Exhibit 10.6 to our quarterly report on Form 10-Q for the fiscal quarter ended July 3, 2010.
10.17†	Amendment to Employment Agreement, dated August 30, 2011, between Vishay Israel Ltd. (a wholly owned subsidiary of Vishay Intertechnology, Inc.) and Marc Zandman. Incorporated by reference to Exhibit 10.2 to our quarterly report on Form 10-Q for the fiscal quarter ended October 1, 2011.
10.18†	Employment Agreement between Vishay Intertechnology, Inc. and Dr. Lior E. Yahalomi. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K/A filed December 10, 2008.
10.19†	Amendment to Employment Agreement, dated August 8, 2010, between Vishay Intertechnology, Inc. and Dr. Lior E. Yahalomi. Incorporated by reference to Exhibit 10.7 to our quarterly report on Form 10-Q for the fiscal quarter ended July 3, 2010.
10.20†	Amendment to Employment Agreement, dated December 15, 2010, between Vishay Intertechnology, Inc. and Dr. Lior E. Yahalomi. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed December 17, 2010.

- 10.21† Separation Agreement, dated August 17, 2011, between Vishay Intertechnology, Inc. and Dr. Lior E. Yahalomi. Incorporated by reference to Exhibit 10.5 to our quarterly report on Form 10-Q for the fiscal quarter ended October 1, 2011. 10.22† General Release and Agreement, dated September 7, 2011, between Vishay Intertechnology, Inc. and Dr. Lior E. Yahalomi. Incorporated by reference to Exhibit 10.6 to our quarterly report on Form 10-Q for the fiscal quarter ended October 1, 2011. 10.23† Compensation Matters Agreement, dated August 23, 2011, between Vishay Intertechnology, Inc. and Lori Lipcaman. Incorporated by reference to Exhibit 10.4 to our quarterly report on Form 10-Q for the fiscal quarter ended October 1, 2011. Compensation Matters Agreement, dated November 11, 2011, between Vishay Intertechnology, Inc. and Dieter Wunderlich. 10.24† Incorporated by reference to Exhibit 10.30 to our 2011 annual report on Form 10-K. Terms and Conditions of Johan Vandoorn Employment Agreement, dated January 16, 2012. Incorporated by reference to Exhibit 10.25† 10.31 to our 2011 annual report on Form 10-K. Employment Agreement between Vishay Americas, Inc. (a wholly owned subsidiary of Vishay Intertechnology, Inc.) and David 10.26† Valletta dated November 21, 2011. Incorporated by reference to Exhibit 10.32 to our 2011 annual report on Form 10-K. 10.27† Consulting and Non-Competition Agreement between Vishay Intertechnology, Inc. and Richard N. Grubb. Incorporated by reference to Exhibit 10.17 to our 2008 annual report on Form 10-K. 10.28 Technology License Agreement, dated as of April 1, 2007, by and between International Rectifier Corporation and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 99.1 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007. 10.29 Technology License Back Agreement, dated as of April 1, 2007, by and between Vishay Intertechnology, Inc. and International Rectifier Corporation. Incorporated by reference to Exhibit 99.2 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007. 10.30 Amended and Restated Transition Services Agreement, dated as of April 1, 2007, by and between International Rectifier Corporation and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 99.5 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007. 10.31 Transition Product Services Agreement, dated as of April 1, 2007, by and between International Rectifier Corporation, International Rectifier Southeast Asia Pte. Ltd., Vishay Intertechnology, Inc., and Vishay Asia Logistics Pte. Ltd. Incorporated by reference to Exhibit 99.6 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007.
  - 10.33 Transition IGBT/Auto Die Supply Agreement, dated as of April 1, 2007, by and between International Rectifier Corporation and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 99.8 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007.

    10.34 Indemnification, Escrey, Agreement, dated as of April 1, 2007, by and among Vishay Intertechnology, Inc. International

Transition Buy Back Die Supply Agreement, dated as of April 1, 2007, by and between International Rectifier Corporation and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 99.7 to International Rectifier Corporation's current report on

Indemnification Escrow Agreement, dated as of April 1, 2007, by and among Vishay Intertechnology, Inc., International Rectifier Corporation and Union Bank of California, N.A., as escrow agent. Incorporated by reference to Exhibit 99.9 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007.

10.32

Form 8-K filed April 9, 2007.

10.35	Confidential Settlement Agreement and Release, Amendment No. 1 to Transition Buy Back Die Supply Agreement, Amendment
	No. 2 to Technology License Agreement, Amendment No. 7 to Master Purchase Agreement, and Amendment No. 3 to Asset
	Purchase Agreement, dated June 25, 2009, by and between Vishay Intertechnology, Inc. and International Rectifier Corporation.
	Incorporated by reference to Exhibit 10.1 to International Rectifier Corporation's current report on Form 8-K/A filed July 29,
10.20	2009.
10.36	Master Separation and Distribution Agreement, dated June 22, 2010, by and among Vishay Intertechnology, Inc. and Vishay
10.05	Precision Group, Inc. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed June 23, 2010.
10.37	Employee Matters Agreement, dated June 22, 2010, by and among Vishay Intertechnology, Inc. and Vishay Precision Group, Inc.
10.20	Incorporated by reference to Exhibit 10.2 to our current report on Form 8-K filed June 23, 2010.
10.38	Tax Matters Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay Intertechnology, Inc. Incorporated
10.20	by reference to Exhibit 10.1 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
10.39	Trademark License Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay Intertechnology, Inc.
10.40	Incorporated by reference to Exhibit 10.2 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
10.40	Transition Services Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 10.3 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
10.41*	Supply Agreement, dated July 6, 2010, between Vishay Advanced Technology, Ltd. and Vishay Dale Electronics, Inc.
10.41	Incorporated by reference to Exhibit 10.4 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
10.42	Secondment Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay Intertechnology, Inc. Incorporated
10.42	by reference to Exhibit 10.5 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
10.43*	Patent License Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay Dale Electronics, Inc.
10.45	Incorporated by reference to Exhibit 10.6 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
10.44	Lease Agreement, dated July 4, 2010, between Vishay Advanced Technology, Ltd. and V.I.E.C. Ltd. Incorporated by reference to
10	Exhibit 10.7 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
10.45	Amendment No. 1 to Lease Agreement, dated March 1, 2012, between Vishay Advanced Technology, Ltd. And V.I.E.C. Ltd.
	Incorporated by reference to Exhibit 10.2 to our quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2012.
10.46*	Supply Agreement, dated July 6, 2010, between Vishay Dale Electronics, Inc. and Vishay Advanced Technology, Ltd.
	Incorporated by reference to Exhibit 10.8 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
10.47*	Supply Agreement, dated July 6, 2010, between Vishay Measurements Group, Inc. and Vishay S.A. Incorporated by reference to
	Exhibit 10.9 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
10.48*	Manufacturing Agreement, dated July 6, 2010, between Vishay S.A. and Vishay Precision Foil GmbH. Incorporated by reference
	to Exhibit 10.10 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.

- Intellectual Property License Agreement, dated July 6, 2010, between Vishay S.A. and Vishay Precision Foil GmbH. Incorporated by reference to Exhibit 10.11 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- 10.50\* Supply Agreement, dated July 6, 2010, between Vishay Precision Foil GmbH and Vishay S.A. Incorporated by reference to Exhibit 10.12 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- 10.51\* Intellectual Property License Agreement, dated July 6, 2010, between Vishay S.A. and Vishay Measurements Group, Inc. Incorporated by reference to Exhibit 10.13 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- 10.52 Lease Agreement between Vishay Alpha Electronics Corporation and Vishay Japan Co., Ltd. Incorporated by reference to Exhibit 10.14 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- Lease Agreement, dated July 6, 2010, between Vishay Intertechnology, Inc. and Vishay Precision Group, Inc. Incorporated by reference to Exhibit 10.15 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- Amendment No. 1 to Lease Agreement, dated February 21, 2012, between Vishay Intertechnology, Inc. and Vishay Precision Group, Inc. Incorporated by reference to Exhibit 10.1 to our quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2012.
- Lease Agreement, dated July 4, 2010, between Vishay Precision Israel, Ltd. and Vishay Israel, Ltd. Incorporated by reference to Exhibit 10.16 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- 10.56 Credit Agreement, dated as of December 1, 2010 among Vishay Intertechnology, Inc. and JPMorgan Chase Bank, N.A., as administrative agent and the lenders and other parties thereto. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed December 1, 2010
- First Amendment and Waiver to Credit Agreement dated March 2, 2011, among Vishay Intertechnology, Inc. and JPMorgan Chase Bank, N.A., as administrative agent and the lenders and other parties thereto. Incorporated by reference to Exhibit 10.2 to our quarterly report on Form 10-Q for the fiscal quarter ended April 1, 2011.
- Second Amendment dated September 8, 2011, among Vishay Intertechnology, Inc. and JPMorgan Chase Bank, N.A., as administrative agent and the lenders and other parties thereto. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed September 9, 2011.
- Third Amendment and Incremental Facility Agreement dated April 3, 2012, among Vishay Intertechnology, Inc., the Incremental Revolving Lenders party hereto, and JPMorgan Chase Bank, N.A. in its capacities as administrative agent and issuing bank. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed April 3, 2012.
- 10.60† Vishay Intertechnology, Inc. Deferred Compensation Plan (as amended and restated, effective November 15, 2011). Incorporated by reference to Exhibit 4.1 to our Registration Statement on Form S-8 (No. 333-178895) filed January 5, 2012.
- 21\*\* Subsidiaries of the Registrant.
- 23.1\*\* Consent of Independent Registered Public Accounting Firm.
- 31.1\*\* Certification pursuant to Rules 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 Chief Executive Officer.
- 31.2\*\* Certification pursuant to Rules 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 Chief Financial Officer.

32.1**	Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 – Chief
	Executive Officer.

32.2\*\* Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 – Chief Financial Officer.

101\*\* Interactive Data File (Annual Report on Form 10-K, for the year ended December 31, 2012, furnished in XBRL (eXtensible Business Reporting Language)).

<sup>\*</sup> Confidential treatment has been requested by, and accorded to, VPG with respect to certain portions of this Exhibit. Omitted portions have been filed separately by VPG with the Securities and Exchange Commission.

<sup>\*\*</sup> Filed herewith.

<sup>†</sup> Denotes a management contract or compensatory plan, contract, or arrangement.

# **SIGNATURES**

Pursuant to the requirement of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

# VISHAY INTERTECHNOLOGY, INC.

By:/s/ Gerald Paul

Dr. Gerald Paul

President and Chief Executive Officer

February 20, 2013

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated below.

Principal Executive Officer:    Solution   President, Chief Executive Officer, and Director   February 20, 2013     Dr. Gerald Paul   Principal Financial and Accounting Officer:    Solution   Secutive Vice President and Chief Financial Officer   February 20, 2013     Solution   Secutive Vice President and Chief Financial Officer   February 20, 2013     Solution   Secutive Vice President   Secutive Vice Pr
/s/ Lori Lipcaman Executive Vice President and Chief Financial Officer February 20, 2013
<del>.</del>
Lori Lipcaman
Board of Directors:
/s/ Marc Zandman Executive Chairman of the Board of Directors February 20, 2013 Marc Zandman
/s/ Abraham Ludomirski Director February 20, 2013 Dr. Abraham Ludomirski
/s/ Frank D. Maier Frank D. Maier Frank D. Maier Frank D. Maier
Vs/ Wayne M. Rogers Wayne M. Rogers Director February 20, 2013
/s/ Ronald M. Ruzic Director February 20, 2013 Ronald M. Ruzic
/s/ Ziv Shoshani Director February 20, 2013 Ziv Shoshani
/s/ Thomas C. Wertheimer Director February 20, 2013 Thomas C. Wertheimer
<u>/s/ Ruta Zandman</u> Director February 20, 2013 Ruta Zandman
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# Vishay Intertechnology, Inc.

# **Index to Consolidated Financial Statements**

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# Report of Independent Registered Public Accounting Firm on the Consolidated Financial Statements

The Board of Directors and Stockholders of Vishay Intertechnology, Inc.:

We have audited the accompanying consolidated balance sheets of Vishay Intertechnology Inc. as of December 31, 2012 and 2011, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2012. These financial statements are the responsibility of Vishay Intertechnology Inc.'s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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, 2012 and 2011, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2012, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Vishay Intertechnology Inc.'s internal control over financial reporting as of December 31, 2012, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 20, 2013 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania February 20, 2013

# Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting

The Board of Directors and Stockholders of Vishay Intertechnology, Inc.:

We have audited Vishay Intertechnology Inc.'s internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Vishay Intertechnology Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in Item 9A, "Management's Report on Internal Control Over Financial Reporting." Our responsibility is to express an opinion on Vishay Intertechnology Inc.'s internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Vishay Intertechnology Inc. maintained in all material respects, effective internal control over financial reporting as of December 31, 2012, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Vishay Intertechnology Inc. as of December 31, 2012 and 2011, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2012 and our report dated February 20, 2013 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania February 20, 2013

Consolidated Balance Sheets

(In thousands, except share amounts)

(In thousands, except share amounts)	<b>December</b> 3 2012	<b>1,</b> -	December 31, 2011
Assets			
Current assets:	<b>*</b>	4	<b>-</b> 40 000
Cash and cash equivalents	\$ 697,	595 \$	749,088
Short-term investments	294,	943	249,139
Accounts receivable, net of allowances for doubtful			
accounts of \$2,534 and \$2,569, respectively	247,	035	270,970
Inventories:			
Finished goods	109,		104,478
Work in process	177,		181,354
Raw materials	120,		131,795
Total inventories	407,	349	417,627
Deferred income taxes	24	385	24,632
Prepaid expenses and other current assets	119,		119,220
Total current assets	1,791,		1,830,676
Total Current assets	1,731,	-05	1,030,070
Property and equipment, at cost:			
Land	92,	348	91,507
Buildings and improvements	523,	)91	493,550
Machinery and equipment	2,163,	182	2,079,395
Construction in progress	101,		94,717
Allowance for depreciation	(1,965,	53 <del>9</del> )	(1,851,264)
Property and equipment, net	914,	552	907,905
Goodwill	34,	B66	9,051
Other intangible assets, net	133,	717	103,927
Other assets	141,		142,171
Total assets	\$ 3,016,	277 \$	2,993,730
Continues on following page.			

Consolidated Balance Sheets (continued) (In thousands, except share amounts)

	December 31, 2012	December 31, 2011
Liabilities and stockholders' equity		
Current liabilities:		
Notes payable to banks	\$ 6	\$ 13
Trade accounts payable	147,936	154,942
Payroll and related expenses	108,353	109,833
Other accrued expenses	148,660	161,119
Income taxes	7,215	13,881
Total current liabilities	412,170	439,788
Long-term debt, less current portion	392,931	399,054
Deferred income taxes	129,379	110,356
Other liabilities	108,600	117,235
Accrued pension and other postretirement costs	344,961	319,136
Total liabilities	1,388,041	1,385,569
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value \$1.00 per share:		
authorized - 1,000,000 shares; none issued		
Common stock, par value \$0.10 per share:		
authorized - 300,000,000 shares; 131,143,534 and 143,735,481		
shares outstanding	13,114	14,374
Class B convertible common stock, par value \$0.10 per share:		
authorized - 40,000,000 shares; 12,129,227 and 13,452,549		
shares outstanding	1,213	1,345
Capital in excess of par value	1,999,901	2,086,925
(Accumulated deficit) retained earnings	(380,678	) (503,416)
Accumulated other comprehensive income (loss)	(10,222	3,778
Total Vishay stockholders' equity	1,623,328	1,603,006
Noncontrolling interests	4,908	5,155
Total equity	1,628,236	1,608,161
Total liabilities and equity	\$ 3,016,277	\$ 2,993,730

See accompanying notes.

Consolidated Statements of Operations (In thousands, except per share amounts)

		_	
Years	ended	Decem	ber 31.

	 2012	 2011	 2010
Net revenues	\$ 2,230,097	\$ 2,594,029	\$ 2,725,092
Costs of products sold	1,703,424	1,874,043	1,917,607
Gross profit	526,673	719,986	807,485
Selling, general, and administrative expenses	349,625	367,623	389,547
Gain on sale of property	(12,153)	-	-
Executive compensation charges	 <u>-</u>	5,762	_
Operating income	189,201	346,601	417,938
Other income (expense):			
Interest expense	(22,604)	(19,277)	(11,036)
Other	 3,440	 3,792	 (1,369)
	(19,164)	(15,485)	(12,405)
Income before taxes	170,037	331,116	405,533
Income tax expense	 46,506	91,119	45,240
Net earnings	123,531	239,997	360,293
Less: net earnings attributable to noncontrolling interests	793	1,176	1,187
Net earnings attributable to Vishay stockholders	\$ 122,738	\$ 238,821	\$ 359,106
Basic earnings per share attributable to Vishay stockholders:	\$ 0.82	\$ 1.49	\$ 1.96
Diluted earnings per share attributable to Vishay stockholders:	\$ 0.79	\$ 1.42	\$ 1.89
Weighted average shares outstanding - basic	149,020	160,094	183,618
Weighted average shares outstanding - diluted	155,844	168,514	190,227
San annum in a matar			

VISHAY INTERTECHNOLOGY, INC. Consolidated Statements of Comprehensive Income (*In thousands*)

		Years ended December 31,					
		2012			2011		2010
Net earnings		\$	123,531	\$	239,997	\$	360,293
Other comprehensive income (loss), net of tax							
Foreign currency translation adjustment			14,567		(26,441)		(41,930)
Pension and other post-retirement actuarial items			(29,759)		(29,207)		(15,159)
Unrealized gain (loss) on available-for-sale securities			1,192		(1,065)		602
Other comprehensive income (loss)			(14,000)		(56,713)		(56,487)
Comprehensive income			109,531		183,284		303,806
Less: comprehensive income attributable to noncontrolling interests			793		1,176		1,187
Comprehensive income attributable to Vishay stockholders		\$	108,738	\$	182,108	\$	302,619
See accompanying notes.							
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**VISHAY INTERTECHNOLOGY, INC.** Consolidated Statements of Cash Flows (In thousands)

Consolidated Statements of Cash Flows					
(In thousands)	 Year 2012	rs end	led December 2011	31,	2010
Continuing operating activities	 				
Net earnings	\$ 123,531	\$	239,997	\$	360,293
Adjustments to reconcile net earnings (loss) to net cash provided by operating activities:					
Depreciation and amortization	168,555		179,706		189,541
(Gain) loss on disposal of property and equipment	(12,894)		(930)		574
Accretion of interest on convertible debentures	3,028		2,046		188
Inventory write-offs for obsolescence	20,865		21,118		21,449
Pensions and other postretirement benefits, net of contributions	(12,146)		(11,385)		(6,967)
Deferred income taxes	(6,828)		14,108		(26,476)
Other	8,530		(16,120)		4,932
Net change in operating assets and liabilities, net of effects of businesses acquired or spun-off	(5,152)		(52,503)		1,730
Net cash provided by continuing operating activities	287,489		376,037		545,264
Continuing investing activities					
Capital expenditures	(150,291)		(168,641)		(145,413)
Proceeds from sale of property and equipment	10,241		2,162		1,188
Purchase of businesses, net of cash acquired	(85,493)		(19,335)		-
Purchase of short-term investments	(381,040)		(497,258)		_
Maturity of short-term investments	339,287		226,792		_
Sale of investments	-		2,167		_
Proceeds from loans receivable	-		_,,		15,000
Other investing activities	(1,828)		1,350		(2,287)
Net cash used in continuing investing activities	 (269,124)		(452,763)		(131,512)
Continuing financing activities					
Proceeds from long-term borrowings	150,000		150,000		275,000
Issuance costs	(4,827)		(4,429)		(15,116)
Principal payments on long-term debt and capital leases	(27)		(681)		(104,581)
Net (payments) proceeds on revolving credit lines	(66,000)		(85,000)		115,000
Common stock repurchases	(150,000)		(150,000)		(275,000)
Distribution in connection with spin-off of VPG	-		-		(70,600)
Net changes in short-term borrowings	(115)		(10)		528
Distributions to noncontrolling interests	(1,040)		(1,440)		(757)
Proceeds from stock options exercised	174		9,675		-
Excess tax benefit from stock options exercised	-		555		-
Net cash used in continuing financing activities	(71,835)		(81,330)		(75,526)
Effect of exchange rate changes on cash and cash equivalents	1,977		9,806		(19,995)
Increase (decrease) in cash and cash equivalents from continuing activities	 (51,493)		(148,250)		318,231
Net cash used in discontinued operating activities	_				(82)
Net cash used in discontinued operations  Net cash used in discontinued operations					(82)
•	 (E4 402)	_	(1.40.050)		
Net increase (decrease) in cash and cash equivalents	 (51,493)		(148,250)		318,149
Cash and cash equivalents at beginning of year	749,088		897,338		579,189
Cash and cash equivalents at end of year	\$ 697,595	\$	749,088	\$	897,338
				_	

See accompanying notes.

Consolidated Statements of Stockholders' Equity

(In thousands, except share amounts)

	Common Stock	Class B Convertible Common Stock	Capital in Excess of Par Value	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Total Vishay Stockholders' Equity	Noncontrolling Interests	Total Equity
Balance at January 1, 2010 Net earnings	\$ 17,228 -	\$ 1,435	\$ 2,317,613	\$ (922,805) 359,106	\$ 102,975	\$ 1,516,446 359,106	\$ 5,155 1,187	\$ 1,521,601 360,293
Other comprehensive income (loss)	-	-	-	-	(56,487)	(56,487)	-	(56,487)
Spin-off of Vishay Precision Group, Inc. Stock repurchase	-	-	-	(178,538)	14,003	(164,535)	(166)	(164,701)
Stock repurchase (21,721,959 shares) Issuance of convertible	(2,172)	-	(272,828)	-	-	(275,000)	-	(275,000)
debentures due 2040 Distributions to	-	-	110,094	-	-	110,094	-	110,094
noncontrolling interests Phantom and restricted stock issuances (119,010	-	-	-	-	-	-	(757)	(757)
shares) Cancellation of shares	12	-	(12)	-	-	-	-	-
(68,976 shares) Stock compensation	(7)	-	7	-	-	-	-	-
expense Tax effects of stock plan	-	-	2,643 (536)	-	-	2,643 (536)	-	2,643 (536)
Conversions from Class B to common stock (49 shares)	_	_	_	_	_	_	_	_
Balance at December 31, 2010	\$ 15,061	\$ 1,435	\$ 2,156,981	\$ (742,237)	\$ 60,491	\$ 1,491,731	\$ 5,419	\$ 1,497,150
Net earnings Other comprehensive income (loss)	-	-	-	238,821	(56,713)	238,821 (56,713)	1,176	239,997 (56,713)
Distributions to noncontrolling interests  Phantom and restricted	-	-		-	-	-	(1,440)	(1,440)
stock issuances (193,602 shares)	20	-	(161)	-	-	(141)	-	(141)
Issuance of convertible debentures due 2041 Stock repurchase	-	-	62,246	-	-	62,246	-	62,246
(8,620,689 shares) Stock compensation	(862)	-	(149,138)	-	-	(150,000)	-	(150,000)
expense Stock options exercised	-	-	6,832	-	-	6,832	-	6,832
(650,621 shares) Tax effects of stock plan	65 -	- -	9,610 555	-	- -	9,675 555	-	9,675 555
Conversions from Class B to common stock (900,290 shares)	90	(90)	-	-	<u>-</u>	_	<u>-</u>	_
Balance at December 31, 2011 Net earnings	\$ 14,374	\$ 1,345	\$ 2,086,925	\$ (503,416) 122,738	\$ 3,778	\$ 1,603,006 122,738	\$ 5,155 <b>793</b>	\$ 1,608,161 123,531
Other comprehensive income	_	_	_	122,730	(14,000)	(14,000)	-	(14,000)
Distributions to noncontrolling interests	-	-	-	-	-	-	(1,040)	(1,040)
Phantom and restricted stock issuances (11,323 shares)	1	-	(9)	-	-	(8)	-	(8)
Issuance of convertible debentures due 2042 Stock repurchase	-	-	57,874	-	-	57,874	-	57,874
(13,948,687 shares) Stock compensation	(1,395)	-	(148,605)	-	-	(150,000)	-	(150,000)
expense Stock options exercised (22,095 shares)	2	-	3,544 172	-	-	3,544 174	-	3,544 174
Conversions from Class B to common stock (1,323,322 shares)	132	(132)	1/2	-	-	1/4	-	1/4
Balance at December 31, 2012	\$ 13,114	\$ 1,213	\$ 1,999,901	\$ (380,678)	\$ (10,222)	\$ 1,623,328	\$ 4,908	\$ 1,628,236
See accompanying notes.								

(dollars in thousands, except per share amounts)

Vishay Intertechnology, Inc. ("Vishay" or the "Company") is a global manufacturer and supplier of semiconductors and passive components, including power MOSFETs, power integrated circuits, transistors, diodes, optoelectronic components, resistors, capacitors, and inductors. Semiconductors and electronic components manufactured by the Company are used in virtually all types of electronic products, including those in the industrial, computing, automotive, consumer electronics products, telecommunications, power supplies, military/aerospace, and medical industries.

# Note 1 - Summary of Significant Accounting Policies

# **Use of Estimates**

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

# **Principles of Consolidation**

The consolidated financial statements include the accounts of Vishay and all of its subsidiaries in which a controlling financial interest is maintained. For those consolidated subsidiaries in which the Company's ownership is less than 100 percent, the outside stockholders' interests are shown as noncontrolling interest in the accompanying consolidated balance sheets. Investments in affiliates over which the Company has significant influence but not a controlling interest are carried on the equity basis. Investments in affiliates over which the Company does not have significant influence are accounted for by the cost method. All intercompany transactions, accounts, and profits are eliminated.

#### Subsequent Events

In connection with the preparation of the consolidated financial statements and in accordance with GAAP, the Company evaluated subsequent events after the balance sheet date of December 31, 2012 through the date these financial statements were issued through the filing of this annual report on Form 10-K with the U.S. Securities and Exchange Commission.

#### Revenue Recognition

The Company recognizes revenue on product sales during the period when the sales process is complete. This generally occurs when products are shipped to the customer in accordance with terms of an agreement of sale, title and risk of loss have been transferred, collectibility is reasonably assured, and pricing is fixed or determinable. For a small percentage of sales where title and risk of loss passes at point of delivery, the Company recognizes revenue upon delivery to the customer, assuming all other criteria for revenue recognition are met. The Company historically has had agreements with distributors that provided limited rights of product return. The Company has modified these arrangements to allow distributors a limited credit for unsaleable products, which it terms a "scrap allowance." Consistent with industry practice, the Company also has a "stock, ship and debit" program whereby it considers requests by distributors for credits on previously purchased products that remain in distributors' inventory, to enable the distributors to offer more competitive pricing. In addition, the Company has contractual arrangements whereby it provides distributors with protection against price reductions initiated by the Company after product is sold by the Company to the distributor and prior to resale by the distributor.

(dollars in thousands, except per share amounts)

# Note 1 - Summary of Significant Accounting Policies (continued)

The Company records a reduction of revenue during each period, and records a related accrued expense for the period, based upon its estimate of product returns, scrap allowances, "stock, ship and debit" credits, and price protection credits that will be attributable to sales recorded through the end of the period. The Company makes these estimates based upon sales levels to its distributors during the period, inventory levels at the distributors, current and projected market conditions, and historical experience under the programs. While the Company utilizes a number of different methodologies to estimate the accruals, all of the methodologies take into account sales levels to distributors during the relevant period, inventory levels at the distributors, current and projected market trends and conditions, recent and historical activity under the relevant programs, changes in program policies, and open requests for credits. These procedures require the exercise of significant judgments. The Company believes that it has a reasonable basis to estimate future credits under the programs.

Royalty revenues, included in net revenues on the consolidated statements of operations, were \$7,131, \$6,633 and \$5,781 for the years ended December 31, 2012, 2011, and 2010, respectively. The Company records royalty revenue in accordance with agreed upon terms when performance obligations are satisfied, the amount is fixed or determinable, and collectibility is reasonably assured. Vishay earns royalties at the point of sale of products which incorporate licensed intellectual property. Accordingly, the amount of royalties recognized is determined based on periodic reporting to Vishay by its licensees, and based on judgments and estimates by Vishay management, which management considers reasonable.

# Shipping and Handling Costs

Shipping and handling costs are included in costs of products sold.

# Research and Development Expenses

Research and development costs are expensed as incurred. The amount charged to expense for research and development (exclusive of purchased in-process research and development) aggregated \$57,164, \$55,809, and \$50,968, for the years ended December 31, 2012, 2011, and 2010, respectively. The Company spends additional amounts for the development of machinery and equipment for new processes and for cost reduction measures.

# Grants

Government grants received by certain 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 recognized as a reduction of costs of products sold were \$351, \$483, and \$543 for the years ended December 31, 2012, 2011, and 2010, respectively. Deferred grant income included in other liabilities on the consolidated balance sheets was \$1,548 and \$2,185 at December 31, 2012 and 2011, respectively. The grants are subject to certain conditions, including maintaining specified levels of employment for periods up to ten years. Noncompliance with such conditions could result in the repayment of grants. However, management expects that the Company will comply with all terms and conditions of the grants.

(dollars in thousands, except per share amounts)

# Note 1 - Summary of Significant Accounting Policies (continued)

#### **Income Taxes**

The provision for income taxes is determined using the asset and liability approach of accounting for income taxes. Under this approach, deferred taxes represent the future tax consequences expected to occur when the reported amounts of assets and liabilities are recovered or paid. The provision for income taxes represents income taxes paid or payable for the current year plus the change in deferred taxes during the year. Deferred taxes result from differences between the financial and tax bases of the Company's assets and liabilities and are adjusted for changes in tax rates and tax laws when changes are enacted. Valuation allowances have been established for deferred tax assets which the Company believes do not meet GAAP criteria of "more likely than not." This criterion requires a level of judgment regarding future taxable income, which may be revised due to changes in market conditions, tax laws, or other factors. If the Company's assumptions and estimates change in the future, valuation allowances established may be increased, resulting in increased tax expense. Conversely, if the Company is ultimately able to utilize all or a portion of the deferred tax assets for which a valuation allowance has been established, then the related portion of the valuation allowance can be released, resulting in decreased tax expense.

At the present time, substantially all earnings generated by foreign subsidiaries are expected to be reinvested outside of the United States indefinitely. Accordingly, no provision has been made for U.S. federal and state income taxes on these foreign earnings. 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), state income taxes, incremental foreign income taxes, and withholding taxes payable to the various foreign countries.

# Cash, Cash Equivalents, and Short-Term Investments

Cash and cash equivalents includes demand deposits and highly liquid investments with maturities of three months or less when purchased. Highly liquid investments with original maturities greater than three months, but less than one year are classified as short-term investments. At December 31, 2012 and 2011, the Company's short-term investments were comprised of time deposits with financial institutions whose original maturity exceeds three months, but less than one year.

# Allowance for Doubtful Accounts

The Company maintains an allowance for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. The allowance is determined through an analysis of the aging of accounts receivable and assessments of risk that are based on historical trends and an evaluation of the impact of current and projected economic conditions. The Company evaluates the past-due status of its trade receivables based on contractual terms of sale. If the financial condition of the Company's customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. Bad debt expense (income realized upon subsequent collection) was \$(24), \$(93), and \$(838) for the years ended December 31, 2012, 2011, and 2010, respectively.

# **Inventories**

Inventories are stated at the lower of cost, determined by the first-in, first-out method, or market. Inventories are adjusted for estimated obsolescence and written down to net realizable value based upon estimates of future demand, technology developments, and market conditions.

(dollars in thousands, except per share amounts)

# Note 1 – Summary of Significant Accounting Policies (continued)

# **Property and Equipment**

Property and equipment is carried at cost and is depreciated principally by the straight-line method based upon the estimated useful lives of the assets. Machinery and equipment are being depreciated over useful lives of seven to ten years. Buildings and building improvements are being depreciated over useful lives of twenty to forty years. Construction in progress is not depreciated until the assets are placed in service. The estimated cost to complete construction in progress at December 31, 2012 was approximately \$40,903. Depreciation of capital lease assets is included in total depreciation expense. Depreciation expense was \$153,801, \$165,022, and \$169,724 for the years ended December 31, 2012, 2011, and 2010, respectively. Gains and losses on the disposal of assets which do not qualify for presentation as discontinued operations are included in the determination of operating margin (within selling, general, and administrative expenses). Individually material gains and losses on disposal are separately disclosed in the notes to the consolidated financial statements.

# Goodwill and Other Intangible Assets

Goodwill and indefinite-lived intangible assets are not amortized but rather are tested for impairment at least annually. The required annual impairment tests of goodwill and indefinite-lived intangible assets are completed as of the first day of the fourth fiscal quarter of each year. These tests are performed more frequently whenever events or changes in circumstances indicate that the assets might be impaired. Certain of the Company's tradenames have been assigned indefinite useful lives.

Definite-lived intangible assets are amortized over their estimated useful lives. Patents and acquired technology are being amortized over useful lives of seven to twenty-five years. Capitalized software is amortized over periods of three to ten years, primarily included in costs of products sold on the consolidated statements of operations. Customer relationships are amortized over useful lives of five to twenty years. Noncompete agreements are amortized over periods of four to ten years. The Company continually evaluates the reasonableness of the useful lives of these assets.

GAAP prescribes a two-step quantitative method for determining goodwill impairment. The Company has the option of performing a qualitative assessment before performing the two-step quantitative impairment test. If it is determined, on the basis of qualitative factors, that the fair value of the reporting unit is not more likely than not less than the carrying amount, the two-step quantitative impairment test is not required. If it is determined that the fair value of the reporting unit is more likely than not less than the carrying amount, the two-step quantitative impairment test is required. In the first step, the Company determines the fair value of the reporting unit and compares that fair value to the net book value of the reporting unit. The fair value of the reporting unit is determined using various valuation techniques, including a comparable companies market multiple approach and a discounted cash flow analysis (an income approach).

If the net book value of the reporting unit were to exceed the fair value, the Company would then perform the second step of the quantitative impairment test, which requires allocation of the reporting unit's fair value to all of its assets and liabilities in a manner similar to a purchase price allocation, with any residual fair value being allocated to goodwill. An impairment charge will be recognized only when the implied fair value of a reporting unit's goodwill is less than its carrying amount.

The Company has the option of performing a qualitative assessment of the indefinite-lived intangible assets before performing a quantitative impairment test. The fair value of the tradenames is measured as the discounted cash flow savings realized from owning such tradenames and not having to pay a royalty for their use.

There was no impairment identified through the annual impairment tests completed in 2012, 2011, or 2010.

Upon determining that an intangible asset classified as indefinite-lived is impaired, the Company reassesses the useful life of the impaired assets and begins to amortize the remaining carrying value over that useful life if it is determined that the asset no longer has an indefinite useful life.

(dollars in thousands, except per share amounts)

# Note 1 – Summary of Significant Accounting Policies (continued)

# **Impairment of Long-Lived Assets**

The carrying value of long-lived assets held-and-used, other than goodwill and indefinite-lived intangible assets, is evaluated when events or changes in circumstances indicate the carrying value may not be recoverable or the useful life has changed. The carrying value of a long-lived asset group is considered impaired when the total projected undiscounted cash flows from such asset group are separately identifiable and are less than the carrying value. In that event, a loss is recognized based on the amount by which the carrying value exceeds the fair market value of the long-lived asset group. Fair market value is determined primarily using present value techniques based on projected cash flows from the asset group. Losses on long-lived assets held-for-sale, other than goodwill and indefinite-lived intangible assets, are determined in a similar manner, except that fair market values are reduced for disposal costs.

# Available-for-Sale Securities

Other assets include investments in marketable securities which are classified as available-for-sale. These assets include assets that are held in trust related to the Company's non-qualified pension and deferred compensation plans (see Note 11) and assets that are intended to fund a portion of the Company's other postretirement benefit obligations outside of the U.S. These assets are reported at fair value, based on quoted market prices as of the end of the reporting period. Unrealized gains and losses are reported, net of their related tax consequences, as a component of accumulated other comprehensive income in stockholders' equity until sold. At the time of sale the assets that are held in trust related to the Company's non-qualified pension and deferred compensation plans, any gains (losses) calculated by the specific identification method are recognized as a reduction (increase) to benefits expense, within selling, general, and administrative expenses.

# **Financial Instruments**

The Company uses financial instruments in the normal course of its business, including from time to time, derivative financial instruments. Additionally, from time to time, the Company enters into contracts that are not considered derivative financial instruments in their entirety, but that include embedded derivative features. The convertible senior debentures due 2040, due 2041, and due 2042 contain embedded derivatives that are recorded at fair value on a recurring basis. At December 31, 2012 and 2011, outstanding derivative instruments were not material.

The Company reports derivative instruments on the consolidated balance sheet at their fair values. The accounting for changes in fair value depends upon the purpose of the derivative instrument and whether it is designated and qualifies for hedge accounting. For instruments designated as hedges, the effective portion of gains or losses is reported in other comprehensive income (loss) and the ineffective portion, if any, is reported in current period net earnings (loss). Changes in the fair values of derivative instruments that are not designated as hedges, including embedded derivatives, are recorded in current period net earnings (loss).

The Company has in the past used interest rate swap agreements to modify variable rate obligations to fixed rate obligations, thereby reducing exposure to market rate fluctuations. The Company has also in the past used financial instruments such as forward exchange contracts to hedge a portion, but not all, of its firm commitments denominated in foreign currencies. The purpose of the Company's foreign currency management is to minimize the effect of exchange rate changes on actual cash flows from foreign currency denominated transactions.

Other financial instruments include cash and cash equivalents, short-term investments, accounts receivable, and notes payable. The carrying amounts of these financial instruments reported in the consolidated balance sheets approximate their fair values due to the short-term nature of these assets and liabilities.

(dollars in thousands, except per share amounts)

# Note 1 - Summary of Significant Accounting Policies (continued)

# **Foreign Currency Translation**

The Company has significant operations outside of the United States. The Company finances its operations in Europe and certain locations in Asia in local currencies, and accordingly, these subsidiaries utilize the local currency as their functional currency. The Company's operations in Israel and most significant locations in Asia are largely financed in U.S. dollars, and accordingly, these subsidiaries utilize the U.S. dollar as their functional currency.

For those subsidiaries where the local currency is the functional currency, assets and liabilities in the consolidated balance sheets have been translated at the rate of exchange as of the balance sheet date. Translation adjustments do not impact the consolidated results of operations and are reported as a separate component of stockholders' equity. Revenues and expenses are translated at the average exchange rate for the year. While the translation of revenues and expenses into U.S. dollars does not directly impact the statement of operations, the translation effectively increases or decreases the U.S. dollar equivalent of revenues generated and expenses incurred in those foreign currencies.

For those foreign subsidiaries where the U.S. dollar is the functional currency, all foreign currency financial statement amounts are remeasured into U.S. dollars. Exchange gains and losses arising from remeasurement of foreign currency-denominated monetary assets and liabilities are included in the consolidated results of operations.

# **Stock-Based Compensation**

Compensation costs related to stock-based payment transactions are recognized in the consolidated financial statements. The amount of compensation cost is measured based on the grant-date fair value of the equity (or liability) instruments issued. Compensation cost is recognized over the period that an officer, employee, or non-employee director provides service in exchange for the award. For options and restricted stock units subject to graded vesting, the Company recognizes expense over the service period for each separately vesting portion of the award as if the award was, in-substance, multiple awards.

# **Commitments and Contingencies**

Liabilities for loss contingencies, including environmental remediation costs, arising from claims, assessments, litigation, fines, penalties, and other sources are recorded when it is probable that a liability has been incurred and the amount of the assessment and/or remediation can be reasonably estimated. The costs for a specific environmental remediation site are discounted if the aggregate amount of the obligation and the amount and timing of the cash payments for that site are fixed or reliably determinable based upon information derived from the remediation plan for that site. Accrued liabilities for environmental matters recorded at December 31, 2012 and 2011 do not include claims against third parties.

(dollars in thousands, except per share amounts)

# Note 1 - Summary of Significant Accounting Policies (continued)

#### Self-Insurance Programs

The Company uses a combination of insurance and self-insurance mechanisms to provide for the potential liabilities for workers' compensation, general liability, property damage, director and officers' liability, and vehicle liability.

As part of its self-insurance program for certain risks, the Company created a wholly-owned captive insurance entity in 2007. At December 31, 2012, the captive insurance entity provides only property and general liability insurance, although it is licensed to also provide casualty and directors' and officers' insurance. The captive insurance entity had no amounts accrued for outstanding claims at December 31, 2012 and 2011.

Certain cash and investments held by the captive insurance entity are restricted primarily for the purpose of potential insurance claims. Restricted cash of \$7,752 and \$7,637 is included in other noncurrent assets at December 31, 2012 and 2011, respectively, representing required statutory reserves of the captive insurance entity.

# **Convertible Debentures**

The Company separately accounts for the liability and equity components of convertible debt instruments that may be settled in cash in a manner that reflects the Company's nonconvertible debt borrowing rate. The liability component at issuance is recognized at fair value, based on the fair value of a similar instrument that does not have a conversion feature. A discount is recorded if debentures are issued at a coupon rate which is below the rate of a similar instrument that did not have a conversion feature at issuance. The equity component is based on the excess of the principal amount of the debentures over the fair value of the liability component, after adjusting for an allocation of debt issuance costs and the deferred tax impact, and is recorded as capital in excess of par. Debt discounts are amortized as additional non-cash interest expense over the expected life of the debt.

# Recently Adopted Accounting Guidance

In May 2011, the FASB issued Accounting Standards Update ("ASU") No. 2011-4, *Fair Value Measurement (Topic 820)*, *Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRS*. The ASU generally aligns the principles for fair value measurements and the related disclosure requirements under GAAP and International Financial Reporting Standards. The updated guidance clarifies existing fair value measurement and disclosure requirements and requires additional disclosure requirements. The ASU is effective for the Company for interim and annual periods beginning after January 1, 2012. Vishay adopted the ASU on January 1, 2012. The adoption of the ASU had no effect on the Company's financial position, results of operations, or liquidity.

In September 2011, the FASB issued ASU No. 2011-8, *Testing Goodwill for Impairment*. Under the revised guidance, the Company has the option of performing a qualitative assessment before calculating the fair value of the reporting unit when testing goodwill for impairment. If the Company determines, on the basis of qualitative factors, that the fair value of the reporting unit is more likely than not less than the carrying amount, the two-step impairment test would be required. The ASU does not change how goodwill is calculated or assigned to reporting units, nor does it revise the requirement to test goodwill annually for impairment. In addition, the ASU does not amend the requirement to test goodwill for impairment between annual tests if events or circumstances warrant; however, it does revise the examples of events and circumstances that an entity should consider. The ASU is effective for annual and interim goodwill impairment tests beginning after January 1, 2012. Vishay adopted the ASU on January 1, 2012. The adoption of the ASU had no effect on the Company's financial position, results of operations, or liquidity.

(dollars in thousands, except per share amounts)

# Note 1 - Summary of Significant Accounting Policies (continued)

In July 2012, the FASB issued ASU No. 2012-02, *Intangibles—Goodwill and Other (Topic 350): Testing Indefinite-Lived Intangible Assets for Impairment.* Under the revised guidance, when testing an indefinite-lived intangible asset for impairment the Company has the option of performing a qualitative assessment before calculating the fair value of the asset. If the Company determines, on the basis of qualitative factors, that the fair value of the indefinite-lived intangible asset is not more likely than not impaired, the Company would not need to calculate the fair value of the asset. The ASU does not revise the requirement to test indefinite-lived intangible assets annually for impairment. In addition, the ASU does not amend the requirement to test these assets for impairment between annual tests if there is a change in events or circumstances; however, it does revise the examples of events and circumstances that an entity should consider in interim periods. Vishay early adopted the ASU for its annual period ending December 31, 2012. The adoption of the ASU had no effect on the Company's financial position, results of operations, or liquidity.

# Reclassifications

Certain prior year amounts have been reclassified to conform to the current financial statement presentation.

(dollars in thousands, except per share amounts)

# Note 2 - Acquisition and Divestiture Activities

As part of its growth strategy, the Company seeks to expand through targeted acquisitions of other manufacturers of electronic components that have established positions in major markets, reputations for product quality and reliability, and product lines with which the Company has substantial marketing and technical expertise.

# Year ended December 31, 2012

#### HiRel Systems LLC

On January 13, 2012, Vishay acquired HiRel Systems LLC, a leading supplier of high reliability transformers, inductors, coils, and power conversion products, for \$85,493, net of cash acquired. The products and technology portfolio acquired further enhanced the Company's inductors portfolio, particularly in the field of custom magnetics for medical, military, aerospace and aviation, and applications in the industrial and commercial field such as renewable energy and test and measurement equipment. For financial reporting purposes, the results of operations for this business have been included in the Resistors & Inductors segment from January 13, 2012. Based on an estimate of their fair values, the Company allocated \$43,950 of the purchase price to definite-lived intangible assets. After allocating the purchase price to the assets acquired and liabilities assumed based on an estimation of their fair values at the date of acquisition, the Company recorded goodwill of \$25,815 related to this acquisition. The goodwill associated with this transaction is deductible for income tax purposes. The Company tests the goodwill for impairment at least annually in accordance with GAAP.

Had this acquisition occurred as of the beginning of the periods presented in these consolidated financial statements, the pro forma statements of operations would not be materially different than the consolidated statements of operations presented.

# Year ended December 31, 2011

# Huntington Electric, Inc.

On September 28, 2011, Vishay acquired the resistor businesses of Huntington Electric, Inc., for approximately \$19,335, net of cash acquired. For financial reporting purposes, the results of operations for these businesses have been included in the Resistors & Inductors segment from September 28, 2011. After allocating the purchase price to the assets acquired and liabilities assumed based on their fair values at the date of acquisition, the Company recorded goodwill of \$9,051 related to this acquisition. The goodwill associated with this transaction is deductible for income tax purposes. The Company tests the goodwill for impairment at least annually in accordance with GAAP.

Had this acquisition occurred as of the beginning of the periods presented in these consolidated financial statements, the pro forma statements of operations would not be materially different than the consolidated statements of operations presented.

# Year ended December 31, 2010

# Spin-off of Vishay Precision Group, Inc.

On July 6, 2010, Vishay completed the spin-off of its measurements and foil resistors businesses into an independent, publicly-traded company to be named Vishay Precision Group, Inc. ("VPG") through a tax-free stock dividend to Vishay's stockholders. Vishay's common stockholders received 1 share of VPG common stock for every 14 shares of Vishay common stock they held on the record date, June 25, 2010, and Vishay's Class B common stockholders received 1 share of VPG Class B common stock for every 14 shares of Vishay Class B common stock they held on the record date. Upon completion of the spin-off certain executive officers received bonuses aggregating approximately \$2,100, which are reflected in the results of the year ended December 31, 2010.

(dollars in thousands, except per share amounts)

# Note 2 - Acquisition and Divestiture Activities (continued)

Until July 6, 2010, VPG was part of Vishay and its results of operations and cash flows are included in the amounts reported in these consolidated financial statements for periods prior to the completion of the spin-off. The product lines that comprise VPG are included in the VPG reporting segment. See Note 15 for further information on the effect that VPG had on Vishay's consolidated results.

Relationship with VPG after Spin-off

Following the spin-off, VPG is an independent company and Vishay retains no ownership interest. However, two members of the VPG board of directors also serve on Vishay's board of directors.

In connection with the completion of the spin-off, on July 6, 2010, Vishay and its subsidiaries entered into several agreements with VPG and its subsidiaries that govern the relationship of the parties following the spin-off. Among the agreements entered into with VPG and its subsidiaries were a transition services agreement, several lease agreements, and supply agreements. None of the agreements are expected to have a material impact on Vishay's financial position, results of operations, or liquidity.

Vishay also entered into a trademark license agreement with VPG pursuant to which Vishay granted VPG the license to use certain trademarks, service marks, logos, trade names, entity names, and domain names which include the term "Vishay." The license granted VPG the limited, exclusive, royalty-free right and license to use certain marks and names incorporating the term "Vishay" in connection with the design, development, manufacture, marketing, provision and performance of certain VPG products that do not compete with any products within Vishay's product range as constituted immediately following the separation and certain services provided in connection with the products. The license cannot be terminated except as a result of willful misconduct or liquidation bankruptcy of VPG.

Due to the common board members, transition services agreement, lease and supply agreements, and trademark license agreements with VPG, which, in the aggregate, represent significant continuing involvement, Vishay did not restate prior periods to present VPG as a discontinued operation.

# Prepayment of KEMET Loan Receivable

In conjunction with the acquisition of the wet tantalum capacitor business of KEMET Corporation ("KEMET") on September 15, 2008, Vishay issued a three-year term loan of \$15,000 to KEMET. On May 5, 2010, KEMET prepaid the entire principal amount of the term loan plus interest, which is reflected on the accompanying consolidated statement of cash flows as a cash inflow from investing activities.

(dollars in thousands, except per share amounts)

# Note 3 - Goodwill and Other Intangible Assets

Goodwill represents the excess of the cost of a business acquired over the fair value of the related net assets at the date of acquisition. Goodwill is not amortized but rather tested for impairment at least annually. The required annual impairment test of goodwill is completed as of the first day of the fourth fiscal quarter of each year. These impairment tests must be performed more frequently whenever events or changes in circumstances indicate that the asset might be impaired. The Company's business segments (see Note 15) represent its reporting units for goodwill impairment testing purposes.

Vishay recorded goodwill impairment charges in the year ended December 31, 2008. Subsequent to the goodwill impairment charges recorded in 2008, there was no remaining goodwill recorded on the consolidated balance sheet until the acquisition of the resistor businesses of Huntington Electric on September 28, 2011.

The changes in the carrying amount of goodwill by segment for the years ended December 31, 2012 and 2011 were as follows:

	Resistors & Inductors	Total
Balance at January 1, 2011	\$ -	\$ -
Huntington Electric acquisition	9,051	9,051
Balance at December 31, 2011	\$ 9,051	\$ 9,051
HiRel Systems acquisition	25,815	25,815
Balance at December 31, 2012	\$ 34,866	\$ 34,866
Other intangible assets are as follows:		
	Decem	iber 31,
	2012	2011
Intangible Assets Subject to Amortization (Definite-lived):		
Patents and acquired technology	\$ 83,383	\$ 111,428
Capitalized software	56,162	53,721
Customer relationships	97,451	57,723
Tradenames	34,534	36,762
Non-competition agreements	1,700	1,000
	273,230	260,634
Accumulated amortization:		
Patents and acquired technology	(61,269)	(89,379)
Capitalized software	(50,161)	(47,836)
Customer relationships	(33,416)	(26,174)
Tradenames	(14,579)	(13,615)
Non-competition agreements	(447)	(62)
	(159,872)	(177,066)
Net Intangible Assets Subject to Amortization	113,358	83,568
Intangible Assets Not Subject to Amortization		
(Indefinite-lived):	00.050	20.250
Tradenames	20,359	20,359
	<u>\$ 133,717</u>	\$ 103,927

(dollars in thousands, except per share amounts)

# Note 3 - Goodwill and Other Intangible Assets (continued)

The increase in net intangible assets from December 31, 2011 is mainly attributable to the acquisition of HiRel Systems LLC on January 13, 2012. The Company allocated \$43,950 of the purchase price to definite-lived intangible assets. Net intangible assets of \$15,371 were transferred to VPG on July 6, 2010. Amortization expense (excluding capitalized software) was \$14,754, \$14,684, and \$19,817, for the years ended December 31, 2012, 2011, and 2010, respectively. HiRel Systems LLC intangible assets accounted for \$2,670 of amortization expense for the year ended December 31, 2012. VPG intangible assets accounted for \$1,466 of amortization expense for the year ended December 31, 2010.

Estimated annual amortization expense of intangible assets on the balance sheet at December 31, 2012 for each of the next five years is as follows:

2013 \$ 15,331
2014 15,263
2015 15,196
2016 13,522
2017 9,654
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(dollars in thousands, except per share amounts)

# Note 4 - Restructuring and Related Activities

The Company places a strong emphasis on controlling its costs.

Historically, the Company's primary cost reduction technique was through the transfer of production to the extent possible from high-labor-cost countries, such as the United States and Western Europe, to lower-labor-cost countries, such as the Czech Republic, Israel, India, Malaysia, Mexico, the People's Republic of China, and the Philippines. Between 2001 and 2009, the Company recorded, in the consolidated statements of operations, restructuring and severance costs and related asset write-downs in order to reduce its cost structure going forward. The Company also incurred significant costs to restructure and integrate acquired businesses, which was included in the cost of the acquisitions under then-applicable GAAP.

The Company believes that its workforce is now appropriately located to serve its customers and end markets, while maintaining lower manufacturing costs. Accordingly, the Company did not initiate any new restructuring projects in the years ended December 31, 2012, 2011, and 2010 and thus did not record any restructuring and severance costs expenses in the years.

# Gain on Sale of Vacated Property

On April 3, 2012, Vishay sold a property in Belgium vacated as a result of its restructuring activities in prior years for approximately \$14,200. At closing, Vishay recognized a gain on the sale of the property of \$12,153 within its statements of operations and proceeds from the sale of property and equipment of \$3,406 within its statement of cash flows. The remaining proceeds will be reported as proceeds from the sale of property and equipment within the statements of cash flows as the cash is received over the next three years.

(dollars in thousands, except per share amounts)

# Note 5 – Income Taxes

Income (loss) from continuing operations before taxes and noncontrolling interests consists of the following components:

		Years ended December 31,							
	_	2012		2011		2010			
Domestic	\$	(15,995)	\$	2,143	\$	32,493			
Foreign		186,032		328,973		373,040			
	\$	170,037	\$	331,116	\$	405,533			

Significant components of income taxes are as follows:

	Years ended December 31,					
	2012		2011		2010	
Current:						
Federal	\$ 8,409	\$	10,968	\$	9,823	
State and local	574		(801)		2,434	
Foreign	44,351		66,844		59,459	
	 53,334		77,011		71,716	
Deferred:						
Federal	(8,557)		6,188		(949)	
State and local	(240)		(2,286)		2,108	
Foreign	1,969		10,206		(27,635)	
	(6,828)		14,108		(26,476)	
Total income tax expense	\$ 46,506	\$	91,119	\$	45,240	

(dollars in thousands, except per share amounts)

# Note 5 - Income Taxes (continued)

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 assets and liabilities are as follows:

	Decem	ber 3	1,
	2012		2011
Deferred tax assets:			
Pension and other retiree obligations	\$ 58,577	\$	48,810
Inventories	13,881		10,711
Net operating loss carryforwards	158,638		159,831
Tax credit carryforwards	16,180		11,225
Other accruals and reserves	34,194		40,494
Total gross deferred tax assets	281,470		271,071
Less valuation allowance	(166,266)		(156,073)
	115,204		114,998
Deferred tax liabilities:			
Tax over book depreciation	(13,975)		(16,208)
Earnings not permanently reinvested	(1,652)		(25,960)
Convertible debentures	(149,113)		(105,830)
Other - net	(2,711)		(2,515)
Total gross deferred tax liabilities	(167,451)		(150,513)
Net deferred tax assets (liabilities)	\$ (52,247)	\$	(35,515)

The Company makes significant judgments regarding the realizability of its deferred tax assets (principally net operating losses). The carrying value of deferred tax assets is based on the Company's assessment that it is more likely than not that the Company will realize these assets after consideration of all available positive and negative evidence.

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

	Years ended December 31,						
	2	2012		2011		2010	
Tax at statutory rate	\$	59,513	\$	115,891	\$	141,937	
State income taxes, net of U.S. federal tax benefit		217		(2,005)		2,952	
Effect of foreign operations		(19,083)		(52,609)		(69,034)	
Unrecognized tax benefits		6,626		4,869		(1,823)	
Change in valuation allowance on U.S. deferred tax asset		-		-		(36,229)	
Change in valuation allowance on non-U.S. deferred tax assets		(4,036)		(5,554)		(21,671)	
Tax benefit of operating loss carryforwards		(671)		(1,588)		(8,799)	
Foreign income taxable in the U.S.		7,476		22,822		31,294	
Tax on foreign dividends paid to the U.S.		-		15,453		1,417	
U.S. foreign tax credits		(4,257)		(12,322)		-	
Effect of statutory rate changes on deferred tax assets		-		9,040		1,128	
Other		721		(2,878)		4,068	
Total income tax expense	\$	46,506	\$	91,119	\$	45,240	

(dollars in thousands, except per share amounts)

# Note 5 – Income Taxes (continued)

Income tax expense for the years ended December 31, 2012, 2011, and 2010 include certain discrete tax items for changes in uncertain tax positions, valuation allowances, tax rates, and other related items. These items total \$(4,036) (tax benefit), \$3,486, and \$(59,484) (tax benefit) in 2012, 2011, and 2010, respectively. For the year ended December 31, 2012, the discrete item is the reduction of a valuation allowance on a deferred tax asset in Israel due to a merger of several of the Company's wholly-owned subsidiaries in Israel in the fourth fiscal quarter which will allow for the realization of these tax benefits that likely otherwise would have been forgone. For the year ended December 31, 2011, the discrete items included a \$10,024 expense for the effect of a tax rate change on deferred taxes in Israel recorded in the first fiscal quarter, reduced by \$984 for a 2010 tax return filing in the fourth fiscal quarter, and partially offset by benefits related to reductions of valuation allowances in various jurisdictions of \$5,554 recorded in the fourth fiscal quarter. The reductions of valuation allowances were principally in Belgium due to expected future income from a pending real estate sale. The discrete items for the year ended December 31, 2010 were recorded in the fourth fiscal quarter and related primarily to the release of valuation allowances in the U.S. and Israel.

At December 31, 2012, the Company had the following significant net operating loss carryforwards for tax purposes:

		Expires
Austria	\$ 9,696	No expiration
Belgium	188,658	No expiration
Brazil	18,833	No expiration
Germany	47,180	No expiration
Israel	95,733	No expiration
Netherlands	23,519	2013 - 2021
California	53,909	2016 - 2032
Pennsylvania	548,532	2018 - 2032

Approximately \$70,449 of the carryforwards in Belgium resulted from the Company's acquisition of BCcomponents in 2002. Valuation allowances of \$23,946 and \$23,502, as of December 31, 2012 and 2011, respectively, have been recorded through goodwill for these acquired net operating losses. Prior to the adoption of updated guidance in ASC Topic 805 on January 1, 2009, if tax benefits were recognized through the utilization of these acquired net operating losses, the benefits of such loss utilization were recorded as a reduction to goodwill. After the adoption of the updated guidance on January 1, 2009, the benefits of such losses are recorded as a reduction of tax expense. In 2012, 2011, and 2010, the tax benefit recognized through a reduction of acquisition-date valuation allowances recorded as a reduction of tax expense was \$0, \$4,299, and \$567, respectively. The reduction in valuation allowances included preacquisition allowances for losses in Austria and Netherlands. As of December 31, 2011, pre-acquisition net operating losses in Netherlands expired, reducing the valuation allowances by \$16,495.

At December 31, 2012, the Company had the following significant tax credit carryforwards available:

		Expires
U.S. Foreign Tax Credit	\$ 10,482	2020 - 2022
California Research Credit	7,937	No expiration

(dollars in thousands, except per share amounts)

# Note 5 - Income Taxes (continued)

At December 31, 2012, no provision has been made for U.S. federal and state income taxes on approximately \$2,607,402 of foreign earnings, which the Company continues to expect to be reinvested outside of the United States 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), state income taxes, incremental foreign income taxes, 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.

As of December 31, 2008, the Company recorded additional tax expense for an expected repatriation of \$112,500 because such earnings were not deemed to be indefinitely reinvested outside of the United States. During the third fiscal quarter of 2012, the Company repatriated \$72,100 of cash to the U.S., which substantially completed the \$112,500 cash repatriation program the Company initiated in 2008. This repatriated cash was used to reduce the amount outstanding under the Company's revolving credit facility. At the present time, the Company expects that the remaining cash and profits generated by foreign subsidiaries will continue to be reinvested indefinitely.

Net income taxes paid (refunded) were \$46,611, \$126,918, and \$23,322 for the years ended December 31, 2012, 2011, and 2010, respectively.

The Company and its subsidiaries are subject to income taxes in the U.S. and numerous foreign jurisdictions. Significant judgment is required in evaluating the Company's tax positions and determining its provision for income taxes. During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. The Company establishes reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due. These reserves are established when the Company believes that certain positions might be challenged despite the Company's belief that its tax return positions are fully supportable. The Company adjusts these reserves in light of changing facts and circumstances and the provision for income taxes includes the impact of reserve provisions and changes to reserves that are considered appropriate.

These accruals for tax-related uncertainties are based on management's best estimate of potential tax exposures. When particular matters arise, a number of years may elapse before such matters are audited by tax authorities and finally resolved. Favorable resolution of such matters could be recognized as a reduction to the Company's effective tax rate in the year of resolution. Unfavorable resolution of any particular issue could increase the effective tax rate and may require the use of cash in the year of resolution.

Until the spin-off of VPG on July 6, 2010, VPG was included in the Company's consolidated federal income tax returns and with the Company and/or certain of the Company's subsidiaries in applicable combined or unitary state and local income tax returns. In conjunction with the spin-off, the Company and VPG entered a tax matters agreement under which the Company generally will be liable for all U.S. federal, state, local, and foreign income taxes attributable to VPG with respect to taxable periods ending on or before the distribution date except to the extent that VPG has a liability for such taxes on its books at the time of the spin-off. The Company is also principally responsible for managing any income tax audits by the various tax jurisdictions for pre-spin-off periods. The Company has fully indemnified VPG of tax exposures arising prior to the spin-off.

(dollars in thousands, except per share amounts)

# Note 5 - Income Taxes (continued)

The Company recognizes interest and penalties related to unrecognized tax benefits in income tax expense. At December 31, 2012 and 2011, the Company had accrued interest and penalties related to the unrecognized tax benefits of \$8,671 and \$5,764, respectively. During the years ended December 31, 2012, 2011, and 2010, the Company recognized \$2,833, \$3,795, and \$1,081, respectively, in interest and penalties.

The following table summarizes changes in the liabilities associated with unrecognized tax benefits:

	Years ended December 31,							
	2012		2011			2010		
Balance at beginning of year	\$	53,808	\$	54,285	\$	54,463		
Addition based on tax positions related to the current year		665		2,459		1,916		
Addition based on tax positions related to prior years		6,332		10,918		3,090		
Currency translation adjustments		(162)		(922)		451		
Reduction based on tax positions related to prior years		-		(3,293)		(670)		
Reduction for settlements		(359)		(9,604)		(3,289)		
Reduction for lapses of statute of limitation		-		(35)		(1,676)		
Balance at end of year	\$	60,284	\$	53,808	\$	54,285		

The amount of unrecognized tax benefits as of December 31, 2012 that if recognized would affect the effective tax rate is \$60,284. The current portion of unrecognized tax benefits, representing the amount the Company expects that the unrecognized tax benefits will decrease in the next year, principally due to settlements of tax audits in Germany, is \$9,147.

The Company and its subsidiaries file U.S. federal income tax returns, as well as income tax returns in multiple U.S. state and foreign jurisdictions. The U.S. Internal Revenue Service concluded its examinations of Vishay's U.S. federal tax returns for all tax years through 2002. Because of net operating losses, which were fully utilized on the 2010 tax return, the Company's U.S. federal tax return for 2003 and subsequent years remain subject to examination. Examinations of most principal subsidiaries in Israel through the 2007 tax year were concluded in 2010, and these principal subsidiaries are currently under audit for tax years 2008 through 2010. The tax returns of other significant non-U.S. subsidiaries are currently under examination in Germany (2005 through 2008), India (2004 through 2009), China (2007 through 2011), and the Republic of China (Taiwan) (2006 through 2011). The Company and its subsidiaries are also subject to income taxes in other taxing jurisdictions in the U.S. and around the world, many of which are still open to examinations.

(dollars in thousands, except per share amounts)

# Note 6 - Long-Term Debt

Long-term debt consists of the following:

	December 31, 2012		Dec	ember 31, 2011
Credit facility	\$	89,000	\$	155,000
Exchangeable unsecured notes, due 2102		95,042		95,042
Convertible senior debentures, due 2040		100,166		98,463
Convertible senior debentures, due 2041		51,399		50,549
Convertible senior debentures, due 2042		57,324		-
		392,931		399,054
Less current portion		-		-
	\$	392,931	\$	399,054

# **Credit Facility**

The Company maintains a credit facility with a consortium of banks led by JPMorgan as administrative agent (the "Credit Facility"). The Credit Facility became effective on December 1, 2010 and provides a revolving commitment through December 1, 2015. On April 3, 2012, the Company amended the Credit Facility and entered into an incremental facility agreement that increases the total revolving commitment from \$450,000 to \$528,000. Following the expansion, Vishay has the ability to request up to an additional \$22,000 of incremental commitments, subject to the satisfaction of certain conditions.

Borrowings under the Credit Facility bear interest at LIBOR plus an interest margin. The applicable interest margin is based on the Company's leverage ratio. For the year ended December 31, 2011 and through the second fiscal quarter of 2012, borrowings bore interest at LIBOR plus 1.65%. Since the beginning of the third fiscal quarter of 2012 and based on the Company's current leverage ratio, borrowings bear interest at LIBOR plus 1.95%. The interest rate on the Company's borrowings will increase if the Company's leverage ratio equals or exceeds 2.00 to 1 and will decrease if the Company's leverage ratio decreases below 1.50 to 1. Vishay is also required to pay facility commitment fees of 0.35% per annum on the entire commitment amount. Such facility commitment fees will increase if the Company's leverage ratio equals or exceeds 2.50 to 1.

The borrowings under the Credit Facility are secured by a lien on substantially all assets located in the United States, including accounts receivable, inventory, machinery and equipment, and general intangibles (but excluding real estate, intellectual property registered or licensed for use in, or arising under the laws of, any country other than the United States, and bank and securities accounts) of Vishay and certain significant domestic subsidiaries, and pledges of stock in certain significant domestic and foreign subsidiaries and are guaranteed by certain significant subsidiaries. Certain of the Company's subsidiaries are permitted to borrow under the Credit Facility, subject to the satisfaction of specified conditions. Any borrowings by these subsidiaries under the credit facility will be guaranteed by Vishay.

The Credit Facility includes limits or restrictions on, among other things, incurring indebtedness, incurring liens on its assets, making investments and acquisitions, making asset sales, repurchasing common stock, and paying cash dividends and making other restricted payments. The credit facility also requires the Company to comply with other covenants, including the maintenance of specific financial ratios.

On September 8, 2011, Vishay entered into an amendment to the Credit Facility that permits the Company to repurchase shares of its common stock up to a permitted capacity, conditioned upon Vishay maintaining (i) a pro forma leverage ratio of 2.75 to 1.00, (ii) a pro forma interest expense coverage ratio of 2.00 to 1.00, and (iii) \$400,000 of available liquidity, as defined in the amendment. Beginning in 2012, the permitted capacity to repurchase shares of the Company's outstanding common stock under the Credit Facility began to increase each quarter by an amount equal to 20% of net income. At December 31, 2012, the Credit Facility allows the Company to repurchase up to \$174,548 of its common stock. The amount and timing of any future stock repurchases remains subject to authorization of the Company's Board of Directors.

(dollars in thousands, except per share amounts)

# Note 6 - Long-Term Debt (continued)

The Credit Facility also contains customary events of default, including, but not limited to, failure to pay principal or interest, failure to pay or default under other material debt, misrepresentation or breach of warranty, violation of certain covenants, a change of control, the commencement of bankruptcy proceedings, the insolvency of Vishay or certain of its significant subsidiaries, and the rendering of a judgment in excess of \$25,000 against Vishay or certain of its significant subsidiaries. Upon the occurrence of an event of default under the Credit Facility, Vishay's obligations under the credit facility may be accelerated and the lending commitments under the credit facility terminated.

At December 31, 2012 and 2011, there was \$431,295 and \$286,995, respectively, available under the Credit Facility. Letters of credit totaling \$7,705 and \$8,005 were outstanding at December 31, 2012 and 2011, respectively.

# Convertible Senior Debentures

Vishay currently has three issuances of convertible senior debentures outstanding with generally congruent terms. The following table summarizes some key facts and terms regarding the three series of outstanding convertible senior debentures:

	Du	Due 2040 I		Due 2041	 Due 2042
	No	vember 9,			
Issuance date		2010	N	May 13, 2011	May 31, 2012
	Nov	ember 15,			
Maturity date		2040	N	May 15, 2041	June 1, 2042
Principal amount	\$	275,000	\$	150,000	\$ 150,000
Cash coupon rate (per annum)		2.25%		2.25%	2.25%
Nonconvertible debt borrowing rate at issuance (per annum)		8.00%		8.375%	7.50%
Initial conversion rate (per \$1 principal amount)		72.0331		52.5659	84.6937
Effective conversion price (per share)	\$	13.88	\$	19.02	\$ 11.81
130% of the conversion price (per share)	\$	18.04	\$	24.73	\$ 15.35
	Nov	ember 20,			
Call date		2020	N	May 20, 2021	June 7, 2022

GAAP requires an issuer to separately account for the liability and equity components of the instrument in a manner that reflects the issuer's nonconvertible debt borrowing rate when interest costs are recognized in subsequent periods. The resulting discount on the debt is amortized as non-cash interest expense in future periods.

The carrying values of the liability and equity components of the convertible debentures are reflected in the Company's consolidated balance sheets as follows:

December 31, 2012			-	Unamortized discount		Embedded derivative		Carrying value of liability component		Equity ponent - net rying value
Due 2040	\$	275,000		(175,456)		622	\$	100,166	\$	110,094
Due 2041	\$	150,000		(99,000)		399	\$	51,399	\$	62,246
Due 2042	\$	150,000		(92,958)		282	\$	57,324	\$	57,874
Total	\$	575,000	\$	(367,414)	\$	1,303	\$	208,889	\$	230,214
<u>December 31, 2011</u>										
Due 2040	\$	275,000		(177,131)		594	\$	98,463	\$	110,094
Due 2041	\$	150,000		(99,843)		392	\$	50,549	\$	62,246
Total	\$	425,000	\$	(276,974)	\$	986	\$	149,012	\$	172,340

(dollars in thousands, except per share amounts)

# Note 6 - Long-Term Debt (continued)

Interest is payable on the debentures semi-annually at the cash coupon rate; however, the remaining debt discount is being amortized as additional non-cash interest expense using an effective annual interest rate equal to the Company's estimated nonconvertible debt borrowing rate at the time of issuance. In addition to ordinary interest, contingent interest will accrue in certain circumstances relating to the trading price of the debentures and under certain other circumstances beginning ten years subsequent to issuance.

Interest expense related to the debentures is reflected on the consolidated statements of operations for the years ended December 31:

<u>2012</u>	Contractual coupon interes	Non-cash amortization of debt discount	Non-cash amortization of deferred financing costs	Non-cash change in value of derivative liability	Total interest expense related to the debentures
Due 2040		1,675	88	28	\$ 7,979
Due 2041	\$ 3,37	<b>75 84</b> 3	45	7	\$ 4,270
Due 2042	\$ 1,97	78 510	32	46	\$ 2,566
Total	\$ 11,54	\$ 3,028	\$ 165	\$ 81	\$ 14,815
<u>2011</u>					
Due 2040	\$ 6,18	1,548	88	275	\$ 8,099
Due 2041	\$ 2,12	28 498	29	181	\$ 2,836
Total	\$ 8,31	.6 \$ 2,046	\$ 117	\$ 456	\$ 10,935
<u>2010</u>					
Due 2040	\$ 73	73 188	11	(55)	\$ 917

Prior to three months before the maturity date, the holders may only convert their debentures under the following circumstances: (1) during any fiscal quarter after the first full quarter subsequent to issuance, if the sale price of Vishay common stock reaches 130% of the conversion price for a specified period; (2) the trading price of the debentures falls below 98% of the product of the sale price of Vishay's common stock and the conversion rate for a specified period; (3) Vishay calls any or all of the debentures for redemption, at any time prior to the close of business on the third scheduled trading day immediately preceding the redemption date; or (4) upon the occurrence of specified corporate events. None of these conditions had occurred as of December 31, 2012.

The debentures are convertible, subject to certain conditions, into cash, shares of Vishay's common stock or a combination thereof, at Vishay's option, at the conversion rate. At the direction of its Board of Directors, Vishay intends, upon conversion, to repay the principal amount of the debentures in cash and settle any additional amounts in shares. Vishay must provide additional shares upon conversion if there is a "fundamental change" in the business as defined in the indenture governing the debentures.

Vishay may not redeem the debentures prior to the respective call dates, except in connection with certain tax-related events. On or after the call date and prior to the maturity date, Vishay may redeem for cash all or part of the debentures at a redemption price equal to 100% of the principal amount of the debentures to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date, if the last reported sale price of Vishay's common stock has been at least 150% of the conversion price then in effect for at least 20 trading days during any 30 consecutive trading day period prior to the date on which Vishay provides notice of redemption.

(dollars in thousands, except per share amounts)

# Note 6 - Long-Term Debt (continued)

# Exchangeable Unsecured Notes, due 2102

On December 13, 2002, Vishay issued \$105,000 in nominal (or principal) amount of its floating rate unsecured exchangeable notes due 2102 in connection with an acquisition. The notes are governed by a note instrument and a put and call agreement dated December 13, 2002. The notes may be put to Vishay in exchange for shares of its common stock and, under certain circumstances, may be called by Vishay for similar consideration.

Under the terms of the put and call agreement, by reason of the spin-off, Vishay was required to take action so that the existing notes are deemed exchanged as of the date of the spin-off, for a combination of new notes of Vishay reflecting a lower principal amount of the notes and new notes issued by VPG.

Based on the relative trading prices of Vishay and VPG common stock on the ten trading days following the spin-off, Vishay retained the liability for an aggregate \$95,042 principal amount of exchangeable notes effective July 6, 2010. The assumption of a portion of the liability by VPG was recorded as a reduction in parent net investment just prior to the completion of the spin-off.

The notes are subject to a put and call agreement under which the holders may at any time put the notes to Vishay in exchange for 6,176,471 shares of Vishay's common stock in the aggregate, and Vishay may call the notes in exchange for cash or for shares of its common stock at any time after January 2, 2018. The put/call rate of the Vishay notes is \$15.39 per share of common stock.

The notes bear interest at LIBOR. Interest continues to be payable quarterly on March 31, June 30, September 30, and December 31 of each calendar year. The interest rate could be further reduced to 50% of LIBOR if the price of Vishay's common stock is above \$40.73 per share for thirty or more consecutive trading days.

# Convertible Subordinated Notes, due 2023

In 2003, Vishay sold \$500,000 aggregate principal amount of 3-5/8% convertible subordinated notes due 2023. Holders of substantially all (99.6%) of the 3-5/8% notes exercised their option to require Vishay to repurchase their notes on August 1, 2008. The remaining notes, with an aggregate principal amount of \$1,870, were redeemed at Vishay's option on August 1, 2010.

(dollars in thousands, except per share amounts)

## Note 6 - Long-Term Debt (continued)

## **Other Borrowings Information**

Aggregate annual maturities of long-term debt, based on the terms stated in the respective agreements, are as follows:

2013 \$	-
2014	-
2015	89,000
2016	-
2017	-
Thereafter	670,042

The annual maturities of long-term debt are based on the amount required to settle the obligation. Accordingly, the discounts associated with the convertible debentures due 2040, due 2041, and due 2042 are excluded from the calculation of the annual maturities of long-term debt in the table above.

In 2010, the Company repaid a \$13,500 Israeli bank loan and the balance of a \$90,000 term loan under a previous credit facility.

At December 31, 2012, the Company had committed and uncommitted short-term credit lines with various U.S. and foreign banks aggregating approximately \$18,200, which was substantially unused. At December 31, 2011, the Company had committed and uncommitted short-term credit lines with various U.S. and foreign banks aggregating approximately \$15,500, which was substantially unused.

Interest paid was \$16,578, \$14,084, and \$9,120 for the years ended December 31, 2012, 2011, and 2010, respectively.

See Note 18 for further discussion on the fair value of the Company's long-term debt.

(dollars in thousands, except per share amounts)

#### Note 7 - Stockholders' Equity

The Company's Class B common 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 into shares of common stock. Transfers of Class B shares other than to permitted transferees result in the automatic conversion of the Class B shares into common stock.

The Board of Directors may only declare dividends or other distributions with respect to the common stock or the Class B common stock if it grants such dividends or distributions in the same amount per share with respect to the other class of stock. The Company's revolving credit facility currently prohibits the payment of cash dividends (see Note 6). Stock dividends or distributions on any class of stock are payable only in shares of stock of that class. Shares of either common stock or Class B common stock cannot be split, divided, or combined unless the other is also split, divided, or combined equally.

On May 31, 2012, the Company repurchased 13,948,687 shares of common stock for an aggregate purchase price of \$150,000. The Company repurchased 8,620,689 shares of its common stock on May 13, 2011 for \$150,000 and 21,721,959 shares of its common stock on November 9, 2010 for \$275,000. At December 31, 2012, the Credit Facility allows the Company to repurchase up to \$174,548 of its common stock, conditioned upon the Company maintaining specific pro forma financial ratios and a required minimum amount of available liquidity, as defined in the amendment. The amount and timing of any future stock repurchases remains subject to authorization of the Company's Board of Directors.

The Company issued 8,823,529 warrants to acquire shares of Vishay common stock as part of the purchase price for the 2002 acquisition of BCcomponents. These warrants expired in December 2012.

At December 31, 2012, the Company had reserved shares of common stock for future issuance as follows:

Common stock options outstanding	109,000
Restricted stock units outstanding	1,316,000
2007 Stock Incentive Program - available to grant	1,140,000
Phantom stock units outstanding	97,000
Phantom stock units available to grant	85,000
Exchangeable unsecured notes, due 2102	6,176,471
Convertible senior debentures, due 2040*	22,285,258
Convertible senior debentures, due 2041*	8,870,490
Convertible senior debentures, due 2042*	14,450,865
Conversion of Class B common stock	12,129,227
	66,659,311

<sup>\*</sup>The convertible senior debentures due 2040, due 2041, and due 2042 are convertible into 19,809,103, 7,884,885, and 12,704,055 shares, respectively, of Vishay common stock. The Company has reserved the maximum amount of shares to be delivered upon a make-whole fundamental change as defined in the indentures governing the debentures.

(dollars in thousands, except per share amounts)

## Note 8 - Other Income (Expense)

The caption "Other" on the consolidated statements of operations consists of the following:

		Years ended December 31,						
	2012			2011		2010		
	_		_		_			
Foreign exchange gain (loss)	\$	(3,654)	\$	(8,249)	\$	(2,792)		
Interest income		7,626		10,386		2,888		
Loss on early extinguishment of debt		-		-		(1,659)		
Sale of investments		-		1,396		-		
Other		(532)		259		194		
	\$	3,440	\$	3,792	\$	(1,369)		

In the year ended December 31, 2011, the Company sold ancillary investments in the equity of two companies located outside of the U.S. for a total gain of \$1,396. In the year ended December 31, 2010, the Company recorded a \$1,659 loss on the early extinguishment of debt equal to the balance of unamortized deferred financing costs associated with a revolving credit commitment and term loan at the date of termination.

## Note 9 - Other Accrued Expenses

Other accrued expenses consist of the following:

		December 31,		
	2012			2011
Sales returns and allowances	\$	32,703	\$	36,943
Goods received, not yet invoiced		29,690		37,573
Other		86,267		86,603
	\$	148,660	\$	161,119

(dollars in thousands, except per share amounts)

# Note 10 – Accumulated Other Comprehensive Income (Loss)

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

	Beginning Balance		Before-Tax Amount		Tax Effect		Net-of-Tax Amount	VPG Spin-off	Ending Balance
December 31, 2010									
Pension and other post-retirement actuarial items	\$	(105,910)	\$	(30,213)	\$ 4,494	\$	(25,719)	\$ 1,079	\$ (130,550)
Reclassification adjustment for recognition of actuarial items		, , ,		10,498	62		10,560	-	10,560
Currency translation adjustment		208,341		(41,930)	-		(41,930)	12,924	179,335
Unrealized gain (loss) on available-for-sale securities		544		927	(325	)	602	-	1,146
	\$	102,975	\$	(60,718)	\$ 4,231	\$	(56,487)	\$ 14,003	\$ 60,491
December 31, 2011									
Pension and other post-retirement actuarial items	\$	(119,990)	\$	(54,053)	\$ 16,975	\$	(37,078)	\$ -	\$ (157,068)
Reclassification adjustment for recognition of actuarial items				12,192	(4,321	)	7,871	-	7,871
Currency translation adjustment		179,335		(26,441)	-		(26,441)	-	152,894
Unrealized gain (loss) on available-for-sale securities		1,146		(1,639)	574		(1,065)		81
	\$	60,491	\$	(69,941)	\$ 13,228	\$	(56,713)	\$ -	\$ 3,778
December 31, 2012									
Pension and other post-retirement actuarial items	\$	(149,197)	\$	(57,072)	\$ 16,626	\$	(40,446)	\$ -	\$ (189,643)
Reclassification adjustment for recognition of actuarial items		, , ,		16,059	(5,372	)	10,687	-	10,687
Currency translation adjustment		152,894		14,567	-		14,567	-	167,461
Unrealized gain (loss) on available-for-sale securities		81		1,834	(642	)	1,192	-	1,273
	\$	3,778	\$	(24,612)	\$ 10,612	\$	(14,000)	\$ -	\$ (10,222)

Other comprehensive income (loss) includes Vishay's proportionate share of other comprehensive income (loss) of nonconsolidated subsidiaries accounted for under the equity method.

(dollars in thousands, except per share amounts)

# Note 11 - Pensions and Other Postretirement Benefits

The Company maintains various retirement benefit plans. GAAP requires employers to recognize the funded status of a benefit plan, measured as the difference between plan assets at fair value and the benefit obligation, in its balance sheet. The recognition of the funded status on the balance sheet requires employers to recognize actuarial items (such as actuarial gains and losses, prior service costs, and transition obligations) as a component of other comprehensive income, net of tax.

The following table summarizes amounts recorded on the consolidated balance sheets associated with these various retirement benefit plans:

	Decem	31,	
	 2012		2011
Included in "Other Assets":			
Non-U.S. pension plans	\$ 143	\$	802
Total included in other assets	\$ 143	\$	802
Included in "Accrued Payroll":			
U.S. pension plans	\$ (83)	\$	-
Non-U.S. pension plans	(6,997)		-
U.S. other postretirement plans	 (637)		<u>-</u>
Total included in accrued payroll	\$ (7,717)	\$	-
Accrued pension and other postretirement costs:	 		
U.S. pension plans	\$ (89,116)	\$	(83,482)
Non-U.S. pension plans	(229,014)		(209,224)
U.S. other postretirement plans	(7,520)		(10,924)
Non-U.S. other postretirement plans	(6,964)		(5,972)
Other retirement obligations	(12,347)		(9,534)
Total accrued pension and other postretirement costs	\$ (344,961)	\$	(319,136)
Accumulated other comprehensive loss:			
U.S. pension plans	\$ 146,525	\$	135,009
Non-U.S. pension plans	71,459		41,494
U.S. other postretirement plans	(5,937)		(4,142)
Non-U.S. other postretirement plans	805		_
Total accumulated other comprehensive loss*	\$ 212,852	\$	172,361

<sup>\* -</sup> Amounts included in accumulated other comprehensive loss are presented in this table pre-tax.

(dollars in thousands, except per share amounts)

#### Note 11 - Pensions and Other Postretirement Benefits (continued)

#### **Defined Benefit Pension Plans**

#### U.S. Pension Plans

The Company maintains several defined benefit pension plans which covered most full-time U.S. employees. These include pension plans which are "qualified" under Employee Retirement Security Act of 1974 ("ERISA") and the Internal Revenue Code, and "non-qualified" pension plans which provide defined benefits primarily to U.S. employees whose benefits under the qualified pension plan would be limited by ERISA and the Internal Revenue Code. Pension benefits earned are generally based on years of service and compensation during active employment.

#### Qualified U.S. Pension Plans

The qualified U.S. pension plans include both contributory and non-contributory plans. The Company's principal qualified U.S. pension plan (the Vishay Retirement Plan) was funded through Company and participant contributions to an irrevocable trust fund. The Company's other qualified U.S. pension plans, which were assumed as a result of past acquisitions, were funded only through Company contributions.

During the fourth quarter of 2008, the Company adopted amendments to the Vishay Retirement Plan such that effective January 1, 2009, the plan was frozen. Pursuant to these amendments, no new employees may participate in the plan, no further participant contributions were required or permitted, and no further benefits shall accrue after December 31, 2008. Benefits accumulated as of December 31, 2008 will be paid to employees upon retirement, and the Company will likely need to make additional cash contributions to the plan to fund this accumulated benefit obligation. To mitigate the loss in benefits of these employees, effective January 1, 2009, the Company increased the Company-match portion of its 401(k) defined contribution savings plan for employees impacted by the pension freeze.

The Company's other qualified U.S. pension plans had all been effectively frozen in prior years.

## Non-qualified U.S. Pension Plans

The Company's principal non-qualified U.S. pension plan (the Vishay Non-qualified Retirement Plan) was a contributory pension plan designed to provide similar defined benefits to covered U.S. employees whose benefits under the Vishay Retirement Plan would be limited by ERISA and the Internal Revenue Code. The Vishay Non-qualified Retirement Plan is identical in construction to the Vishay Retirement Plan, except that the plan is not qualified under ERISA.

The Vishay Non-qualified Retirement Plan, like all non-qualified plans, is considered to be unfunded. The Company maintains a non-qualified trust, referred to as a "rabbi" trust, to fund benefit payments under this plan. Rabbi trust assets are subject to creditor claims under certain conditions and are not the property of employees. Therefore, they are accounted for as other noncurrent assets. Assets held in trust related to the non-qualified pension plan were \$16,608 and \$14,423 at December 31, 2012 and 2011, respectively.

During the fourth quarter of 2008, the Company adopted amendments to the Vishay Non-Qualified Retirement Plan such that effective January 1, 2009, the plan was frozen. Pursuant to these amendments, no new employees may participate in the plans, no further participant contributions were required or permitted, and no further benefits shall accrue after December 31, 2008. Benefits accumulated as of December 31, 2008 will be paid to employees upon retirement, and the Company will likely need to make additional cash contributions to the rabbi trust to fund this accumulated benefit obligation. To mitigate the loss in benefits of these employees, effective January 1, 2009, the Company increased the Company-match portion of its 401(k) defined contribution savings plan for employees impacted by the pension freeze.

(dollars in thousands, except per share amounts)

#### Note 11 - Pensions and Other Postretirement Benefits (continued)

The Company also maintains other pension plans which provide supplemental defined benefits primarily to former U.S. employees whose benefits under qualified pension plans were limited by ERISA. These non-qualified plans are all non-contributory plans, and are considered to be unfunded.

In 2004, the Company entered into an employment agreement with Dr. Felix Zandman, its Executive Chairman and then-Chief Executive Officer. Pursuant to this agreement, the Company is providing an annual retirement benefit of approximately \$614 to his surviving spouse. The Company maintains a non-qualified trust, referred to as a "rabbi" trust, to fund benefit payments under this plan. Rabbi trust assets are subject to creditor claims under certain conditions and are not the property of employees. Therefore, they are accounted for as other noncurrent assets. Assets held in trust related to this non-qualified pension plan were \$4,833 and \$5,445 at December 31, 2012 and 2011, respectively.

On June 16, 2010, the Compensation Committee determined to modify Dr. Gerald Paul's and the Compensation Committee recommended to the Board of Directors, and the Board of Directors determined to modify Mr. Marc Zandman's employment arrangements such that upon any termination (other than for cause) after attaining age 62, the executive would be entitled to the same payments and benefits he would have received if his respective employment was terminated by Vishay without cause or by the respective executive for good reason. These modifications were included in formal amendments signed on August 8, 2010. The expense associated with the modifications to the employment arrangements of Dr. Gerald Paul and Mr. Marc Zandman effectively represents a defined retirement benefit that will be recognized over the remaining service period of the individuals.

#### Non-U.S. Pension Plans

The Company provides pension and similar benefits to employees of certain non-U.S. subsidiaries consistent with local practices. Pension benefits earned are generally based on years of service and compensation during active employment.

(dollars in thousands, except per share amounts)

# Note 11 – Pensions and Other Postretirement Benefits (continued)

The following table sets forth a reconciliation of the benefit obligation, plan assets, and funded status related to U.S. and non-U.S. pension plans:

		<b>December 31, 2011</b>						
	U.S. Plans		Non-U.S. Plans		U.S. Plans			Non-U.S. Plans
Change in benefit obligation:								
Benefit obligation at beginning of year	\$	322,527	\$	243,966	\$	303,613	\$	231,870
Service cost		-		3,247		-		3,197
Interest cost		15,699		9,374		16,332		10,366
Plan amendments		-		67		-		531
Actuarial (gains) losses		35,467		29,957		20,320		14,986
Benefits paid		(18,628)		(11,456)		(17,738)		(12,764)
Currency translation		-		7,293		-		(4,220)
Benefit obligation at end of year	\$	355,065	\$	282,448	\$	322,527	\$	243,966
							_	
Change in plan assets:								
Fair value of plan assets at beginning								
of year	\$	239,045	\$	35,544	\$	238,523	\$	32,461
Actual return on plan assets		27,763		2,795		1,117		830
Company contributions		17,686		17,905		17,143		15,325
Benefits paid		(18,628)		(11,456)		(17,738)		(12,763)
Currency translation		-		1,792		-		(309)
Fair value of plan assets at end of year	\$	265,866	\$	46,580	\$	239,045	\$	35,544
Funded status at end of year	\$	(89,199)	\$	(235,868)	\$	(83,482)	\$	(208,422)

The plan assets are stated at fair value. See Note 18 for further discussion of the valuation of the plan assets.

Amounts recognized in the consolidated balance sheet consist of the following:

		December 31, 2012			December			r <b>31, 201</b> 1	
	U.S. Non-U.S. Plans Plans		U.S. Plans		Non-U.S. Plans				
Other assets	\$	_	\$	143	\$	_	\$	802	
Accrued benefit liability - currrent		(83)		(6,997)		-		-	
Accrued benefit liability - non-current		(89,116)		(229,014)		(83,482)		(209,224)	
Accumulated other comprehensive loss		146,525		71,459		135,009		41,494	
	\$	57,326	\$	(164,409)	\$	51,527	\$	(166,928)	

(dollars in thousands, except per share amounts)

# Note 11 – Pensions and Other Postretirement Benefits (continued)

Actuarial items consist of the following:

		December	2012	<b>December 31, 2011</b>				
	U.S. Plans				U.S. Plans			Non-U.S. Plans
Unrecognized net actuarial loss	\$	144,324	\$	71,459	\$	130,608	\$	41,494
Unamortized prior service cost		2,201		-		4,401		-
	\$	146,525	\$	71,459	\$	135,009	\$	41,494

The following table sets forth additional information regarding the projected and accumulated benefit obligations:

	 December	2012		2011				
	 U.S. Non-U.S. Plans Plans		U.S. Plans		Non-U.S. Plans			
Accumulated benefit obligation, all plans	\$ \$ 355,065		\$ 261,557		322,527	\$	\$ 225,381	
Plans for which the accumulated benefit								
obligation exceeds plan assets:								
Projected benefit obligation	\$ 355,065	\$	255,772	\$	322,527	\$	236,323	
Accumulated benefit obligation	355,065		240,816		322,527		221,637	
Fair value of plan assets	265,866		20,436		239,045		27,098	

The following table sets forth the components of net periodic pension cost:

					rears chucu L	CCC	moer 51,					
	20	12		2011					2010			
	U.S. Plans		Non-U.S. Plans		U.S. Plans		Non-U.S. Plans		U.S. Plans		Non-U.S. Plans	
Service cost net of employee contributions	\$ -	\$	3,247	\$	-	\$	3,197	\$	-	\$	3,027	
Interest cost	15,699		9,374		16,332		10,366		16,341		10,774	
Expected return on plan assets	(18,972)		(1,667)		(19,082)		(1,651)		(18,098)		(1,629)	
Amortization of actuarial losses	12,960		1,681		9,006		993		9,315		160	
Amortization of prior service cost	2,200		60		2,361		531		1,477		163	
Curtailment and settlement losses (gains)	 <u>-</u>		_		148		<u>-</u>		<u>-</u>		<u>-</u>	
Net periodic benefit cost	\$ 11,887	\$	12,695	\$	8,765	\$	13,436	\$	9,035	\$	12,495	

(dollars in thousands, except per share amounts)

#### Note 11 - Pensions and Other Postretirement Benefits (continued)

See Note 10 for the pretax, tax effect and after tax amounts included in other comprehensive income during the years ended December 31, 2012, 2011, and 2010. The estimated actuarial items for the defined benefit pensions plans that will be amortized from accumulated other comprehensive loss into net periodic pension cost during 2013 is \$20,100.

The following weighted average assumptions were used to determine benefit obligations at December 31 of the respective years:

	20	)12	2011			
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans		
Discount rate	4.00%	3.04%	5.00%	3.96%		
Rate of compensation increase	0.00%	1.48%	0.00%	2.31%		

The following weighted average assumptions were used to determine the net periodic pension costs for the years ended December 31, 2012 and 2011:

		Years ended December 31,								
	2	012	2011							
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans						
Discount rate	5.00%	3.96%	5.50%	4.50%						
Rate of compensation increase	0.00%	2.31%	0.00%	2.19%						
Expected return on plan assets	8.00%	4.47%	8.00%	4.26%						

The plans' expected return on assets is based on management's expectations of long-term average rates of return to be achieved by the underlying investment portfolios. In establishing this assumption, management considers historical and expected returns for the asset classes in which the plans are invested, advice from pension consultants and investment advisors, and current economic and capital market conditions.

The investment mix between equity securities and fixed income securities is based upon achieving a desired return, balancing higher return, more volatile equity securities, and lower return, less volatile fixed income securities. The Company's U.S. defined benefit plans are invested in diversified portfolios of public-market equity and fixed income securities. Investment allocations are made across a range of markets, industry sectors, capitalization sizes, and, in the case of fixed income securities, maturities and credit quality. The target allocation has historically been approximately 60% invested in equity securities and 40% invested in fixed income securities. The Company's non-U.S. defined benefit plan investments are based on local laws and customs. Most plans invest in cash and local government fixed income securities, although plans in certain countries have investments in equity securities. The plans do not invest in securities of Vishay or its subsidiaries. Negative investment returns could ultimately affect the funded status of the plans, requiring additional cash contributions. See Note 18 for further information on the fair value of the plan assets by asset category.

(dollars in thousands, except per share amounts)

# Note 11 – Pensions and Other Postretirement Benefits (continued)

Estimated future benefit payments are as follows:

_	U.S. Plans	Non-U.S. Plans
2013	18,595	12,225
2014	24,960	14,382
2015	20,624	13,580
2016	20,960	14,315
2017	20,229	16,839
2018-2022	107 853	86 879

The Company anticipates making contributions to U.S. defined benefit pension plans of between \$15,000 and \$20,000 in 2013.

The Company's anticipated 2013 contributions for non-U.S. defined benefit pension plans will approximate the expected benefit payments disclosed above.

(dollars in thousands, except per share amounts)

## Note 11 - Pensions and Other Postretirement Benefits (continued)

## Other Postretirement Benefits

In the U.S., the Company maintains two unfunded non-pension postretirement plans which are funded as costs are incurred. One of these plans was amended effective January 1, 2012, which reduced the benefit obligations of the Company. The Company also maintains two unfunded non-pension postretirement plans at two European subsidiaries.

In 2004, the Company entered into formal employment agreements with six of its executives. These employment agreements provide medical benefits for these executives and their surviving spouses for life, up to a stated maximum annual premium value per person. The Company subsequently entered into similar agreements with additional executives. These benefits are fully vested, and accordingly, the obligations represented prior service costs which will be amortized over the average remaining expected services period for these executives.

The following table sets forth a reconciliation of the benefit obligation, plan assets, and accrued benefit cost related to U.S. and non-U.S. non-pension defined benefit postretirement plans:

	December 31, 2012			December	ecember 31, 2011			
	U.S. Plans			on-U.S. Plans	U.S. Plans		Non-U.S. Plans	
Change in benefit obligation:								
Benefit obligation at beginning of year	\$	10,924	\$	5,972	\$ 10,633	\$	5,801	
Service cost		106		253	77		275	
Interest cost		366		286	547		282	
Plan amendments and initiations		(3,297)		-	-		-	
Actuarial (gains) losses		660		1,022	675		341	
Benefits paid		(602)		(704)	(1,008)		(618)	
Currency translation		<u>-</u>		135	 <u>-</u>		(109)	
Benefit obligation at end of year	\$	8,157	\$	6,964	\$ 10,924	\$	5,972	
Fair value of plan assets at end of year	\$		\$	-	\$ -	\$	-	
							_	
Funded status at end of year	\$	(8,157)	\$	(6,964)	\$ (10,924)	\$	(5,972)	

Amounts recognized in the consolidated balance sheet consist of the following:

	 December 31, 2012				<b>December 31, 2011</b>			
	 U.S. Non-U.S. Plans Plans			U.S. Plans		-		
Accrued benefit liability - current	\$ (637)	\$	-	\$	-	\$	-	
Accrued benefit liability - non-current	(7,520)		(6,964)		(10,924)		(5,972)	
Accumulated other comprehensive income	(5,937)		805		(4,142)		-	
	\$ (14,094)	\$	(6,159)	\$	(15,066)	\$	(5,972)	

(dollars in thousands, except per share amounts)

# Note 11 – Pensions and Other Postretirement Benefits (continued)

Actuarial items consist of the following:

	December 31, 2012					December 31, 2011		
	U.S. Non-U.S. Plans Plans		U.S. Plans			Non-U.S. Plans		
Unrecognized net actuarial gain	\$	(1,657)	\$	805	\$	(2,309)	\$	
Unamortized prior service (credit) cost		(4,280)		-		(1,865)		-
Unrecognized net transition obligation	-			-		32	32	
	\$	(5,937)	\$	805	\$	(4,142)	\$	_

The following table sets forth the components of net periodic benefit cost:

	Years ended December 31,										
	20	12			20	11		2010			
	U.S. Plans				U.S. Plans	Non-U.S. Plans		U.S. Plans		Non-U.S Plans	
Service cost	\$ 106	\$	253	\$	77	\$	275	\$	95	\$	255
Interest cost	366		286		547		282		640		291
Amortization of actuarial gains	(76)		-		(315)		-		(244)		-
Amortization of prior service credit	(798)		-		(431)		-		(434)		-
Amortization of transition obligation	32		-		47		_		61		-
Net periodic benefit cost	\$ (370)	\$	539	\$	(75)	\$	557	\$	118	\$	546

The estimated actuarial items for the other postretirement benefit plans that will be amortized from accumulated other comprehensive loss into net periodic benefit cost during 2013 are not material and approximate the amounts amortized in 2012.

The following weighted average assumptions were used to determine benefit obligations at December 31 of the respective years:

	2	2012	2011			
	U.S.		U.S.			
	Plans	Non-U.S. Plans	Plans	Non-U.S. Plans		
Discount rate	4.00%	3.80%	5.00%	5.09%		
Rate of compensation increase	0.00%	3.20%	0.00%	3.22%		

The following weighted average assumptions were used to determine the net periodic benefit costs for the years ended December 31, 2012 and 2011:

	Years ended December 31,								
	2	2012	2011						
	U.S.		U.S.						
	Plans	Non-U.S. Plans	Plans	Non-U.S. Plans					
Discount rate	5.00%	5.09%	5.50%	4.80%					
Rate of compensation increase	0.00%	3.22%	0.00%	3.00%					

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 not material.

(dollars in thousands, except per share amounts)

## Note 11 - Pensions and Other Postretirement Benefits (continued)

Estimated future benefit payments are as follows:

		 U.S. Plans	on-U.S. Plans
	2013	\$ 637	\$ 444
	2014	654	327
	2015	675	333
	2016	683	402
	2017	669	497
20	018-2022	2.970	3.470

As the plans are unfunded, the Company's anticipated contributions for 2013 are equal to its estimated benefits payments.

## **Other Retirement Obligations**

The Company participates in various other defined contribution and government-mandated retirement plans based on local law or custom. The Company periodically makes required contributions for certain of these plans, whereas other plans are unfunded retirement bonus plans which will be paid at the employee's retirement date. At December 31, 2012 and 2011, the consolidated balance sheets include \$12,347 and \$9,534, respectively, within accrued pension and other postretirement costs related to these plans.

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 \$4,230, \$4,985, and \$5,399 for the years ended December 31, 2012, 2011, and 2010, respectively. No material amounts are included in the consolidated balance sheets at December 31, 2012 and 2011 related to unfunded 401(k) contributions.

Certain key employees participate in a deferred compensation plan. During the years ended December 31, 2012, 2011, and 2010, these employees could defer a portion of their compensation until retirement, or elect shorter deferral periods. The Company maintains a liability within other noncurrent liabilities on its consolidated balance sheets related to these deferrals. The Company maintains a non-qualified trust, referred to as a "rabbi" trust, to fund payments under this plan. Rabbi trust assets are subject to creditor claims under certain conditions and are not the property of employees. Therefore, they are accounted for as other noncurrent assets. Assets held in trust related to the deferred compensation plan at December 31, 2012 and 2011 were approximately \$12,310 and \$11,830, respectively.

The Company is obligated to pay post-employment benefits to certain terminated employees related to acquisitions. The liabilities recorded for these obligations total \$5,827 and \$6,818 as of December 31, 2012 and 2011, respectively. Of these amounts, \$1,498 and \$1,823 are included in accrued liabilities as of December 31, 2012 and 2011, respectively, with the remaining amounts included in other noncurrent liabilities.

(dollars in thousands, except per share amounts)

#### Note 12 - Share-Based Compensation

The Company has various stockholder-approved programs which allow for the grant of share-based compensation to officers, employees, and non-employee directors.

The amount of compensation cost related to share-based payment transactions is measured based on the grant-date fair value of the equity instruments issued. The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model. The Company determines compensation cost for restricted stock units ("RSUs"), phantom stock units, and restricted stock based on the grant-date fair value of the underlying common stock. Compensation cost is recognized over the period that an officer, employee, or non-employee director provides service in exchange for the award.

The following table summarizes share-based compensation expense recognized:

		Years ended December 31,						
		2012		2011		2010		
Stock options	¢	73	¢	(83)	¢	619		
Restricted stock units	J.	3,378	Ψ	6,693	Ψ	1,849		
Phantom stock units	_	93		222		175		
Total	\$	3,544	\$	6,832	\$	2,643		

Stock-based compensation expense for the year ended December 31, 2012, as presented in the table above, includes the reversal, in the fourth fiscal quarter of 2012, of stock-based compensation expense recognized for the performance-based RSUs scheduled to vest on January 1, 2015 at the time it was determined that the performance-based vesting criteria was not expected to be achieved.

Stock-based compensation expense for the year ended December 31, 2011, as presented in the table above, includes amounts associated with the acceleration of vesting of awards upon the passing of Vishay's former Executive Chairman of the Board of Directors, Dr. Felix Zandman. The associated expense is reported as a component of the executive compensation charge reported in the accompanying consolidated statement of operations. In accordance with Dr. Zandman's employment agreement, 98,375 RSUs held by Dr. Zandman immediately vested and were contributed to his estate following his passing and 202,330 RSUs with performance-based vesting criteria will be contributed to his estate upon the Company's achievement of the performance-based criteria. Additionally, the vesting of 77,334 unvested stock options held by Dr. Zandman at the time of his passing was accelerated. These options have since expired unexercised.

Stock-based compensation expense for the year ended December 31, 2011, as presented in the table above, also includes amounts associated with the acceleration of vesting and other modifications of awards upon the resignation of Vishay's former Chief Financial Officer, Dr. Lior Yahalomi. The associated expense is reported as a component of the executive compensation charge reported in the accompanying consolidated statement of operations. In accordance with Dr. Yahalomi's employment agreement, 18,438 RSUs held by Dr. Yahalomi immediately vested upon his resignation and 55,316 RSUs with performance-based vesting criteria will vest upon the Company's achievement of the performance-based criteria. Additionally, the vesting of 29,459 unvested stock options held by Dr. Yahalomi was accelerated and Dr. Yahalomi's vested stock options were modified to extend their expiration to one year after Dr. Yahalomi's resignation. Of these accelerated and modified options, 22,095 were exercised and 21,173 expired unexercised.

(dollars in thousands, except per share amounts)

#### Note 12 - Share-Based Compensation (continued)

The following table summarizes unrecognized compensation cost and the weighted average remaining amortization periods at December 31, 2012 (amortization periods in years):

	Comp	cognized pensation Cost	Weighted Average Remaining Amortization Periods
Stock options	\$	18	0.4
Restricted stock units		6,321	1.1
Phantom stock units		-	0.0
Total	\$	6,339	

#### 2007 Stock Incentive Plan

The Company's 2007 Stock Incentive Program (the "2007 Program") permits the grant of up to 3,000,000 shares of restricted stock, unrestricted stock, RSUs, and stock options, to officers, employees, and non-employee directors. Such instruments are available for grant until May 22, 2017.

The 2007 Program was originally approved by stockholders of the Company on May 22, 2007, as the "2007 Stock Option Program." On May 28, 2008, the Company's stockholders approved amendments to the 2007 Stock Option Program, which was then renamed the "2007 Stock Incentive Program".

On February 23, 2011, the Board of Directors of the Company amended and restated the 2007 Program. The amendment eliminated share recycling, so that on the exercise of an option where the exercise price is paid via the tender of previously-owned shares or pursuant to an "immaculate cashless exercise," the total "gross" number of option shares exercised is removed from the pool of shares available for future issuance. Similarly, shares withheld to pay income taxes in connection with the exercise of an option are also removed from the pool. The amendment also restricts re-pricing and cash repurchases of options without the prior approval of stockholders.

At December 31, 2012, the Company has reserved 1,140,000 shares of common stock for future grants of equity awards pursuant to the 2007 Program. If any outstanding awards are forfeited by the holder or cancelled by the Company, the underlying shares would be available for regrant to others.

## Stock Options

In addition to stock options outstanding pursuant to the 2007 Program, during the periods presented, the Company had stock options outstanding under previous stockholder-approved stock option programs.

Under the 1998 Stock Option Program, certain executive officers and key employees were granted options. On March 16, 2008, the stockholder approval for the 1998 Stock Option Program expired. While no additional options may be granted pursuant to this plan, at December 31, 2012, 99,000 options issued under the 1998 Program remain outstanding and may be exercised in future periods.

On November 2, 2001, Vishay acquired General Semiconductor, Inc., which became a wholly owned subsidiary of the Company. As a result of the acquisition, each outstanding option to acquire General Semiconductor common stock became exercisable for shares of Vishay common stock. Based on the conversion ratio in the acquisition of 0.563 of a Vishay share for each General Semiconductor share, the former General Semiconductor options become exercisable in the aggregate for 4,282,000 shares of Vishay common stock on the date of the acquisition. All such options were immediately vested and exercisable as a result of the merger but the terms of the options otherwise remained unchanged. As of November 2, 2011, the tenth anniversary of the acquisition, no options related to this plan were outstanding and no additional options may be granted from this plan.

(dollars in thousands, except per share amounts)

## Note 12 - Share-Based Compensation (continued)

As a consequence of the spin-off of VPG on July 6, 2010, the exercise price of all stock options was reduced 9.48% and 259,000 make-up options were granted to reflect the loss of value to the option holders due to the decrease in the trading price of Vishay's common stock as result of the spin-off. Additionally, approximately 102,000 stock options that were held by VPG employees expired.

The following table summarizes the Company's stock option activity (number of options in thousands):

	20		Years ended 20	nber 31,	2010				
	Number of Options	A	Veighted Average rcise Price	Number of Options		Veighted Average ercise Price	Number of Options	Α	Veighted Average rcise Price
Outstanding:									
Beginning of year	384	\$	15.40	1,254	\$	15.04	2,728	\$	19.84
Granted	-		-	-		-	-		-
Exercised	(22)		7.89	(651)		14.87	-		-
Cancelled or forfeited	(253)		16.12	(219)		14.92	(1,733)		20.35
Adjustment due to VPG spin-off*	<u> </u>		<u>-</u>	<u>-</u> _		<u>-</u>	259		<u>-</u>
End of year*	109	\$	15.24	384	\$	15.40	1,254	\$	15.04
Vested and expected to vest*	109			384			1,254		
Exercisable:									
End of year*	79			323			1,001		

<sup>\*</sup> The weighted average exercise price of the stock options included in the line item "Adjustment due to VPG spin-off" is equal to the weighted average exercise price of such stock options prior to the spin-off, as reduced by the spin-off adjustment. The weighted average exercise price of stock options outstanding, vested and expected to vest, and exercisable as of December 31, 2010 also reflects the decrease in the exercise price as a result of the spin-off adjustment.

The following table summarizes information concerning stock options outstanding and exercisable at December 31, 2012 (number of options in thousands, contractual life in years):

		<b>Options Outstanding</b>		Options I	Exerc	isable
Exercise Price	Number of Options	Weighted Average Remaining Contractual Life	eighted Average Exercise Price	Number of Options	,	Weighted Average Exercise Price
\$ 11.54 - \$12.90	32	3.85	\$ 12.73	27	\$	12.70
\$ 16.29	77	4.39	 16.29	52		16.29
Total	109	4.23	\$ 15.24	79	\$	15.06

The weighted-average remaining contractual life of all exercisable options is 4.18 years.

(dollars in thousands, except per share amounts)

## Note 12 - Share-Based Compensation (continued)

The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model. There were no options granted in 2012, 2011, or 2010 other than the replacement options.

The pretax aggregate intrinsic value (the difference between the closing stock price on the last trading day of 2012 of \$10.63 per share and the exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their options on December 31, 2012 is \$0 because all outstanding options have exercise prices in excess of market value. This amount changes based on changes in the market value of the Company's common stock. During the years ended December 31, 2012 and 2011, 22,095 and 650,621 options, respectively, were exercised. No options were exercised during the year ended December 31, 2010. The total intrinsic value of options exercised during the years ended December 31, 2012 and 2011 was \$110 and \$1,693, respectively.

The following table summarizes information concerning unvested stock options (number of options in thousands):

				Years ended D	ece	mber 31,					
	20		20	2011				2010			
	Number of Options	of Average Grant-		Number of Options	Weighted Average Grant-date Fair Value		Number of Options		Weighted Average Grant-date Fair Value		
Unvested:											
Beginning of year	61	\$	9.96	253	\$	9.33	328	\$	9.93		
Granted	-		-	-		-	-		-		
Vested	(31)		9.79	(192)		9.13	(81)		9.24		
Forfeited	-		-	-		-	(19)		7.95		
Adjustment due to VPG spin-off*	-		-	-		-	25		-		
End of year*	30	\$	10.14	61	\$	9.96	253	\$	9.33		

<sup>\*</sup> The weighted average grant date fair value of the stock options included in the line item "Adjustment due to VPG spin-off" is equal to the weighted average grant date fair value of such stock options prior to the spin-off, as reduced by the spin-off adjustment. The weighted average grant date fair value of stock options outstanding as of December 31, 2010 also reflects the decrease in the grant date fair value as a result of the spin-off adjustment.

(dollars in thousands, except per share amounts)

#### Note 12 - Share-Based Compensation (continued)

#### Restricted Stock Units

Each RSU entitles the recipient to receive a share of common stock when the RSU vests.

As a consequence of the spin-off of VPG on July 6, 2010, approximately 60,000 make-up RSUs were granted to reflect the loss of value to the unit holders due to the decrease in the trading price of Vishay's common stock as result of the spin-off. Additionally, approximately 5,000 RSUs that were held by VPG employees expired. RSU activity for the years ended December 31, 2012, 2011, and 2010 is presented below (number of RSUs in thousands):

	20	12			Years ended December 31, 2011				
	Number of RSUs	Weighted Average Grant- date Fair Value		Number of RSUs	Weighted Average Grant-date Fair Value		Number of RSUs		Weighted Average Grant-date Fair Value
Outstanding:									
Beginning of year	891	\$	12.58	634	\$	9.61	155	\$	9.14
Granted	437		12.31	423		16.57	509		10.87
Vested	(12)		8.29	(154)		11.25	(76)		9.68
Cancelled or forfeited	-		-	(12)		13.26	(14)		8.83
Adjustment due to VPG spin-off*			-	<u> </u>		-	60		<u>-</u>
End of year*	1,316	\$	12.53	891	\$	12.58	634	\$	9.61

<sup>\*</sup> The weighted average grant date fair value per unit included in the line item "Adjustment due to VPG spin-off" is equal to the weighted average grant date fair value per unit of such RSUs prior to the spin-off, as reduced by the spin-off adjustment. The weighted average grant date fair value per unit of RSUs outstanding as of December 31, 2010 also reflects the decrease in the grant date fair value as a result of the spin-off adjustment.

The Company recognizes compensation cost for RSUs that are expected to vest. The performance vesting criteria of the RSUs granted in the year ended December 31, 2010 that contain performance-based vesting criteria have been adjusted by 10% to reflect the absence of VPG within Vishay's consolidated results. The Company expects the performance-based vesting criteria for the outstanding performance-based RSUs that are scheduled to vest on January 1, 2013 and 2014 to be achieved. The stock-based compensation expense recognized for 276,000 performance-based RSUs scheduled to vest on January 1, 2015 was reversed in the fourth fiscal quarter of 2012 at the time that it was determined that the performance-based vesting criteria was not expected to be achieved. RSUs with performance-based vesting criteria are expected to vest as follows (number of RSUs in thousands):

	Number of
Vesting Date	RSUs
January 1, 2013	324*
January 1, 2014	233
January 1, 2015	-

<sup>\*</sup> The performance vesting criteria for the performance-based RSUs with a vesting date of January 1, 2013 has been achieved.

In the event of (i) the termination of the executive's employment by the Company without cause, by the executive for "good reason," or as a result of death or disability, the executive's outstanding RSUs shall immediately vest and the outstanding performance-based RSUs shall vest on their normal vesting date to the extent applicable performance criteria are realized; and (ii) a change of control of Vishay, all of such executive's outstanding RSUs and performance-based RSUs shall immediately vest. In the event of voluntary termination by the executive (without "good reason") or termination for cause, the executive's outstanding RSUs and performance-based RSUs will be forfeited.

(dollars in thousands, except per share amounts)

#### Note 12 - Share-Based Compensation (continued)

#### **Phantom Stock Plan**

The Company maintains a phantom stock plan for certain senior executives. The Phantom Stock Plan authorizes the grant of up to 300,000 phantom stock units to the extent provided for in the Company's employment agreements with such senior executives. Each phantom stock unit entitles the recipient to receive a share of common stock at the individual's termination of employment or any other future date specified in the individual's employment agreement. The phantom stock units are fully vested at all times.

If the Company declares dividends on its common stock, the dividend amounts with respect to the phantom stock units will be deemed reinvested in additional units of phantom stock.

The Board of Directors of the Company can amend or terminate the Phantom Stock Plan at any time, except that phantom stock units already granted to any individual cannot be adversely affected without the individual's consent. Furthermore, stockholder approval of an amendment is required if the amendment increases the number of units subject to the Phantom Stock Plan or otherwise materially amends the Phantom Stock Plan or if stockholder approval is otherwise required by applicable law or stock exchange rules. If the Board of Directors does not terminate the Phantom Stock Plan, it will terminate when all phantom stock units have been awarded with respect to all 300,000 shares of common stock reserved for the Phantom Stock Plan.

In accordance with the Phantom Stock Plan, following Dr. Zandman's passing, 43,667 phantom stock units held by Dr. Zandman's estate were redeemed as common stock. As a consequence of the spin-off of VPG on July 6, 2010, approximately 15,000 make-up phantom stock units were granted to reflect the loss of value to the unit holders due to the decrease in the trading price of Vishay's common stock as result of the spin-off. Additionally, 38,667 phantom stock units held by a VPG employee were adjusted and redeemed as common stock on December 7, 2010. The following table summarizes the Company's phantom stock units activity for the years ended December 31, 2012, 2011, and 2010 (number of phantom stock units in thousands):

	20	12		Years ended D 20	ber 31,	20			
	Number of Phantom Stock Units		Grant- date ir Value per Unit	Number of Phantom Stock Units		Grant- date r Value per Unit	Number of Phantom Stock Units	Fair	Grant- date Value per Unit
Outstanding:									
Beginning of year	87			116			120		
Granted	10	\$	9.33	15	\$	14.78	20	\$	8.76
Redeemed for common stock	-			(44)			(39)		
Adjustment due to VPG spin-off	-			-			15		
End of year	97			87			116		
Available for									
future grants	85			95			110		
			F-51						

(dollars in thousands, except per share amounts)

#### Note 13 - Commitments and Contingencies

#### Leases

The Company uses various leased facilities and equipment in its operations. In the normal course of business, operating leases are generally renewed or replaced by other leases. Certain operating leases include escalation clauses.

Total rental expense under operating leases was \$29,667, \$26,351, and \$28,194 for the years ended December 31, 2012, 2011, and 2010, respectively. VPG accounted for \$1,789 of rental expense for the year ended December 31, 2010.

Future minimum lease payments for operating leases with initial or remaining noncancelable lease terms in excess of one year are as follows:

2013	\$ 24,991
2014	20,814
2015	17,411
2016	12,709
2017	10,216
Thereafter	17.939

The Company also has capital lease obligations of \$39 at December 31, 2012.

#### **Environmental Matters**

The Company is subject to various federal, state, local, and foreign laws and regulations governing environmental matters, including the use, discharge, and disposal of hazardous materials. The Company's manufacturing facilities are believed to be in substantial compliance with current laws and regulations. Complying with current laws and regulations has not had a material adverse effect on the Company's financial condition.

The Company has engaged environmental consultants and attorneys to assist management in evaluating potential liabilities related to environmental matters. Management assesses the input from these consultants along with other information known to the Company in its effort to continually monitor these potential liabilities. Management assesses its environmental exposure on a site-by-site basis, including those sites where the Company has been named as a "potentially responsible party." Such assessments include the Company's share of remediation costs, information known to the Company concerning the size of the hazardous waste sites, their years of operation, and the number of past users and their financial viability.

The Company has accrued environmental liabilities of \$14,964 as of December 31, 2012 relating to environmental matters related to its General Semiconductor subsidiary. The Company has also accrued approximately \$9,609 at December 31, 2012 for other environmental matters. The liabilities recorded for these matters total \$24,573, of which \$11,650 is included in other accrued liabilities on the consolidated balance sheet, and \$12,923 is included in other noncurrent liabilities on the consolidated balance sheet.

While the ultimate outcome of these matters cannot be determined, management does not believe that the final disposition of these matters will have a material adverse effect on the Company's consolidated financial position, results of operations, or cash flows beyond the amounts previously provided for in the consolidated financial statements. The Company's present and past facilities have been in operation for many years. These facilities have used substances and have generated and disposed of wastes which are or might be considered hazardous. Therefore, it is possible that additional environmental issues may arise in the future, which the Company cannot now predict.

(dollars in thousands, except per share amounts)

## Note 13 - Commitments and Contingencies (continued)

#### Litigation

The Company is a party to various claims and lawsuits arising in the normal course of business. The Company is of the opinion that these litigations or claims will not have a material negative effect on its consolidated financial position, results of operations, or cash flows.

#### Semiconductor Foundry Agreements

The Company's Siliconix subsidiary maintains long-term foundry agreements with subcontractors to ensure access to external front-end capacity.

Since 2004, Siliconix has maintained a definitive long-term foundry agreement for semiconductor manufacturing with Tower Semiconductor, pursuant to which Siliconix transferred certain technology to Tower Semiconductor and committed to purchase a minimum amount of semiconductor wafers. Subsequent to the balance sheet date, the Company further amended its long-term foundry agreement with Tower Semiconductor. The agreement with Tower Semiconductor, as amended, extends through the fourth quarter of 2017.

On July 6, 2012, Siliconix amended its foundry agreement with an Asian foundry to ensure additional capacity in exchange for cash and a commitment to purchase a minimum amount of semiconductor wafers. This agreement extends through the fourth quarter of 2016.

The Company estimates its total purchase commitments under all long-term foundry agreements as follows:

2013 \$	36,776
2014	40,319
2015	45,030
2016	46,303
2017	35,461

Siliconix has the option to purchase wafers from these subcontractors in addition to the minimum commitments and, accordingly, actual purchases may be different than the commitments disclosed above. Actual purchases from these subcontractors during the year ended December 31, 2012 were \$36,419.

#### **Product Quality Claims**

The Company is a party to various product quality claims in the normal course of business. The Company provides warranties for its products which offer replacement of defective products. Annual warranty expenses are generally not significant. The Company periodically receives claims which arise from consequential damages which result from a customer's installation of an alleged defective Vishay component into the customer's product. Although not covered by its stated warranty, Vishay may occasionally reimburse the customer for these consequential damages in limited circumstances.

(dollars in thousands, except per share amounts)

#### Note 13 - Commitments and Contingencies (continued)

#### **Executive Employment Agreements**

The Company has employment agreements with certain of its senior executives. These employment agreements provide incremental compensation in the event of termination. The Company does not provide any severance or other benefits specifically upon a change in control.

On May 13, 2009, the Company entered into an amended and restated employment agreement with Dr. Felix Zandman (the "2009 Agreement"). This agreement amended and restated the employment agreement between the Company and Dr. Zandman that was previously amended and restated as of January 1, 2004 (the "2004 Agreement").

The purpose of the 2009 Agreement was to eliminate the right of Dr. Zandman to receive a royalty during the ten years following his termination of employment equal to 5% of gross sales, less returns and allowances, of Vishay products incorporating inventions and any other form of technology created, discovered or developed by him or under his direction. The royalty was payable in the event Dr. Zandman was terminated without "cause" or resigned for "good reason," as defined in the 2004 Agreement. This provision was carried over from Dr. Zandman's original employment agreement of March 1985, and could not be modified or eliminated without Dr. Zandman's consent. It was a reflection, among other things, of Dr. Zandman's key role in the founding of the Company and in creating, developing and commercializing the Company's technologies and the absence of any compensation to Dr. Zandman for the core intellectual property that he contributed to the Company over the years from its inception.

The Company engaged a consultant in 2007 to assist its evaluation of the royalties to which Dr. Zandman would be entitled were his employment to be terminated. Based in part upon the work of this consultant and management's own updated computations, management estimated that the present value of the royalties to which Dr. Zandman would be entitled were his employment terminated at December 31, 2008 would have been between approximately \$370,000 and \$445,000, with a possible tax gross-up if the royalties were payable in connection with a change of control and deemed subject to an excise tax. (This present value does not factor in any assessment of the probability of payment.)

Pursuant to the 2009 Agreement, Dr. Zandman's right to the royalty payments was terminated. Dr. Zandman received a payment of \$10,000 as of the effective date of the amended and restated agreement, and his estate is entitled to receive annual payments of \$10,000 each through 2014. Dr. Zandman's passing in June 2011 has no effect on the timing of these payments. The Company recognized the compensation expense equal to the present value of these payments in 2009. The Company recognized no tax benefit associated with the executive employment agreement charge. At December 31, 2012, the Company had approximately \$9,731 and \$10,000 accrued in other liabilities and other accrued expenses, respectively, for this liability.

The Company recognized compensation expense of \$3,889 reported as a component of the executive compensation charges in the accompanying consolidated statement of operations for the year ended December 31, 2011 for other elements of compensation that accelerated upon the passing of Dr. Zandman. (See also Note 12.)

The Company recognized compensation expense of \$1,873 reported as a component of the executive compensation charges in the accompanying consolidated statement of operations for the year ended December 31, 2011 for elements of compensation payable to the Company's former Chief Financial Officer, Dr. Lior Yahalomi, in connection with his resignation. (See also Note 12.)

(dollars in thousands, except per share amounts)

### Note 14 - Current Vulnerability Due to Certain Concentrations

#### **Market Concentrations**

While no single customer comprises greater than 10% of net revenues, a material portion of the Company's revenues are derived from the worldwide industrial, telecommunications, and computing markets. These markets have historically experienced wide variations in demand for end products. If demand for these end products should decrease, the producers thereof could reduce their purchases of the Company's products, which could have a material adverse effect on the Company's results of operations and financial position.

#### **Credit Risk Concentrations**

Financial instruments with potential credit risk consist principally of cash and cash equivalents, short-term investments, accounts receivable, and notes receivable. Concentrations of credit risk with respect to receivables are generally limited due to the Company's large number of customers and their dispersion across many countries and industries. As of December 31, 2012, one customer comprised 14.7% of the Company's accounts receivable balance. This customer comprised 10.9% of the Company's accounts receivable balance as of December 31, 2011. No other customer comprised greater than 10% of the Company's accounts receivable balance as of December 31, 2011. The Company continually monitors the credit risks associated with its accounts receivable and adjusts the allowance for uncollectible accounts accordingly. The credit risk exposure associated with the accounts receivable is limited by the allowance and is not considered material to the financial statements.

The Company maintains cash and cash equivalents and short-term investments with various major financial institutions. The Company is exposed to credit risk related to the potential inability to access liquidity in financial institutions where its cash and cash equivalents and short-term investments are concentrated. As of December 31, 2012, the following financial institutions held over 10% of the Company's combined cash and cash equivalents and short-term investments balance:

UniCredit*	20.8%
HSBC*	15.9%
Bank Leumi*	13.3%
Bank Hapoalim*	12.6%
KBC*	12.6%

<sup>\*</sup>Participant in Credit Facility

## **Sources of Supplies**

Many of the Company's products require the use of raw materials that are produced in only a limited number of regions around the world or are available from only a limited number of suppliers. The Company's consolidated results of operations may be materially and adversely affected if there are significant price increases for these raw materials, the Company has difficulty obtaining these raw materials, or the quality of available raw materials deteriorates. For periods in which the prices of these raw materials are rising, the Company may be unable to pass on the increased cost to the Company's customers, which would result in decreased margins for the products in which they are used. For periods in which the prices are declining, the Company may be required to write down its inventory carrying cost of these raw materials which, depending on the extent of the difference between market price and its carrying cost, could have a material adverse effect on the Company's net earnings.

(dollars in thousands, except per share amounts)

#### Note 14 - Current Vulnerability Due to Certain Concentrations (continued)

Vishay is a major consumer of the world's annual production of tantalum. Tantalum, a metal purchased in powder or wire form, is the principal material used in the manufacture of tantalum capacitors. There are few suppliers that process tantalum ore into capacitor grade tantalum powder.

From time to time, there have been short-term market shortages of raw materials utilized by the Company. While these shortages have not historically adversely affected the Company's ability to increase production of products containing these raw materials, they have historically resulted in higher raw material costs for the Company. The Company cannot assure that any of these market shortages in the future would not adversely affect the Company's ability to increase production, particularly during periods of growing demand for the Company's products.

Certain raw materials used in the manufacture of the Company's products, such as gold, copper, palladium, and other metals, are traded on active markets and can be subject to significant price volatility. To ensure adequate supply and to provide cost certainty, the Company's policy is to enter into short-term commitments to purchase defined portions of annual consumption of the raw materials utilized by the Company if market prices decline below budget. If after entering into these commitments, the market prices for these raw materials decline, the Company must recognize losses on these adverse purchase commitments.

Recently enacted rules in the U.S. on conflict minerals, which include tantalum, tungsten, tin, and gold, all of which are used in the Company's products, could result in increased prices and decreased supply of conflict minerals, which could negatively affect the Company's consolidated results of operations.

#### **Geographic Concentration**

The Company has operations outside the United States, and approximately 74% of revenues earned during 2012 were derived from sales to customers outside the United States. Additionally, as of December 31, 2012, \$974,323 of the Company's cash and cash equivalents and short-term investments were held in countries outside of the United States. Some of the Company's products are produced and cash and cash equivalents and short-term investments are held in countries which are subject to risks of political, economic, and military instability. This instability could result in wars, riots, nationalization of industry, currency fluctuations, and labor unrest. These conditions could have an adverse impact on the Company's ability to operate in these regions and, depending on the extent and severity of these conditions, could materially and adversely affect the Company's overall financial condition, operating results, and ability to access its liquidity when needed. As of December 31, 2012 the Company's cash and cash equivalents and short-term investments were concentrated in the following countries:

Germany	37.9%	
Israel	26.0%	
Singapore	9.5%	
People's Republic of China	7.8%	
United States	1.8%	
Other Asia	9.3%	
Other Europe	7.1%	
Other	0.6%	

Vishay has been in operation in Israel for 42 years. The Company has never experienced any material interruption in its operations attributable to these factors, in spite of several Middle East crises, including wars.

(dollars in thousands, except per share amounts)

#### Note 15 - Segment and Geographic Data

Following the completion of the spin-off of VPG in the third fiscal quarter of 2010, Vishay operates, and its chief operating decision maker makes strategic and operating decisions with regards to assessing performance and allocating resources based on, five reporting segments: MOSFETs, Diodes, Optoelectronic Components, Resistors & Inductors, and Capacitors.

The Company evaluates business segment performance on operating income, exclusive of certain items ("segment operating income"). Only dedicated, direct selling, general, and administrative expenses of the segments are included in the calculation of segment operating income. The Company's calculation of segment operating income excludes such selling, general, and administrative costs as global operations, sales and marketing, information systems, finance and administration groups, as well as restructuring and severance costs, asset write-downs, goodwill and indefinite-lived intangible asset impairments, inventory write-downs, gains or losses on purchase commitments, and other items. Management believes that evaluating segment performance excluding such items is meaningful because it provides insight with respect to intrinsic operating results of the Company. These items represent reconciling items between segment operating income and consolidated operating income. Business segment assets are the owned or allocated assets used by each business.

The Company has also disclosed certain additional items not used to evaluate segment performance. In some cases, the items are regularly provided to the chief operating decision maker and are required to be disclosed by GAAP. Additionally, the additional segment disclosures may provide insight to the Company's future profitability by reportable segment.

(dollars in thousands, except per share amounts)

# Note 15 - Segment and Geographic Data (continued)

The following tables set forth business segment information:

448,157 448,157 98,783 23,354 52	\$ \$ \$		\$	- - -	\$ \$	2,222,966
448,157 98,783 23,354	\$		\$		\$	, ,
98,783 23,354	\$	-			_	7,131
98,783 23,354	\$	-		-	¢	2,230,097
23,354		-			\$	2,230,097
23,354		_	\$	_	\$	526,673
- ,	d		Ф	-	Ф	320,073
- ,	•	_	\$	1 150	\$	153,801
	Ψ	_	Ψ			22,604
		_				150,291
10,001				2,007	Ψ	150,251
587,586	\$	_	\$	172,641	\$	3,016,277
,,	•		•	,		-,,
577,816	\$	-	\$	-	\$	2,587,396
-		-		-	\$	6,633
577,816	\$		\$		\$	2,594,029
161,843	\$	-	\$	-	\$	719,986
25,979	\$	-	\$	1,235	\$	165,022
223		-		18,819	\$	19,277
19,676		-		3,808	\$	168,641
672,049	\$	-	\$	219,962	\$	2,993,730
546,149	\$	101,089	\$	-	-	2,719,311
				-	-	5,781
546,149	\$	101,089	\$	-	\$	2,725,092
144,349	\$	37,030	\$	-	\$	807,485
	\$	-,	\$			169,724
						11,036
17,132		918		87	\$	145,413
CED 743	ď		¢	116 170	ф	2.000.002
652,/42	Э	-	Ъ	116,1/0	<b>Þ</b>	2,966,093
	52 15,531 587,586 577,816 	52 15,531 587,586 \$ 577,816 \$ 577,816 \$ 161,843 \$ 25,979 \$ 223 19,676 672,049 \$ 546,149 \$ 	52       -         15,531       -         587,586       \$       -         577,816       \$       -         577,816       \$       -         577,816       \$       -         161,843       \$       -         25,979       \$       -         223       -       -         19,676       -       -         546,149       \$       101,089         -       -       -         546,149       \$       101,089         144,349       \$       37,030         31,551       \$       3,391         762       33         17,132       918	52       -         15,531       -         587,586       \$         577,816       \$         577,816       \$         577,816       \$         \$       -         161,843       \$         \$       -	52         -         21,805           15,531         -         2,897           587,586         \$         -         \$         172,641           577,816         \$         -         -         -           577,816         \$         -         -         -           577,816         \$         -         -         -           161,843         \$         -         \$         -           25,979         \$         -         \$         1,235           223         -         18,819           19,676         -         \$         3,808           672,049         \$         101,089         \$         -           546,149         \$         101,089         \$         -           546,149         \$         101,089         \$         -           144,349         \$         37,030         \$         -           31,551         \$         3,391         \$         1,458           762         33         9,308         17,132         918         87	52         -         21,805         \$           15,531         -         2,897         \$           587,586         \$         -         \$         172,641         \$           577,816         \$         -         \$         -         \$           577,816         \$         -         \$         -         \$           161,843         \$         -         \$         -         \$           25,979         \$         -         \$         1,235         \$           223         -         18,819         \$           19,676         -         3,808         \$           672,049         \$         -         \$         219,962         \$           546,149         \$         101,089         \$         -         \$           546,149         \$         101,089         \$         -         \$           144,349         \$         37,030         \$         -         \$           31,551         \$         3,391         \$         1,458         \$           762         33         9,308         \$           17,132         918         87         \$

(dollars in thousands, except per share amounts)

# Note 15 - Segment and Geographic Data (continued)

	Years ended December 31,						
		2012		2011		2010	
Operating margin reconciliation:							
MOSFETs	\$	17,198	\$	85,336	\$	152,794	
Diodes		75,733		118,111		115,168	
Optoelectronic Components		54,632		60,492		64,088	
Resistors & Inductors		172,129		185,327		195,730	
Capacitors		76,858		136,901		121,714	
Vishay Precision Group		-		-		18,949	
Unallocated Selling, General, and Administrative Expenses		(219,502)		(233,804)		(250,505)	
Gain on sale of property		12,153		-		-	
Executive compensation charges		<u> </u>		(5,762)			
Consolidated Operating Income (Loss)	\$	189,201	\$	346,601	\$	417,938	

(dollars in thousands, except per share amounts)

## Note 15 - Segment and Geographic Data (continued)

Until July 6, 2010, VPG was part of Vishay and its assets, liabilities, results of operations, and cash flows are included in the amounts reported in these consolidated financial statements for periods prior to the completion of the spin-off. Excluding the non-recurring costs of the spin-off incurred by Vishay, VPG contributed \$9,716 of income before taxes, \$5,811 of net earnings attributable to Vishay stockholders, and \$0.03 per diluted share attributable to Vishay stockholders to Vishay's 2010 results.

The following table summarizes net revenues based on revenues generated by subsidiaries located within the identified geographic area:

		Years ended December 31,					
	_	2012		2011		2010	
United States	\$	568,849	\$	363,847	\$	345,267	
Germany	•	775,204	_	801,539	-	726,235	
Other Europe		61,236		175,639		217,099	
Israel		14,708		219,037		292,025	
Asia		810,100		1,033,967		1,144,466	
	\$	2,230,097	\$	2,594,029	\$	2,725,092	

In the fourth fiscal quarter of 2011, Vishay made changes to its business model to streamline its sales process such that three main subsidiaries generate the majority of third-party sales.

The following table summarizes property and equipment based on physical location:

	December 31,			31,
		2012		2011
United States	\$	133,812	\$	136,159
Germany		121,957		125,905
Czech Republic		51,620		53,126
Other Europe		98,534		97,212
Israel		140,994		125,885
People's Republic of China		169,395		178,877
Republic of China (Taiwan)		116,315		117,450
Other Asia		80,304		71,677
Other		1,621		1,614
	\$	914,552	\$	907,905

(dollars in thousands, except per share amounts)

# Note 16 - 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 the weighted average number of common shares outstanding adjusted to include the potentially dilutive effect of stock options and restricted stock units (see Note 12), warrants (see Note 7), convertible debt instruments (see Note 6), and other potentially dilutive securities.

The following table sets forth the computation of basic and diluted earnings per share attributable to Vishay stockholders (shares in thousands):

	Years ended December 31,			er 31,
	2012 20			2010
Numerator:				
Numerator for basic earnings per share:				
Net earnings	\$	122,738 \$	238,821	\$ 359,106
Adjustment to the numerator for continuing operations and net earnings:				
Interest savings assuming conversion of dilutive convertible and exchangeable notes, net of tax		293	189	257
Numerator for diluted earnings per share:				
Net earnings	\$	123,031	239,010	\$ 359,363
Denominator:				
Denominator for basic earnings per share:				
Weighted average shares		149,020	160,094	183,618
The British a verage shares		110,020	100,00	105,010
Effect of dilutive securities:				
Convertible and exchangeable debt instruments		6,176	7,820	6,313
Restricted stock units		549	212	133
Other		99	388	163
Dilutive potential common shares		6,824	8,420	6,609
Denominator for diluted earnings per share:				
Adjusted weighted average shares		155,844	168,514	190,227
	_			
Basic earnings per share attributable to Vishay stockholders	\$	0.82 \$	5 1.49	\$ 1.96
Busic currings per smale activatione to visitaly stockholders	Ψ	0.02	1.43	Ψ 1.30
Diluted earnings per share attributable to Vishay stockholders	\$	0.79 \$	1.42	\$ 1.89
F-61				

(dollars in thousands, except per share amounts)

#### Note 16 - Earnings Per Share (continued)

Diluted earnings per share for the years presented do not reflect the following weighted average potential common shares, as the effect would be antidilutive (in thousands):

	Years	Years ended December 31,					
	2012	2011	2010				
Convertible and exchangeable notes:							
Convertible Senior Debentures, due 2040	19,809	9,905	=				
Convertible Senior Debentures, due 2041	7,885	5,026	-				
Convertible Senior Debentures, due 2042	7,434	-	=				
Convertible Subordinated Notes, due 2023	-	-	51				
Weighted average employee stock options	177	182	2,243				
Weighted average warrants	8,390	8,824	8,824				
Weighted average other	282	123	35				

In periods in which they are dilutive, if the potential common shares related to the exchangeable notes are included in the computation, the related interest savings, net of tax, assuming conversion/exchange is added to the net earnings used to compute earnings per share.

The Company's convertible debt instruments are only convertible upon the occurrence of certain events. While none of these events has occurred as of December 31, 2012, certain conditions which could trigger conversion have been deemed to be non-substantive, and accordingly, the Company has always assumed the conversion of these instruments in its diluted earnings per share computation during periods in which they are dilutive.

At the direction of its Board of Directors, the Company intends, upon conversion, to repay the principal amount of the convertible senior debentures, due 2040, due 2041, and due 2042, in cash and settle any additional amounts in shares of Vishay common stock. Accordingly, the debentures are included in the diluted earnings per share computation using the "treasury stock method" (similar to options and warrants) rather than the "if converted method" otherwise required for convertible debt. Under the "treasury stock method," Vishay calculates the number of shares issuable under the terms of the notes based on the average market price of Vishay common stock during the period, and that number is included in the total diluted shares figure for the period. If the average market price is less than \$13.88, no shares are included in the diluted earnings per share computation for the convertible senior debentures due 2040, if the average market price is less than \$19.02, no shares are included in the diluted earnings per share computation for the convertible senior debentures due 2041, and if the average market price is less than \$11.81, no shares are included in the diluted earnings per share computation for the convertible senior debentures due 2042.

As described in Note 6, the Company purchased 99.6% of the outstanding convertible subordinated notes due 2023 pursuant to the option of the holders to require the Company to repurchase their notes on August 1, 2008. The remaining notes, with an aggregate principal amount of \$1,870, were redeemed at Vishay's option on August 1, 2010.

(dollars in thousands, except per share amounts)

# Note 17 – Additional Cash Flow Information

Changes in operating assets and liabilities, net of effects of businesses acquired consists of the following:

		Years ended December 31,					
		2012 20			2011 2		
Accounts receivable	¢	22.004	¢	C1 010	¢	(00.261)	
	Þ	33,004	Ф	- /	\$	(89,261)	
Inventories		(186)		(13,829)		(54,358)	
Prepaid expenses and other current assets		2,977		(14,273)		(22,637)	
Accounts payable		(9,408)		(11,468)		59,568	
Other current liabilities		(31,539)		(74,851)		108,418	
Net change in operating assets and liabilities	\$	(5,152)	\$	(52,503)	\$	1,730	

(dollars in thousands, except per share amounts)

## Note 18 - Fair Value Measurements

The fair value measurement accounting guidance establishes a valuation hierarchy of the inputs used to measure fair value. This hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

Level 1: Observable inputs such as quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.

Level 3: Unobservable inputs that reflect the Company's own assumptions.

An asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The following table provides the financial assets and liabilities carried at fair value measured on a recurring basis as of December 31, 2012 and 2011:

	Fa	Total iir Value		Level 1		Level 2		Level 3
<u>December 31, 2012</u>								
Assets:								
Assets held in rabbi trusts	\$	33,751	\$	21,954	\$	11,797	\$	-
Available for sale securities	\$	7,580		7,580		-		-
U.S. Defined Benefit Pension Plan Assets:								
Equity securities	\$	153,829		153,829		-		-
Fixed income securities	\$	99,669		42,006		57,663		-
Real Estate Investment Trust securities	\$	6,518		6,518		-		_
Cash	\$	5,850		5,850		-		-
Non - U.S. Defined Benefit Pension Plan Assets:								
Equity securities	\$	8,888		8,888		-		-
Fixed income securities	\$	14,437		14,437		-		-
Cash	\$	23,255		23,255		-		-
	\$	353,777	\$	284,317	\$	69,460	\$	-
Liabilities:			_		_			
Embedded derivative - convertible debentures due 2040	\$	(622)		_		_		(622)
Embedded derivative - convertible debentures due 2041	\$	(399)		_		_		(399)
Embedded derivative - convertible debentures due 2042	\$	(282)		_		_		(282)
	\$	(1,303)	\$	-	\$	-	\$	(1,303)
December 31, 2011								
Assets: Assets held in rabbi trusts	\$	31,698	\$	20,569	\$	11,129	\$	
Available for sale securities	\$ \$	*	Ф		Ф	11,129	Ф	-
	Ъ	6,776		6,776		-		-
U.S. Defined Benefit Pension Plan Assets:	¢	120 270		120.270				
Equity securities	\$	138,379		138,379		-		-
Fixed income securities  Real Estate Investment Trust securities	\$ \$	93,842 6,486		40,606 6,486		53,236		-
Cash	\$ \$	338		338		-		-
Non - U.S. Defined Benefit Pension Plan Assets:	Э	338		338		-		-
	\$	6,815		6,815				
Equity securities Fixed income securities	\$ \$	*				-		-
		10,173		10,173		-		-
Cash	<u>\$</u> \$	18,556 313,063	\$	18,556 248,698	\$	64,365	\$	<u> </u>
Liabilities:	Ψ	313,000	Ψ	0,050	Ψ	5 1,505	Ÿ	
Embedded derivative - convertible debentures due 2040	\$	(594)		-		-		(594)
Embedded derivative - convertible debentures due 2041	\$	(392)		-		_		(392)
	\$	(986)	\$		\$		\$	(986)

(dollars in thousands, except per share amounts)

#### Note 18 - Fair Value Measurements (continued)

The Company maintains non-qualified trusts, referred to as "rabbi" trusts, to fund payments under deferred compensation and non-qualified pension plans. Rabbi trust assets consist primarily of marketable securities, classified as available-for-sale, and company-owned life insurance assets. The marketable securities held in the rabbi trusts are valued using quoted market prices on the last business day of the year. The company-owned life insurance assets are valued in consultation with the Company's insurance brokers using the value of underlying assets of the insurance contracts. The fair value measurement of the marketable securities held in the rabbi trust is considered a Level 1 measurement and the measurement of the company-owned life insurance assets is considered a Level 2 measurement within the fair value hierarchy.

The Company maintains defined benefit retirement plans in certain of its U.S. and non-U.S. subsidiaries. The assets of the plans are measured at fair value.

Equity securities held by the U.S. defined benefit retirement plans consist of various mutual funds and exchange traded funds that are valued based on quoted market prices on the last business day of the year. The fair value measurement of the mutual funds and exchange traded funds securities is considered a Level 1 measurement within the fair value hierarchy.

Fixed income securities held by the U.S. defined benefit retirement plans consist of exchange traded funds, investments in a group annuity contract, and a short-term investment fund. The exchange traded funds are valued based on quoted market prices on the last business day of the year. The fair value measurement of the exchange traded funds securities is considered a Level 1 measurement within the fair value hierarchy. The group annuity contract consists of a general asset account and a pooled separate account. Units of the general asset account are valued based on a discounted cash flow model using the current yields of similar instruments with comparable durations and similar credit risk. The pooled separate accounts are valued based on the value of the underlying bond funds, which are valued at quoted market prices on the last business day of the year, with adjustments made to reflect the nature of how the investment is held. The fair value measurement of the group annuity contract is considered a Level 2 measurement within the fair value hierarchy. The short-term investment fund strictly invests in short-term investments, including commercial paper, certificates of deposit, U.S. government agency and instrumentality obligations, U.S. government obligations, corporate notes, and funding agreements. The maturity date of all investments held by the short-term investment fund is within one year from the financial statement date. There are no redemption restrictions on the plan's investment. The fair value of the short-term investment fund has been estimated using the net asset value per share of the investment. The fair value measurement of the short-term investment fund is considered a Level 2 measurement within the fair value hierarchy.

Real estate investments held by the U.S. defined benefit retirement plans consist of real estate investment trust securities that are valued at quoted market prices on the last business day of the year. The fair value measurement of the real estate investments is considered a Level 1 measurement within the fair value hierarchy.

Equity securities held by the non-U.S. defined benefit retirement plans consist of equity securities that are valued based on quoted market prices on the last business day of the year. The fair value measurement of the equity securities is considered a Level 1 measurement within the fair value hierarchy.

Fixed income securities held by the non-U.S. defined benefit retirement plans consist of government bonds in the Philippines and India and corporate notes that are valued based on quoted market prices on the last business day of the year. The fair value measurement of the fixed income securities is considered a Level 1 measurement within the fair value hierarchy.

Cash held by the U.S. and non-U.S. defined benefit retirement plans consists of demand deposits on account in various financial institutions to fund current benefit payments. The carrying amount of the cash approximates its fair value.

(dollars in thousands, except per share amounts)

#### Note 18 - Fair Value Measurements (continued)

The Company holds available for sale investments in debt securities that are intended to fund a portion of its pension and other postretirement benefit obligations outside of the U.S. The investments are valued based on quoted market prices on the last business day of the year. The fair value measurement of the investments is considered a Level 1 measurement within the fair value hierarchy.

The convertible senior debentures, due 2040, due 2041, and due 2042, issued by the Company on November 9, 2010, May 13, 2011, and May 31, 2012, respectively, contain embedded derivative features that GAAP requires to be bifurcated and remeasured each reporting period. Each quarter, the change in the fair value of the embedded derivative features, if any, is recorded in the consolidated statements of operations. The Company uses a derivative valuation model to derive the value of the embedded derivative features. Key inputs into this valuation model are the Company's current stock price, risk-free interest rates, the stock dividend yield, the stock volatility, and the debentures' credit spread over London Interbank Offered Rate (LIBOR). The first three aforementioned inputs are based on observable market data and are considered Level 2 inputs while the last two aforementioned inputs are unobservable and thus require management's judgment and are considered Level 3 inputs. The fair value measurement is considered a Level 3 measurement within the fair value hierarchy.

The fair value of the long-term debt, excluding the derivative liability, at December 31, 2012 and 2011 is approximately \$686,800 and \$533,900, respectively, compared to its carrying value, excluding the derivative liability, of \$391,628 and \$398,068, respectively. The Company estimates the fair value of its long-term debt using a combination of quoted market prices for similar financing arrangements and expected future payments discounted at risk-adjusted rates, which are considered level 2 inputs.

At December 31, 2012 and 2011, the Company's short-term investments were comprised of time deposits with financial institutions that have maturities that exceed 90 days from the date of acquisition; however they all mature within one year from the respective balance sheet dates. The short-term investments are accounted for as held-to-maturity debt instruments, at amortized cost, which approximates their fair value. The investments are funded with excess cash not expected to be needed for operations prior to maturity; therefore, the Company believes it has the intent and ability to hold the short-term investments until maturity. At each reporting date, the Company performs an evaluation to determine if any unrealized losses are other-than-temporary. No other-than-temporary impairments have been recognized on these securities, and there are no unrecognized holding gains or losses for these securities during the periods presented. There have been no transfers to or from the held-to-maturity classification. All decreases in the account balance are due to returns of principal at the securities' maturity dates. Interest on the securities is recognized as interest income when earned.

At December 31, 2012 and 2011, the Company's cash and cash equivalents were comprised of demand deposits and time deposits with maturities of three months or less when purchased. The Company estimates the fair value of its cash, cash equivalents, and short-term investments using level 2 inputs. Based on the current interest rates for similar investments with comparable credit risk and time to maturity, the fair value of the Company's cash, cash equivalents, and short-term investments approximate the carrying amounts reported in the consolidated balance sheets.

The Company's financial instruments also include accounts receivable, short-term notes payable, and accounts payable. The carrying amounts for these financial instruments reported in the consolidated balance sheets approximate their fair values.

(dollars in thousands, except per share amounts)

# Note 19 - Summary of Quarterly Financial Information (Unaudited)

			2012				2011		
		First	Second	Third	Fourth	First	Second	Third	Fourth
Statement of Operations data:									<u> </u>
Net revenues	\$	538,547 \$	588,199 \$	572,781 \$	530,570 \$	695,151 \$	709,838 \$	637,649 \$	551,391
Gross profit		136,709	147,619	133,554	108,791	214,663	212,190	167,477	125,656
Operating income		50,345	72,883	44,459	21,514	122,198	115,505	75,333	33,565
Net earnings		34,075	45,830	22,489	21,137	75,607	82,496	50,692	31,202
Net earnings attributable to noncontro	olling								
interests		263	159	209	162	320	401	205	250
Net earnings attributable to Vi	ishay								
stockholders		33,812	45,671	22,280	20,975	75,287	82,095	50,487	30,952
Per Share data:									
Basic earnings per share attributable to Vi	ishay								
stockholders (a)	\$	0.22 \$	0.30 \$	0.16 \$	0.15 \$	0.46 \$	0.51 \$	0.32 \$	0.20
Diluted earnings per share attributabl	e to								
Vishay stockholders (a)	\$	0.21 \$	0.29 \$	0.15 \$	0.14 \$	0.43 \$	0.48 \$	0.31 \$	0.19
Certain Items Recorded during the Qua	arters:								
Operating income (loss):									
Gain on sale of property	\$	- \$	12,153 \$	- \$	- \$	- \$	- \$	- \$	-
Executive compensation charge	\$	- \$	- \$	- \$	- \$	- \$	(3,889) \$	(1,873) \$	-
One time tax benefit (expense)	\$	- \$	- \$	- \$	4,036 \$	(10,024) \$	- \$	- \$	6,538
Quarter end date (b)	M	arch 31	June 30	Sept. 29	Dec. 31	April 2	July 2	Oct. 1	Dec. 31

<sup>(</sup>a) May not add due to differences in weighted average share counts.

<sup>(</sup>b) The Company reports interim financial information for 13-week periods beginning on a Sunday and ending on a Saturday, except for the first fiscal quarter, which always begins on January 1, and the fourth fiscal quarter, which always ends on December 31.

## SUBSIDIARIES OF THE REGISTRANT

Note: Names of Subsidiaries are indented under name of Parent. Subsidiaries are wholly owned unless otherwise noted. (Directors' or other shares required by statute in foreign jurisdictions and totaling less than 1% of equity are omitted.)

Vishay Americas, Inc. Delaware Vishay Americas do Brasil, LTDA Brazil Vishay Infrared Components Inc. California Vishav Insurance, Ltd. Ireland Vishay France Holdings SAS France Vishay Dale Electronics, Inc. Delaware Electronica Dale de Mexico S.A. de C.V. Mexico Vishay HiRel Systems LLC Delaware Vishay HiRel Sytems International, LLC Delaware Vishay HiRel Systems Asia Limited Hong Kong Vishay HiRel Systems (HK) Ltd Hong Kong Delaware Vishay Sprague, Inc. Vitramon do Brasil Ltda. Brazil Vishay Sprague Canada Holdings Inc. Canada Sprague Electric of Canada, Ltd. Canada Siliconix incorporated Delaware Vishay Siliconix, LLC Delaware Siliconix Semiconductor, Inc. Delaware Siliconix Technology C.V. Netherlands (a) Vishay Siliconix Electronic Co. Ltd. The Republic of China (Taiwan) Shanghai Simconix Electronic Company Ltd. China (b) Vishay Semiconductor Italiana S.p.A. Italy Vishay Asia Logistics Pte Ltd. Singapore Vishay Semiconductor India Ltd. India Singapore Delaware Siliconix Singapore Pte Ltd Vishay GSI, Inc. Vishay GSI Holdings, LLC Delaware Cayman Islands Vishay General Semiconductor, L.P. (c) Delaware The Republic of China (Taiwan) Vishay General Semiconductor, LLC Vishay General Semiconductor of Taiwan, Ltd. Vishay Asia GS Investments Pte., Ltd. Singapore New York General Semiconductor International Corp. ATC Corp.
General Semiconductor Hong Kong Ltd. Delaware Hong Kong Vishay General Semiconductor GmbH Germany Vishay BCcomponents Holdings Ltd.
Vishay BCcomponents B.V.
Vishay Capacitors Belgium NV Delaware Netherlands Belgium Vishay Resistors Belgium BVBA Belgium Valen Ltd. Hong Kong India Vishay Components India Pvt. Ltd (d) Vishay BCcomponents Hong Kong Ltd. BCcomponents China Ltd Hong Kong Hong Kong Vishay Components (Huizhou) Co. Ltd. China Vishay Trading (Shanghai) Co. Ltd China Vishay Intertechnology Asia Pte Ltd. Singapore Vishay Hong Kong Ltd. Hong Kong Vishay Japan K.K. Japan Vishay Korea Co. Ltd. Vishay (Taiwan) Ltd. The Republic of China (Taiwan) Vishay (Thailand) Limited

Vishay Israel Limited Z.T.R. Electronics Ltd. Israel ECOMAL Israel Ltd. Israel (e) Vishay Europe GmbH (f) Germany Vishay Europe Sales GmbH Germany Vishay BCcomponents Austria GmbH Austria Vishay BCcomponents Beyschlag GmbH Germany Vishay Electronic GmbH Germany Vishay Siliconix Itzehoe GmbH Germany Roederstein GmbH Germany Roederstein Electronica Portugal Lda. Portugal (g) ECOMAL Deutschland GmbH Germany ECOMAL Schweiz A.G. Switzerland ECOMAL Austria Ges.mbH Austria Vishay Components, S.A. Spain Biohm S.A. Spain ECOMAL Nederland BV Netherlands ECOMAL Belgium N.V. Belgium ECOMAL S.r.O. Czech Republic ECOMAL Denmark A/S Denmark ECOMAL Finland OY Finland ECOMAL France S.A. France ECOMAL UK Ltd. United Kingdom ECOMAL Italy SRL Italy Vishay Electronic SPOL SRO Czech Republic (h) Vishay S.A. France Ultronix, Inc. Delaware E-Sil Components Ltd. United Kingdom Vishay Ltd. United Kingdom **Grued Corporation** Delaware Con-Gro Corp. Delaware Gro-Con, Inc. Delaware Angstrohm Precision Inc. Delaware Angstrohm Holdings Inc. Delaware Vishay Semiconductor GmbH Germany Vishay (Phils.) Inc. Philippines Vishay Semiconductor Ges.mbH Austria (i) Vishay Asia Semiconductor Investments Pte. Ltd. Singapore Vishay Asia Investments Pte. Ltd. Singapore (j) Shanghai Vishay Semiconductors Ltd. China General Semiconductor (China) Co., Ltd. Vishay Xi'an Micro-Electronics Co. Ltd. China China Vishay China Co. Ltd. Vishay HiRel Systems Zhuhai Electronics Co Ltd China China Hungary Vishay Hungary Elektronikai KFT Vishay Semiconductor Malaysia Sdn Bhd Malaysia Vishay Phoenix do Brasil Ltda Brazil Vishay Automotive Systems GmbH

Israel

Germany

(a) -Registrant's indirect ownership percentage in Siliconix Technology C.V. is 100%; 89% is owned by its wholly owned subsidiary Siliconix Incorporated, 10% is owned by its indirectly wholly owned subsidiary Siliconix Semiconductor, Inc., and 1% is owned by its indirect wholly owned subsidiary Vishay Siliconix LLC. Registrant's indirect ownership percentage in Shanghai Simconix Electronic Company Ltd. is 96%.

- Registrant's indirect ownership percentage in Vishay General Semiconductor, L.P. is 100%; 1% is owned by its indirectly wholly owned subsidiary Vishay GSI Holdings, LLC, and 99% is owned by its wholly owned subsidiary Vishay GSI, Inc.

  Registrant's indirect ownership percentage in Vishay Components India Pvt Ltd. is 100%; 69% is owned directly and 31% is owned by its indirectly wholly owned subsidiary Vishay
- (d) -BCcomponents B.V.

- Registrant's indirect ownership percentage in Ecomal Israel Ltd. is 66.7%.
  Registrant's indirect ownership percentage in Vishay Europe GmbH is 100%; over 99.9% is owned directly or indirectly by its wholly owned subsidiary Vishay Israel Limited and its (e) -(f) -
- affiliates; and less than 0.1% is owned directly.

  Registrant's indirect ownership percentage in Roederstein Electronics Portugal Lda.is 100%; 95% is owned by its wholly owned subsidiary Roederstein GmbH and 5% is owned by its wholly owned subsidiary Vishay Europe GmbH. (g) -

- (h) -(i) -
- Registrant's indirect ownership percentage in Vishay S.A. is 99.8%; 2.3% is owned directly and 97.5% is owned by its indirectly wholly owned subsidiary Vishay Europe GmbH.
  Registrant's indirect ownership percentage in Vishay Semiconductor Ges.mbH is 100%, 54% is owned by its indirectly wholly owned subsidiary Sprague Electric of Canada, 44% is owned by its indirectly wholly owned subsidiary Vishay Europe GmbH.
  Registrant's indirect ownership percentage in Vishay Semiconductor GmbH, and 2% is owned by its indirectly wholly owned subsidiary Vishay Europe GmbH.
  Registrant's indirect ownership percentage in Vishay Asia Investments Pte. Ltd. is 100%, 57% is owned by its indirectly wholly owned subsidiary Vishay Asia Semiconductor Investments
  Pte. Ltd., 25% is owned by its indirectly wholly owned subsidiary Vishay Asia Semiconductor GS Investments Pte. Ltd., and 18% is owned by its indirectly wholly owned subsidiary (j) -

# **Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in the following Registration Statements and in the related Prospectuses of Vishay Intertechnology, Inc. of our reports dated February 20, 2013, with respect to the consolidated financial statements of Vishay Intertechnology, Inc. and the effectiveness of internal control over financial reporting of Vishay Intertechnology, Inc., included in this Annual Report (Form10-K) for the year ended December 31, 2012.

Registration Statement Number	Form	Description
333-78045	S-8	1997 Stock Option Program and 1998 Employee Stock Option Program of Vishay Intertechnology, Inc.
333-102507	S-3/A	Class A Warrants to Purchase 7,000,000 Shares of Common Stock; Class B Warrants to Purchase 1,823,529 Shares of Common Stock; 6,176,467 Shares of Common Stock Issuable Upon Exchange of \$105,000,000 Floating Rate Unsecured Notes due 2102; and 8,823,529 Shares of Common Stock Issuable Upon Exercise of Class A Warrants and Class B Warrants
333-144466	S-8	2007 Stock Incentive Program of Vishay Intertechnology, Inc.
333-178895	S-8	Vishay Intertechnology, Inc. Deferred Compensation Plan

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania February 20, 2013

#### CERTIFICATIONS

#### I, Dr. Gerald Paul, certify that:

- 1. I have reviewed this Annual Report on Form 10-K of Vishay Intertechnology, Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 20, 2013

/s/ Gerald Paul
Dr. Gerald Paul
Chief Executive Officer

#### CERTIFICATIONS

#### I, Lori Lipcaman, certify that:

- 1. I have reviewed this Annual Report on Form 10-K of Vishay Intertechnology, Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 20, 2013

<u>/s/ Lori Lipcaman</u> Lori Lipcaman Chief Financial Officer

# CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Vishay Intertechnology, Inc. (the "Company") on Form 10-K for the year ended December 31, 2012 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Dr. Gerald Paul, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Gerald Paul
Dr. Gerald Paul
Chief Executive Officer
February 20, 2013

# CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Vishay Intertechnology, Inc. (the "Company") on Form 10-K for the year ended December 31, 2012 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Lori Lipcaman, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Lori Lipcaman Lori Lipcaman Chief Financial Officer February 20, 2013