









# ANNUAL REPORT

























# SALES BY SEGMENT, 2013

10%

**MOSFETs** 

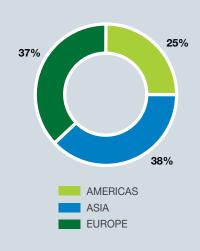
DIODES

INFRARED/OPTO

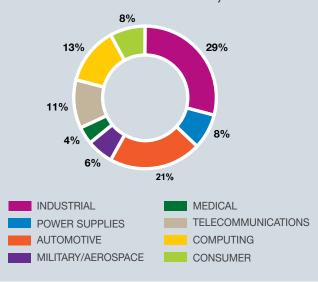
**RESISTORS/INDUCTORS** 

CAPACITORS

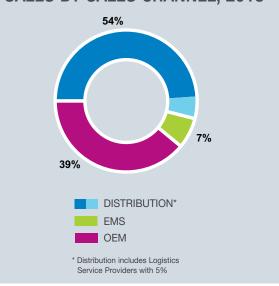








#### SALES BY SALES CHANNEL, 2013





Marc Zandman Executive Chairman of the Board

# LETTER FROM THE EXECUTIVE CHAIRMAN

In 2013, Vishay Intertechnology continued to build upon its position as a leader in the global electronics industry and continued to enhance stockholder value. The Company is successfully following its Growth Plan, the foundation of which is its strong financial health.

For the first time in the Company's history, Vishay will begin to make quarterly cash dividend payments to its stockholders. Our historically strong cash generation even during economically challenging times enables us to start paying a cash dividend to our stockholders, while also continuing to pursue our Growth Plan, which includes organic growth supplemented by small to mid-size acquisitions.

We are pleased to be in a position to return cash to our stockholders and are proud of the strong financial health of Vishay. From 2010 to 2012, we repurchased 44.3 million shares of our common stock, representing 24% of our shares outstanding before we began this initiative. With the initiation

of a quarterly cash dividend program, we have now taken yet another step in our continuous efforts to enhance stockholder value.

We have also enhanced stockholder value through targeted acquisitions of specialty businesses. In June 2013, Vishay acquired MCB Industrie S.A., a manufacturer of resistors used as motion sensors in avionics, military, and space applications and as power resistors in traction, energy distribution, and various other industrial applications.

The acquisition of MCB Industrie S.A. follows the 2012 acquisition of HiRel Systems and the previous year's acquisition of Huntington Electric. Vishay will continue to pursue targeted acquisitions of small to mid-size businesses, while at the same time investing in R&D and stimulating organic growth. I am confident that Vishay's strong financial health and solid market position will lead to continued growth in 2014 and beyond.

I offer my sincere thanks to Vishay's employees, customers, vendors, strategic business partners, and stockholders. Thank you for your faith in Vishay.

Marjahn

Marc Zandman
Executive Chairman of the Board

# LETTER FROM THE CHIEF EXECUTIVE OFFICER

For manufacturers of electronic components, year 2013 overall was not bad. However, developments in relevant market segments differed from

one another. Vishay's results in this environment were acceptable. In 2013, Vishay generated "free cash" (the amount of cash generated from operations in excess of capital expenditures and net of proceeds from the sale of assets) of \$144 million. Vishay has consistently generated in excess of \$100 million in "free cash" in each of the past eight years.

We defended the level of contributive margin during recent years and also kept increases in fixed costs low while adding technical resources. We remain committed to our Growth Plan, which includes organic growth supplemented by small to mid-size acquisitions.

In October, Vishay announced several cost reduction programs. These programs include a plan to enhance the competitiveness of the Company's MOSFETs business, and a voluntary separation/early retirement offer to certain employees Company-wide. There are also two smaller cost

reduction programs concerning manufacturing within the Company's diodes business. The programs in total are expected to lower costs by approximately \$36 million per year when fully implemented at expected

cash costs of approximately \$32 million. These programs are in process, and there are plans for further cost reductions.

In case of a real upturn, Vishay is very well positioned. We would benefit from increased capacities in strategic product lines; from having improved market access in the industrial segment in Asia, specifically in China; from increased technical resources; from our broad and innovative product portfolio; and from our strong position with distributors worldwide.

I am grateful to Vishay's employees, customers, vendors, strategic business partners, and stockholders for their support in 2013 and anticipate further success in 2014.



2.13

Dr. Gerald Paul Chief Executive Officer

## THE VISHAY STORY

Dr. Felix Zandman, with a loan from his cousin Alfred P. Slaner, founded Vishay in 1962 to develop and manufacture Bulk Metal® foil resistors. The Company was named after Dr. Zandman's ancestral village in Lithuania, in memory of family members who perished in the Holocaust. When Dr. Zandman passed away in 2011, he left a lasting legacy. His high standards and values are embedded in Vishay's culture.

#### **ACQUISITIONS**

During the 1960s and 1970s, Vishay became known as the world's leading manufacturer of foil resistors, PhotoStress® products, and strain gages. (These products later became part of Vishay Precision Group [NYSE: VPG], which was spun off as an independent, publicly traded company in 2010 through a tax-free stock dividend to Vishay Intertechnology stockholders.) Vishay's decision in the mid-1980s to grow through acquisitions proved very successful. Starting in 1985, Vishay acquired resistor companies Dale Electronics (U.S.), Draloric Electronic (Germany), and Sfernice (France). These acquisitions helped produce dramatic sales growth.

In the early 1990s, Vishay applied its acquisition strategy to the capacitor market by purchasing Sprague Electric (U.S.), Roederstein (Germany), and Vitramon (U.S.). In 2002, Vishay purchased BCcomponents, the former passive component businesses of Philips Electronics (Netherlands) and Beyschlag (Germany).

In 1998, Vishay acquired the Semiconductor Business Group of TEMIC, which included Telefunken (Germany) and 80.4% of Siliconix (U.S.), producers of MOSFETs, RF transistors, diodes, optoelectronic products, and power and analog switching integrated circuits. Vishay's next semiconductor acquisition came in 2001, with the purchase of the infrared component business of Infineon Technologies (Germany). That was followed the same year by the acquisition of General Semiconductor (U.S.), a leading global manufacturer of rectifiers and diodes. These 2001 acquisitions enhanced Vishay's existing Telefunken and Siliconix businesses and propelled Vishay into the top ranks of discrete semiconductor manufacturers.

In 2005, Vishay purchased the remaining 19.6% of Siliconix shares. Two years later, Vishay acquired selected discrete semiconductor and module product lines from International Rectifier. This acquisition added manufacturing plants in Italy, China, and India and provided products that were new to Vishay: high-voltage planar MOSFETs and high-power diodes and thyristors.

Over the years, Vishay has made a number of other passive component acquisitions. 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; and the wet tantalum capacitor business of KEMET in 2008. In 2011, Vishay acquired the resistor businesses of Huntington Electric, composed of Huntington, Milwaukee, Central, and Mills Resistors. In 2012, Vishay acquired HiRel Systems, a leading supplier of high-reliability transformers, inductors, coils, and power conversion products. In 2013, Vishay acquired MCB Industrie S.A., a manufacturer of resistors used as motion sensors in avionics, military, and space applications and as power resistors in traction, energy distribution, and various other industrial applications.

Since 2011, Vishay's acquisition strategy has focused on opportunistic small to mid-size acquisitions of niche businesses to supplement organic growth.

#### **GLOBAL INDUSTRY LEADER**

Vishay offers one of the industry's broadest portfolios of electronic components. Its "one-stop shop" service for electronic components enables customers to streamline their design and purchasing processes by ordering multiple types of components from Vishay. In addition, Vishay has demonstrated an ability to customize components to meet specific customer needs. These benefits make Vishay a solutions provider and a valuable partner to customers.

Vishay is very well positioned to provide components for new macroeconomic growth drivers such as connectivity (including wireless charging, solid-state drives, and mobile payment systems); mobility (including internal combustion systems, hybrid and fully electric vehicles, off-road equipment, railroad equipment, and ships); and sustainability (including solar, wind turbine, smart grid, and energy exploration systems). Through its R&D, process engineering, and product marketing programs, Vishay generates a steady stream of innovative components to help designers create new generations of end products.

Vishay discrete semiconductors and passive components are used in virtually all types of electronic devices and equipment, in the industrial, computing, automotive, consumer, telecommunications, military, aerospace, power supply, and medical markets. Vishay's global footprint includes manufacturing plants in the Americas, Asia, Europe, and Israel, as well as sales offices worldwide. Vishay's technology innovations, acquisition strategy, focus on cost control, "one-stop shop" service to customers, and custom design capabilities have made it a global industry leader.

Vishay has broad market penetration with a wide range of end markets, a balanced geographic footprint, and a good mix of sales channels. Vishay has strong relationships with original equipment manufacturers (OEMs) of end products, distributors, and electronic manufacturing services (EMS) companies worldwide.

#### DR. ZANDMAN'S LEGACY

When Dr. Felix Zandman, Vishay's founder and Executive Chairman of the Board, passed away in 2011, he left a lasting legacy. His high standards and values are embedded in Vishay's culture. They positively influence the ethical business practices implemented by Vishay personnel, across the globe, every day. Marc Zandman, as Executive Chairman of the Board, and Dr. Gerald Paul, as President and CEO, are committed to building upon Dr. Zandman's efforts and leading Vishay through its next phase of continued growth.

#### DRIVING STOCKHOLDER VALUE

Vishay's Growth Plan is focused on driving stockholder value. It will do this through intensified organic growth, targeted acquisitions, a cash dividend program, and opportunistic stock buybacks, while at the same time maintaining a prudent capital structure.

Vishay is a reliable generator of "free cash" (the amount of cash generated from operations in excess of capital expenditures and net of proceeds from the sale of assets). Vishay has consistently generated in excess of \$100 million in "free cash" in each of the past eight years. From 2010 to 2012, the Company repurchased 44.3 million shares of its common stock, representing 24% of its shares outstanding before it began this initiative. In February 2014, Vishay announced its first ever cash dividend, taking yet another step in its continuous efforts to enhance stockholder value.

#### **NEW PRODUCT DEVELOPMENT**

Areas for accelerated development of new products include all Vishay business segments:

- High-voltage MOSFETs: Next generations of Super Junction
- Mid-voltage ThunderFET® MOSFETs: Dual trench technology
- Low-voltage TrenchFET® MOSFETs: Split gate technology in n-channel and p-channel
- Next generations of DrMOS, smart load switches, microBUCK®, integrated current sensing devices, etc.
- Power modules containing IGBTs, diodes, MOSFETs, and SCRs
- New ultrafast diodes and TVS products
- Further expansion of eSMP® package ranges
- Extended integration of optosensors to more "intelligent" circuits: Encoders for printers, high-power infrared arrays, and proximity sensors with ambient light sensors
- Wide-body optocouplers
- High-power current sense Power Metal Strip® resistors/battery shunts
- Continued expansion of specialty resistors (high-precision, high-temperature, wide-terminal, etc.)
- High-power resistors, including water-cooled components
- Specialty components such as thermo fuses and igniters based on resistor technologies
- Specialty power inductors (IHLP®): Miniature IHLP 1212 series, high-current IHLP 8787 series, and coupled inductors and dual inductors
- Planar transformers
- Heavy-duty film capacitors with improved reliability and performance
- Broad range of RF multilayer ceramic chip capacitors
- Automotive and medical tantalum capacitors (MICROTAN®)
- High-vibration Super Tan® wet tantalum capacitors (T16 series)

### RECENT VISHAY AWARDS



- EE Times and EDN Annual Creativity in Electronics (ACE) Award
- Design News Golden Mousetrap Award
- Electronic Design "Top 101 Components"
- EFY Readers' Choice Awards
- EDN China Innovation Award
- Electronic Products China Top 10 Power Product Award
- HC360 Electronic Industry Top 10 Award
- TTI Global Operations Excellence Award and Supplier Excellence Awards, North America and Europe
- TTI Asia Diamond Award and Supplier Excellence Award
- Mouser Electronics Best in Class Award
- Italian Association of Electronic Suppliers (ASSODEL) Award
- WKK Best Supplier Award

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## DRIVING STOCKHOLDER VALUE

Vishay is focused on driving stockholder value through intensified organic growth, targeted acquisitions, a cash dividend program, and opportunistic stock buybacks, while at the same time maintaining a prudent capital structure.

Vishay Intertechnology 3

# DIVERSE COMPONENTS

#### **PASSIVE COMPONENTS**

#### **RESISTORS**

Resistors restrict current flow. Vishay manufactures many different types of resistive products, including single (discrete) resistors based on film, wirewound, Power Metal Strip®, and other technologies, as well as resistor networks and arrays, in which multiple resistors are combined in a single package. Vishay also manufactures battery management shunts, chip fuses, variable resistors (including potentiometers), and non-linear resistors (including thermistors, used for current protection and temperature sensing). Vishay is a market and technology leader in wirewound and other power resistors, leaded film resistors, and thin film surface-mount resistors.

#### **INDUCTORS**

Inductors, a category of magnetics, use an internal magnetic field to change AC current phase and resist AC current. Inductor functions include controlling AC current and voltage and filtering out unwanted electrical signals. Transformers, also a type of magnetics, are made up of two inductors on a common core of magnetic material. Transformers increase or decrease AC voltage or AC currents. Vishay innovations include IHLP® power inductors, which outperform competing devices. Vishay is a market and technology leader in power inductors and custom magnetics.

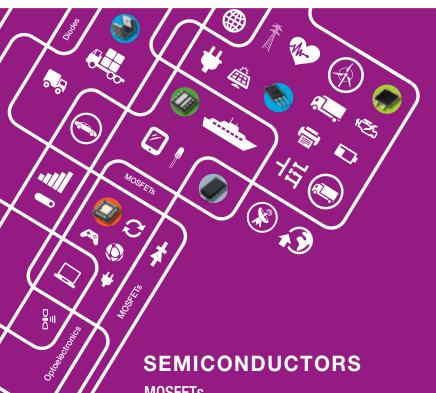
#### **CAPACITORS**

Capacitors store energy and discharge it when needed.

Applications include power conversion, DC-linking, frequency conversion, bypass, decoupling, and filtering. Types of capacitors manufactured by Vishay Intertechnology include tantalum (both solid and wet), ceramic (both multilayer chip and disc), film, power, heavy-current, and aluminum. Vishay is a market and technology leader in wet and conformal-coated tantalum capacitors, as well as capacitors for power electronics. Vishay is also one of the largest manufacturers of molded tantalum surface-mount capacitors.

Passive components (resistors, capacitors, and inductors) do not require a power supply to handle the signals that pass through them. They are used to store electrical charges, to limit or resist electrical current, and to help in filtering, surge suppression, measurement, timing, and tuning applications.





Discrete semiconductors (including MOSFETs, rectifiers, diodes, and infrared optoelectronics components) typically perform the function of switching, amplifying, rectifying, or transmitting electrical signals. Semiconductors are referred to as "active" components because they require power to function.

#### **MOSFETs**

Metal oxide semiconductor field-effect transistors (MOSFETs) function as solid-state switches to control power. For example, they turn off specific functions of smartphones when these functions are not in use, thereby extending battery life. They also help convert power into levels required by other components. Vishay offers lowvoltage TrenchFET® power MOSFETs, medium-voltage power MOSFETs, high-voltage planar MOSFETs, highvoltage Super Junction MOSFETs, and automotive-grade MOSFETs that switch and manage power very efficiently. Vishay is a market and technology leader in low-voltage power MOSFETs.

#### **INTEGRATED CIRCUITS (ICs)**

Integrated circuits combine the functions of multiple semiconductors and passive components on a single chip. IC products from Vishay are focused on analog signal switching and routing, power conversion, and power management. They are used in end products such as tablet, notebook, and desktop computers; smartphones; fixed telecommunications systems; and other products and systems. The Vishay IC portfolio includes power management and power control ICs, smart load switches, and analog switches and multiplexers.

#### RECTIFIERS

Rectifiers convert alternating current (AC) into direct current (DC), a unidirectional current required for operation of many electronic systems. For example, a bridge rectifier is used in a phone charger to change the AC voltage from a wall outlet to a specific DC voltage. Vishay rectifiers, including TMBS®, FRED Pt®, HEXFRED®, SUPERECTIFIER®, eSMP®, and isoCink+™ devices, save space, reduce power losses, and improve efficiency in computing, telecommunications, and other areas. Vishay is a market and technology leader in power rectifiers.

#### DIODES AND THYRISTORS

Diodes and thyristors are semiconductor components that allow voltage to be conducted in only one direction. Most diodes are based on semiconductor p-n junctions; in thyristors there are four layers of p-n material creating three p-n junctions. Both types of devices are used in a wide range of electronic systems to route, switch, and block radio frequency (RF), analog, and power signals. The Vishay diodes portfolio includes a variety of devices, as well as products for transient voltage suppression (TVS), electrostatic discharge (ESD) protection, and electromagnetic interference (EMI) filtering.

#### INFRARED OPTOELECTRONICS

Optoelectronic components emit light, detect light, or do both. Vishay's broad range of optoelectronic components includes infrared (IR) emitters and detectors, IR remote control receivers, optical sensors for detection, optocouplers and solid-state relays for circuit isolation, LEDs for light sources, 7-segment displays, IR data transceiver modules for wireless, twoway data transfer, and custom products. Vishay is a market and technology leader in infrared components.

Vishay Intertechnology

## **DIVERSE MARKETS**

Vishay Intertechnology supports customers in virtually every major market sector. Vishay components are used every day in designs around the world, for applications in industrial, communications, transportation, consumer, medical, and defense products. Highlighted below are the key major market sectors and applications in which Vishay components are found.

#### **INDUSTRIAL**

**29**%



The industrial market covers a range of applications including electric power grid and power distribution systems, smart meters, wind and solar power systems, oil and gas exploration equipment, factory automation, heating and air conditioning systems, test and measurement equipment, escalators and elevators, surveillance systems (including smoke, gas, and water detectors), lighting ballasts, power tools, welding equipment, and more. Electronic components from Vishay help to manage and convert power, drive and control motors, sense temperature, and perform other tasks in industrial applications. Wind turbine systems, for example, include high power semiconductor modules, high-voltage MOSFETs, power ICs, diodes and rectifiers, optical isolators, shunt resistors, crowbar resistors, thermistors, inductors/electromagnetic interference (EMI) filters, and power capacitors.

#### **POWER SUPPLIES**

8%



Adapters, converters, and uninterruptible power supplies (UPS) handle electric current from main power grids and batteries and adjust it for use by all types of devices — from small, portable products to large industrial equipment. Power supplies must meet various power quality, efficiency, energy saving, and safety regulations. Their capabilities range from very low (milliwatts) to very high (kilowatts). Vishay components for power supplies include Super Junction FET MOSFETs, TMBS® diodes, tandem diodes, and Hyperfast rectifiers for power factor correction; film and aluminum electrolytic capacitors for EMI suppression; and transient voltage suppressors for inrush protection; as well as TrenchFET® MOSFETs, power rectifiers, couplers, Power Metal Strip® current sense resistors, and IHLP® power inductors.

#### **AUTOMOTIVE**

21%



Very hot under-the-hood temperatures, cold weather, and vibration are just some of the stresses placed upon automotive components. Vishay components are used in a wide variety of automotive systems including engine control, exhaust, heating/ventilation/air conditioning, steering, braking and safety, transmission, stop/start, lighting, infotainment, driver assistance systems, and navigation. In hybrid and fully electric vehicles they are used in main inverters, high-voltage bus systems, battery management, and energy recuperation systems. As an example of the key roles played by Vishay components in automobiles, electric power steering systems include customized MOSFET modules, optical sensors, Power Metal Strip® current sense resistors, IHLP® power inductors, and aluminum electrolytic boost capacitors.

#### **MILITARY AND AEROSPACE**

6%



Vishay manufactures one of the industry's broadest lines of military-qualified resistors and capacitors, as well as a number of inductors, diodes and rectifiers, MOSFETs, and analog switches that meet the needs of military and aerospace customers. Vishay components are used in mission-critical applications in flight, cockpit, and cabin equipment in aircraft and helicopters; navigation and weather satellites; radar and sonar units; radio and satellite communications; guidance systems; and other military and aerospace equipment and systems. For example, airplane cockpit panels include MOSFETs, Schottky rectifiers, thick film chip resistors, potentiometers, IHLP® power inductors, MICROTAN® tantalum capacitors, and other Vishay components.

#### **MEDICAL**

4%



Many types of components manufactured by Vishay are used in medical implantable devices such as nerve stimulators, pacemakers, and defibrillators. They are used in patient monitoring systems and medical instrumentation including blood pressure cuffs, handheld blood glucose meters, X-ray machines, MRI systems, and CRT equipment. Vishay is a leading manufacturer of telemetry coils for pacemakers and defibrillators and transformers for defibrillators, as well as multilayer ceramic chip capacitors and tantalum capacitors for implantable devices and hearing aids. Vishay components for pacemakers include MICROTAN® tantalum chip capacitors, multilayer ceramic chip capacitors, MOSFETs, thin film top-contact resistors, telemetry coils, and thick film resistors. Vishay provides close engineering support to medical customers.

#### **VISHAY'S BLUE-CHIP CUSTOMERS AND DISTRIBUTORS**

Apple
Arrow
Avnet
Benchmark
Bosch
Boston Scientifi
Celestica
Cisco
Compal
Continental

ABB

Delphi
Delta
Digi-Key
Emerson
Ericsson
Flextronics
Foxconn
Future
General Electric
Harman-Becker
Hella

Hewlett-Packard
Honeywell
Huawei
IBM
Jabil
LG Electronics
Lite-On
Medtronic
Nokia Siemens
Networks
Philips

Plexus Rutronik Samsung Sanmina Seagate Schneider Siemens Sony TRW TTI Tomen Weikeng Western Digital Wistron WPG Yosun Zenitron ZTE ...and others

#### **TELECOMMUNICATIONS**

11%



8%



Vishay components for handheld telecommunications devices and wearables support a number of functions including radio frequency modulation, audio and video recording and playback, charge control, DC/DC conversion, load control, and peripheral connectivity. Vishay provides a broad range of components for EMI filtering, line card protection, and other applications in transmission systems, base stations, access infrastructure, and customer premises equipment. Vishay components for telecommunications applications include MOSFETs, power ICs, analog switches and multiplexers, diodes and rectifiers, several types of resistors including Power Metal Strip®, chip fuses, IHLP® power inductors, several types of capacitors, diodes and rectifiers, solid-sate relays, and proximity and ambient light sensors

#### COMPUTING

13%



Vishay components are found in computers, from network servers to tablets, to handle high current, fast transients, and the excessive heat associated with rapid microprocessing speeds. They also manage power; filter out unwanted electrical signals; and perform other important circuit functions. Vishay components are included in embedded systems, solid-state discs, and switches and routers. In portable computing devices, they convert power, monitor power usage, extend battery life, enable short-range, two-way, wireless connectivity, and support other functions. They also are found in peripherals including printers, photocopiers, graphics cards, and wireless charging devices. Electronic components in computer equipment include MOSFETs, diodes and rectifiers, power ICs, infrared receiver modules, resistors, inductors, and capacitors.

The consumer segment covers a broad range of entertainment products including TVs, e-book readers, game consoles, and set-top boxes, as well as home appliances such as heating and air conditioning systems, washers and dryers, refrigerators, vacuum cleaners, and many other appliances. Vishay manufactures many types of components to satisfy the needs of this broad market. For example, LCD TVs contain electronic components for power conversion, analog/digital signal switching, audio amplification, interface protection, infrared receiving, gesture recognition, EMI filtering, rectification, power factor correction, and other functions. These components include MOSFETs, power ICs, analog switches, several types of diodes and rectifiers, optocouplers, infrared receivers, resistors, thermistors, inductors/EMI filters, aluminum electrolytic capacitors, and more.





## **PRODUCT LIST**

#### **SEMICONDUCTORS**

#### **MOSFETs Segment**

**MOSFETs** 

Low-Voltage TrenchFET® Power MOSFETs Medium-Voltage Power MOSFETs

High-Voltage Planar MOSFETs

High-voitage Planar MOSFEIS

High-Voltage Super Junction MOSFETs

Automotive-Grade MOSFETs

**ICs** 

Power Management and Power Control ICs

Smart Load Switches

Analog Switches and Multiplexers

#### **Diodes Segment**

Rectifiers

Schottky Rectifiers

Ultra-Fast Recovery Rectifiers

Standard and Fast Recovery Rectifiers

High-Power Rectifiers/Diodes

**Bridge Rectifiers** 

Small-Signal Diodes

Schottky and Switching Diodes

Zener Diodes

Tuner/Capacitance Diodes

Bandswitching Diodes

RF PIN Diodes

**Protection Diodes** 

TVS Diodes or TRANSZORB® (unidirectional,

bidirectional)

ESD Protection Diodes (including arrays)

Thyristors/SCRs

**Phase-Control Thyristors** 

Fast Thyristors

**Power Modules** 

Input Modules (diodes and thyristors)

Output and Switching Modules (contain MOSFETs,

IGBTs, and diodes)

**Custom Modules** 

#### **Optoelectronic Components Segment**

Infrared Emitters and Detectors

**Optical Sensors** 

Infrared Remote Control Receivers

Optocouplers

Phototransistor, Photodarlington

Linear

Phototriac

High-Speed

IGBT and MOSFET Driver

Solid-State Relays

LEDs and 7-Segment Displays

Infrared Data Transceiver Modules

**Custom Products** 

#### PASSIVE COMPONENTS

#### **Resistors and Inductors Segment**

Film Resistors

Metal Film Resistors

Thin Film Resistors

Thick Film Resistors

Power Thick Film Resistors

Crowbar and Steel Blade Resistors

Metal Oxide Film Resistors

Carbon Film Resistors

Wirewound Resistors

Vitreous, Cemented, and Housed Resistors

Braking and Neutral Grounding Resistors

Custom Load Banks

Power Metal Strip® Resistors

**Battery Management Shunts** 

Thermo Fuses

Chip Fuses

Pyrotechnic Initiators/Igniters

Variable Resistors

Cermet Variable Resistors

Wirewound Variable Resistors

Conductive Plastic Variable Resistors

Contactless Potentiometers

Hall Effect Position Sensors

Precision Magnetic Encoders

Networks/Arrays

Non-Linear Resistors

**NTC Thermistors** 

PTC Thermistors

**Varistors** 

Magnetics

Inductors

Wireless Charging Coils

**Transformers** 

Connectors

#### **Capacitors Segment**

**Tantalum Capacitors** 

Molded Chip Tantalum Capacitors

Coated Chip Tantalum Capacitors

Solid Through-Hole Tantalum Capacitors

Wet Tantalum Capacitors

Ceramic Capacitors

Multilayer Chip Capacitors

**Disc Capacitors** 

Film Capacitors

**Power Capacitors** 

**Heavy-Current Capacitors** 

**Aluminum Capacitors** 

# CORPORATE INFORMATION

#### **BOARD OF DIRECTORS**

#### Marc Zandman

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

#### Dr. Abraham Ludomirski

Founder and Managing Director of Vitalife Fund, a venture capital company specializing in high-tech electronic medical devices

#### Frank D. Maier

Retired Managing Director TEMIC GmbH

#### Dr. Gerald Paul

President
Chief Executive Officer
Vishav Intertechnology, Inc.

#### Wayne M. Rogers

Investor, specializing in small and mid-size acquisitions; stock commentator and analyst for Fox News Channel

#### Ronald M. Ruzic

Retired Group President BorgWarner Automotive, Inc.

#### Ziv Shoshani

President Chief Executive Officer Vishay Precision Group, Inc.

#### Timothy V. Talbert

Senior Vice President Credit and Originations Lease Corporation of America ("LCA") President LCA Bank Corporation

#### Thomas C. Wertheimer

Accounting Consultant, previously partner of PricewaterhouseCoopers LLP

#### Ruta Zandman

Private Stockholder Vishay Intertechnology, Inc.

## HONORARY EXECUTIVE CHAIRMAN OF THE BOARD

Dr. Felix Zandman (Deceased June 4, 2011)

#### **CORPORATE OFFICERS**

#### Marc Zandman

Executive Chairman of the Board Chief Business Development Officer

#### Dr. Gerald Paul

President

Chief Executive Officer

#### Lori Lipcaman

Executive Vice President Chief Financial Officer

#### Dieter Wunderlich

Executive Vice President Chief Operating Officer

#### Johan Vandoorn

Executive Vice President Chief Technical Officer

#### David Valletta

Executive Vice President Worldwide Sales

#### Peter Henrici

Senior Vice President Corporate Secretary

#### David L. Tomlinson

Senior Vice President Corporate Controller

#### David E. McConnell

Vice President Corporate Treasurer

#### **CORPORATE OFFICE**

Vishay Intertechnology, Inc. 63 Lancaster Avenue Malvern, PA 19355 Phone: 610-644-1300 Fax: 610-296-0657 www.vishay.com

#### **ANNUAL MEETING**

May 20, 2014 at 9:30 a.m. Vishay Intertechnology, Inc. Auditorium 63 Lancaster Avenue Malvern, PA 19355

#### STOCKHOLDER ASSISTANCE

For information about stock transfers, dividend payments, address changes, account consolidation, registration changes, lost stock certificates, and Form 1099, contact the Company's Transfer Agent and Registrar.

#### Transfer Agent and Registrar

American Stock Transfer & Trust Company 59 Maiden Lane New York, NY 10038 Phone: 800-937-5449 Fax: 718-921-8331 Email: info@amstock.com

For other information or questions, contact Investor Relations at (610) 644-1300.

#### Common Stock

Ticker symbol: VSH
The common stock is listed and
principally traded on the New York
Stock Exchange.

#### **Duplicate Mailings**

If you receive more than one Annual Report and Proxy Statement and wish to help us reduce costs by discontinuing multiple mailings, contact our Transfer Agent American Stock Transfer & Trust Company.

#### **Electronic Proxy Materials**

You can receive Vishay's Annual Report and proxy materials electronically, which will give you immediate access to these materials, and will save the Company printing and mailing costs. If you are a registered holder (you own the stock in your name), and wish to receive your proxy materials electronically, go to www.icsdelivery.com/vsh. If you are a street holder (you own this stock through a bank or broker), please contact your broker and ask for electronic delivery of Vishay's proxy materials.







## CORPORATE HEADQUARTERS



63 Lancaster Avenue Malvern, PA 19355-2120 United States



P 610.644.1300



F 610.296.0657

# BUILD VISHAY into your DESIGN

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