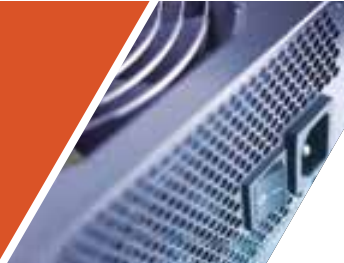


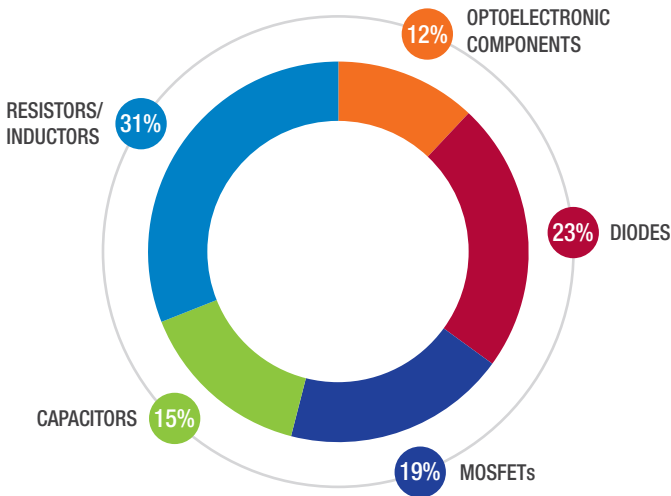


VISHAY INTERTECHNOLOGY, INC.

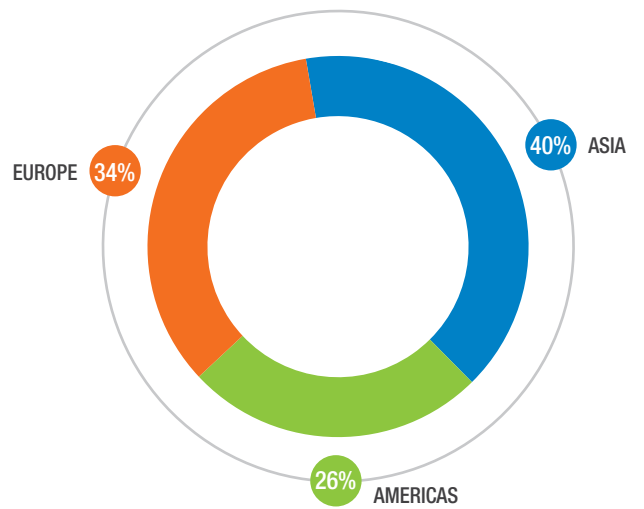
# 2015 ANNUAL REPORT



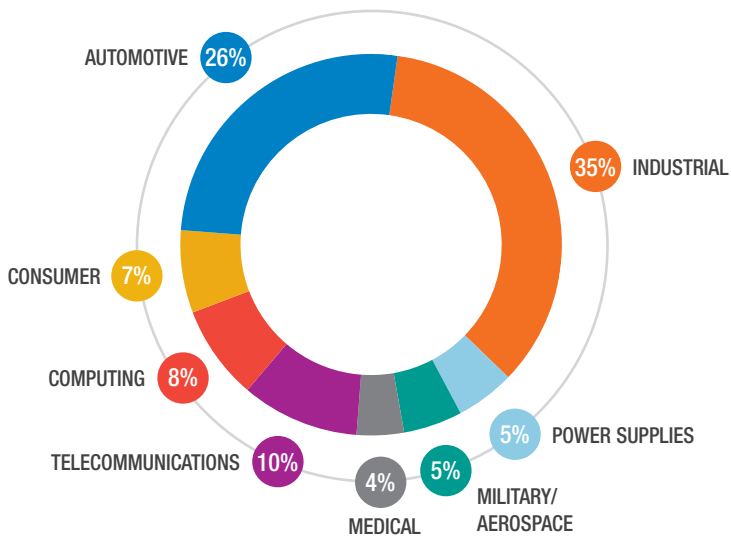
## 2015 SALES BY SEGMENT



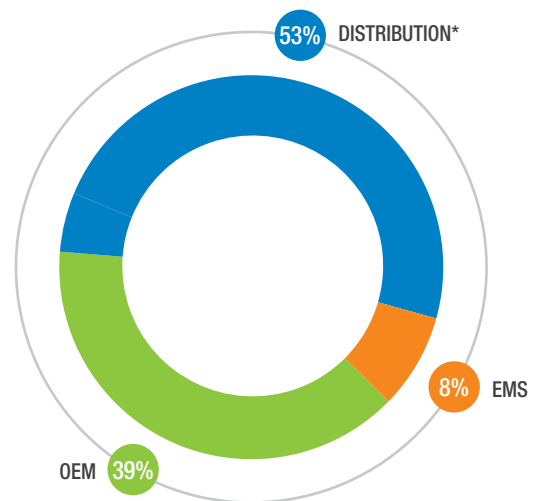
## 2015 SALES BY REGION



## 2015 SALES BY END MARKET



## 2015 SALES BY SALES CHANNEL



\* Distribution includes Logistics Service Providers with 5%

# MESSAGES FROM THE EXECUTIVE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

## THE EXECUTIVE CHAIRMAN

Vishay Intertechnology maintained a steady course throughout 2015 in a turbulent economic environment.

In 2015, we were not able to close on any acquisitions that would have met our financial criteria, even if the targets had been in line with our technological and market criteria. However, we are starting to reap the benefits of our previous acquisitions. While the general performance of the Capella Microsystems acquisition was below expectations, it is enabling an even faster growth of our optical sensors business. The technology transfer from our Holy Stone Polytech acquisition allowed Vishay to make a promising start in penetrating the polymer tantalum capacitor market and also strengthened Vishay's presence in the Japanese market.

In 2015, we continued to focus on shareholder value. We announced our intent to repatriate \$300 million of foreign earnings over the next several years for anticipated cash taxes of approximately 15%. Our strong generation of "free cash," in combination with the availability of this cash in the United States, will substantially

improve our flexibility to pay dividends, buy back stock, and pursue domestic acquisitions. Recently, we announced a 4% increase of our quarterly cash dividend.

Sadly, 2015 also was marked by the passing of Wayne M. Rogers, a member of Vishay's Board of Directors since 2006. Wayne was a true friend of the Company, and I mourn his passing with deep regret.

Vishay was founded to manufacture and market innovative products. Innovation is part of the Company's DNA. During 2016, Vishay will continue to invest in R&D, roll out innovative products, and explore opportunities for targeted acquisitions.

Regardless of macroeconomic conditions during 2016, Vishay's strengths will continue to drive stockholder value and we shall continue to be an industry leader. I thank Vishay's employees, customers, vendors, strategic business partners, and stockholders for their unwavering support during 2015.



A handwritten signature in black ink that reads "Marc Zandman".

**MARC ZANDMAN**  
Executive Chairman  
of the Board

## THE CHIEF EXECUTIVE OFFICER

In 2015, Vishay, like the entire electronic components industry, experienced an unexpected deterioration of the general economic environment after the first quarter. Revenues for the year 2015 decreased by 4% excluding exchange rate effects and acquisitions. As a consequence, Vishay did not meet its plans for profitability. On the other hand, Vishay continued to produce good results and remained a reliable generator of "free cash."

Vishay made substantial progress in several vital areas. In 2015, we were again able to compensate for the impact of inflation and price decline on our contributive margin. We also were able to use cost reductions to compensate for the effect of inflation on our fixed costs. In addition, we initiated additional programs to reduce SG&A costs Company-wide and targeted streamlining and consolidation of production for certain product lines within our Capacitors and our Resistors and Inductors segments. The programs in total are expected to lower costs by approximately \$35 million annually when fully implemented, at an expected cash cost of

approximately \$30 million. We implemented our MOSFETs restructuring program, announced in 2013, and we expect to reap the benefits of it starting in the second quarter of 2016.

While controlling our overall sales costs, we further increased our technical sales force in China, anticipating ongoing growth in China, especially in the industrial and automotive markets where our focus lies.

It is important to keep in mind that the electronics industry is cyclical in nature. Historically, Vishay has maintained its position as an industry leader during both downturns and upturns. With its extremely broad product portfolio, wide range of end markets, balanced geographic footprint, diverse customer base, and strong financial position, Vishay is well positioned for growth.

As I look ahead to success in 2016 and beyond, I thank all Vishay's employees, customers, vendors, strategic business partners, and stockholders for their commitment and support.



A handwritten signature in black ink that reads "G. Paul".

**DR. GERALD PAUL**  
Chief Executive Officer

# THE VISHAY INTERTECHNOLOGY STORY

## COMPANY ROOTS

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. They positively influence the ethical business practices implemented by Vishay personnel across the globe every day.

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.

## ACQUISITIONS

Vishay has a strong track record of strategic acquisitions. These include Dale Electronics, Draloric Electronic, Sfernice, Sprague Electric, Roederstein, Vitramon, BCcomponents, the Semiconductor Business Group of TEMIC (Telefunken and Siliconix), the infrared component business of Infineon Technologies, General Semiconductor, selected product lines from International Rectifier, Huntington Electric, HiRel Systems, MCB Industrie, Holy Stone Polytech, and Capella Microsystems.

## GLOBAL INDUSTRY LEADER

Vishay discrete semiconductors and passive components are used today by virtually all major manufacturers of electronic products worldwide, in the industrial, computing, automotive, consumer, telecommunications, military, aerospace, power supply, and medical markets. Vishay components are inside products and systems used every day, from high-voltage transmission systems to wearables to automobiles to LCD TVs to airplanes to pacemakers. In addition, Vishay has demonstrated an ability to customize components to meet specific customer needs.

Vishay is very well positioned to provide components for new macroeconomic growth drivers such as connectivity, mobility, and sustainability.

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.



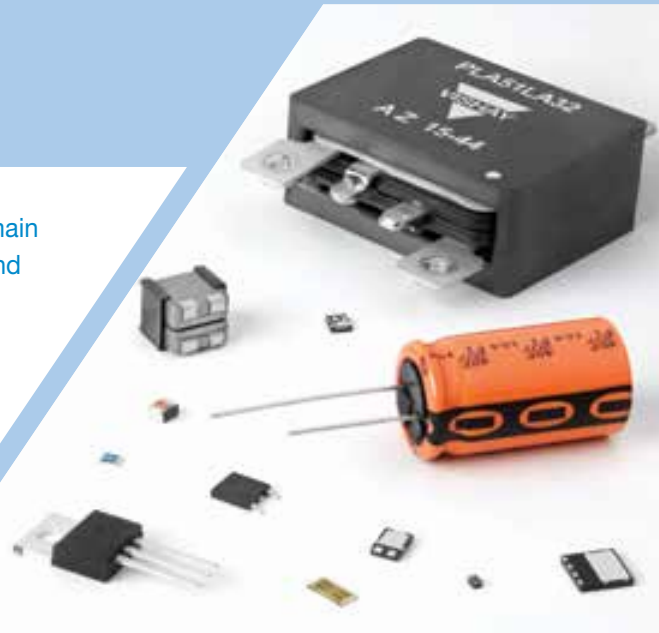
## DRIVING STOCKHOLDER VALUE

Vishay is focused on driving stockholder value. It is doing this through intensified organic growth, supplemented by targeted acquisitions, a regular cash dividend program, and opportunistic stock buybacks, while at the same time maintaining a prudent capital structure. Vishay continues to be 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 ten years.



# DIVERSE COMPONENTS

Components manufactured by Vishay can be separated into two main categories: passive components (including resistors, capacitors, and inductors) and semiconductors (including MOSFETs, integrated circuits, diodes, rectifiers, and infrared optoelectronics components). Passive components 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. Semiconductors 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.



## RESISTORS

Resistors limit 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, pyrotechnic initiators/igniters, variable resistors (including potentiometers), and non-linear resistors (including thermistors, used for current protection and temperature sensing).

## INDUCTORS AND TRANSFORMERS

Inductors use an internal magnetic field to change alternating current (AC) phase, resist AC current, and filter out unwanted electrical signals. Vishay innovations include IHLP® power inductors, which outperform competing devices. Transformers are made up of two inductors on a common core of magnetic material. Transformers increase or decrease AC voltage or AC currents.

## 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 include tantalum (solid, wet, and molded polymer), ceramic (both multilayer chip and disc), film, power, heavy-current, aluminum electrolytic, and, most recently, hybrid storage capacitors.

## 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 low-voltage TrenchFET® power MOSFETs, medium-voltage power MOSFETs, high-voltage planar MOSFETs, high-voltage superjunction MOSFETs, and automotive-grade 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 tablets, notebooks, and desktop computers; smartphones; fixed telecommunications systems; and other products and systems.

## DIODES AND RECTIFIERS

Diodes are used in a wide range of electronic systems to route, regulate, and block radio frequency (RF), analog, and power signals and also to protect systems from surges or electrostatic discharge (ESD) damage, as well as provide electromagnetic interference (EMI) filtering. Rectifiers are used to convert alternating current (AC) into direct current (DC), a unidirectional current required for operation of many power 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.

## 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, two-way data transfer; and custom products.

# DIVERSE MARKETS

Vishay Intertechnology supports customers in virtually every major market sector. Vishay components are used every day in applications in industrial, communications, transportation, consumer, medical, and defense products and systems. Vishay components are well suited for use in the Internet of Things (IoT), in which data is sent back and forth between devices, which can include everything from household appliances to large industrial equipment.

## AUTOMOTIVE

Vishay components are used in a wide variety of automotive systems including fuel pump control, engine control, exhaust emission control, heating/ventilation/air conditioning, steering, braking and active safety control, transmission, stop/start, lighting, airbag control, infotainment, driver assistance systems, and navigation. In hybrid and fully electric vehicles, Vishay components are used in main inverters, high-voltage bus systems, battery management, and energy recuperation systems.

## INDUSTRIAL

Factory automation, drives, M2M communication, electric power grid and power distribution systems, wind and solar power systems, smart meters, oil and gas exploration equipment, trains, heating and air conditioning systems, test and measurement equipment, escalators and elevators, lighting ballasts, power tools, and welding equipment are just some of the products and systems that make up the industrial market. Vishay components help to manage and convert power, drive and control motors, sense temperature, and perform other key tasks.





## POWER SUPPLIES

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 are used in power factor correction, EMI suppression, inrush protection, and other applications.



## MILITARY AND AEROSPACE

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 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.





## CONSUMER

The consumer segment includes both home appliances and entertainment products. Types of components manufactured by Vishay are used in home automation systems, air conditioners, washing machines and dryers, refrigerators and freezers, and robotic vacuum cleaners and lawn mowers, as well as TVs, e-book readers, game consoles, set-top boxes, smartwatches, and more. For example, applications in LCD TVs include power conversion, EMI filtering, rectification, power factor correction, analog/digital signal switching, audio amplification, interface protection, infrared receiving, and gesture recognition.



## COMPUTING

Vishay components are found in computers, from network servers to tablets. They 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, and wireless chargers.



A close-up, slightly blurred image of a medical monitor screen. The screen displays several horizontal waveforms in different colors (red, yellow, green) against a dark background. The monitor is tilted, and the background behind it is a bright, out-of-focus sky.

## MEDICAL

From large equipment such as MRI systems and X-ray machines to small devices such as hearing aids, medical products and systems use types of components manufactured by Vishay. They are used in nerve stimulators, pacemakers, defibrillators, patient monitoring systems, medical instrumentation equipment, blood pressure cuffs, blood glucose meters, and more. Vishay is a leading manufacturer of telemetry coils for pacemakers and defibrillators and transformers for defibrillators, as well as capacitors for implantable devices and hearing aids.

A photograph of several telecommunications towers against a clear sky. The towers are made of metal lattice and have various antennas and equipment attached. The image is partially obscured by a large, semi-transparent purple shape in the foreground.

## TELECOMMUNICATIONS

Vishay components are used in both portable devices and telecommunications infrastructure. Handheld telecommunications devices and wearables support a number of functions including radio frequency modulation, power amplifiers, transmitters, receivers, 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'S BLUE CHIP CUSTOMERS AND DISTRIBUTORS

ABB	General Electric	Schneider
Apple	Gree	Seagate
Arrow	Harman	Siemens
Avnet	Hella	Sony
Benchmark	Honeywell	TTI
Bosch	HP	Tomen
Boston Scientific	Huawei	Valeo
Celestica	Jabil	Weikeng
Cisco	Lenovo	Wistron
Continental	LG Electronics	WPG
Delphi	Lite-On	Xiaomi
Delta	Medtronic	Zenitron
Denso	Philips	ZF Group
Digi-Key	Plexus	...and others
Ericsson	Quanta	
Flex	Rutronik	
Foxconn	Samsung	
Future	Sanmina	



## RECENT INDUSTRY AWARDS

- *EDN* Hot 100 Product Award
- *Electronic Products* Product of the Year Award
- *Selezione di Elettronica* Innovation Award
- *OFweek* LED Award
- *Electronic Products China* Top-10 Power Product Award
- *EDN China* Innovation Award
- Delphi Automotive Pinnacle Awards for Supplier Excellence
- TTI Supplier Excellence Awards: The Americas, Europe, and Asia
- Flextronics Strategic Supplier Award
- *CEM* Editors' Choice Awards
- SPDEI (French Association of Distributors of Electronic Components) Award
- *Electronic Design* Top 101 Components
- *EEPW* Power Supply Products Award



# 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  
Vishay Intertechnology, Inc.

### 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

Senior Vice President  
Corporate Treasurer and Risk Management

## CORPORATE OFFICE

Vishay Intertechnology, Inc.  
63 Lancaster Avenue  
Malvern, PA 19355-2120  
Phone: 610-644-1300  
Fax: 610-296-0657  
www.vishay.com

## ANNUAL MEETING

May 24, 2016 at 9:30 a.m.  
Vishay Intertechnology, Inc.  
Auditorium  
63 Lancaster Avenue  
Malvern, PA 19355-2120

## STOCKHOLDER ASSISTANCE

For information about stock transfers, dividend payments, address changes, account consolidation, registration changes, lost stock certificates, and Form 1099, please 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, please 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, please contact our Transfer Agent American Stock Transfer & Trust Company.

### Electronic Proxy Materials

You can receive Vishay Intertechnology'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, please go to [www.icsdelivery.com/vsh](http://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 Intertechnology's proxy materials.



VISHAY INTERTECHNOLOGY, INC.

## *CORPORATE HEADQUARTERS*

63 Lancaster Avenue  
Malvern, PA 19355-2120  
United States

P 610.644.1300  
F 610.296.0657

[www.vishay.com](http://www.vishay.com)

