VISHAY

The DNA of tech.™

VISHAY INTERTECHNOLOGY, INC.

ANNUAL REPORT

2019

VISHAY INTERTECHNOLOGY

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, ethics, and values are embedded in Vishay's culture. They positively influence the 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.

Global Industry Leader

Vishay passive components and semiconductors are used by virtually all major manufacturers of electronic products worldwide, in the automotive, industrial, power supply, military / aerospace, medical, telecommunications, computing, and consumer markets. They are found inside products and systems used every day, from automobiles to airplanes to power grids to phones to pacemakers. In addition, Vishay has demonstrated an ability to customize components to meet specific customer needs.

The world in which we live is built around innovative electronic technology. Macroeconomic growth drivers such as connectivity, mobility, and sustainability generate the need for components manufactured by Vishay.

Vishay's international 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.

Acquisitions

Vishay has made a number of strategic acquisitions over the years. These include Dale® Electronics, Draloric® Electronic, Sfernice, Sprague® Electric, Roederstein®, Vitramon®, BCcomponents® (including Beyschlag®), 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, Capella Microsystems, and UltraSource®. Vishay continues to explore opportunities for targeted acquisitions that fit its business model.

FROM THE EXECUTIVES

Executive Chairman of the Board

Marc Zandman

In 2019, a year of correction after two years of strong growth, Vishay Intertechnology demonstrated its strength as a financially successful, solid, and predictable company.

We remain committed to a deliberate refreshment of the Board. In November 2019 Vishay announced the appointment of Jeffrey H. Vanneste to its Board of Directors. Mr. Vanneste recently retired as Chief Financial Officer of Lear Corporation (NYSE: LEA), a global automotive technology leader in seating and electrical and electronic systems. He brings to the Board extensive knowledge of and experience in the automotive industry, one of our key focus markets. Additionally, his experience as the Chief Financial Officer of a multinational, publicly traded company allows him to bring an important perspective to the Board and the Audit Committee.

I remain very optimistic about Vishay's prospects for continued long-term growth as our products are a necessary and pervasive part of technological shifts occurring in the automotive, industrial, telecom, medical, and military / aerospace markets.

I am grateful to all members of the Vishay family for their hard work and dedication and to our customers, vendors, strategic business partners, and stockholders for their constant and tireless support.

Chief Executive Officer

Dr. Gerald Paul

2019 was a year of correction for Vishay Intertechnology and the electronic components business. Compared to the previous two years sales volumes dropped sharply as the inflated inventories in the supply chain were reduced. The drastically reduced manufacturing volumes negatively impacted Vishay's profitability. Despite the drop in sales we continued to be an excellent generator of "free cash" (the amount of cash generated from operations in excess of capital expenditures and net proceeds from the sale of assets). We generated $140 million in "free cash" during 2019 despite having paid cash taxes of $39 million related to our cash repatriation program, after repatriating $724 million net of taxes in 2018.

After last year's correction we expect to return to solid growth as the fundamentals have not changed. Vishay is well recognized as a manufacturer of one of the broadest lines of discrete semiconductors and passive components. Our quality and customer relationships uniquely position us in those end markets that no doubt will continue to show accelerated growth: automotive and industrial.

I thank all of Vishay's employees, customers, vendors, strategic business partners, and stockholders for their continued faith in Vishay.

PASSIVE COMPONENTS

The main building blocks of electronic circuits, passive components are used to store or dissipate electrical energy, limit or resist electrical current, and help in filtering, attenuating, surge suppression, measurement, sensing, timing, and tuning applications.

Resistors

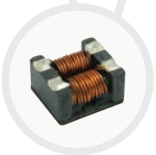
Vishay manufactures a variety of resistive products offering standard to ultra high precision, stability, frequency, and power. These include discrete devices and multi-resistor networks and arrays based on film, wirewound, Power Metal Strip®, and other technologies, in addition to battery management shunts, chip fuses, pyrotechnic initiators / igniters, variable resistors, position sensors, encoders and transducers, current and temperature sensors, and non-linear resistor devices.

Capacitors

Typical capacitor applications include power conversion, DC linking, frequency conversion, bypass, decoupling, filtering, and serving as backup energy sources. Vishay's capacitor portfolio includes tantalum, single and multilayer ceramic, film, power, heavy current, and aluminum electrolytic devices, as well as hybrid energy storage capacitors and supercapacitors.

Inductors and Transformers

In AC electronic equipment, inductors are used to block AC current and allow DC current to pass. Vishay's innovations include low profile IHLP® power inductors, which outperform competing high current devices, and a variety of custom magnetics and chokes. Transformers are made up of at least two inductors on a common core of magnetic material, and are essential components in AC electrical energy transmission and distribution.

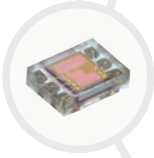


SEMICONDUCTORS

Semiconductors perform functions such as switching, amplifying, rectifying, and transmitting electrical signals. They are built on a variety of substrate materials such as silicon, germanium, gallium arsenide, gallium nitride, and silicon carbide.

Diodes and Rectifiers

Diodes are utilized in a wide range of electronic systems to route, regulate, and block RF, analog, and power signals; protect systems from surges or ESD damage; and provide EMI filtering. Composed of one or more diodes, rectifiers are used for AC/DC conversion and are often found in DC power supplies and high voltage power transmission systems. Vishay's offerings include power devices and small signal, Zener, Schottky, and ESD and TVS protection diodes. The company's lineup is completed with thyristors and power modules featuring integrated diodes, MOSFETs, and IGBTs.

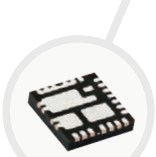


Optoelectronics

Vishay is one of the world's largest manufacturers of optoelectronic components, which emit and / or detect light. The company's portfolio includes IR emitters, receivers, data transceiver modules, and touch panels; photo detectors; optical sensors; optocouplers and solid-state relays for circuit isolation; LEDs; LCDs; plasma displays; 7-segment displays; and custom products.

MOSFETs

MOSFETs convert power into levels required by other circuit components, and are used as load switches in devices like smartphones to turn off specific functions or power supplies not in use, thereby extending battery life. Vishay's offerings include low voltage TrenchFET® devices, medium voltage MOSFETs, high voltage planar devices, high voltage superjunction MOSFETs, and Automotive Grade MOSFETs.



Integrated Circuits (ICs)

ICs save PCB space and lower costs by combining multiple functions on a single chip. Vishay's IC products are focused on analog signal switching and routing, power conversion, power management, and integrated smart power solutions for tablets, notebooks, and desktop computers; game consoles; smartphones; industrial testing equipment; fixed telecommunications systems; automotive electronics; and more.

DIVERSE MARKETS

With its broad and competitive product and technology portfolio, Vishay supports customers in virtually every market sector.

Automotive

Vishay manufactures a broad range of passive and active discrete components that can withstand the high temperatures and peak transients of automotive systems, from engine control to infotainment and multi-phase converters in advanced driver assistance systems. The company's devices support the innovative applications in today's hybrid and electric vehicles, including traction inverters, DC/DC converters for 48 V power subsystems, battery management with cell balancing, on-board and off-board battery charging, energy recuperation systems, and more.

Industrial

Vishay components support power backup and energy harvesting solutions; drive and control motors; sense temperature; measure current; and more. They are optimized for a wide range of end products, including factory automation, power distribution, and renewable energy systems; oil and gas exploration equipment; trains; HVAC systems; test and measurement equipment; lighting ballasts; smoke detectors; power tools; and robotic systems. Vishay devices are well suited for the Industry 4.0 transition and the Internet of Things (IoT).

Power Supplies

Adapters, converters, battery chargers, and uninterruptible power supplies (UPS) adjust and control electric current from main power grids and for use in a wide variety of devices — from small, portable products to large industrial equipment. In power supplies, Vishay components are used for applications including rectification; power factor correction; galvanic insulation; temperature sensing; energy storage and transformation; EMI suppression; and inrush protection.

Military and Aerospace

Vishay manufactures one of the industry's broadest lines of military-qualified resistors and capacitors, as well as a number of other components that meet the stringent needs of military and aerospace customers. Vishay components are used in aircraft flight, cockpit, and cabin equipment; unmanned aerial systems; drones; navigation and weather satellites; radar and sonar units; radio and satellite communications; guidance systems; deep space exploration; and more.

Consumer

Vishay components can be found in home appliances; home automation systems; and entertainment and lifestyle products, such as televisions, e-book readers, smart speakers and voice-activated devices, games consoles, VR / AR headsets, smart watches, and more.

Computing

In notebooks, tablets, desktops, servers, and routers, Vishay components are used to manage power, filter unwanted electrical signals, and provide ESD protection. In portable computing devices, they convert power and monitor power usage to extend battery life and enable short range, two-way wireless connectivity. They also are found in peripherals including printers, photocopiers, and wireless chargers.

Medical

Vishay devices can be found in a wide range of medical products and systems, including medical imaging systems. The company is a leading manufacturer of telemetry coils for pacemakers and transformers for defibrillators, as well as capacitors for implantable devices and hearing aids.

Telecommunications

Vishay components support a number of functions for handheld telecommunications devices and wearables, such as improving efficiency and increasing battery life in smartphones and providing signal filtering and impedance matching in 4G and 5G systems. The devices are also used for EMI filtering, surge line card protection, and other applications in transmission systems, base stations, and access infrastructure.

VISHAY'S BLUE CHIP CUSTOMERS AND DISTRIBUTORS

ABB
Apple
Aptiv
Arrow
Asus
Avnet
BAE Systems
Bosch
Boston Scientific
BYD
Celestica
Cisco
Collins Aerospace
Continental
Delta
Denso
Digi-Key
Ericsson
Flex
Foxconn
Future
General Electric
Harman
Hella
Honeywell
Hyundai
Jabil
Keboda
LG Electronics
Lite-On
Magneti Marelli
Medtronic
Nexty
Nokia
Plexus
Quanta
Rutronik
Samsung
Sanmina
Schneider
Seagate
Siemens
Sony
Tesla
TTI
Valeo
Weikeng
WPG
ZF Group
…and others

RECENT INDUSTRY AWARDS

TTI 2018 Supplier Excellence Award - Platinum for the Americas, Europe, and Asia

Continental 2017 Supplier of the Year Award

Siemens 2017 SEWC Best Cooperation Supplier Award

FLEX 2017 Preferred Supplier Award

AspenCore 2019 China World Electronics Achievement Award

Electronic Products China 2019 Top-10 Power Product Award

2018 Design and Elektronik Innovator of the Year Award

Electronics Maker Best Award 2018

DRIVING STOCKHOLDER VALUE

Vishay is firmly committed to driving stockholder value. It accomplishes this through organic growth that is 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 $200 million in cash from operations in each of the past eighteen years.

CORPORATE INFORMATION

Board of Directors

Marc Zandman

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

Michael J. Cody

Retired Vice President of
Corporate Development
Raytheon Company

Dr. Abraham Ludomirski

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

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

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

Retired President
LCA Bank Corporation

Jeffrey H. Vanneste

Retired Chief Financial Officer
Lear Corporation

Thomas C. Wertheimer

Accounting Consultant, previously partner of PricewaterhouseCoopers LLP

Ruta Zandman

Private Stockholder
Vishay Intertechnology, Inc.

Raanan Zilberman

Former President and
Chief Executive Officer
Caesarstone Ltd.

Honorary Executive Chairman of the Board

Dr. Felix Zandman
(Deceased June 4, 2011)

Executive 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

Johan Vandoorn

Executive Vice President
Chief Technical Officer
Deputy to the CEO

Werner Gebhardt

Executive Vice President
Human Resources

Joel Smejkal

Executive Vice President
Business Head Passive Components

Clarence Tse

Executive Vice President
Business Head Semiconductors

David Valletta

Executive Vice President
Worldwide Sales

Corporate Office

Vishay Intertechnology, Inc.
63 Lancaster Avenue
Malvern, PA 19355-2120
Phone: 610.644.1300
www.vishay.com

Annual Meeting

May 19, 2020 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
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. 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.

The DNA of tech.™

Vishay Intertechnology, Inc.

63 Lancaster Avenue
Malvern, PA 19355-2120
United States
610.644.1300

www.vishay.com