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

FORM 10-K

/ X / ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (FEE REQUIRED)

For the fiscal year ended December 31, 1993

OR

/ / TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (NO FEE REQUIRED)

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 1-7416

VISHAY INTERTECHNOLOGY, INC.

(Exact name of registrant as specified in its charter)

Delaware 38-1686453

(State or other jurisdiction of incorporation or organization) identification no.)

63 Lincoln Highway Malvern, Pennsylvania

19355-2120

(Address of principal executive offices) (Zip code)

Registrant's telephone number, including area code: (610) 644-1300

Securities registered pursuant to Section 12(b) of the Act:

Title of each class
-----Common Stock, \$.10 par value

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes X No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ( )

The aggregate market value of the Common Stock held by non-affiliates of the registrant as of March 25, 1994, assuming conversion of all its Class B Common Stock into Common Stock of the registrant held by non-affiliates, was \$648,375,000.

As of March 25, 1994, registrant had 17,641,081 shares of its Common Stock and 3,590,232 shares of its Class B common stock outstanding.

Portions of the registrant's definitive proxy statement, which will be filed within 120 days of December 31, 1993, are incorporated by reference into Part III.

PART I.

Item 1. DESCRIPTION OF BUSINESS

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Vishay Intertechnology, Inc. (together with its consolidated subsidiaries, "Vishay" or the "Company") is a leading international manufacturer and supplier of passive electronic components, particularly resistors and tantalum and film capacitors. Resistors, the most common component in electronic circuits, are used to adjust and regulate levels of voltage and current. Capacitors perform energy storage, frequency control, timing and filtering functions in almost all types of electronic equipment. The Company's products are used in a broad variety of electronic applications, including those in the computer, telecommunications, military/aerospace, instrument, industrial, automotive, office equipment and entertainment industries.

Through a series of acquisitions over the last eight years, the Company has grown from a small manufacturer of precision resistors and strain gages to one of the world's largest manufacturers and suppliers of a broad line of passive electronic compo-The Company's acquisition strategy has focused on acquiring manufacturers of those types of quality products in which the Company has strong marketing organizations and technical expertise but who have encountered operating, financial or management difficulties. In connection with each acquisition, the Company has implemented programs to realize synergies between its existing businesses and the acquired business. These programs have focused on reducing selling, general and administrative expenses and maximizing production efficiencies, including the integration of redundant sales offices and administrative functions and the transfer of some production operations to regions where the Company  $\,$ can take advantage of lower labor costs and available tax and other incentives.

The Company's first major acquisition was the purchase in 1985 of a 50% interest in Dale Electronics, Inc. ("Dale"), a United States producer of precision and commercial resistors, magnetic components and plasma displays. In 1987, the Company established a major presence in Germany with the acquisition of Draloric Electronic GmbH ("Draloric"), strengthening the Company's metal film resistor and specialty resistor businesses. In 1988, the Company acquired the remaining 50% interest in Dale as well as all of the outstanding shares of Sfernice, S.A., a French manufacturer of resistors, potentiometers and printed circuit boards. Subsequently, Vishay acquired several small United States inductor manufacturers and one French inductor manufacturer. In 1992, the Company acquired the worldwide tantalum capacitor and United States thick film resistor network businesses of American Annuity Group, Inc., formerly Sprague Technologies, Inc. ("STI"). In January

1993, Vishay exercised its option to purchase 81% of the outstanding share capital of Roederstein Spezialfabriken fur Bauelemente der Elektronik und Kondensatoren der Starkstromtechnik GmbH ("Roederstein"). Vishay acquired its initial 19% interest in Roederstein in February 1992. Roederstein's principal products include film, aluminum electrolytic and tantalum capacitors as well as resistors. It also manufactures single layer ceramic capacitors, heavy current capacitors and triplers.

Most recently, on July 2, 1993, Vishay acquired the assets of the tantalum capacitor business of Philips Electronics North America Corporation, a subsidiary of Philips Electronics N.V., for approximately \$11\$ million.

The Company currently operates as five separate business units: (i) Vishay Electronic Components, U.S., which is comprised of Dale, a manufacturer and supplier of resistors, the Vishay Resistive Systems Unit, which primarily manufactures high performance foil resistors and thin film resistor networks, and Sprague, which consists of the tantalum capacitor and thick film resistor network manufacturing businesses acquired from STI; (ii) Draloric/Roederstein, German-based manufacturers and suppliers of resistors and capacitors in Europe; (iii) Sfernice, S.A., a resistor producer in France; (iv) Measurements Group, Inc., which produces resistive sensors and other stress measuring devices in the United States; and (v) Vishay Components (UK) Ltd., a manufacturer and supplier of the Company's products in the United Kingdom.

Vishay was incorporated in Delaware in 1962 and maintains its principal executive offices at 63 Lincoln Highway, Malvern, Pennsylvania 19355-2120. The telephone number is (610) 644-1300.

#### Products

Vishay designs, manufactures and markets electronic components that cover a wide range of products and technologies. The products primarily consist of fixed resistors, tantalum and film capacitors, and, to a lesser extent, inductors, specialty ceramic capacitors, transformers, potentiometers, plasma displays and thermistors.

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 in numerous materials and forms. Resistive components may be either fixed or variable, the distinction being whether the resistance is adjustable (variable) or not (fixed). Resistors can also be used as measuring devices, such as Vishay's resistive sensors. Resistive sensors, or strain gages, are used in electronic measurement and experimental stress analysis systems, as

well as in transducers, for measuring loads (scales), acceleration and fluid pressure.

Fixed resistive components can be broadly categorized as discrete components or networks. A discrete component is designed to perform a single function and is incorporated by the customer in the circuitry of a system which requires that particular function. A network, on the other hand, is a microcircuit (consisting of a number of resistors placed on a ceramic base), which is designed to perform a number of standard functions. Vishay manufactures discrete resistors and networks both of which are principally sold in the precision or higher quality segments of the resistor market (i.e., fixed precision wirewound, metal film and foil resistors and network resistors).

The Company's resistive products primarily consist of fixed resistors (foil and thin film resistors, wire-wound resistors, metal film resistors, oxide film resistors, thermistors, thick film resistor chips, networks (microcircuits) and resistive sensors); variable resistors (trimmers and potentiometers); magnetic components (inductors and transformers) and printed circuit boards. Vishay produces resistors for virtually every segment of the resistive product market, from resistors used in the highest quality precision instruments for which the performance of the resistors is the most important requirement, to resistors for which price is the most important factor.

Capacitors perform energy storage, frequency control, timing and filtering functions in most types of electronic equipment. The more important applications for capacitors are (i) electronic filtering for linear and switching power supplies, (ii) decoupling and bypass of electronic signals or integrated circuits and circuit boards, and (iii) frequency control, timing and conditioning of electronic signals for a broad range of applications. The Company's capacitor products primarily consist of solid tantalum chip capacitors, solid tantalum leaded capacitors, wet/foil tantalum capacitors and film capacitors. The tantalum capacitor is the smallest and most stable type of capacitor for its range of capacitance.

#### Markets

The Company's products are sold primarily to other manufacturers and, to a much lesser extent, to United States and foreign government agencies. Its products are used in, among other things, the circuitry of measuring instruments, industrial equipment, automotive applications including engine controls and fuel injection systems, process control systems, computer-related products, telecommunications, military and aerospace applications, medical instruments and scales.

Approximately 41% of the Company's net sales for the year ended December 31, 1993 was attributable to sales to customers in the United States while the remainder was attributable to sales primarily in Europe. In the United States, products are marketed primarily through independent manufacturers' representatives (who are compensated solely on a commission basis), the Company's own sales personnel and independent distributors. Company has regional sales personnel in several locations to provide technical and sales support for independent manufacturers' representatives throughout the United States, Mexico and Canada. In addition, the Company uses independent distributors to resell its products. Internationally, products are sold to customers in Germany, the United Kingdom, France, Israel, Japan, Singapore, South Korea and other European and Pacific Rim countries through Company sales offices, independent manufacturers' representatives and distributors.

The Company endeavors to have its products incorporated into the design of electronic equipment at the research and prototype stages. Vishay employs its own staff of application and field engineers who work with its customers, independent manufacturers' representatives and distributors to solve technical problems and develop products to meet specific needs.

One of the fastest growing markets for passive electronic components is for surface mounted devices. These devices adhere to the surface of a circuit board rather than being secured by leads that pass through holes to the back side of the board. Surface mounting provides certain advantages over through-hole mounting, including the ability to place more components on a circuit board. The Company believes it has taken advantage of the growth of the surface mount market and is an industry leader in designing and marketing surface mount devices. The Company offers a wide range of these devices, including both thick and thin film resistor chips and networks, capacitors, inductors, oscillators, transformers and potentiometers, as well as a number of component packaging styles to facilitate automated product assembly by its customers.

Sales of the Company's products to manufacturers in defense-related industries have continued to decline over the past year, primarily as a result of reduced governmental procurements of defense-related products. The Company has qualified certain products under various military specifications, approved and monitored by the United States Defense Electronic Supply Center ("DESC"), and under certain European military specifications. Classification levels have been established by DESC based upon the rate of failure of products to meet specifications (the "Classification Level"). In order to maintain the Classification Level of a product, tests must be continuously performed, and the results of these tests must be reported to DESC. If the product fails to meet the requirements for the applicable Classification Level, the product's classification may be reduced to a less stringent level. In that event, the Company's product may not qualify for use as a

component in other products required to meet a more stringent Classification Level, although the Company's product may still be sold for use in other products requiring a less stringent classification. After completion of additional retesting, however, the product may again be classified at its original level. Sales of the product may be adversely affected pending the completion of any such additional retesting and the resumption of the original Classification Level. Various United States manufacturing facilities from time to time experience a product Classification Level modification. During the time that such level is modified for any specific product, net sales and earnings derived from such product may be adversely affected.

The Company is undertaking to have the quality systems at all of its major manufacturing facilities approved under the established ISO 9000 international quality control standard. ISO 9000 is a comprehensive set of quality program standards developed by the International Standards Organization. Several of the Company's manufacturing operations have already received ISO 9000 approval and others are actively pursuing such approval.

Vishay's largest customers vary from year to year, and no customer has long-term commitments to purchase products of the Company. No customer accounted for more than 10% of the Company's sales for the year ended December 31, 1993.

## Research and Development

The Company maintains separate research and development staffs and promotes separate programs at a number of its production facilities to develop new products and new applications of existing products, and to improve product and manufacturing techniques. This decentralized system encourages individual product development and, from time to time, developments at one manufacturing facility will have applications at another facility. Most of the Company's products and manufacturing processes have been invented, designed and developed by Company engineers and scientists. Company research and development costs were approximately \$7.1 million for 1993, \$7.1 million for 1992 and \$7.0 million for 1991. The Company spends additional amounts for the development of machinery and equipment for new processes and for cost reduction measures. See "Competition".

## Sources of Supplies

Although most materials incorporated in the Company's products are available from a number of sources, certain materials (particularly tantalum) are available only from a limited number of suppliers. In order to protect itself from manufacturing disruptions due to potential supply shortages, the Company

maintains a supply of certain critical materials, the nondelivery of which could have a materially adverse effect on the Company.

Tantalum metal is the principal material used in the manufacture of tantalum capacitor products. Tantalum is purchased in powder form, primarily under annual contracts with domestic suppliers, at prices that are subject to periodic adjustment. The Company is a major consumer of the world's annual tantalum production. Tantalum, and other required raw materials have generally been available in sufficient quantities, but have been subject to wide price variations. Disruptions in the supply of, or substantial increases in the price of, tantalum metal could have a materially adverse effect on the Company.

## Inventory and Backlog

Although Vishay manufactures standardized products, a substantial portion of its products are produced to meet specific customer specifications. The Company does, however, maintain an inventory of resistors and other components. Backlog of outstanding orders for the Company's products was \$198.4 million, \$134.3 million and \$104.5 million, at December 31, 1993, 1992 and 1991, respectively. The increase in backlog at December 31, 1993 and 1992, as compared with prior periods, is attributable to the acquisitions of Roederstein and Sprague, respectively. The current backlog is expected to be filled during the next 12 months. Most of the orders in the Company's backlog may be cancelled by its customers, in whole or in part, although sometimes subject to penalty. To date, however, cancellations have not represented a material portion of the backlog.

## Competition

The Company faces strong competition in its various product lines from both domestic and foreign manufacturers that produce products using technologies similar to those of the Company. Certain of the Company's products compete on the basis of its marketing and distribution network, which provides a high level of customer service, such as design assistance, order expediting and prompt delivery. In addition, the Company's competitive position depends on its product quality, know-how, proprietary data, marketing and service capabilities, business reputation and price.

A number of the Company's customers are contractors or subcontractors on various United States and foreign government contracts. Under certain United States Government contracts, retroactive adjustments can be made to contract prices affecting the profit margin on such contracts. The Company believes that its profits are not excessive and, accordingly, no provision has been made for any such adjustment.

In several areas the Company strengthens its market position by conducting seminars and educational programs for customers and for potential customers.

Although the Company has numerous United States and foreign patents covering certain of its products and manufacturing processes, and acquired various patents with the acquisition of the STI tantalum capacitor and network lines, no particular patent is considered material to the business of the Company.

### Manufacturing Operations

The Company conducts manufacturing operations in three principal geographic regions: the United States, Europe and Israel. At December 31, 1993, approximately 40% of the Company's identifiable assets were located in the United States, approximately 50% were located in Europe, approximately 9% were located in Israel and 1% in other regions. In the United States, the Company's main manufacturing facilities are located in Nebraska, South Dakota, North Carolina, Pennsylvania and Maine. In Europe, the Company's main manufacturing facilities are located in Selb and Landshut, Germany and Nice and Tours, France. In Israel, manufacturing facilities are located in Holon and Dimona. The Company also maintains manufacturing facilities in Juarez, Mexico and Toronto, Canada.

For the year ended December 31, 1993, sales of products manufactured in Israel accounted for approximately 8% of the Company's net sales. The Company conducts manufacturing operations in Israel in order to take advantage of the relatively low wage rates in Israel and several incentive programs instituted by the Government of Israel, including certain tax abatements. These programs have contributed substantially to the growth and profitability of the Company. The Company may be materially and adversely affected if these incentive programs were no longer available to the Company or if hostilities were to occur in the Middle East that materially interfere with the Company's operations in Israel.

Due to a shift in manufacturing emphasis, resulting from the growing market for surface mount devices, over-capacity at a number of the Company's manufacturing facilities and the relocation of some production to regions with lower labor costs, portions of the Company's work force and certain facilities may not be fully utilized in the future. As a result, the Company may incur significant costs in connection with work force reductions and the closing of additional manufacturing facilities.

### Environment

The Company's manufacturing operations are subject to various federal, state and local laws restricting discharge of materials into the environment. The Company is not involved in any pending or threatened proceedings which would require curtailment of its operations at this time. However, the Company is involved in various legal actions concerning state government enforcement proceedings and various dump site clean-ups. These actions may result in fines and/or clean-up expenses. The Company believes that any fine and/or clean-up expense, if imposed, would not be material. The Company continually expends funds to ensure that its facilities comply with applicable environmental regulations. The Company has nearly completed its undertaking to comply with new environmental regulations, relating to the elimination of chlorofluorocarbons (CFCs) and ozone depleting substances (ODS), and other anticipated compliances with the Clean Air Act amendments of 1990. The Company anticipates that it will undertake capital expenditures of approximately \$1,000,000 in fiscal 1994 for general environmental enhancement programs.

### **Employees**

As of December 31, 1993, the Company employed approximately 14,200 full time employees of whom approximately 8,600 were located outside the United States. The Company hires few employees on a part time basis. While many of the Company's foreign employees are members of trade unions, none of the Company's employees located in the United States are represented by unions except for approximately 172 employees at the North Adams, Massachusetts facility acquired from STI, who are represented by three unions. The Company is currently negotiating the collective bargaining agreements of such domestic employees with each of these unions. The Company believes that its relationship with its employees is excellent.

## Item 2. PROPERTIES

The Company maintains 53 manufacturing facilities. The principal locations of such facilities, along with available space including administrative offices, are:

Owned Locations	Approx. Available Space (Square Feet)		
United States			
Malvern and Bradford, PA	223,000		
Columbus and Norfolk, NE	336,000		
Wendell and Statesville, NC	193,000		
Sanford, ME	212,000		
Foreign			
Germany (11 locations)	1,375,000		
France (11 locations)	606,000		
Israel (2 locations)	400,000		
Portugal	100,000		

Vishay owns an additional 239,000 square feet of manufacturing facilities located in Colorado, Maryland, South Dakota and Florida

Available leased facilities in the United States include 420,000 square feet of space located in New York, California, New Jersey, South Dakota, Texas, Massachusetts and New Hampshire. Foreign leased facilities consist of 206,000 square feet in Mexico, 151,000 square feet in France, 130,000 square feet in England, 109,000 square feet in Canada and 98,000 square feet in Germany. The Company also has facilities in Japan, Austria, Switzerland, and the Czech Republic.

In September 1993, Vishay entered into negotiations to build an additional manufacturing facility in Israel. The facility, which will be approximately 200,000 square feet, will be located near Haifa.

 $$\operatorname{\textsc{Management}}$  believes it has sufficient manufacturing space for its current business.

## Item 3. LEGAL PROCEEDINGS

The Company, from time to time, is involved in routine litigation incidental to its business. Management believes that such matters, either individually or in the aggregate, should not have a materially adverse effect on the Company's business or financial condition.

# Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

## Item 4A. EXECUTIVE OFFICERS OF THE REGISTRANT

The following table sets forth certain information regarding the executive officers of the Company as of March 25, 1994.

Nama	A	Positions Held
Name	Age	POSICIONS HELD
Felix Zandman*	65	Chairman of the Board, President, Chief Executive Officer and Director
Robert A. Freece*	53	Vice President, Treasurer, Chief Financial Officer and Director
Henry V. Landau	47	Vice President; President Measurements Group, Inc.
Moshe Shamir	70	Vice President; President Vishay Israel Limited
William J. Spires	52	Vice President and Secretary
Donald G. Alfson	48	Vice President, Director; President Vishay Electronic Components, U.S. and Asia and President Dale Electronics, Inc.
Gerald Paul	45	Vice President, Director; President Vishay Electronic Components, Europe and Managing Director Draloric Electronic GmbH.

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

Felix Zandman, a founder of the Company, has been President, Chief Executive Officer and a Director of the Company since its inception. Dr. Zandman has been Chairman of the Board since March 1989.

Robert A. Freece has been Vice President, Treasurer, Chief Financial Officer and a Director of the Company since 1972.

Henry V. Landau has been a Vice President of the Company since 1983. Mr. Landau has been the President and Chief Executive Officer of Measurements Group, Inc., a subsidiary of the Company, since July 1984. Mr. Landau was an Executive Vice President of Measurements Group, Inc. from 1981 to 1984 and has been employed by the Company since 1972.

Moshe Shamir has been the President of Vishay Israel Limited since its inception in 1969. Mr. Shamir has been a Vice President of the Company since 1972. Mr. Shamir is also a member of the Board of Directors of Teva Pharmaceuticals Industries, Ltd. and Chairman of the Executive Committee thereof.

William J. Spires has been a Vice President and Secretary of the Company since 1981. Mr. Spires has been Vice President - Industrial Relations since 1980 and has been employed by the Company since 1970.

Donald G. Alfson has been a Vice President since May 1993, a Director of the Company since May 1992 and the President of Vishay Electronic Components U.S. and Asia, and President of Dale Electronics, Inc. since April 1992. Mr. Alfson has been employed by the Company since 1972.

Gerald Paul has been a Vice President and a Director of the Company since May 1993 and President of Vishay Electronic Components, Europe since January 1994. Dr. Paul has been Managing Director of Draloric Electronic GmbH since January 1991. Dr. Paul has been employed by the Company since February 1978.

Item 5.

### PART II

## MARKET FOR REGISTRANT'S COMMON STOCK AND RELATED SECURITY ---- HOLDER MATTERS

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The Company's Common Stock is listed on the New York Stock Exchange under the symbol VSH. The following table sets forth the high and low sale prices for the Company's Common Stock as reported on the New York Stock Exchange Composite Tape for the quarterly periods within the 1993 and 1992 fiscal years indicated. Stock prices have been restated to reflect stock dividends. The Company does not currently pay cash dividends on its capital stock. Its policy is to retain earnings to support the growth of the Company's business and the Company does not intend to change this policy at the present time. In addition, the Company is restricted from paying cash dividends under the terms of the Company's revolving credit and term loan agreement (see Note 6 to the consolidated financial statements). Holders of record of the Company's Common Stock totalled approximately 1,441 at March 25,

## COMMON STOCK MARKET PRICES

	Calenda	ar 1993	Calendar 1992	
	High	Low	High	Low
First Quarter	\$35.48	\$27.38	\$21.31	\$14.74
Second Quarter	36.25	25.48	24.29	18.59
Third Quarter	37.75	31.63	26.67	22.03
Fourth Quarter	35.38	28.75	35.48	25.36

On October 1, 1990, the Company commenced a stock repurchase program pursuant to which the Company was authorized to purchase up to \$5 million worth of its Common Stock. The purchases of Common Stock by the Company under the repurchase program are made in open-market transactions, subject to the availability of stock in accordance with the rules of the Securities and Exchange Commission and at the discretion of management. As of December 31, 1990 the Company had repurchased 36,600 shares at an approximate cost of \$459,000. No repurchases were made in 1991, 1992 or 1993.

In addition at March 25, 1994, the Company had outstanding 3,590,232 shares of Class B Common Stock, par value \$.10 per share (the "Class B Stock"), each of which entitles the holder to ten votes. The Class B Stock generally is not transferable and there is no market for those shares. The Class B Stock is convertible, at the option of the holder, into Common Stock on a share for share basis. Substantially all such Class B Stock is beneficially owned by Dr. Felix Zandman, Mr. Moshe Shamir and a revocable trust for the benefit of Mr. Alfred P. Slaner. Dr. Felix Zandman is an executive officer and director of the Company, and Mr. Shamir is a director. Mr. Slaner and his wife, Luella B. Slaner, are Trustees of the Slaner Trust, and accordingly, Mrs. Slaner, a Vishay director, may also be deemed beneficially to own such shares.

## Item 6. SELECTED FINANCIAL DATA

The following table sets forth selected consolidated financial information of the Company for the fiscal years ended December 31, 1993, 1992, 1991, 1990 and 1989. This table should be read in conjunction with the Consolidated Financial Statements of the Company and the related notes thereto included elsewhere in this Form 10-K.

	Year Ended December 31,				
	1993(1)	1992(2)	1991	1990	1989
	(in t	housands,	except per	share amou	ints)
Net sales	\$856,272 20,624	\$664,226 19,110		\$445,596 19,426	\$415,619 21,068
accounting change Income taxes Earnings before cumulative	50,894 8,246	37,924 7,511	,	33,856 10,655	26,418 8,651
effect of accounting change Cumulative effect of accounting change for	42,648	30,413	20,890	23,201	17,767
income taxes	1,427				
Net earnings	44,075	30,413	20,890	23,201	17,767
Total assets	948,106	661,643	448,771	440,656	419,958
Long-term debt	266,999	139,540	127,632	140,212	186,182
Working capital	205,806	145,327	128,733	120,384	115,945
Stockholders' equity Earnings per share: Before cumulative effect	376,503	346,625	201,366	177,839	117,984
of accounting change . Accounting change for	2.01	1.71	1.25	1.48	1.24
income taxes	0.07				
Net earnings	\$ 2.08	\$ 1.71	\$ 1.25	\$ 1.48	\$ 1.24
Weighted average number of shares outstanding	21,228	19,366	16,649	17,961	14,354

<sup>(1)</sup> Includes the results from January 1, 1993 of the Roederstein acquisition. (2) Includes the results from January 1, 1992 of the businesses acquired

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

Introduction and Background

The Company's sales and net income have increased significantly in the past several years primarily as a result of its acquisitions. Following each acquisition, the Company implemented programs to take advantage of distribution and operating synergies among its businesses. This implementation is reflected in an increase in the Company's sales and in the decline in selling, general and administrative expenses as a percentage of the Company's sales. Since mid-1990, sales of most of the Company's products have been adversely affected by the worldwide slowdown in the electronic components industry. In addition, sales to defense-related industries have declined since the first quarter of 1991. These trends are continuing.

Year ended December 31, 1993 compared to Year ended December 31, 1992

Results of Operations

Net sales for the year ended December 31, 1993 increased by \$192,046,000 over the comparable period of the prior year. The increase resulted from the acquisition of Roederstein, effective January 1, 1993. Net sales of Roederstein were \$212,124,000 for the year ended December 31, 1993. Net sales, exclusive of Roederstein, decreased by \$20,078,000, compared to the same period of the prior year. This decrease in net sales is attributable to the strengthening of the U.S. dollar against foreign currencies, which resulted in a decrease in reported Vishay sales of \$15,671,000 for the year ended December 31, 1993, and recessionary pressures in Europe.

Costs of products sold for the year ended December 31, 1993 were 77.5% of net sales as compared to 76.5% for the comparable period of the prior year. The reason for this increase is that the costs of products sold for Roederstein (prior to the full implementation of synergistic cost reductions) are approximately 80% of net sales, while Vishay's business, exclusive of Roederstein, has been operating in the 76% to 78% range. In 1993, grants of \$3,424,000 received from the government of Israel, which were utilized to offset start-up costs of new facilities, were recognized as a reduction of costs of products sold.

Selling, general, and administrative expenses for the year ended December 31, 1993 were 13.9% of net sales as compared to 15.3% for the comparable period of the prior year. The current year's lower rates reflect the effect of the acquisition of

Roederstein and the ongoing cost savings programs implemented with the acquisition of certain businesses of STI during 1992.

Restructuring charges of \$6,659,000 for the year ended December 31, 1993 consist primarily of severance costs related to the Company's decision to downsize its European operations, primarily in France, as a result of the European business climate.

Income from unusual items of \$7,221,000 for the year ended December 31, 1993 represents proceeds received for business interruption insurance claims principally related to operations in Dimona, Israel.

Interest costs increased by \$1,514,000 for the year ended December 31, 1993 as a result of increased debt incurred for the  $\,$ acquisition of Roederstein.

Other income for the year ended December 31, 1993 decreased by \$4,410,000 over the comparable period of the prior year because other income for the year ended December 31, 1992 included consulting fees of \$2,307,000 from Roederstein. These fees to Vishay were for time and expenses of Vishay personnel utilized by Roederstein in its attempt to restructure itself. Also, other income for the year ended December 31, 1992 included fees of approximately \$3,325,000 from STI under one-year sales and distribution agreements. Foreign currency losses for the year ended December 31, 1993 were \$1,382,000, as compared to foreign currency losses of \$1,594,000 for the year ended December 31, 1992.

The effective tax rate of 16.2% for the year ended December 31, 1993 reflects the non-taxability of certain insurance recoveries. The 1993 rate was also affected by increased manufacturing in Israel, where the Company's average income tax rate was approximately 4% in 1993. The effective tax rate for the  $\,$ year ended December 31, 1993, exclusive of the effect of the nontaxable insurance proceeds, was 18.6%. The effective tax rate for the year ended December 31, 1992 was 19.8%.

## **Accounting Changes**

Effective January 1, 1993, the Company changed its method of accounting for income taxes from the deferred method to the liability method required by FASB Statement No. 109, "Accounting for Income Taxes". The cumulative effect of adopting Statement 109 as of January 1, 1993 was to increase net income by \$1,427,000. Application of the new income tax rules also decreased pretax earnings by \$2,870,000 for the year ended December 31, 1993 because of increased depreciation expense as a result of Statement 109's requirement to report assets acquired in prior business combinations at their pretax amounts.

The Company also adopted FASB Statement No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions", effective January 1, 1993. The Company has elected to recognize the transition obligation on a prospective basis over a twenty-year period. In 1993, the new standard resulted in additional annual net periodic postretirement benefit costs of \$1,200,000 before taxes, and \$792,000 after taxes, or \$0.04 per share. Prior-year financial statements have not been restated to apply the new standard.

Year ended December 31, 1992 compared to Year ended December 31, 1991

Net sales for the year ended December 31, 1992 increased \$221,943,000 over the comparable period of the prior year. The increase was the result of the inclusion of the businesses acquired from STI effective as of January 1, 1992. Net sales of the acquired businesses were \$230,492,000 for the year ended December 31, 1992. For the year ended December 31, 1992, net sales, exclusive of the acquired businesses, decreased by \$8,549,000 compared to the same period of the prior year when recessionary pressures affecting sales were not as great.

The weakening of the U.S. dollar against foreign currencies resulted in an increase in reported Vishay sales of \$10,418,000 for the year ended December 31, 1992.

Costs of products sold for the year ended December 31, 1992 were 76.5% of net sales as compared to 71.9% for the comparable period of the prior year. The reason for this increase is that the costs of products sold for the newly purchased businesses from STI (prior to any synergistic cost reductions) are 80% of net sales, while Vishay's resistor businesses traditionally operate at levels of 70% to 75%.

Selling, general, and administrative expenses for the year ended December 31, 1992 were 15.3% of net sales compared to 17.2% for the comparable period of the prior year. The 15.3% rate reflects the effect of the businesses acquired from STI. The rate applicable to the businesses acquired from STI (approximately 11%) includes the effects of initial cost saving programs installed subsequent to the acquisition. For the year ended December 31, 1992, selling, general and administrative expenses of the Vishay resistor business (approximately 17%) were comparable to the levels experienced in the prior year.

Interest costs increased by 3,903,000 for the year ended December 31, 1992 as a result of the increased debt incurred for the purchase of the businesses from STI.

Other income for the year ended December 31, 1992 includes consulting fees of \$2,307,000 from Roederstein. Other income for the year ended December 31, 1992 also includes fees of approxi-

mately \$3,325,000 from STI under one-year sales and distribution agreements expiring February 14, 1993, which were entered into in connection with the acquisition of the businesses from STI.

The effective tax rate was 19.8% for the year ended December 31, 1992. The effective rate is comparable to the rate of 23.3% for 1991. The 1992 rate was in part affected by increased manufacturing in Israel where the Company's average income tax rate was 7% for 1992.

Year ended December 31, 1991 compared to Year ended December 31, 1990

Net sales decreased by \$3,313,000 or approximately 1% to \$442,283,000 for the year ended December 31, 1991 from \$445,596,000 for the year ended December 31, 1990. Sales increased in the United States by 2.7% as a result of acquisitions, which partially offset the effect of the worldwide recession. Sales in Western Europe declined 4.9% compared to the year ended December 31, 1990 as a result of the recession and the strengthening of the dollar against foreign currencies. Price increases did not materially affect sales.

Costs of products sold increased to \$318,166,000 or 71.9% of sales for the year ended December 31, 1991 from \$312,925,000 or 70.2% of sales for the year ended December 31, 1990. The increase in costs of products sold as a percentage of sales reflects increased production costs of relatively flat sales in addition to certain manufacturing inefficiencies during the latter part of 1991.

Selling, general, and administrative expenses decreased to \$75,973,000 or 17.2% of sales for the year ended December 31, 1991 from \$77,740,000 or 17.4% of sales for the year ended December 31, 1990 primarily because of the continuation of cost reduction programs introduced during 1990.

Expenses of approximately \$3,700,000 for layoff costs at the Company's European subsidiaries were incurred during the latter half of 1991. This correction to the work force was made to strengthen the subsidiaries' ability to attain earnings goals and to respond to the current recession.

Interest expense decreased by \$4,219,000 to \$15,207,000 for the year ended December 31, 1991 from \$19,426,000 for the year ended December 31, 1990 primarily as a result of payments made on long-term debt and lower interest rates.

Other expenses for the year ended December 31, 1991 were \$289,000 compared to income of \$2,344,000 for the year ended December 31, 1990, primarily due to decreases in investment grants from Israel and interest income. Investment grants and interest

income for the year ended December 31, 1991 were \$106,000 and \$797,000, respectively, compared to \$980,000 and \$2,257,000, respectively, for the year ended December 31, 1990.

The effective tax rate for the year ended December 31, 1991 was 23.3% versus 31.5% for the year ended December 31, 1990. The decrease in the effective tax rate resulted from a reduced tax rate for certain Israeli operations and an increase in the proportion of earnings taxable in Israel. The lower rate was primarily due to tax advantages of doing business in Israel where the Company's effective average tax rate was approximately 10% at that

#### Financial Condition

Cash flows from operations were \$50,114,000 for the year ended December 31, 1993 compared to \$54,357,000 for the prior year and were used primarily to finance capital expenditures. Purchases of property and equipment were \$76,813,000 for the year ended December 31, 1993 compared to \$49,801,000 for the prior year primarily due to additions of manufacturing equipment for surface mount products and expansion of manufacturing facilities in Israel. The Company's financial condition at December 31, 1993 is strong with the Company's current ratio of 2.1 to 1. The Company's ratio of long-term debt to stockholders' equip was .7 to 1 at December 31, 1993 as compared to .4 to 1 at December 31, 1992. The increase in this ratio resulted from additional borrowings in connection with the acquisition of Roederstein.

In connection with the Roederstein acquisition, Vishay entered into a DM 104,316,000 term loan agreement with its lending banks in January 1993. In addition, an Israeli subsidiary of Vishay borrowed \$20 million pursuant to an unsecured credit agreement. The funds from the credit facilities were used in connection with the Roederstein acquisition and the refinancing of Roederstein's debt. Vishay and the Banks also amended certain terms of the outstanding \$170,000,000 Revolving Credit and Term Loan Agreement dated as of January 10, 1992 among Vishay and the Banks and the Amended and Restated DM 42,375,000 Revolving Credit and DM 57,036,000 Term Loan Agreement dated as of January 10, 1992 among Vishay, Draloric and the lending banks in order to, among other things, allow Vishay to draw upon its revolving credit facilities to refinance a portion of Roederstein's debt.

See Note 6 to the Company's Consolidated Financial Statements elsewhere herein for additional information with respect to Vishay's loan agreements, long-term debt and available short-term credit lines.

Management believes that available sources of credit, together with cash expected to be generated from operations, will be sufficient to satisfy the Company's anticipated financing needs

for working capital and capital expenditures during the next twelve months.

### Inflation

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

# Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The following Consolidated Financial Statements of the Company and its subsidiaries, together with the report of independent auditors thereon, are presented under Item 14 of this report:

Report of Independent Auditors

Consolidated Balance Sheets -- December 31, 1993 and 1992.

Consolidated Statements of Operations -- for the years ended December 31, 1993, 1992 and 1991.

Consolidated Statements of Cash Flows -- for the years ended December 31, 1993, 1992 and 1991.

Consolidated Statements of Stockholders' Equity -- for the years ended December 31, 1993, 1992 and 1991.

Notes to Consolidated Financial Statements -- December 31,

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

None.

1993

# PART III

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Information with respect to Items 10, 11, 12 and 13 on Form 10-K is set forth in the Company's definitive proxy statement, which will be filed within 120 days of December 31, 1993, the Company's most recent fiscal year. Such information is incorporated herein by reference, except that information with respect to Executive Officers of Registrant is set forth in Part I, Item 4A hereof under the caption, "Executive Officers of the Registrant".

PART IV

# Item 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON - - - ----- FORM 8-K

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- (a) (1) All Consolidated Financial Statements of the Company and its subsidiaries for the year ended December 31, 1993 are filed herewith. See Item 8 of this Report for a list of such financial statements.
  - (2) Financial Statement Schedules for Vishay, set forth immediately following this Item 14 are as follows:

Schedule V -- Property, Plant and Equipment

Schedule VI -- Accumulated Depreciation, Depletion and Amortization of Property, Plant and Equipment

Schedule IX -- Short-Term Borrowings

Schedule  ${\sf X}$  -- Supplementary Income Statement Information

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

- (3) Exhibits -- See response to paragraph (c) below.
- (b) Reports on Form 8-K

None

- (c) Exhibits:
- 2.1 Purchase and Sale Agreement, dated as of November 14, 1991, among Sprague Technologies, Inc., Sprague Electric Company and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 1 to the Current Report on Form 8-K dated November 14, 1991.
- 3.1 Certificate of Incorporation of Registrant, as amended and Certificate of Amendment of Restated Certificate of Incorporation of Registrant dated May 18, 1993.
- 3.2 Amended and Restated Bylaws of Registrant. Incorporated by reference to Exhibit 3.2 to Registration Statement No. 33-13833 of Registrant on Form S-2 under the

- Securities Act of 1933 (the "Form S-2") and Amendment No. 1 to Amended and Restated Bylaws of Registrant.
- 10.1 Performance-Based Compensation Plan for Chief Executive Officer of Registrant.
- 10.2 Second Amendment dated as of January 29, 1993 to Amended and Restated Vishay Intertechnology, Inc. \$170,000,000 Revolving Credit and Term Loan Agreement by and among Comerica Bank, NationsBank of North Carolina, N.A., Signet Bank Maryland, CoreStates Bank, N.A., Bank Hapoalim, B.M., Meridian Bank, Bank Leumi le-Israel, B.M., Berliner Handels-und Frankfurter Bank and ABN AMRO Bank N.V. (collectively, the "Banks"), Comerica Bank, as agent for the Banks (the "Agent"), and Vishay Intertechnology, Inc. ("Vishay"), dated as of January 10, 1992. Incorporated by reference to Exhibit (10.1) to the Current Report on Form 8-K, dated January 29, 1993.
- 10.3 Second Amendment dated as of January 29, 1993 to Amended and Restated Draloric Electronic GmbH DM 42,375,000 Revolving Credit and DM 57,036,000 Term Loan Agreement by and among the Banks, the Agent and Draloric Electronic GmbH ("Draloric"), dated as of January 10, 1992. Incorporated by reference to Exhibit (10.2) to the Current Report on Form 8-K, dated January 29, 1993.
- 10.4 Roederstein DM 104,315,990.20 Term Loan Agreement dated as of January 29, 1993 by and among the Banks, the Agent, Draloric and Vishay. Incorporated by reference to Exhibit (10.3) to the Current Report on Form 8-K, dated January 29, 1993.
- 10.5 Agreement between First International Bank of Israel and Vishay Israel Ltd. dated January 28, 1993. Incorporated by reference to Exhibit (10.4) to the Current Report on Form 8-K, dated January 29, 1993.
- 10.6 Amended and Restated Vishay Intertechnology, Inc. \$170,000,000 Revolving, Credit and Term Loan Agreement by and among Manufacturers Bank, N.A., NationsBank of North Carolina, N.A., Signet Bank Maryland, CoreStates Bank, N.A., Bank Hapoalim, B.M., Meridian Bank and Bank Leumi le-Israel, B.M. (collectively, the "Prior Banks"), the Agent and Vishay, dated as of January 10, 1992. Incorporated by reference to Exhibit (10.1) to the Current Report on Form 8-K, dated January 10, 1992.
- 10.7 Amended and Restated Draloric Electronic, GmbH DM 42,375,000 Revolving Credit and DM 57,036,000 Term Loan

- Agreement by and among the Prior Banks, the Agent and Draloric, dated as of January 10, 1992. Incorporated by reference to Exhibit (10.2) to the Current Report on Form 8-K, dated January 10, 1992.
- 10.8 Amended and Restated Guaranty by Vishay to the Banks, dated as of January 29, 1993. Incorporated by reference to Exhibit (10.5) to the Current Report on Form 8-K, dated January 29, 1993.
- 10.9 Amended and Restated Guaranty by Dale Holdings, Inc., Dale Electronics, Inc., Bradford Electronics, Inc., and Measurements Group, Inc. to the Banks, dated as of January 29, 1993. Incorporated by reference to Exhibit (10.6) to the Current Report on Form 8-K, dated January 29, 1993.
- 10.10 Amended and Restated Permitted Borrowers Guaranty by Vilna Equities Holding B.V., Visra Electronics Financing, B.V., Draloric, E-Sil Components, Ltd., Vishay Components (U.K.) Limited, Sfernice, S.A., Ultronix, Inc., Techno Components Corporation and Ohmtek, Inc. to the Banks, dated as of January 29, 1993. Incorporated by reference to Exhibit (10.7) to the Current Report on Form 8-K, dated January 29, 1993.
- 10.11 Guaranty by Vishay Sprague, Inc., Sprague North Adams, Sprague Sanford and Roederstein Electronics, Inc. to the Banks, dated January 29, 1993. Incorporated by reference to Exhibit (10.8) to the Current Report on Form 8-K, dated January 29, 1993.
- 10.12 Guaranty Agreement, dated as of November 29, 1989 between the Company and Societe Generale, New York Branch. Incorporated by reference to Exhibit 10.3 to the Company's Annual Report on Form 10-K for December 31, 1989.
- 10.13 Option Agreement for the Assets of the Resista Division of Roederstein by and among Vishay, Mr. Jorg Roederstein, Roederstein Spezialfabriken fur Bauelemente der Elektronik und Kondensatoren der Starkstromtechnik GmbH ("Roederstein") and Mr. Till Roederstein, dated February 18, 1992. Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, dated February 18, 1992.
- 10.14 Purchase and Transfer Agreement concerning Shares by and among, Mrs. Ute Roederstein, Mrs. Cornelia Bodinka, nee Roederstein, Ms. Claudia Roederstein, Mr. Jorg Roederstein, Mr. Till Roederstein and Vishay dated February 18, 1992. Incorporated by reference to Exhibit

- 10.2 to the Current Report on Form 8-K, dated February 18 1992
- 10.15 Notarial Offer for a Purchase and Transfer Agreement concerning Shares by Mr. Till Roederstein and Vishay Intertechnology, Inc. dated February 18, 1992. Incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K, dated February 18, 1992.
- 10.16 Fiscal Agency Agreement, dated July 28, 1988, between the Company and Citibank, N.A. Incorporated by reference to Exhibit (10(i)) to the Current Report on Form 8-K, dated August 30, 1988.
- 10.17 Management Fee Agreement between Dale Holdings, Inc. and the Company, dated May 14, 1986. Incorporated by reference to Exhibit 10.15 to the Form S-2.
- 10.18 Employment Agreement, dated as of March 15, 1985, between the Company and Dr. Felix Zandman. Incorporated by reference to Exhibit 10.12 to the Form S-2.
- 10.19 1986 Employee Stock Plan of the Company. Incorporated by reference to Exhibit 4 to the Company's Registration Statement on Form S-8 (No. 33-7850).
- 10.20 1986 Employee Stock Plan of Dale Electronics, Inc. Incorporated by reference to Exhibit 4 to the Company's Registration Statement on Form S-8 (No. 33-7851).
- 10.21 Money Purchase Plan Agreement of Measurements Group, Inc. Incorporated by reference to Exhibit 10(a)(6) to Amendment No. 1 to the Company's Registration Statement on Form S-7 (No. 2-69970).
- 10.22 Distributor Agreement between Nytron Inductors and VSD, Inc. dated as of January 1, 1991. Incorporated by reference to the Company's Annual Report on Form 10-K for December 31, 1990.
- 10.23 Distribution Sales Agreement between Sprague Electric Company and Vishay Intertechnology, Inc., dated February 14, 1992. Incorporated by reference to Exhibit (10.1) to the Current Report on Form 8-K, dated February 14, 1902
- 10.24 Sales Representation Agreement between Sprague Electric Company and Vishay Intertechnology, Inc. dated February 14, 1992. Incorporated by reference to Exhibit (10.2) to the Current Report on Form 8-K, dated February 14, 1992.

- 10.25 Agreement for Transfer of Computer Software License Administration Services Agreement between Sprague Electric Company and Vishay Intertechnology, Inc., dated February 14, 1992. Incorporated by reference to Exhibit (10.3) to the Current Report on Form 8-K, dated February 14, 1992.
- 10.26 Lease of Concord Facility, dated February 14, 1992. Incorporated by reference to Exhibit (10.4) to the Current Report on Form 8-K, dated February 14, 1992.
- 10.27 Sublease of Hudson Facility, dated February 14, 1992. Incorporated by reference to Exhibit (10.5) to the Current Report on Form 8-K, dated February 14, 1992.
- 10.28 Lease of El Paso Property, dated February 14, 1992. Incorporated by reference to Exhibit (10.6) to the Current Report on Form 8-K, dated February 14, 1992.
- 10.29 Non-Competition Agreement among Sprague Technologies, Inc., Sprague Electric Company and Vishay Interechnology, Inc., dated February 14, 1992. Incorporated by reference to Exhibit (10.7) to the Current Report on Form 8-K, dated February 14, 1992.
- 10.30 Agreement between Sprague Technologies, Inc. and Vishay Israel, Ltd., dated February 14, 1992. Incorporated by reference to Exhibit (10.8) to the Current Report on Form 8-K, dated February 14, 1992.
- 11. Statement regarding Computation of Per Share Earnings.
- 22. Subsidiaries of the Registrant.
- 23. Consent of Independent Auditors.

#### Report of Independent Auditors

Board of Directors and Stockholders Vishay Intertechnology, Inc.

We have audited the accompanying consolidated balance sheets of Vishay Intertechnology, Inc. as of December 31, 1993 and 1992, and the related consolidated statements of operations, cash flows, and stockholders equity for each of the three years in the period ended December 31, 1993. Our audits also included the financial statement schedules listed in the Index at Item 14(a). These financial statements and schedules are the responsibility of the Companys management. Our responsibility is to express an opinion on these financial statements and schedules based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Vishay Intertechnology, Inc. at December 31, 1993 and 1992, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 1993, in conformity with generally accepted accounting principles. Also, in our opinion, the related financial statement schedules, when considered in relation to the basic financial statements taken as a whole, present fairly in all material respects the information set forth therein.

As discussed in the Notes to Consolidated Financial Statements, in 1993 the Company changed its methods of accounting for income taxes (Note 5) and postretirement benefits other than pensions (Note 10).

# /s/ ERNST & YOUNG

Philadelphia, Pennsylvania February 10, 1994 except for Note 6, as to which the date is March 25, 1994

# Consolidated Balance Sheets

(In thousands, except per share and share amounts)

	December 1993	1992
Assets		
Current assets: Cash and cash equivalents Accounts receivable, less allowances	\$ 10,931	\$ 15,977
of \$5,150 and \$3,885 Inventories:	125,284	102,757
Finished goods	85,783	50,874
Raw materials and work in process Prepaid expenses and other current	138,872	99,901
assets	33,365	18,192
Total current assets	394,235	287,701
Property and equipmentat cost:	22 701	12 017
Buildings and improvements	33,791 136,432	12,917 87 623
Machinery and equipment	136,432 398,885	288, 527
Less allowances for depreciation	569,108 (149,004)	
	420,104	271,619
Goodwill	118,286	74,872
Other assets	15,481	27,451
	\$948,106 =======	\$661,643

	Decemb	er 31
	1993	1992
Liabilities and stockholders' equity Current liabilities:		
Notes payable to banks	\$ 22,695	\$ 18,966
Trade accounts payable	48,404	42,727
Payroll and related expenses	28, 942	23,124
Other accrued expenses	54,112	25,984
Income taxes	3,740	-
Current portion of long-term debt	30,536	31,573
Total current liabilities	188,429	142,374
Long-term debtless current portion	266,999	139,540
Deferred income taxes	26,080	9,786
Other liabilities	24,081	1,021
Accrued pension costs	66,014	22, 297
Stockholders' equity: Preferred Stock, par value \$1.00 a sha Authorized1,000,000 shares; none issued Common Stock, par value \$.10 a share: Authorized35,000,000 shares; 17,639,081 and 16,795,234 shares outstanding after deducting 47,441 and 47,432 shares in treasury Class B convertible Common Stock, par value \$.10 a share: Authorized 15,000,000 shares; 3,590,232 and 3,419,385 shares outstanding after deducting 125,965 and 119,967	1,763	1,679
shares in treasury	359	342
Capital in excess of par value	288,980	253,446
Retained earnings	105,849	97,156
Foreign currency translation adjustment	(13,109)	(5,864)
Unearned compensation	(60)	(134)
Pension adjustment	(7,279)	-
		346,625
	\$948,106	,
	==========	=========

See accompanying notes.

# Consolidated Statements of Operations

(In thousands, except per share and share amounts)

	1993	ended December 1992	1991
Net sales Costs of products sold	\$856,272	\$664,226 508,018	\$442,283
Gross profit		156,208	
Selling, general, and administrative expenses Restructuring expense Unusual items	118,906 6,659 (7,221)	101,327 - -	75,973 3,700
	74,689	54,881	44,444
Other income (expense): Interest expense Amortization of goodwill Other	123		(289)
	(23,795)	(16,957)	(17,191)
Earnings before income taxes and cumulative effect of accounting change Income taxes	50,894 8,246	37,924 7,511	27,253 6,363
Earnings before cumulative effect of accounting change Cumulative effect of accounting change for income taxes		30,413	20,890
Net earnings		\$30,413	
=	=========	==========	=========
Earnings per share:  Before cumulative effect of accounting change Accounting change for income	\$2.01	\$1.71	\$1.25
taxes	0.07	-	-
Net earnings	\$2.08	\$1.71 ========	\$1.25
Weighted average shares outstanding		19,366,000	
See accompanying notes.			

# Consolidated Statements of Cash Flows

(In thousands)

		ended December 1992	
Operating activities Net earnings Adjustments to reconcile net earnings to net cash provided by operating activities:	\$44,075	\$30,413	\$20,890
Depreciation and amortization Interest accrued on Convertible Subordinated	48,578	36,062	27,056
Debentures in excess of coupon rate Cumulative effect of accounting change	- (1,427)	2,190	2,812
Other Changes in operating assets and liabilities:		5,133	
Accounts receivable Inventories Prepaid expenses and other	2,804 (22,780)	(7,774) (6,164)	6,912 (7,949)
current assets	182	(3,647)	1,644
Accounts payable Other current liabilities	(14,080)	1,650 (3,506)	(2,726) (2,646)
Net cash provided by operating activities		54,357	
Investing activities Purchases of property and equipment Purchase of businesses, net of cash acquired Investment in and advances to Roederstein Cash provided by changes in short-term investments	-	(20,147) 176	43
Net cash used in investing activities		(201, 251)	
Financing activities Proceeds from revolving line of credit and long-term borrowings Principal payments on revolving line of	265,274	403,970	79,483
credit and long-term debt	(235,124)	(327,797)	(88,906)
Cash provided by (used in) net changes in short-term borrowings Proceeds from sale of common stock	4,873	13,791 59,133	(4,689)
Net cash provided by (used in) financing activities Effect of exchange rate changes on cash	35,023 (403)	149,097 (470)	(14,112) (165)
(Decrease) increase in cash and cash equivalents Cash and cash equivalents at beginning of year	(5,046) 15,977	1,733 14,244	(1,825) 16,069
Cash and cash equivalents at end of year	\$10,931	\$15,977	\$14,244

See accompanying notes.

# Consolidated Statements of Stockholders' Equity

(In thousands, except share amounts)

	Year 1993	ended Decemb 1992	oer 31 1991
Common Stock:  Beginning balance  Shares issued (3,775; 1,816,016; and	\$1,679	\$1,165	\$1,105
20,469 shares) Stock dividends (839,952; 583,748; and	-	182	2
554,015 shares) Conversion of subordinated debentures	84	58	55
(2,536,783 shares) Conversions from Class B (120; 200,658;		254	-
and 25,752 shares)	-	20	3
Ending balance	1,763	1,679	1,165
Class B convertible Common Stock: Beginning balance	3/12	345	331
Stock dividends (170,967; 172,383; and			
165,398 shares) Conversions to Common (120; 200,658;		17	
and 25,752 shares)		(20)	
Ending balance	359	342	345
Capital in excess of par value: Beginning balance Shares issued	253,446 123 - 35,281 130	115,398 59,162	101,173 382
Conversion of subordinated debentures Stock dividends Tax effects relating to stock plan	35,281 130	18,548 26	13,777 66
Ending balance	288,980	253, 446	115,398
Retained earnings: Beginning balance Net earnings Stock dividends	97,156 44,075 (35,382)	85,366 30,413 (18,623)	78,325 20,890 (13,849)
Ending balance		97,156	
Foreign currency translation adjustment:	,	,	,
Beginning balance Translation adjustment for the year	(5,864) (7,245)	(347) (5,517)	(2,084) 1,737
Ending balance	(13,109)	(5,864)	
Unearned compensation: Beginning balance Shares issued under stock plans (3,775;	(134)	(561)	(1,011)
16,016; and 20,469 shares) Amounts expensed during the year		(208) 635	
Ending balance		(134)	
Pension adjustment: Beginning balance Pension adjustment for the year	- (7,279)	- -	- -
Ending balance	(7,279)		
Total stockholders' equity		\$346,625	
. ,	=========		

See accompanying notes.

### Notes to Consolidated Financial Statements

December 31, 1993

# 1. Summary of Significant Accounting Policies

### Principles of Consolidation

The consolidated financial statements of Vishay Intertechnology, Inc. include the accounts of the Company and its subsidiaries, after elimination of all significant intercompany transactions, accounts, and profits.

#### Inventories

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

#### Depreciation

Depreciation is computed principally by the straight-line method based upon the estimated useful lives of the assets. Depreciation of capital lease assets is included in total depreciation expense. Depreciation expense was \$43,493,000, \$30,995,000, and \$23,706,000 for the years ended December 31, 1993, 1992, and 1991, respectively.

# Goodwill

Goodwill, representing the excess of purchase price over net assets of businesses acquired, is being amortized on a straight-line basis over 40 years. Accumulated amortization amounted to \$10,945,000 and \$7,679,000 at December 31, 1993 and 1992, respectively.

#### Cash Equivalents

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

### Research and Development Expenses

The amount charged to expense aggregated \$7,097,000, \$7,149,000, and \$6,967,000 for the years ended December 31, 1993, 1992, and 1991, respectively. The Company spends additional amounts for the development of machinery and equipment for new processes and for cost reduction measures.

## Grants

Grants received from governments by certain foreign subsidiaries are recognized as income when conditions for receipt are met. In 1993, grants of \$3,424,000 received from the government of Israel, which were utilized to offset startup costs of new facilities, were recognized as a reduction of costs of products sold.

Notes to Consolidated Financial Statements (continued)

### 1. Summary of Significant Accounting Policies (continued)

### Earnings Per Share

Earnings per share is based on the weighted average number of common shares and dilutive common equivalent shares (from the assumed conversion of convertible subordinated debentures) outstanding during the period. In October 1992, the convertible subordinated debentures were converted into 2,536,783 shares of Common Stock. For the year ended December 31, 1992, where assumed conversion of the debentures has a dilutive effect, net earnings used in the computations are adjusted for interest expense, net of income taxes, on the convertible subordinated debentures. Earnings per share amounts for all periods presented reflect 5% stock dividends paid on June 11, 1993, June 16, 1992, and June 11, 1991. Earnings per share for the years ended December 31, 1993 and 1992 reflect the weighted effect of the issuance of 1,800,000 shares of Common Stock on December 24, 1992.

### Accounting Changes

In 1993, the Company changed its methods of accounting for income taxes (Note 5) and postretirement benefits other than pensions (Note 10).

#### Reclassifications

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

## 2. Acquisitions

During January 1993, Vishay exercised its option to purchase the remaining 81% of the outstanding share capital of Roederstein GmbH, a passive electronic components manufacturer with headquarters in Germany for 4,050,000 Deutsche Marks ("DM") (\$2,502,000) pursuant to an option agreement dated February 18, 1992. Vishay had acquired its initial 19% interest in Roederstein on February 18, 1992 for DM 950,000 (\$577,000). In connection with the acquisition, Vishay refinanced all of Roederstein's existing bank debt of DM 160,381,000 (\$99,062,000). Funds to refinance Roederstein's debt were provided by a DM 104,316,000 term loan with a group of banks, \$20,000,000 borrowed under an unsecured credit agreement, and borrowings under an existing line of credit.

Effective January 1, 1992, the Company acquired the worldwide tantalum capacitor and U.S. thick film resistor network businesses of Sprague Technologies, Inc. Under the terms of the purchase agreement, Vishay paid \$127,000,000 cash, transferred to Sprague real property with a fair value of \$4,771,000, and assumed certain liabilities relating to the businesses. Vishay also entered into certain ancillary agreements with the seller, including one-year sales and distribution agreements under which Vishay received fees of \$3,325,000 during 1992, which are included in other income. The purchase price was funded primarily from a \$125,000,000 term loan facility.

Notes to Consolidated Financial Statements (continued)

### 2. Acquisitions (continued)

The acquisitions have been accounted for under the purchase method of accounting. The operating results of Roederstein and Sprague have been included in the Company's consolidated results of operations from January 1, 1993 and January 1, 1992, respectively. Excess of cost over the fair value of net assets acquired (Roederstein--\$45,210,000; Sprague--\$19,534,000) is being amortized on a straight-line basis over forty years.

Had the Roederstein and Sprague acquisitions been made at the beginning of the year prior to their acquisition, the Company's pro forma unaudited results would have been (in thousands, except per share amounts):

	Year ended December 31		
	1992	1991	
Net sales	\$913,398	\$679,183	
Net earnings (loss)	(22,992)	20,591	
Earnings (loss) per share	\$(1.19)	\$1.24	

The unaudited pro forma results are not necessarily indicative of the results that would have been attained had the acquisitions occurred at the beginning of the periods presented or of results which may occur in the future. Pro forma net earnings for 1992 reflect \$31,860,000 of restructuring costs incurred by Roederstein for work force reductions.

During 1992, Vishay provided Roederstein with management and sales support, short-term working capital advances, and assistance in renegotiating Roederstein's bank debt. Vishay also assisted Roederstein in developing a cost-savings program involving reductions in the Roederstein work force, including the closing of an unprofitable division. Vishay recognized consulting fees, which are included in other income, from Roederstein of \$2,307,000 for the year ended December 31, 1992 for its assistance to Roederstein. As of December 31, 1992, Vishay had investments in Roederstein of \$3,229,000, advances to Roederstein, included in other assets, of \$16,918,000, accounts receivable and other current receivables from Roederstein of \$5,166,000, and accounts payable to Roederstein of \$1,158,000.

The Company made several minor acquisitions in 1993 and 1991, all of which were accounted for under the purchase method. The results of operations of these businesses have been included in the consolidated results of the Company from the dates of acquisition.

# 3. Restructuring Expense and Unusual Items

Restructuring expenses of \$6,659,000 for 1993 related to the downsizing of some of the Company's European operations. Income from unusual items of \$7,221,000 for 1993 represents insurance recoveries the Company has received for business interruption insurance claims.

The Company incurred restructuring costs of \$3,700,000 in 1991 relating primarily to costs associated with layoffs in France.

Notes to Consolidated Financial Statements (continued)

### 4. Foreign Subsidiaries

The following amounts relating to foreign subsidiaries are included in the consolidated financial statements (in thousands):

	As of and for 1993	the year ende 1992	ed December 31 1991
Current assets	\$239,371	\$141,334	\$113,515
Current liabilities	135,003	81,532	50,288
Net property and equipment	258, 279	127,740	93,708
Parent company equity in net assets			
(including intercompany accounts)	199,955	161,529	119,097
Sales to customers	429,578	258, 226	200,475
Earnings after eliminating intercompany			
earnings and expenses	23,620	12,490	7,333

### 5. Income Taxes

Effective January 1, 1993, the Company changed its method of accounting for income taxes from the deferred method to the liability method required by FASB Statement No. 109, "Accounting for Income Taxes." As permitted under the new rules, prior years' financial statements have not been restated.

The cumulative effect of adopting Statement 109 as of January 1, 1993 was to increase net earnings by \$1,427,000, or \$.07 per share. For the year ended December 31, 1993, application of the new income tax rules decreased pretax income by \$2,870,000 because of increased depreciation expense as a result of Statement 109's requirement to report assets acquired in prior business combinations at their pretax amounts.

At December 31, 1993, the Company has net operating loss carryforwards for tax purposes of approximately \$96,300,000 in Germany (no expiration date), \$3,100,000 in France (expire December 31, 1998), and \$1,800,000 in Portugal (expire December 31, 1997). Approximately \$70,800,000 of the carryforward in Germany, and the full \$1,800,000 in Portugal, resulted from the Company's acquisition of Roederstein. For financial reporting purposes, a valuation allowance of \$34,862,000 has been recognized to offset deferred tax assets related to German net operating loss carryforwards. If tax benefits are recognized in the future through reductions of the valuation allowance, such amounts will reduce goodwill of acquired companies. The valuation allowance decreased from January 1, 1993 by \$6,584,000 primarily due to a decrease in German tax rates which had the effect of reducing the deferred tax asset for German net operating loss carryforwards.

Notes to Consolidated Financial Statements (continued)

## 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 used for income tax purposes. Significant components of the Company's deferred tax liabilities and assets as of December 31, 1993 are as follows (in thousands):

Deferred tax liabilities:	
Tax over book depreciation	\$57,401
Othernet	2,685
Total deferred tax liabilities	60,086
Deferred tax assets:	
Pension and other retiree obligations	20,179
Net operating loss carryforwards	38,773
Restructuring reserves	7,354
Other accruals and reserves	12,300
Total deferred tax assets	78,606
Valuation allowance for deferred tax assets	(34,862)
Net deferred tax assets	43,744
Net deferred tax liabilities	¢16 242
MET MELELLEN TAY TTANTITITES	\$16,342

For financial reporting purposes, earnings before income taxes and cumulative effect of accounting change includes the following components (in thousands):

1993	ended December 1992	1991
\$13,136 37,758	\$10,252 27,672	\$8,519 18,734
\$50,894	\$37,924	\$27,253
	37,758	37,758 27,672

Notes to Consolidated Financial Statements (continued)

#### 5. Income Taxes (continued)

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For the year ended December 31, 1992, deferred income taxes resulted from accelerated methods of depreciation used for tax purposes (\$2,494,000) and restructuring reserves (\$2,012,000). These amounts were partially offset by differences relating to inventory valuation methods (\$900,000) and other items (\$757,000). For the year ended December 31, 1991, deferred taxes resulted principally from use of accelerated methods of depreciation for tax purposes.

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

	Method	Deferred	Method
	Year 1993	ended Decemb 1992	per 31 1991
Tax at statutory rate State income taxes, net of	\$17,304	\$12,894	\$9,266
federal tax Effect of foreign income	396	501	452
tax rates Effect of purchase accounting	(10,532)	(5,649)	(5,166)
adjustments	717	939	1,291
Other	361	(1,174)	520
	\$8,246	\$7,511	\$6,363

Notes to Consolidated Financial Statements (continued)

#### 5. Income Taxes (continued)

At December 31, 1993, no provision has been made for U.S. income taxes on approximately \$169,678,000 of foreign earnings which are expected to be reinvested indefinitely.

Income taxes paid were 6,933,000, 5,729,000 and 8,418,000 for the years ended December 31, 1993, 1992, and 1991, respectively.

#### 6. Long-Term Debt

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

	December 31		
	1993	1992	
Revolving Credit Loan Term Loan Deutsche Mark Revolving Credit Loan Deutsche Mark Term Loan Deutsche Mark Term Loan II	\$51,500 102,500 23,035 10,948 60,073	\$7,500 117,500 10,500 23,486	
Unsecured Credit Agreements Industrial Development Revenue Bonds French Industrial Bonds Other Debt and Capital Lease Obligations	38,638 578 3,147 7,116	2,581 1,952 7,594	
Less current portion	297,535 30,536	171,113 31,573	
	\$266,999 =======	\$139,540 ======	

As of December 31, 1993, five facilities were available under the Company's amended and restated Revolving Credit and Term Loan and Deutsche Mark Revolving Credit and Term Loan agreements with a group of banks; a multicurrency revolving credit loan (interest 4.25% at December 31, 1993), a U.S. term loan (interest 4.44% at December 31, 1993), a Deutsche Mark revolving credit loan (interest 7.50% at December 31, 1993), a Deutsche Mark term loan (interest 7.69% at December 31, 1993), and an additional Deutsche Mark term loan (interest 8.25% at December 31, 1993).

During March 1994, the Company's bank group agreed to amend the Revolving Credit and Term Loan and Deutsche Mark Revolving Credit and Term Loan agreements in effect at December 31, 1993. The terms of the five facilities, as agreed in March 1994, are summarized below. The first facility is a \$90,000,000 multicurrency revolving credit facility which is available to the Company on a revolving basis until December 31, 1996, at which time the Company may elect a term out option, with quarterly payments due beginning March 31, 1997 through December 31, 2000. Interest is payable at prime or at other interest rate options. The Company is required to pay a commitment fee equal to 3/8% per annum on the average unused line. The second facility is a \$102,500,000 term loan, with interest payable at prime plus 1/8% or at other interest rate options. Principal payments are due as follows: 1994 --\$5,000,000; 1995--\$10,000,000; 1996--\$10,000,000;

Notes to Consolidated Financial Statements (continued)

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

1997--\$15,000,000; 1998--\$20,000,000; 1999--\$20,000,000; 2000--\$22,500,000. Additional principal payments may be required based on excess cash flow as defined in the agreement. The loan agreements also provide a German subsidiary of the Company with three Deutsche Mark ("DM") facilities. The first DM facility is a DM 40,000,000 (\$23,035,000) revolving credit facility which is available until December 31, 1996, at which time the Company may elect a term out option, with quarterly payments due beginning March 31, 1997 through December 31, 2000. Interest is based on DM market rates plus 15/16%. The Company is required to pay a commitment fee equal to 3/8% per annum on the average unused line. The second DM facility is a DM 19,012,000 (\$10,948,000) term loan. Principal of DM 4,753,000 (\$2,737,000) and interest at DM market rates plus 1-1/8% is due quarterly with final payment on December 31, 1994. The third DM facility is a DM 104,316,000 (\$60,073,000) term loan. Interest is based on DM market rates plus 1-11/16%. Principal payments of DM 18,700,000, 34,100,000, 37,000,000, and 14,516,000 (\$10,769,000, \$19,637,000, \$21,307,000, and \$8,360,000) are due on or before December 31, 1994, 1995, 1996, and 1997, respectively. Additional principal payments may be required based on excess cash flow as defined in the agreement.

Under the loan agreements, the Company is restricted from paying cash dividends and must comply with other covenants, including the maintenance of specific ratios. The Company is in compliance with the restrictions and limitations under the terms of loan agreements, as amended. All of the Company's U.S. assets and the stock of certain foreign subsidiaries are pledged as collateral under loan agreements.

Borrowings under a \$20,000,000 unsecured credit agreement with First International Bank of Israel are at LIBOR plus 1-1/8% (4.25% at December 31, 1993). Principal payments of \$5,000,000, \$6,666,666, and \$8,333,334 are due on or before December 31, 1997, 1998, and 1999, respectively. Other unsecured borrowings are at various interest rates ranging from 3.9% to 7.2%.

The industrial development revenue bonds are at various interest rates ranging from 8% to 12% and mature at various dates from 1996 through 1999. The French industrial bonds are payable in French francs and bear interest at rates ranging from zero to 10% and require periodic payments through 2004.

Aggregate annual maturities of long-term debt, as revised to reflect the agreement reached with the Company's bank group in March 1994 and excluding payments which may be required based on excess cash flow, are as follows: 1994--\$30,536,000; 1995--\$32,132,000; 1996--\$41,729,000; 1997--\$50,393,000; 1998--\$48,305,000; thereafter--\$94,440,000.

The Company has short-term credit lines with various banks aggregating \$64,667,000, of which \$29,030,000 was unused at December 31, 1993.

Interest paid was \$20,587,000, \$16,496,000, and \$12,775,000 for the years ended December 31, 1993, 1992, and 1991, respectively.

Notes to Consolidated Financial Statements (continued)

#### 7. Stockholders' Equity

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

Unearned compensation relating to Common Stock issued under employee stock plans is being amortized over a 36-month period. 132,153 shares are available for issuance under stock plans at December 31, 1993.

#### Other Income

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

	Year 1993	ended Decemb 1992	per 31 1991
Foreign exchange gains (losses) Investment income Sales and distribution fees fro	\$(1,382) 722	\$(1,594) 1,565	\$41 797
Sprague Technologies, Inc.	-	3,325	-
Roederstein consulting fees	-	2,307	-
Other	783	(1,070)	(1,127)
	\$123 	\$4,533	\$(289)

#### 9. Employee Retirement Plans

Two U.S. subsidiaries of Vishay, Dale Electronics, Inc. and Sprague North Adams, Inc., which was acquired effective January 1, 1992, maintain defined benefit pension plans (the "Plans"). Substantially all full-time employees of Dale and hourly employees of Sprague's North Adams facility are eligible to participate. The benefits under the Dale Plan are based on the employees' compensation during all years of participation. The benefits under the Sprague Plan are based on number of years of credited service.

The Plans are tax qualified subject to the minimum funding requirements of ERISA. Employees participating in the Dale Plan are required to contribute an amount based on annual earnings. The Company's funding policy is to contribute annually amounts that satisfy the funding standard account requirements of ERISA. The assets of the Dale Plan are invested primarily in guaranteed investment contracts issued by an insurance company and mutual funds. The assets of the Sprague Plan are invested primarily in fixed income securities and common stock.

Notes to Consolidated Financial Statements (continued)

# 9. Employee Retirement Plans (continued)

	Year ended December 31 1993 1992 19		
Annual service costbenefits earned for the period Less: Employee contributions	\$2,233 1,157	\$2,101 1,067	\$2,061 1,096
Net service cost Interest cost on projected benefit obligation Actual return on Plan assets Net amortization and deferral	1,076 4,732 (5,270) 655	1,034 4,206 (4,611) 648	965 2,599 (2,529) 337
Net pension cost	\$1,193	\$1,277	\$1,372

The expected long-term rate of return on assets was 9.5%.

The following table sets forth the funded status of the Plans and amounts recognized in the Company's financial statements (in thousands):

	December 31	
	1993	1992
Accumulated benefit obligation, including vested benefits of \$61,671 and \$54,329	\$62,448 =======	\$55,138 
Actuarial present value of projected benefit obligations Plan assets at fair value	\$(67,077)	\$(59,144) 53,468
Projected benefit obligations in excess of Plan assets Unrecognized (gain) loss from past experience different fro		(5,676)
that assumed and effects of changes in assumptions	5,085	(450)
Unrecognized prior service cost	1,300	1,534
Unrecognized net obligation at transition date, being recognized over 15 years	575	685
	(3,855)	(3,907)
Estimated tax effects of purchase	(-,,	(-//
accounting adjustment	-	1,169
Accrued pension liability	. , ,	\$(2,738)
	=======	

The following assumptions have been used in the actuarial determinations of the  $\operatorname{Plans}$ :

	1993	1992	
Discount rate	7.5%	8.0%-8.5%	
Rate of increase in compensation levels	4.5%	4.5%	

Notes to Consolidated Financial Statements (continued)

#### 9. Employee Retirement Plans (continued)

The Company's U.S. subsidiary, Measurements Group, Inc., maintains a defined contribution pension plan covering substantially all full-time employees. Contributions are made based on participants' compensation. Costs for this plan were \$530,000, \$512,000, and \$485,000 for the years ended December 31, 1993, 1992, and 1991, respectively. In addition, 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 \$1,996,000, \$1,894,000, and \$1,170,000 for the years ended December 31, 1993, 1992, and 1991, respectively.

The Company provides pension and similar benefits to employees of certain foreign subsidiaries consistent with local practices. German subsidiaries of the Company (including Roederstein, which was acquired in January 1993) have noncontributory defined benefit pension plans covering management and employees. Pension benefits are based on years of service. Net pension cost for the German Plans included the following components (in thousands):

	Year 6 1993	ended December 1992	31 1991
Annual service costbenefits earned for the period	\$682	\$122	\$151
Interest cost on projected benefit obligation Actual return on plan assets	4,521 (796)	757	681
Net amortization and deferral	(86)	(99)	186
Net pension cost	\$4,321	\$780	\$1,018

The following table sets forth the funded status of the German Plans and amounts recognized in the Company's financial statements (in thousands):

	ber 31
1993	1992
\$63,002	. ,
\$(63,218) 11,540	\$(13,080)
(51,678) 6,810 391	(13,080) 57 -
(37)	(44)
	\$(13,067)
	\$63,002 \$(63,218) 11,540 (51,678) 6,810 391 (37) (7,279)

Notes to Consolidated Financial Statements (continued)

#### 9. Employee Retirement Plans (continued)

The following assumptions have been used in the actuarial determinations of the  $\mbox{\it German Plans:}$ 

December 31

	1993	1992
Discount rate	7.0%	6.0%
Rate of increase in compensation levels	3.0%	4.0%

#### 10. Postretirement Medical Benefits

The Company pays limited health care premiums for certain eligible retired U.S. employees. Prior to 1993, the cost of these benefits, which was not significant, was charged to expense when the benefits were paid.

Effective January 1, 1993, the Company adopted FASB Statement No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions." Under this new standard, the Company recognizes the cost of postretirement benefits over the active service period of its employees. The Company elected to recognize the transition obligation, which represents the previously unrecognized prior service cost, on a prospective basis over a twenty-year period. In 1993, the new standard resulted in additional annual net periodic postretirement benefit cost of \$1,200,000 before taxes and \$792,000 after taxes, or \$0.04 per share. Prior-year financial statements have not been restated to apply the new standard.

Net postretirement benefit cost for the year ended December 31, 1993 included the following components (in thousands):

Service cost	\$	351
Interest cost		713
Net amortization and deferral		424
Net postretirement benefit cost	\$ 1	, 488

The cost information does not include the effects of Plan amendments made at the end of 1993, which are expected to reduce future costs. Cash payments for these benefits were \$288,000 for 1993. The Company continues to fund postretirement medical benefits on a pay-as-you-go basis.

The status of the plan and amounts recognized in the Company's consolidated balance sheet as of December 31, 1993 were as follows (in thousands):

Accumulated postretirement benefit obligation:
Retirees
Actives eligible to retire
Other actives

Total
Unrecognized loss
Unrecognized transition obligation

Accrued postretirement benefit liability

\$(2,234)
(956)
(3,028)
(3,028)
(6,218)
955
(6,218)
(6,218)
(6,218)
(7,000)
(7,100)
(7,100)

The accumulated postretirement benefit obligation reflects Plan amendments made at the end of 1993 which capped employer contributions for each participant at the 1993 dollar amounts. The discount rate used in the calculation was 7.5%.

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Notes to Consolidated Financial Statements (continued)

#### 11. Leases

Total rental expense under operating leases was \$7,528,000, \$9,577,000, and \$4,435,000 for the years ended December 31, 1993, 1992, and 1991, respectively.

Future minimum lease payments for operating leases with initial or remaining noncancelable lease terms in excess of one year are as follows: 1994--\$5,694,000; 1995--\$4,226,000; 1996--\$3,582,000; 1997--\$2,947,000; 1998--\$2,602,000; thereafter--\$7,492,000

#### 12. Financial Instruments

Financial instruments with potential credit risk consist principally of accounts receivable. Concentrations of credit risk with respect to receivables are limited due to the Company's large number of customers and their dispersion across many countries and industries. At December 31, 1993 and 1992, the Company had no significant concentrations of credit risk. The amounts reported in the balance sheet for cash and cash equivalents and for short-term and long-term debt approximate fair value.

#### 13. Segment and Geographic Information

Vishay operates in one line of business--the manufacture of electronic components. Information about the Company's operations in different geographic areas is as follows (in thousands):

	United States	Europe	Israel	0ther	Elimination	Consolidated
Year ended December 31, 1993						
Net sales to unaffiliated customers Net sales between geographic areas	\$426,695* 13,245	\$407,527 33,548	\$ 3,923 67,939	\$18,127 -	\$ - (114,732)	\$856,272
Total net sales	\$439,940	\$441,075			\$(114,732) \$(114,732)	\$856,272
Operating profit	\$31,302 ========	\$ 11,932 	\$33,467 =======	\$ 3,100		\$79,801 ========
Identifiable assets	\$375,456 ========	\$470,434 =======	\$85,634 =======	\$16,582		\$948,106 ========

Notes to Consolidated Financial Statements (continued)

### 13. Segment and Geographic Information (continued)

	United States	Europe	Israel	0ther	Elimination	Consolidated
Year ended December 31, 1992						
Net sales to unaffiliated customers Net sales between	\$395,249*	\$251,195	\$ 3,762	\$14,020	\$ -	\$664,226
geographic areas	14,070	15,232	50,341	-	(79,643)	-
Total net sales	\$409,319	\$266,427	\$54,103	\$14,020	\$(79,643)	\$664,226
Operating profit	\$31, 964	\$11,765	\$19,724	\$429 ======		\$63,882
Identifiable assets	\$346,938 ========	\$252,829 =======	\$47,658 =======	\$14,218 		\$661,643 =========
Year ended December 31, 1991						
Net sales to unaffiliated customers Net sales between	\$241,792*	\$192,317	\$ 3,070	\$ 5,104	\$ -	\$442,283
	15,163	6,900	42,780	-	(64,843)	-
Total net sales	\$256,955	\$199,217	\$45,850	\$ 5,104	\$(64,843)	\$442,283
Operating profit	\$26,107	\$10,091	\$11,575	\$309		\$48,082 =========
Identifiable assets	\$208,104 ========	\$188,966 ======	\$44,672 =======	\$7,029 ======		\$448,771 =========

<sup>\*</sup> Includes export sales of \$78,793, \$63,606, and \$34,282 for the years ended December 31, 1993, 1992, and 1991, respectively.

Sales between geographic areas are priced to result in operating profit which approximates that earned on sales to unaffiliated customers. Operating profit is total revenue less operating expenses. In computing operating profit, general corporate expenses, interest expense, and income taxes were not deducted.

Notes to Consolidated Financial Statements (continued)

### 14. Summary of Quarterly Financial Information (Unaudited)

Quarterly financial information for the years ended December 31, 1993 and 1992 is as follows:

	First Q	uarter	(In thousands, except per s er Second Quarter Third Quarter					Quarter	Total Year	
	1993	1992	1993	1992	1993	1992	1993	1992	1993	1992
Net sales	\$227,500	\$173,270	\$224,653	\$168,494	\$200,201	\$164,879	\$203,918	\$157,583	\$856,272	\$664,226
Gross profit	49,934	41,389	50,200	40,228	43,410	37,096	49,489	37,495	193,033	156,208
Earnings before cumulative effect of accounting change for income taxes	11,038	7,095	12,082	8,515	10,696	7,408	8,832	7,395	42,648	30,413
Net earnings	12,465(1)	7,095	12,082	8,515	10.696	7,408	8,832	7,395	44,075	30,413
Earnings per share (2): Before cumulative effect of accounting change	\$.52	\$.41	\$.57	\$.49	\$.50	\$.43	\$.42	\$.38	\$2.01	\$1.71
Net earnings	\$.59(1)	) \$.41	\$.57	\$.49	\$.50	\$.43	\$.42	\$.38	\$2.08	\$1.71

- (1) Included in net earnings for the first quarter of 1993 is a one-time tax benefit of \$1,427 or \$.07 per share resulting from the adoption of FASB Statement No. 109, "Accounting for Income Taxes".
- (2) Adjusted to give retroactive effect to 5% stock dividends in June 1993 and June 1992. Fourth quarter 1992 earnings reflect the difference between the Company's actual effective income tax rate of 19.8% and the estimated effective rate of 23.1% used through the third quarter.

# Schedule V -- Property, Plant, and Equipment (In thousands)

COL. A	COL. B	COL. C	COL. D	COL. E	COL. F
DESCRIPTION	Balance at Beginning of Period	at	Retirements	Other Changes Add (Deduct) Describe	Balance at End of
Year ended December 31, 1993:					
Land				(\$1,477)	
Buildings and improvements	87,623	48,710	1,626		136,432
Machinery and equipment	288,527	118,150	9,575	1,783	398,885
_ _	\$389,067	\$189,624(3)	\$11,614	\$2,031 (1)	\$569,108
	69,563	24,205	\$ 1,175 4,741 6,530	(\$538)(4) (1,404)(4) (8,392)(4)	87,623
=	\$267,705	\$144,142(2) ========	\$12,446(2) ========	(\$10,334) =======	\$389,067 =======
	\$ 11,696 65,344 164,414 \$241,454	5,173 25,845	\$ 0 403 3,573 \$3,976	(\$68)(4) (551)(4) (174)(4)	69,563
=	ΦΖ41,454 =========	Φ 31,020 :=======	φ 3,976 ========	(Ф/93) ========	φ201,105 ========
<del>-</del>	<b></b>		<del></del>		

- (1) \$18,406 recorded for the adoption of Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes". Statement 109 requires assets acquired in prior business combinations to be reported at their pretax amounts. Offset principally by foreign currency translation adjustments.
- (2) \$93,022 of the additions and \$5,798 of the retirements relate to the Sprague acquisition.
- (3) \$109,961 of the additions relate to the Roederstein acquisition.
- (4) Principally foreign currency translation adjustments.

# Schedule VI -- Accumulated Depreciation, Depletion, and Amortization of Property, Plant, and Equipment (In thousands)

COL. B	COL. C	COL. D	COL. E	COL. F
Beginning	Charged to Cost and	)	Add (Deduct)	
			(\$763)(1) (1,598)(1)	
\$117,448	\$43,493	\$ 9,576	(\$2,361)	\$149,004
			(\$261)(1) (2,924)(1)	
\$95,754 ========	\$30,995 ======	\$ 6,116(2)	(\$3,185) ========	\$117,448 =======
64,610	20,934	2,578		\$ 12,915 82,839  \$ 95,754
	\$17,632 99,816 \$117,448 ===================================	### Additions Charged to Cost and Cost and Expenses ### \$17,632 \$ 5,537 99,816 37,956 ### \$117,448 \$43,493 ### \$43	Additions Ot Charged to Cost and Feriod Expenses Retirements  \$17,632 \$ 5,537 \$ 512 99,816 37,956 9,064  \$117,448 \$43,493 \$ 9,576  \$12,915 \$ 6,086 \$ 1,108 82,839 24,909 5,008  \$95,754 \$30,995 \$ 6,116(2)  \$10,498 \$ 2,772 \$ 403 64,610 20,934 2,578	Additions Other Changes Balance at Charged to Add Beginning Cost and (Deduct) of Period Expenses Retirements Describe  \$17,632 \$ 5,537 \$ 512 (\$763)(1) 99,816 37,956 9,064 (1,598)(1)  \$117,448 \$43,493 \$ 9,576 (\$2,361)  \$12,915 \$ 6,086 \$ 1,108 (\$261)(1) 82,839 24,909 5,008 (2,924)(1)  \$95,754 \$30,995 \$ 6,116(2) (\$3,185)  \$10,498 \$ 2,772 \$ 403 \$48 (1) 64,610 20,934 2,578 (127)(1)

<sup>(1)</sup> Principally foreign currency translation adjustments.(2) \$1,026 of the retirements relates to the Sprague acquisition.

# Schedule IX Short-Term Borrowings (In thousands, except percentages)

COL. A	COL. B	COL. C	COL. D	COL. E	COL. F	
EGORY OF AGGREGATE DRT-TERM BORROWINGS	Balance at End of Period	Weighted Average Interest Rate	Maximum Amount Outstanding During the Period	Average Amount Outstanding During the Period(2)	Weighted Average Interest Rate During the Period(3)	
ended December 31, 1993 lotes Payable to Bank (1		6 . 85%	\$35,273	\$22,348	8.90%	
ended December 31, 1992 lotes Payable to Bank (1		10.02%	\$25,481	\$14,265	10.33%	
ended December 31, 1991 Jotes Payable to Bank (1		9.95%	\$ 9,128	\$ 7,125	9.37%	

- (1) Notes payable to bank represent borrowings under lines of credit borrowing arrangements which have no termination date but are reviewed annually for renewal.
- (2) The average amount outstanding during the period was based on quarter ending balances.
- (3) The weighted average interest rate during the period was computed by dividing the actual interest expense by average short-term debt outstanding.

# Schedule X -- Supplementary Income Statement Information (In thousands)

COL. A	COL. B
ITEM	Charged to Costs and Expenses
	Year ended December 31, 1993 1992 1991
Maintenance and repairs	\$23,177 \$18,344 \$12,131

Amounts for depreciation and amortization of intangible assets, taxes, other than payroll and income taxes, royalties, and advertising costs are not presented as such amounts are less than 1% of total sales and revenues.

#### **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.

March 30, 1994

/s/Felix Zandman

Date

Felix Zandman, Chairman of the Board, President, Chief Executive Officer & Director

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.

/s/Robert A. Freece

/s/Felix Zandman

Robert A. Freece Director, Vice President, Treasurer and Chief Financial Officer (Principal Financial and Accounting Officer)

Felix Zandman, Chairman of the Board, Director, President and Chief Executive Officer (Principal Executive Officer)

/s/Luella B. Slaner

/s/Avi D. Eden

Luella B. Slaner, Director

Avi D. Eden, Director

/s/Edward B. Shils

/s/Guy Brana

Edward B. Shils, Director Guy Brana, Director

/s/Donald Alfson

/s/Jean-Claude Tine

Donald Alfson, Director, Jean-Claude Tine, Director Vice President, President of Vishay Electronic Components, U.S. and Asia, and President of Dale

Electronics, Inc. /s/Gerald Paul

/s/Mark I. Solomon

Gerald Paul, Director, Vice President, President of Vishay Electronic Components, Europe, and

Mark I. Solomon, Director

Managing Director of Draloric Electronic GmbH

March 30, 1994 Date

EXHIBIT INDEX

Exhibit No.	Description	Page Number in Sequentially Numbered Copy	
2.1	Purchase and Sale Agreement, dated as of November 14, 1991, among Sprague Technologies Inc., Sprague Electric Company and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 1 to the Current Report Form 8-K dated November 14, 1991.		
3.1	Certificate of Incorporation of Registrant, a amended and Certificate of Amendment of Restated Certificate of Incorporation of Registrant dated May 18, 1993.	as 57	
3.2	Amended and Restated Bylaws of Registrant. Incorporated by reference to Exhibit 3.2 to Registration Statement No. 33-13833 of Registrant on Form S-2 under the Securities of of 1933 (the "Form S-2") and Amendment No. 1 Amended and Restated Bylaws of Registrant.		
10.1	Performance-Based Compensation Plan for Chief Executive Officer of Registrant.	f 156	
10.2	Second Amendment dated as of January 29, 1993 to Amended and Restated Vishay Intertechnology Inc. \$170,000,000 Revolving Credit and Term Loan Agreement by and among Comerica Bank, NationsBank of North Carolina, N.A., Signet Bank Maryland, CoreStates Bank, N.A., Bank Hapoalim, B.M., Meridian Bank, Bank Leumi lewer Israel, B.M., Berliner Handels-und Frankfurte Bank and ABN AMRO Bank N.V. (collectively, the "Banks"), Comerica Bank, as agent for the Bark (the "Agent") and Vishay Intertechnology, Incertical Components of the Current Report on Form 8-K, dated January 19, 1993.	gy, er ne nks c.	
10.3	Second Amendment dated as of January 29, 1993 to Amended and Restated Draloric Electronic GmbH DM 42,375,000 Revolving Credit and DM 57,036,000 Term Loan Agreement by and among Banks, the Agent and Draloric Electronic GmbH ("Draloric"), dated as of January 10, 1992. Incorporated by reference to Exhibit (10.2) the Current Report on Form 8-K, dated January 19, 1993.	the H	

Page Number in Sequentially Numbered Copy

Exhibit No. Description

Roederstein DM 104,315,990.20 Term Loan Agreement dated as of January 29, 1993 by and among the Banks, the Agent, Draloric and Vishay.

Incorporated by reference to Exhibit (10.3) to the Current Report on Form 8-K, dated January 19, 1993.

- 10.5 Agreement between First International Bank of Israel and Vishay Israel Ltd. dated January 28, 1993. Incorporated by reference to Exhibit (10.4) to the Current Report on Form 8-K, dated January 19, 1993.
- Amended and Restated Vishay Intertechnology, Inc. \$170,000,000 Revolving, Credit and Term Loan Agreement by and among Manufacturers Bank, N.A., NationsBank of North Carolina, N.A., Signet Bank Maryland, CoreStates Bank, N.A., Bank Hapoalim, B.M., Meridian Bank and Bank Leumi le-Israel, B.M. (collectively, the "Prior Banks"), the Agent and Vishay, dated as of January 10, 1992. Incorporated by reference to Exhibit (10.1) to the Current Report on Form 8-K, dated January 10, 1992.
- 10.7 Amended and Restated Draloric Electronic, GmbH DM 42,375,000 Revolving Credit and DM 57,036,000 Term Loan Agreement by and among the Prior Banks, the Agent and Draloric, dated as of January 10, 1992. Incorporated by reference to Exhibit (10.2) to the Current Report on Form 8-K, dated January 10, 1992.
- Amended and Restated Guaranty by Vishay to the Banks, dated as of January 29, 1993. Incorporated by reference to Exhibit (10.3) to the Current Report on Form 8-K, dated January 29, 1993.
- 10.9 Amended and Restated Guaranty by Dale Holdings, Inc., Dale Electronics, Inc., Bradford Electronics, Inc., and Measurements Group, Inc. to the Banks, dated as of January 29, 1993.

  Incorporated by reference to Exhibit (10.6) to the Current Report on Form 8-K, dated January 29, 1993.
- 10.10 Amended and Restated Permitted Borrowers
  Guaranty by Vilna Equities Holding B.V., Visra
  Electronics Financing, B.V., Draloric, E-Sil
  Components, Ltd., Vishay Components (U.K.)
  Limited, Sfernice, S.A., Ultronix, Inc., Techno
  Components Corporation and Ohmtek, Inc. to the
  Banks, dated as of January 29, 1993.
  Incorporated by reference to Exhibit (10.7) to
  the Current Report on Form 8-K, dated January
  29, 1993.

Page Number in Sequentially Numbered Copy

Exhibit No. Description

January 29, 1993.

10.11 Guaranty by Vishay Sprague, Inc., Sprague North Adams, Sprague Sanford and Roederstein Electronics, Inc. to the Banks, dated January 29, 1993. Incorporated by reference to Exhibit (10.8) to the Current Report on Form 8-K, dated

- 10.12 Guaranty Agreement, dated as of November 29, 1989 between the Company and Societe Generale, New York Branch. Incorporated by reference to Exhibit 10.3 to the Company's Annual Report on Form 10-K for December 31, 1989.
- 10.13 Option Agreement for the Assets of the Resista Division of Roederstein by and among Vishay, Mr. Jorg Roederstein, Roederstein Spezialfabriken fur Bauelemente der Elektronik und Kondensatoren der Starkstromtechnik GmbH ("Roederstein") and Mr. Till Roederstein, dated February 18, 1992. Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, dated February 18, 1992.
- 10.14 Purchase and Transfer Agreement concerning Shares by and among, Mrs. Ute Roederstein, Mrs. Cornelia Bodinka, nee Roederstein, Ms. Claudia Roederstein, Mr. Jorg Roederstein, Mr. Till Roederstein and Vishay dated February 18, 1992. Incorporated by reference to Exhibit 10.2\_ to the Current Report on Form 8-K, dated February 18, 1992.
- 10.15 Notarial Offer for a Purchase and Transfer Agreement concerning Shares by Mr. Till Roederstein and Vishay Intertechnology, Inc. dated February 18, 1992. Incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K, dated February 18, 1992.
- 10.16 Fiscal Agency Agreement, dated July 28, 1988, between the Company and Citibank, N.A.
  Incorporated by reference to Exhibit (10(i)) to the Current Report on Form 8-K, dated August 30. 1988.
- 10.17 Management Fee Agreement between Dale Holdings, Inc. and the Company, dated May 14, 1986. Incorporated by reference to Exhibit 10.15 to the Form S-2.

Page Number in Sequentially on Numbered Copy

No. Description

10.18 Employment Agreement, dated as of March 15, 1985, between the Company and Dr. Felix Zandman. Incorporated by reference to Exhibit

10.12 to the Form S-2.

10.19 1986 Employee Stock Plan of the Company. Incorporated by reference to Exhibit 4 to the Company's Registration Statement on Form S-8 (No. 33-7850).

- 10.20 1986 Employee Stock Plan of Dale Electronics, Inc. Incorporated by reference to Exhibit 4 to the Company's Registration Statement on Form S-8 (No. 33-7851).
- 10.21 Money Purchase Plan Agreement of Measurements Group, Inc. Incorporated by reference to Exhibit 10(a)(6) to Amendment No. 1 to the Company's Registration Statement on Form S-7 (No. 2-69970).
- 10.22 Distributor Agreement between Nytron Inductors and VSD, Inc. dated as of January 1, 1991. Incorporated by reference to the Company's Annual Report on Form 10-K for December 31, 1990.
- 10.23 Distribution Sales Agreement between Sprague Electric Company and Vishay Intertechnology, Inc., dated February 14, 1992. Incorporated by reference to Exhibit (10.1) to the Current Report on Form 8-K, dated February 14, 1992.
- 10.24 Sales Representation Agreement between Sprague Electric Company and Vishay Intertechnology, Inc. dated February 14, 1992. Incorporated by reference to Exhibit (10.2) to the Current Report on Form 8-K, dated February 14, 1992.
- 10.25 Agreement for Transfer of Computer Software License Administration Services Agreement between Sprague Electric Company and Vishay Intertechnology, Inc., dated February 14, 1992. Incorporated by reference to Exhibit (10.3) to the Current Report on Form 8-K, dated February 14, 1992.
- 10.26 Lease of Concord Facility, dated February 14, 1992. Incorporated by reference to Exhibit (10.4) to the Current Report on Form 8-K, dated February 14, 1992.
- 10.27 Sublease of Hudson Facility, dated February 14, 1992. Incorporated by reference to Exhibit (10.5) to the Current Report on Form 8-K, dated February 14, 1992.

23.

Page Number Exhibit in Sequentially Numbered Copy No. Description 10.28 Lease of El Paso Property, dated February 14, 1992. Incorporated by reference to Exhibit (10.6) to the Current Report on Form 8-K, dated February 14, 1992. 10.29 Non-Competition Agreement among Sprague Technologies, Inc., Sprague Electric Company and Vishay Intertechnology, Inc., dated February 14, 1992. Incorporated by reference to Exhibit (10.7) to the Current Report on Form 8-K, dated February 14, 1992. Agreement between Sprague Technologies, Inc. and Vishay Israel, Ltd., dated February 14, 1992. Incorporated by reference to Exhibit (10.8) to the Current Report on Form 8-K, dated 10.30 February 14, 1992. Statement regarding Computation of Per Share 11. Earnings. 160 22. Subsidiaries of the Registrant. 161

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Consent of Independent Auditors.

CERTIFICATE OF AMENDMENT
OF
RESTATED CERTIFICATE
OF INCORPORATION
OF
VISHAY INTERTECHNOLOGY, INC.

## It is hereby certified that:

- 1. The name of the corporation (hereinafter called the "Corporation") is Vishay Intertechnology, Inc.
- 2. The Restated Certificate of Incorporation of the Corporation, as amended, is hereby further amended by striking out the first paragraph of Article Fourth thereof and by substituting in lieu of said paragraph of said Article the following new paragraph:

"FOURTH: Section 1. Classes and Number of Shares. The total number of shares of all classes of stock which the Corporation shall have authority to issue is 51,000,000 shares. The classes and the aggregate number of shares of stock of each class which the Corporation shall have authority to issue are as follows:

- (i) 35,000,000 shares of CommonStock, \$0.10 par value per share (hereinafter the "Common Stock");
- (ii) 15,000,000 shares of Class B
  Common Stock, \$0.10 par value per share
  (hereinafter the "Class B Stock"); and
- (iii) 1,000,000 shares of Preferred Stock, \$1.00 par value per share, with such rights, privileges, restrictions and preferences as the Board of Directors may authorize from time to time (hereinafter the "Preferred Stock").

3. The amendment of the Restated Certificate of Incorporation, as amended, herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

Signed and attested to on May 18, 1993.

/s/Robert A. Freece

Robert A. Freece Vice President

Attest:

/s/ William J. Spires
William J. Spires
Secretary

## RESTATED CERTIFICATE OF INCORPORATION

٥F

VISHAY INTERTECHNOLOGY, INC.

## It is hereby certified that:

- (a) The present name of the Corporation (hereinafter called the "Corporation") is Vishay Intertechnology, Inc.
- (b) The name under which the Corporation was originally incorporated is Micro-Measurements, Inc.; and the date of filing the original certificate of incorporation of the Corporation with the Secretary of State of the State of Delaware is July 3, 1962.
- 2. The certificate of incorporation of the Corporation is hereby amended by striking out Articles FIRST through THIRTEENTH thereof and by substituting in lieu thereof new Articles FIRST through ELEVENTH which are set forth in the Restated Certificate of Incorporation hereinafter provided for.

Each share of Common Stock of the par value of \$1.00 per share, outstanding upon the effective date of this Restated Certificate of Incorporation, shall be reclassified as 250 fully paid and non-assessable shares of the par value of \$.10 per share, which shares shall be included in the 5,000,000 shares of Common Stock authorized in this Restated Certificate of Incorporation.

- 3. The provisions of the certificate of incorporation of the Corporation as heretofore amended and/or supplemented, and as herein amended, are hereby restated and integrated into the single instrument which is hereinafter set forth, and which is entitled Restated Certificate of Incorporation of Vishay Intertechnology, Inc.
- 4. The amendments and the restatement of the Restated Certificate of Incorporation have been duly adopted by the stockholders of the Corporation in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware.
- 5. The capital of the Corporation will not be reduced under or by reason of any amendment herein certified.
- 6. The certificate of incorporation of the Corporation, as amended and restated herein, shall upon the effective date of this Restated Certificate of Incorporation read as follows:

RESTATED CERTIFICATE OF INCORPORATION

ΛE

VISHAY INTERTECHNOLOGY, INC.

FIRST: The name of the Corporation (hereinafter called the "Corporation") is Vishay Intertechnology, Inc.

SECOND: The address, including street, number, city, and county, of the registered office of the Corporation in the

State of Delaware is 229 South State Street, City of Dover, County of Kent; and the name of the registered agent of the Corporation in the State of Delaware at such address is The Prentice-Hall Corporation System, Inc.

THIRD: The purpose of the Corporation are to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is 6,000,000 shares, of which 1,000,000 shares, of the par value of \$1 per share, shall be Preferred Stock, and 5,000,000 shares, of the par value of \$.10 per share, shall be Common Stock.

The designations, preferences and relative, participating, optional or other special rights and qualifications, limitations or restrictions of each class of stock are as follows:

A. The Preferred Stock may be issued in one or more series and may be with such voting powers, full or limited, or without voting powers, and with such designations, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions thereof, as shall be fixed by the Board of Directors pursuant to authority hereby expressly granted to it, and as shall be stated and expressed in the resolution or resolutions providing for the issue of such

stock adopted by the Board of Directors pursuant to authority expressly vested in it by these provisions.

- B. Any Preferred Stock or series thereof may be made subject to redemption at such time or times and at such price or prices as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors as hereinabove provided.
- C. The holders of Preferred Stock or of any series thereof shall be entitled to receive dividends at such rates, on such conditions and at such times as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors as hereinabove provided, payable in preference to, or in such relation to, the dividends payable on any other class or classes of stock, or cumulative or noncumulative as shall be so stated and expressed.
- D. The holders of Preferred Stock or of any class or of any series thereof, shall be entitled to such rights upon the dissolution of, or upon any distribution of the assets of, the Corporation as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors as hereinabove provided.
- E. Any Preferred Stock of any class or of any series thereof may be made convertible into, or exchangeable for, shares of any other class or classes or of any other series of the same

or of any other class or classes of stock of the Corporation, or shares of any class or series of stock of any other corporation, at such price or prices or at such rates of exchange and with such adjustments as shall be stated and expressed or provided for the issue of such stock adopted by the Board of Directors as hereinabove provided.

F. Except as otherwise provided herein, by statute or by the resolutions providing for the issue of Preferred Stock specifically provided, the Preferred Stock shall have no voting power and the Common Stock shall have the sole right and power to vote on all matters on which a vote of stockholders is to be taken. Each holder of Common Stock shall be entitled to vote and shall have one vote for each share thereof held.

 $\label{eq:fifth:$ 

SIXTH: Whenever a compromise or arrangement is proposed between this Corporation and its creditors or any class of them and/or between this Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this Corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this Corporation under the provisions of Section 291 of the General Corporation Law of the State of Delaware or on the application of trustees in dissolution or of any receiver or receivers appointed for this Corporation under the provisions of Section 279 of the

General Corporation Law of the State of Delaware order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this Corporation as a consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this Corporation, as the case may be, and also on this Corporation.

SEVENTH: For the management of the business and for the conduct of the affairs of the Corporation, and in further definition, limitation and regulation of the powers of the Corporation and of its directors and stockholders, or any class thereof, as the case may be, it is further provided:

1. The power to make, alter, or repeal the By-Laws of the Corporation, and to adopt any new By-Laws, except a By-Law classifying directors for election for staggered terms, shall be vested in the Board of Directors, provided that the Board of Directors may

delegate such power, in whole or in part, to the stockholders.

- Whenever the Corporation shall be authorized to issue more than one class of stock, one or more of which is denied voting power, no outstanding share of any class of stock which is denied voting power under the provisions of the Certificate of Incorporation shall entitle the holder thereof to notice of, and the right to vote at any meeting of stockholders except as the provisions of paragraph (c)(2) of section 242 of the General Corporation Law and of sections 251 and 252 of the General Corporation Law shall otherwise require; provided, that no share of any such class which is otherwise denied voting power shall entitle the holder thereof to vote upon the increase or decrease in the number of authorized shares of said class.
- 3. In lieu of taking any permissive or requisite action by vote at a meeting of stockholders, any such vote and any such meeting may be dispensed with if either all of the stockholders entitled to vote upon the action at any such meeting shall consent in

writing to any such corporate action being taken or if less than all of the stockholders entitled to vote upon the action at any such meeting shall consent in writing to any such corporate action being taken; provided, that any such action taken upon less than the unanimous written consent of all stockholders entitled to vote upon any such action shall be by the written consent of the stockholders holding at least the minimum percentage of the votes required to be cast to authorize any such action under the provisions of the General Corporation Law or under the provisions of the Certificate of Incorporation or the By-Laws as permitted by the provisions of the General Corporation Law; and, provided, that prompt notice of the taking of the corporate action without a meeting by less than unanimous consent shall be given to those stockholders who have not consented in writing.

 $\mbox{4.} \quad \mbox{No election of directors need be by} \\ \mbox{written ballot.} \\$ 

EIGHTH: No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership,

association, or other organization in which one or more of its directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because his or their votes are counted for such purpose, if:

- (a) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the Committee, and the Board or Committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a guorum; or,
- (b) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or,
- (c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified, by the Board of Directors, a committee thereof, or the stockholders.

Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

NINTH: Every person (and the heirs, executors and administrators of such person) who is or was a director, officer, employee or agent of the Corporation or of any other company, including another corporation, partnership, joint venture, trust or other enterprise which such person serves or served as such at the request of the Corporation shall be indemnified by the Corporation against all judgments, payments in settlement (whether or not approved by court), fines, penalties and other reasonable costs and expenses (including fees and disbursements of counsel) imposed upon or incurred by such person in connection with or resulting from any action, suit, proceeding, investigation or claim, civil, criminal, administrative, legislative or other (including any criminal action, suit or proceeding in which such person enters a plea of guilty or nolo contendere or its equivalent), or any appeal relating thereto, which is brought or threatened either by or in the right of the Corporation or such other company (herein called a "derivative action") or by any other person, governmental authority or instrumentality (herein called a "third-party action") and in which such person is made a party or is otherwise involved by reason of his being or having been such director, officer, employee, or agent of by reason of any action or omission, or alleged action or omission by such person in his capacity as such director, officer, employee or agent if either (a) such person is wholly successful, on the merits or otherwise, in defending such derivative or third-party action or (b) in the judgment of a court of competent jurisdiction or, in the absence of such a determination, in the judgment

of a majority of a quorum of the Board of Directors of the Corporation (which quorum shall not include any director who is a party to or is otherwise involved in such action) or, in the absence of such a disinterested quorum, in the opinion of independent legal counsel (i) in the case of a derivative action, such person acted without negligence or misconduct in the performance of his duty to the corporation or such other company or (ii) in the case of a third-party action, such person acted in good faith in what he reasonably believed to be the best interest of the corporation or such other company, and, in addition, in any criminal action, had no reasonable cause to believe that his action was unlawful; provided that, in the case of a derivative action, such indemnification shall not be made in respect of any payment to the Corporation or such other company or any stockholder thereof in satisfaction of judgment or in settlement unless either (x) a court of competent jurisdiction has approved such settlement, if any, and the reimbursement of such payment or (y) if the court in which such action has been instituted lacks jurisdiction to grant such approval or such action is settled before the institution of judicial proceedings, in the opinion of independent legal counsel the applicable standard of conduct specified in the preceding sentence has been met, such action was without substantial merit, such settlement was in the best interests of the corporation or such other company and the reimbursement of such payment is permissible under applicable law. In case such person is successful, on the merits or otherwise, in defending part of such action or, in the judgment

of such a court or such quorum of the Board of Directors or in the opinion of such counsel, has met the applicable standard of conduct specified in the preceding sentence with respect to part of such action, he shall be indemnified by the Corporation against the judgments, settlements, payments, fines, penalties and other costs and expenses attributable to such part of such action.

The foregoing rights of indemnification shall be in addition to any rights to which any such director, officer, employee, or agent may otherwise be entitled under the Certificate of Incorporation, any agreement or vote of stockholders or at law or in equity or otherwise.

In any case in which, in the judgment of a majority of such a disinterested quorum of the Board of Directors, any such director, officer or employee will be entitled to indemnification under the foregoing provisions of this Article, such amounts as they deem necessary to cover the reasonable costs and expenses incurred by such person in connection with the action, suit, proceeding, investigation or claim prior to final disposition thereof may be advanced to such person upon receipt of an undertaking by or on behalf of such person to repay such amounts if it is ultimately determined that he is not so entitled to indemnification.

TENTH: The Corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was

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serving at the request of the Corporation as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the Corporation would have the power to indemnify him against such liability under the provisions of Article NINTH.

ELEVENTH: From time to time any of the provisions of this Certificate of Incorporation may be amended, altered or repealed, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted in the manner and at the time prescribed by said law, and all rights at any time conferred upon the stockholders of the Corporation by this Certificate of Incorporation are granted subject to the provisions of this Article ELEVENTH.

Signed and attested to on December 6, 1972.

/s/ Felix Zandman -----President

Attest:

/s/ Robert A. Freece -----Treasurer

/s/ Franklin Feldman Secretary

## State of Delaware Office of the Secretary of State

I, WILLIAM T. QUILLEN, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF INCORPORATION OF "MICRO-MEASURMENTS, INC.", FILED IN THIS OFFICE THE THIRD DAY OF JULY, A.D. 1962, AT 9 O'CLOCK A.M.

/s/ William T. Quillen

SEAL

William T. Quillen, Secretary of State

AUTHENTICATION: 7067577 DATE: 03-24-94

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## CERTIFICATE OF INCORPORATION

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## MICRO-MEASUREMENTS, INC.

WE, THE UNDERSIGNED, for the purpose of associating to establish a corporation of the transaction of the business and the promotion and conduct of the objects and purposes hereinafter stated, under the provisions and subject to the requirements of the laws of the State of Delaware (particularly in Chapter 1, Title 8 of the 1953 Delaware Code and the Acts Amendatory thereof and supplemental thereto, and known as the "General Corporation Law of the State of Delaware"), do make and file this Certificate of Incorporation in writing and do hereby certify as follows, to wit:

 $\label{first:fir$ 

SECOND: The respective names of the County and of the City within the County of which the principal office of the Corporation is to be located in the State of Delaware are the County of Kent and the City of Dover. The name of the resident agent of the Corporation is The Prentice-Hall Corporation System, Inc. The street and number of said principal office and the address by street and number of said resident agent is 229 South State Street, Dover, Delaware.

THIRD: The nature of the business of the Corporation and the object or purpose to be transacted, promoted or carried on by the Corporation are as follows:

To design, devise, invent, manufacture, install, remove, repair, inspect, report upon, buy, sell, handle and deal in, strain sensing elements, temperature sensors, associated instruments, transducers and associated equipment of all kinds and natures.

To purchase, construct, lease or otherwise acquire, own, operate, sell and dispose of factories and other buildings and structures, with such plant, machinery, tools and equipment as may be necessary for the business of the corporation.

To acquire by purchase, exchange, concession, easement, contract, lease or otherwise, to hold, own, use, control, manage, improve, maintain and develop, to mortgage, pledge, grant, sell, convey, exchange, assign, divide, lease, sublease, or otherwise encumber or dispose of, and to deal in and trade in, real estate, improved or unimproved, lands, leaseholds, options, concessions, easements, tenaments, hereditaments and interests in real, mixed, and personal property, of every kind and description wheresoever situated, and any and all rights therein.

To manufacture, process, purchase, sell and generally to trade and deal in and with goods, wares, and merchandise of every kind, nature and description, and to engage and participate

in any mercantile, industrial trading, consultation, or research business of any kind or character whatsoever.

To acquire by purchase, exchange or otherwise, all, or any part of, or any interest in, the properties, assets, business and good will of any one or more persons, firms, associations or corporations heretofore or hereafter engaged in any business for which a corporation may now or hereafter be organized under the laws of the State of Delaware; to pay for the same in cash, property or its own or other securities; to hold, operate, reorganize, liquidate, sell or in any manner dispose of the whole or any part thereof; and in connection therewith, to assume or guarantee performances of any liabilities, obligations or contracts of such persons, firms, associations or corporations, and to conduct the whole or any part of any business thus acquired.

To endorse or guarantee or become surety in respect of the payment of principal, interest or dividends upon, and to guarantee the performance of sinking fund or other obligations of, any securities, and to guarantee in any way permitted by law the performance of any of the contracts or other undertakings in which the Corporation may otherwise be or become interested, of any person, firm, association, corporation, government or subdivision thereof, or of any other combination, organization or entity whatsoever.

To acquire, hold, use, sell, assign, lease, grant licenses in respect of, mortgage or otherwise dispose of letters

patent of the United States or any foreign country, patent rights, licenses and privileges, inventions, improvements and processes, copyrights, trademarks and trade names, relating to or useful in connection with any business of this Corporation.

To acquire by purchase, subscription, or otherwise, and to receive, hold, own, guarantee, sell, assign, exchange, transfer, mortgage, pledge or otherwise dispose of or deal in and with any of the shares of the capital stock, or any voting trust certificates in respect of the shares of capital stock, scrip, warrants, rights, bonds, debentures, notes, trust receipts, other securities, obligations, choses in action and evidences of indebtedness or interest issued or created by any corporations, joint stock companies, syndicates, associations, firms, trusts or persons, public or private, or by the government of the United States of America, or by any foreign government, or by any State, territory, province, municipality or other political subdivision or by any governmental agency, and as owner thereof to possess and exercise all the rights, powers and privileges of ownership, including the right to execute consents and vote thereon, and to do any and all acts and things necessary and advisable for the preservation, protection, improvement and enhancement in the value thereof.

To enter into, make and perform contracts of every kind and description with any person, firm, association, corporation, municipality, county, state, body politic or government or colony or dependency thereof.

To borrow or raise monies for any of the purposes of the corporation and, from time to time without limit as to amount, to draw, make, accept, endorse, execute and issue promissory notes, drafts, bills of exchange, warrants, bonds, debentures and other negotiable or non-negotiable instruments and evidences of indebtedness, and to secure the payment of any thereof and of the interest thereon by mortgage upon or pledge, conveyance or assignment in trust of the whole or any part of the property of the Corporation, whether at the time owned or thereafter acquired, and to sell, pledge or otherwise dispose of such bonds or other obligations of the Corporation for its corporate purpose.

To loan to any person, firm or corporation any of its surplus funds, either with or without security.

To purchase, hold, sell, reissue and transfer the shares of its own capital stock, provided it shall not use its funds or property for the purchase of its own shares of capital stock when such use would cause any impairment of its capital except as otherwise permitted by law, and provided further that shares of its own capital stock belonging to it shall not be voted upon directly or indirectly.

To have one or more offices to carry on all or any of its operations and business and, without restriction or limit as to amount, to purchase or otherwise acquire, hold, own, mortgage, sell, convey or otherwise dispose of, real and personal property of every class and description in any of the states, districts, territories or colonies of the United States, and in any and all foreign countries, subject to the laws of such state, district, territory, colony or country.

In general, to carry on any other business in connection with the foregoing, and to have and exercise all the powers conferred by the law of Delaware upon corporations formed under the General Corporation Law of the State of Delaware, and to do any and all of the things hereinbefore set forth to the same extent as natural persons might or could do.

The objects and purposes specified in the foregoing clauses shall, except where otherwise expressed, be in no wise limited or restricted by reference to, or inference from, the terms of any other clause in this Certificate of Incorporation, but the objects and purposes specified in each of the foregoing clauses of this Article shall be regarded as independent objects and purposes.

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is One Hundred Thousand (100,000) and the par value of each such shares shall be One Dollar (\$1.00) amounting in the aggregate to One Hundred Thousand Dollars (\$100,000). All such shares are of one class and are designated as Common Stock.

FIFTH: The minimum amount of capital with which the Corporation will commence business is One Thousand Dollars (\$1,000).

 $\mbox{SIXTH:} \ \mbox{ The names and places of residence of each of}$  the incorporators are as follows:

NAMES RESIDENCES

Charles B. Hochman 62-60 99th Street

Rego Park, New York

Carl Kanter 1436 Lexington Avenue

New York, New York

Franklin Feldman 45 East 9th Street

New York, New York

 $\label{eq:SEVENTH:} \textbf{ The Corporation is to have perpetual existence.}$ 

EIGHTH: The private property of stockholders of the Corporation shall not be subject to the payment of corporate debts to any extent whatever.

NINTH: For the management of the business and for the conduct of the affairs of the Corporation, and in further definition, limitation and regulation of the powers of the Corporation and of its Directors and stockholders, it is further provided:

1. The number of Directors of the Corporation shall be as specified in the By-Laws of the Corporation, but such number may from time to time be increased or decreased in such manner as may be prescribed by the By-Laws. In no event shall the number of Directors be less than three. The election of Directors need not be by ballot, and Directors need not be stockholders.

- 2. In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors is expressly authorized and empowered:
- (a) to make, alter, amend and repeal the By-Laws of the Corporation, subject to the power of the stockholders to alter or repeal the By-Laws made by the Board of Directors.
- (b) subject to the applicable provisions of the By-Laws then in effect, to determine, from time to time, whether and to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders, and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware, unless and until authorized so to do by resolution of the Board of Directors or of the stockholders of the Corporation.
- (c) without the assent or vote of the stockholders, to authorize and issue obligations of the Corporation, secured or unsecured, to include therein such provisions as to redeemability, convertibility or otherwise, as the Board of Directors, in its sole discretion, may determine, and to authorize the mortgaging or pledging, as security therefor, of any property of the Corporation, real or personal, including after-acquired property.

- (d) to establish bonus, profit-sharing or other types of incentive or compensation plans for the employees (including officers and Directors) of the Corporation and to fix the amount of profits to be distributed or shared and to determine the persons to participate in any such plans and the amounts of their respective participations.
- (e) to set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purpose and to abolish any such reserve in the manner in which it was created.
- $\mbox{(f)} \quad \mbox{by resolution passed by a majority of}$  the whole board, to designate one or more committees.

NAME RESIDENCES

Franklin Feldman 45 East 9th Street New York, New York

 $\label{eq:SEVENTH:} \textbf{ The Corporation is to have perpetual}$  existence.

EIGHTH: The private property of stockholders of the Corporation shall not be subject to the payment of corporate debts to any extent whatever.

NINTH: For the management of the business and for the conduct of the affairs of the Corporation, and in further definition, limitation and regulation of the powers of the Corporation and of its Directors and stockholders, it is further provided:

- 1. The number of Directors of the Corporation shall be as specified in the By-Laws of the Corporation, but such number may from time to time be increased or decreased in such manner as may be prescribed by the By-Laws. In no event shall the number of Directors be less than three. The election of Directors need not be by ballot, and Directors need not be stockholders.
- 2. In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors is expressly authorized and empowered:
- (a) to make, alter, amend and repeal the By-Laws of the Corporation, subject to the power of the stockholders to alter or repeal the By-Laws made by the Board of Directors.
- (b) subject to the applicable provisions of the By-Laws then in effect, to determine, from time to time, whether and to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders, and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware, unless and until authorized so to do by resolution of the Board of Directors or of the stockholders of the Corporation.
- (c) without the assent or vote of the stockholders, to authorize and issue obligations of the

Corporation, secured or unsecured, to include therein such provisions as to redeemability, convertibility or otherwise, as the Board of Directors, in its sole discretion, may determine, and to authorize the mortgaging or pledging, as security therefor, of any property of the Corporation, real or personal, including after-acquired property.

- (d) to establish bonus, profit-sharing or other types of incentive or compensation plans for the employees (including officers and Directors) of the Corporation and to fix the amount of profits to be distributed or shared and to determine the persons to participate in any such plans and the amounts of their respective participations.
- (e) to set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purpose and to abolish any such reserve in the manner in which it was created.
- (f) by resolution passed by a majority of the whole board, to designate one or more committees, each committee to consist of two or more of the Directors of the Corporation, which, to the extent provided in the resolution or in the By-Laws of the Corporation, shall have and may exercise the powers of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it. Such committee or committees shall have such name or names as may be stated in the By-Laws of the Corporation or as

may be determined from time to time by resolution adopted by the  $\ensuremath{\mathsf{Board}}$  of <code>Directors</code>.

When and as authorized by the affirmative vote of the holders of a majority of the stock issued and outstanding having voting power given at a stockholders' meeting duly called for that purpose, or when authorized by the written consent of the holders of a majority of the voting stock issued and outstanding, to sell, lease or exchange all of the property and assets of the Corporation, including its good will and its corporate franchises, upon such terms and conditions and for such consideration, which may be in whole or in part shares of stock in, and/or other securities of, any other corporation or corporations, as its Board of Directors shall deem expedient for the best interest of the Corporation.

In addition to the powers and authorities hereinbefore or by statute expressly conferred upon it, the Board of Directors may exercise all such powers and do all such acts and things as may be exercised or done by the Corporation, subject, nevertheless, to the provisions of the laws of the State of Delaware, of the Certificate of Incorporation, and of the By-Laws of the Corporation.

3. Any Director or any officer elected or appointed by the stockholders or by the Board of Directors may be removed at any time in such manner as shall be provided in the By-Laws of the Corporation.

- In the absence of fraud, no contract or other transaction between the Corporation and any other corporation, and no act of the Corporation, shall in any way be affected or invalidated by the fact that any of the Directors of the Corporation are pecuniarily or otherwise interested in, or are Directors or officers of, such other corporation; and, in the absence of fraud, any Director, individually, or any firm of which any Director may be a member, may be a party to, or may be pecuniarily or otherwise interested in, any contract or transaction of the Corporation; provided, in any case, that the fact that he o such firm is so interested shall be disclosed or shall have been known to the Board of Directors or a majority thereof; and any Director of the Corporation who is also a Director or officer of any such other corporation, or who is also so interested, may be counted in determining the existence of a quorum in any meeting of the Board of Directors of the Corporation which will authorize any such contract, act or transaction, and may vote thereat to authorize any such contract, act or transaction, with like force and effect as if he were not such Director or officer of such other corporation, or not so interested.
- 5. Any contract, act or transaction of the corporation or of the Directors may be ratified by a vote of a majority of the shares having voting power at any meeting of stockholders, or at any special meeting called for such purpose, and such ratification shall, so far as permitted by law and by

the Certificate of Incorporation, be as valid and as binding as though ratified by every stockholder of the Corporation.

TENTH: Whenever a compromise or arrangement is proposed between this Corporation and its creditors or any class of them and/or between this Corporation and its stockholders or any class of them, any Court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this Corporation or of any creditor or stockholder thereof, or on the application of any receiver or receivers appointed for this Corporation under the provisions of Section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for this Corporation under the provisions of Section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, to be summoned in such manner as the said Court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this Corporation as a consequence of such compromise or arrangement and the said reorganization shall, if sanctioned by the Court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this Corporation, as the case may be, and also on this Corporation.

ELEVENTH: Meetings of stockholders may be held outside the State of Delaware, if the By-Laws so provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the By-Laws of the Corporation.

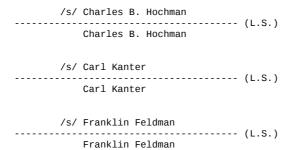
TWELFTH: The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

THIRTEENTH: No stockholder of this Corporation shall have any preemptive or preferential right of subscription to any shares of any stock of this Corporation, or to any obligations convertible into stock of this Corporation, issued or sold, nor any right of subscription to any thereof other than such, if any, as the Board of Directors of this Corporation in its discretion from time to time may determine, and at such price as the Board of Directors from time to time may fix, pursuant to the authority hereby conferred by the Certificate of Incorporation of this Corporation, and the Board of Directors may issue stock of this Corporation, or obligations convertible into stock, without offering such issue of stock, either in whole or in part, to the stockholders of this Corporation. The acceptance of stock in this Corporation shall be a waiver of any such preemptive or preferential right which in the absence of this provision might

otherwise be asserted by stockholders of this Corporation of any of them.

IN WITNESS WHEREOF, we, the undersigned, being all of the incorporators hereinabove named, do hereby further certify that the facts hereinabove stated are truly set forth and accordingly have hereunto set our respective hands and seals.

DATED: New York, New York June 27, 1962



STATE OF NEW YORK ) : SS.:
COUNTY OF NEW YORK )

BE IT REMEMBERED that on this 27th day of June, A.D.

1962, personally came before me, a Notary Public for the State of
New York, CHARLES B. HOCHMAN, CARL KANTER and FRANKLIN FELDMAN,
all of the parties to the foregoing Certificate of Incorporation,
known to me personally to be such, and severally acknowledged the
said Certificate to be the act and deed of the signers
respectively and that the facts therein stated are truly set
forth.

 $\ensuremath{\mbox{\sc GIVEN}}$  under my hand and seal of office the day and year aforesaid.

/s/ Nettie Rothstein

Notary Public
Nettie Rothstein
Notary Public, State of New York
No. 24-3379250
Qualified in Kings County
Certificate filed in New York County
Commission Expires March 30, 1963

## State of Delaware Office of the Secretary of State

I, WILLIAM T. QUILLEN, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

WITH AND INTO "MICRO-MEASUREMENTS, INC." UNDER THE NAME OF "MICRO-MEASUREMENTS, INC.", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE THE THIRTEENTH DAY OF APRIL, A.D. 1966, AT 9 O'CLOCK A.M.

/s/ William T. Quillen

SEAL

William T. Quillen, Secretary of State

AUTHENTICATION: 7067576 DATE: 03-24-94

AGREEMENT OF MERGER dated as of April 9, 1966 between VISHAY INSTRUMENTS, INC., a corporation duly organized and existing under the laws of the State of Delaware, a Constituent Corporation, and a majority of the directors thereof, and MICRO-MEASUREMENTS, INC., a corporation also duly organized and existing under the laws of the State of Delaware, a Constituent Corporation, and a majority of the directors thereof.

WHEREAS, Vishay Instruments, Inc. was organized under the laws of the State of Delaware by a Certificate of Incorporation filed in the office of the Secretary of State of the State of Delaware on February 1, 1962, with an authorized capital consisting of 100,000 shares of Common Stock of the par value of \$1.00 per share, of which 1,000 shares are issued and outstanding; and

WHEREAS, Micro-Measurements, Inc. was organized under the laws of the State of Delaware by a Certificate of Incorporation filed in the office of the Secretary of State of the State of Delaware on July 3, 1962, with an authorized capital consisting of 100,000 shares of Common Stock of the par value of \$1.00 per share, of which 1,000 shares are issued and outstanding; and

WHEREAS, a majority of the directors of each of the Constituent Corporations deem it advantageous for the Constituent Corporations, and for the benefit of the stockholders of each, to merger Vishay Instruments, Inc., with and into Micro-

Measurements, Inc., which is hereinafter sometimes referred to as the Continuing Corporation; and

WHEREAS, pursuant to the General Corporation Law of the State of Delaware the directors, or a majority of them, of each Constituent Corporation are authorized to enter into an agreement signed by them and under the corporate seals of the respective corporations, prescribing the terms and conditions of merger, the mode of carrying the same into effect, and stating such other facts required or permitted by the provisions of said law to be set out in certificates and articles of incorporation, as can be stated in the case of a merger, as well as the manner of converting the shares of each of the Constituent Corporations into shares or other securities of the corporation surviving such merger, with such other details and provisions as are deemed necessary.

NOW, THEREFORE, THIS AGREEMENT WITNESSETH:

ARTICLE I

Merger

Pursuant to the General Corporation Law of the State of Delaware, Vishay Instruments, Inc., the Constituent Delaware Corporation, is hereby merged with and into Micro-Measurements, Inc., the Constituent Delaware Corporation, which shall survive the merger.

The Continuing Corporation shall succeed to, without other transfer, and shall possess and enjoy all the rights,

privileges, powers and franchises as well of a public as of a private nature, and be subject to all the restrictions, disabilities and duties of each of the two Constituent Corporations, and all and singular, the rights, privileges, powers and franchises of each of said corporations, and all property, real, personal and mixed, and all debts due to either of the Constituent Corporations on whatever account, as well for stock subscriptions as all other things in action or belonging to each of such Constituent Corporations, shall be vested in the Continuing Corporation; and all property, rights, privileges, powers and franchises, and all and every other interest shall be thereafter as effectually the property of the Continuing Corporation as they were of the respective Constituent Corporations, and the title to any real estate vested by deed or otherwise in either of such Constituent Corporations, shall not revert or be in any way impaired by reason of such merger; provided, however, that all rights of creditors and all liens upon any property of either of such Constituent Corporations shall be preserved unimpaired, limited to the property affected by such liens at the time of the merger, and all debts, liabilities and duties of the respective Constituent Corporations shall thenceforth attach to the Continuing Corporation, and may be enforced against it to the same extent as if said debts, liabilities and duties had been incurred or contracted by it.

If at any time the Continuing Corporation shall deem or be advised that any further assignments or assurances in law or things are necessary or desirable to vest, or to perfect or

confirm, of record or otherwise, in the Continuing Corporation the title to any property acquired or to be acquired by reason of or as a result of the merger provided for by this Agreement, the proper officers and directors of each of the Constituent Corporations shall and will execute and deliver all such proper deeds, assignments and assurances in law and do all things necessary or proper so to vest, perfect or confirm title to such property in the Continuing Corporation and otherwise to carry out the purpose of this Agreement.

#### ARTICLE II

Certificate of Incorporation of the Continuing Corporation

The Certificate of Incorporation of the Constituent Corporation, Micro-Measurements, Inc., which is a Delaware corporation, shall be the Certificate of Incorporation of the Continuing Corporation, and all terms and provisions thereof are hereby incorporated in this Agreement of Merger with the same force and effect as if herein set forth in full.

#### ARTICLE III

By-Laws of the Continuing Corporation

Until altered, amended or repealed as herein or therein provided, the By-Laws of the Continuing Corporation shall be the By-Laws of Micro-Measurements, Inc. as in effect on the date of this Agreement.

ARTICLE IV

# Directors of the Continuing Corporation

The number of directors of the Continuing Corporation shall be not less than three (3) and the Board of Directors may increase the number of directors at any time, as provided in the By-Laws of the Continuing Corporation. Directors need not be stockholders. Upon this merger's becoming effective, the Board of Directors of the Continuing Corporation shall be three (3) in number and shall consist of the individuals whose names and residences are as follows:

Names Residences

Felix Zandman 335 Spring Mill Road,

Villanova, Pennsylvania

Ruth Zandman 335 Spring Mill Road,

Villanova, Pennsylvania

Franklin Feldman 15 West 81st Street, New York, New York

Said persons shall be the directors of the Continuing Corporation from and after the date when this merger becomes effective and until the next annual meeting of the stockholders of the Continuing Corporation and until their successors respectively are elected to qualify. All persons who, at the time this merger becomes effective, shall be executive or administrative officers of Micro-Measurements, Inc. shall be and remain like officers of the Continuing Corporation until the first meeting of the Board of Directors of the Continuing Corporation. A meeting of the Board of Directors of the Continuing Corporation shall be held as

soon as practicable after this merger becomes effective and may be called in the manner provided in the By-Laws for the calling of Special Meetings of the Board of Directors to be held at the time and place specified in the notice.

#### ARTICLE V

Capitalization of the Continuing Corporation

 $\label{thm:continuing} \mbox{ Corporation upon}$  the merger's becoming effective shall be as follows:

	Shares	Shares
Class	Authorized	<b>Outstanding</b>
Common Stock, par		
value \$1 per share	100,000	2,000

# ARTICLE VI

Manner of Converting Shares of Constituent Corporations

The manner of converting shares of stock of each of the Constituent Corporations shall be as follows:

Upon the filing of this Agreement as required by law, each share of common stock of Vishay Instruments, Inc. shall be converted into one share of common stock of Micro-Measurements, Inc., and any stockholder of Vishay Instruments, Inc., upon the surrender to the Continuing Corporation for cancellation of one or more certificates evidencing shares of common stock of Vishay Instruments, Inc., shall be entitled to receive one or more certificates evidencing the number of shares of the Continuing

Corporation evidenced by the certificates so surrendered for cancellation.

## ARTICLE VII

# Approval of Merger

This Agreement shall be submitted to the respective stockholders of the Constituent Corporations as provided by law and shall become effective only upon written consent to adoption by all of the stockholders of each Constituent Corporation entitled to vote upon the adoption of the Agreement, certification of such fact on the Agreement by the Secretary or an Assistant Secretary of each Constituent Corporation, under the seal of each, the proper execution and acknowledgment of this Agreement, and the filing of the same as required by law. When such consent to the adoption of this Agreement is given and this Agreement is so certified, executed, acknowledged and filed, the separate evidence of Vishay Instruments, Inc. shall cease, and said corporation shall be merged with and into the Continuing Corporation, all in accordance with this Agreement.

 $\hbox{IN WITNESS WHEREOF, this Agreement of Merger has been} \\$  signed by the directors, or a majority thereof, of each of the  $\hbox{Constituent Corporations.}$ 

Directors of Vishay Instruments, Inc.
/s/ Felix Zandman
Felix Zandman
/s/ Ruth Zandman
Ruth Zandman
/s/ Franklin Feldman
Franklin Feldman
Directors of Micro-Measurements, Inc.
/s/ Felix Zandman
Felix Zandman
/s/ Ruth Zandman
Ruth Zandman
/s/ Franklin Feldman
Franklin Feldman

CERTIFICATE OF SECRETARY

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VISHAY INSTRUMENTS, INC.

- I, FRANKLIN FELDMAN, DO HEREBY CERTIFY that I am Secretary of Vishay Instruments, Inc., a Delaware corporation, and I DO FURTHER CERTIFY as follows:
- 1. The foregoing Agreement of Merger (hereinafter referred to as the "Agreement"), for the merger of said Vishay Instruments, Inc. into Micro-Measurements, Inc., a Delaware corporation, was made, signed and delivered by a majority of the Directors of said Vishay Instruments, Inc., after said Merger and the terms and provisions of said Agreement had been approved by said Directors at a meeting thereof duly held for the purpose of considering the same.
- All of the stockholders entitled to vote upon the adoption of the Agreement consented in writing on April 9, 1966 to the adoption of the Agreement.

IN WITNESS WHEREOF, I hereunto sign my name as Secretary of said Vishay Instruments, Inc. and affix hereto its corporate seal this 9th day of April, 1966.

/s/ Franklin Feldman
Secretary

CERTIFICATE OF SECRETARY

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MICRO-MEASUREMENTS, INC.

- 1. The foregoing Agreement of Merger (hereinafter referred to as the "Agreement"), for the merger of Vishay
  Instruments, Inc. into said Micro-Measurements, Inc., a Delaware corporation, was made, signed and delivered by a majority of the Directors of said Micro-Measurements, Inc., after said Merger and the terms and provisions of said Agreement had been approved by said Directors at a meeting thereof duly held for the purpose of considering the same.
- All of the stockholders entitled to vote upon the adoption of the Agreement consented in writing on April 9, 1966 to the adoption of the Agreement.

IN WITNESS WHEREOF, I hereunto sign my name as

Secretary of said Micro-Measurements, Inc., and affix hereto its

corporate seal this 9th day of April, 1966.

/s/ Franklin Feldman
Secretary

The foregoing Agreement of Merger having been duly adopted by the stockholders of each of the Corporations parties thereto, and the fact of the adoption thereof as aforesaid having been duly certified thereon by the Secretary of each of said Corporations, all in accordance with law, said Agreement of Merger is hereby signed by the President and Secretary of Vishay Instruments, Inc. and the Vice President and Secretary of Micro-Measurements, Inc. under the respective corporate seals of said Corporations this 9th day of April, 1966.

/s/ Felix Zandman

President of Vishay Instruments, Inc. (A Delaware corporation)

/s/ Franklin Feldman

Secretary of Vishay Instruments, Inc. (A Delaware corporation)

/s/ Ruth Zandman

Vice President of Micro-Measurements, Inc. (A Delaware corporation)

/s/ Franklin Feldman

Secretary of Micro-Measurements, Inc. (A Delaware corporation)

ACKNOWLEDGMENT OF PRESIDENT

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VISHAY INSTRUMENTS, INC.

STATE OF PENNSYLVANIA	)
	) SS.
COUNTY OF PHILA.	)

I, George M. Laughlin, a Notary Public in and for said County and State aforesaid, DO HEREBY CERTIFY that FELIX ZANDMAN, the President of VISHAY INSTRUMENTS, INC., a Delaware corporation, who is personally known to me to be the person whose name is subscribed to the foregoing Agreement of Merger as such President, and who is personally known to me to be the President of said Corporation, appeared before me this day in person and acknowledged that he signed, sealed and delivered the said Agreement as his free and voluntary act, deed and agreement of said Corporation for the uses and purposes therein set forth; and further acknowledged said Agreement to be the act, deed and agreement of said Corporation.

 $\,$  GIVEN under my hand and notarial seal this 9th day of April, 1966.

/s/	George	М.	Laug	hlir	1		
	Notarv I	Pub]	Lic				

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MICRO-MEASUREMENTS, INC.

STATE OF PENNSYLVANIA	)
	) SS.
COUNTY OF PHILA.	)

I, George M. Laughlin, a Notary Public in and for said County and State aforesaid, DO HEREBY CERTIFY that RUTH ZANDMAN, the Vice President of MICRO-MEASUREMENTS, INC., a Delaware corporation, who is personally known to me to be the person whose name is subscribed to the foregoing Agreement of Merger as such Vice President, and who is personally known to me to be the Vice President of said Corporation, appeared before me this day in person and acknowledged that she signed, sealed and delivered the said Agreement as her free and voluntary act as such Vice President and as the free and voluntary act, deed and agreement of said Corporation for the uses and purposes therein set forth; and further acknowledged said Agreement to be the act, deed and agreement of said Corporation.

 $\,$  GIVEN under my hand and notarial seal this 9th day of April, 1966.

/s/	George	М.	Laug	hlir	1		
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Certificate of Agreement of Merger of the "VISHAY INSTRUMENTS, INC.", merging with and into the "MICRO-MEASUREMENTS, INC.", under the name "MICRO-MEASUREMENTS, INC.", as received and filed in this office the thirteenth day of April, A.D. 1966, at 9 o'clock A.M.

STATE OF NEW YORK ) : SS.:
COUNTY OF NEW YORK )

BE IT REMEMBERED that on this 27th day of June, A.D.

1962, personally came before me, a Notary Public for the State of
New York, CHARLES B. HOCHMAN, CARL KANTER and FRANKLIN FELDMAN,
all of the parties to the foregoing Certificate of Incorporation,
known to me personally to be such, and severally acknowledged the
said Certificate to be the act and deed of the signers
respectively and that the facts therein stated are truly set
forth.

 $\ensuremath{\mbox{\sc GIVEN}}$  under my hand and seal of office the day and year aforesaid.

/s/ Nettie Rothstein

Notary Public
Nettie Rothstein
Notary Public, State of New York
No. 24-3379250
Qualified in Kings County
Certificate filed in New York County
Commission Expires March 30, 1963

## State of Delaware Office of the Secretary of State

I, WILLIAM T. QUILLEN, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "VISHAY INTERTECHNOLOGY, INC.", FILED IN THIS OFFICE ON THE ELEVENTH DAY OF DECEMBER, A.D. 1972, AT 9 O'CLOCK A.M.

/s/ William T. Quillen

SEAL

William T. Quillen, Secretary of State

AUTHENTICATION: 7067574 DATE: 03-24-94

## RESTATED CERTIFICATE OF INCORPORATION

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VISHAY INTERTECHNOLOGY, INC.

## It is hereby certified that:

- (a) The present name of the Corporation (hereinafter called the "Corporation") is Vishay Intertechnology, Inc.
- (b) The name under which the Corporation was originally incorporated is Micro-Measurements, Inc.; and the date of filing the original certificate of incorporation of the Corporation with the Secretary of State of the State of Delaware is July 3, 1962.
- 2. The certificate of incorporation of the Corporation is hereby amended by striking out Articles FIRST through THIRTEENTH thereof and by substituting in lieu thereof new Articles FIRST through ELEVENTH which are set forth in the Restated Certificate of Incorporation hereinafter provided for.

Each share of Common Stock of the par value of \$1.00 per share, outstanding upon the effective date of this Restated Certificate of Incorporation, shall be reclassified as 250 fully paid and non-assessable shares of the par value of \$.10 per share, which shares shall be included in the 5,000,000 shares of Common Stock authorized in this Restated Certificate of Incorporation.

- 3. The provisions of the certificate of incorporation of the Corporation as heretofore amended and/or supplemented, and as herein amended, are hereby restated and integrated into the single instrument which is hereinafter set forth, and which is entitled Restated Certificate of Incorporation of Vishay Intertechnology, Inc.
- 4. The amendments and the restatement of the Restated Certificate of Incorporation have been duly adopted by the stockholders of the Corporation in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware.
- 5. The capital of the Corporation will not be reduced under or by reason of any amendment herein certified.
- 6. The certificate of incorporation of the Corporation, as amended and restated herein, shall upon the effective date of this Restated Certificate of Incorporation read as follows:

RESTATED CERTIFICATE OF INCORPORATION

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VISHAY INTERTECHNOLOGY, INC.

FIRST: The name of the Corporation (hereinafter called the "Corporation") is Vishay Intertechnology, Inc.

SECOND: The address, including street, number, city, and county, of the registered office of the Corporation in the

State of Delaware is 229 South State Street, City of Dover, County of Kent; and the name of the registered agent of the Corporation in the State of Delaware at such address is The Prentice-Hall Corporation System, Inc.

THIRD: The purpose of the Corporation are to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is 6,000,000 shares, of which 1,000,000 shares, of the par value of \$1 per share, shall be Preferred Stock, and 5,000,000 shares, of the par value of \$.10 per share, shall be Common Stock.

The designations, preferences and relative, participating, optional or other special rights and qualifications, limitations or restrictions of each class of stock are as follows:

A. The Preferred Stock may be issued in one or more series and may be with such voting powers, full or limited, or without voting powers, and with such designations, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions thereof, as shall be fixed by the Board of Directors pursuant to authority hereby expressly granted to it, and as shall be stated and expressed in the resolution or resolutions providing for the issue of such

stock adopted by the Board of Directors pursuant to authority expressly vested in it by these provisions.

- B. Any Preferred Stock or series thereof may be made subject to redemption at such time or times and at such price or prices as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors as hereinabove provided.
- C. The holders of Preferred Stock or of any series thereof shall be entitled to receive dividends at such rates, on such conditions and at such times as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors as hereinabove provided, payable in preference to, or in such relation to, the dividends payable on any other class or classes of stock, or cumulative or noncumulative as shall be so stated and expressed.
- D. The holders of Preferred Stock or of any class or of any series thereof, shall be entitled to such rights upon the dissolution of, or upon any distribution of the assets of, the Corporation as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors as hereinabove provided.
- E. Any Preferred Stock of any class or of any series thereof may be made convertible into, or exchangeable for, shares of any other class or classes or of any other series of the same

or of any other class or classes of stock of the Corporation, or shares of any class or series of stock of any other corporation, at such price or prices or at such rates of exchange and with such adjustments as shall be stated and expressed or provided for the issue of such stock adopted by the Board of Directors as hereinabove provided.

F. Except as otherwise provided herein, by statute or by the resolutions providing for the issue of Preferred Stock specifically provided, the Preferred Stock shall have no voting power and the Common Stock shall have the sole right and power to vote on all matters on which a vote of stockholders is to be taken. Each holder of Common Stock shall be entitled to vote and shall have one vote for each share thereof held.

SIXTH: Whenever a compromise or arrangement is proposed between this Corporation and its creditors or any class of them and/or between this Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this Corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this Corporation under the provisions of Section 291 of the General Corporation Law of the State of Delaware or on the application of trustees in dissolution or of any receiver or receivers appointed for this Corporation under the provisions of Section 279 of the

General Corporation Law of the State of Delaware order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this Corporation as a consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this Corporation, as the case may be, and also on this Corporation.

SEVENTH: For the management of the business and for the conduct of the affairs of the Corporation, and in further definition, limitation and regulation of the powers of the Corporation and of its directors and stockholders, or any class thereof, as the case may be, it is further provided:

1. The power to make, alter, or repeal the By-Laws of the Corporation, and to adopt any new By-Laws, except a By-Law classifying directors for election for staggered terms, shall be vested in the Board of Directors, provided that the Board of Directors may

delegate such power, in whole or in part, to the stockholders.

- Whenever the Corporation shall be authorized to issue more than one class of stock, one or more of which is denied voting power, no outstanding share of any class of stock which is denied voting power under the provisions of the Certificate of Incorporation shall entitle the holder thereof to notice of, and the right to vote at any meeting of stockholders except as the provisions of paragraph (c)(2) of section 242 of the General Corporation Law and of sections 251 and 252 of the General Corporation Law shall otherwise require; provided, that no share of any such class which is otherwise denied voting power shall entitle the holder thereof to vote upon the increase or decrease in the number of authorized shares of said class.
- 3. In lieu of taking any permissive or requisite action by vote at a meeting of stockholders, any such vote and any such meeting may be dispensed with if either all of the stockholders entitled to vote upon the action at any such meeting shall consent in

writing to any such corporate action being taken or if less than all of the stockholders entitled to vote upon the action at any such meeting shall consent in writing to any such corporate action being taken; provided, that any such action taken upon less than the unanimous written consent of all stockholders entitled to vote upon any such action shall be by the written consent of the stockholders holding at least the minimum percentage of the votes required to be cast to authorize any such action under the provisions of the General Corporation Law or under the provisions of the Certificate of Incorporation or the By-Laws as permitted by the provisions of the General Corporation Law; and, provided, that prompt notice of the taking of the corporate action without a meeting by less than unanimous consent shall be given to those stockholders who have not consented in writing.

 $\mbox{4.} \quad \mbox{No election of directors need be by} \\ \mbox{written ballot}.$ 

EIGHTH: No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership,

association, or other organization in which one or more of its directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because his or their votes are counted for such purpose, if:

- (a) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the Committee, and the Board or Committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a guorum; or,
- (b) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or,
- (c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified, by the Board of Directors, a committee thereof, or the stockholders.

Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

NINTH: Every person (and the heirs, executors and administrators of such person) who is or was a director, officer, employee or agent of the Corporation or of any other company, including another corporation, partnership, joint venture, trust or other enterprise which such person serves or served as such at the request of the Corporation shall be indemnified by the Corporation against all judgments, payments in settlement (whether or not approved by court), fines, penalties and other reasonable costs and expenses (including fees and disbursements of counsel) imposed upon or incurred by such person in connection with or resulting from any action, suit, proceeding, investigation or claim, civil, criminal, administrative, legislative or other (including any criminal action, suit or proceeding in which such person enters a plea of guilty or nolo contendere or its equivalent), or any appeal relating thereto, which is brought or threatened either by or in the right of the Corporation or such other company (herein called a "derivative action") or by any other person, governmental authority or instrumentality (herein called a "third-party action") and in which such person is made a party or is otherwise involved by reason of his being or having been such director, officer, employee, or agent of by reason of any action or omission, or alleged action or omission by such person in his capacity as such director, officer, employee or agent if either (a) such person is wholly successful, on the merits or otherwise, in defending such derivative or third-party action or (b) in the judgment of a court of competent jurisdiction or, in the absence of such a determination, in the judgment

of a majority of a quorum of the Board of Directors of the Corporation (which quorum shall not include any director who is a party to or is otherwise involved in such action) or, in the absence of such a disinterested quorum, in the opinion of independent legal counsel (i) in the case of a derivative action, such person acted without negligence or misconduct in the performance of his duty to the corporation or such other company or (ii) in the case of a third-party action, such person acted in good faith in what he reasonably believed to be the best interest of the corporation or such other company, and, in addition, in any criminal action, had no reasonable cause to believe that his action was unlawful; provided that, in the case of a derivative action, such indemnification shall not be made in respect of any payment to the Corporation or such other company or any stockholder thereof in satisfaction of judgment or in settlement unless either (x) a court of competent jurisdiction has approved such settlement, if any, and the reimbursement of such payment or (y) if the court in which such action has been instituted lacks jurisdiction to grant such approval or such action is settled before the institution of judicial proceedings, in the opinion of independent legal counsel the applicable standard of conduct specified in the preceding sentence has been met, such action was without substantial merit, such settlement was in the best interests of the corporation or such other company and the reimbursement of such payment is permissible under applicable law. In case such person is successful, on the merits or otherwise, in defending part of such action or, in the judgment

of such a court or such quorum of the Board of Directors or in the opinion of such counsel, has met the applicable standard of conduct specified in the preceding sentence with respect to part of such action, he shall be indemnified by the Corporation against the judgments, settlements, payments, fines, penalties and other costs and expenses attributable to such part of such action.

The foregoing rights of indemnification shall be in addition to any rights to which any such director, officer, employee, or agent may otherwise be entitled under the Certificate of Incorporation, any agreement or vote of stockholders or at law or in equity or otherwise.

In any case in which, in the judgment of a majority of such a disinterested quorum of the Board of Directors, any such director, officer or employee will be entitled to indemnification under the foregoing provisions of this Article, such amounts as they deem necessary to cover the reasonable costs and expenses incurred by such person in connection with the action, suit, proceeding, investigation or claim prior to final disposition thereof may be advanced to such person upon receipt of an undertaking by or on behalf of such person to repay such amounts if it is ultimately determined that he is not so entitled to indemnification.

TENTH: The Corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was

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serving at the request of the Corporation as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the Corporation would have the power to indemnify him against such liability under the provisions of Article NINTH.

ELEVENTH: From time to time any of the provisions of this Certificate of Incorporation may be amended, altered or repealed, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted in the manner and at the time prescribed by said law, and all rights at any time conferred upon the stockholders of the Corporation by this Certificate of Incorporation are granted subject to the provisions of this Article ELEVENTH.

Signed and attested to on December 6, 1972.

/s/ Felix Zandman -----President

Attest:

/s/ Robert A. Freece Treasurer

/s/ Franklin Feldman Secretary

## State of Delaware Office of the Secretary of State

I, WILLIAM T. QUILLEN, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "MICRO-MEASURMENTS, INC.", CHANGING ITS NAME FROM "MICRO-MEASURMENTS, INC." TO "VISHAY INTERTECHNOLOGY, INC.", FILED IN THIS OFFICE THE TWENTIETH DAY OF MAY, A.D. 1966, AT 9 O'CLOCK A.M.

/s/ William T. Quillen

SEAL

William T. Quillen, Secretary of State

AUTHENTICATION: 7067575 DATE: 03-24-94

CERTIFICATE OF AMENDMENT

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CERTIFICATE OF INCORPORATION

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MICRO-MEASUREMENTS, INC.

(Pursuant to Section 242 of Title 8, Chapter 1 of the Delaware Code)

MICRO-MEASUREMENTS, INC. (hereinafter called the "Corporation"), a corporation organized and existing under and by virtue of Title 8, Chapter 1 of the Delaware Code, does hereby certify as follows:

FIRST: That, upon the unanimous written consent of the holders of all of the outstanding shares of stock entitled to vote of the above corporation, which consent was given pursuant to the provisions of Section 228 of Title 8, Chapter 1 of the Delaware Code, the following amendment of the Certificate of Incorporation of the corporation has been duly adopted in accordance with the provisions of Section 242 of Title 8, Chapter 1 of the Delaware Code:

By striking out Article FIRST thereof in its entirety, and by substituting in lieu thereof a new Article FIRST to read as follows:

"The name of the Corporation (hereinafter called the Corporation) is VISHAY INTERTECHNOLOGY, INC."

IN WITNESS WHEREOF, the said Micro-Measurements, Inc. has made under its corporate seal and signed by Ruth Zandman, its Vice-President and Franklin Feldman, its Secretary, the foregoing certificate and the said Ruth Zandman, as Vice-President and the said Franklin Feldman, as Secretary have hereunto respectively set their hands and caused the corporate seal of the corporation to be affixed this 10th day of May, 1966.

/s/ Ruth Zandman
Ruth Zandman, Vice-President

/s/ Franklin Feldman
Franklin Feldman, Secretary

STATE OF PENNSYLVANIA ) SS.:

BE IT REMEMBERED, that on this 12th day of May, 1966, personally came before me, John R. Blackburn, Jr., Justice of the Peace, in and for the County and State aforesaid, duly commissioned and sworn to take acknowledgment or proof of deeds, RUTH ZANDMAN, Vice-President of Micro-Measurements, Inc., a corporation of the State of Delaware, the corporation described in the foregoing Certificate, known to me personally to be such and be the said RUTH ZANDMAN, as such Vice-President, duly executed said certificate before me, and acknowledged the said Certificate to be her act and deed and made on behalf of said corporation that the signatures of said Vice-President and of the Secretary to said foregoing certificate of amendment are in the handwriting of the said Vice-President and Secretary of said corporation, respectively, and that the seal affixed to said certificate is the common or corporate seal of said corporation, and that his act of sealing, executing, acknowledging and delivering the said Certificate was duly authorized by the stockholders of said corporation.

 $\label{eq:in_witness_whereof} \mbox{In witness whereof, I have hereunto set my hand the day} \\ \mbox{and year aforesaid.}$ 

/s/ John R. Blackburn, Jr.
Notary Public

State of Delaware Office of the Secretary of State

I, WILLIAM T. QUILLEN, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "VISHAY INTERTECHNOLOGY, INC.", FILED IN THIS OFFICE ON THE THIRD DAY OF DECEMBER, A.D. 1985, AT 10 O'CLOCK A.M.

/s/ William T. Quillen

SEAL

William T. Quillen, Secretary of State

AUTHENTICATION: 7067573 DATE: 03-24-94

CERTIFICATE OF AMENDMENT OF RESTATED CERTIFICATE OF INCORPORATION of VISHAY INTERTECHNOLOGY, INC.

It is hereby certified that:

- 6. The name of the corporation (hereinafter called the "Corporation") is Vishay Intertechnology, Inc.
- 7. The Restated Certificate of Incorporation of the Corporation is hereby amended by striking out the first sentence of Article Fourth thereof and by substituting in lieu of said sentence of said Article the following new sentence:

"The total number of shares of stock which the Corporation shall have authority to issue is 16,000,000 shares, of which 1,000,000 shares, of the par value of \$1 per share, shall be Preferred Stock, and 15,000,000 shares, of the par value of \$0.10 per share, shall be Common Stock."

8. The amendment of the Restated Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

Signed and attested to on November 26, 1985.

/s/ Robert A. Freece Robert A. Freece

Robert A. Freece Vice President

Attest:

/s/ William J. Spires
William J. Spires
Secretary

I, WILLIAM T. QUILLEN, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "VISHAY INTERTECHNOLOGY, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF JANUARY, A.D. 1987, AT 12 O'CLOCK A.M.

/s/ William T. Quillen

SEAL

William T. Quillen, Secretary of State AUTHENTICATION: 7067572 DATE: 03-24-94

CERTIFICATE OF AMENDMENT 0F RESTATED CERTIFICATE OF INCORPORATION 0F

VISHAY INTERTECHNOLOGY, INC.

It is hereby certified that:

- 1) The name of the Corporation (hereinafter called the "Corporation") is Vishay Intertechnology, Inc.
- To accomplish the foregoing Amendment, Articles Fourth and Ninth of the Restated Certificate of Incorporation, relating to the authorization to issue stock and their relative rights, privileges and limitations, and Director Liability and Indemnification, are hereby stricken out in their entirety, and the following new Articles are substituted in lieu thereof:

 $\,$  FOURTH: Section 1. Classes and Number of Shares. The total number of shares of all classes of stock which the Corporation shall have authority to issue is 31,000,000 shares. The classes and the aggregate number of shares of stock of each class which the Corporation shall have authority to issue are as follows:

- (i) 15,000,000 shares of Common Stock, \$0.10 par value per share (hereinafter the "Common
- (ii) 15,000,000 shares of Class B Common Stock, \$0.10 par value per share (hereinafter the "Class B Stock"); and
- (iii) 1,000,000 shares of Preferred Stock, \$1.00 par value per share, with such rights, privileges, restrictions and preferences as the Board of Directors may authorize from time to time (hereinafter the "Preferred Stock").

Section 2. Powers and Rights of the Common Stock and the Class B Stock.

- A. Voting Rights and Powers.
- (i) With respect to all matters upon which shareholders are entitled to vote or to which shareholders are entitled to give consent, every holder of Common Stock shall be entitled to one

vote in person or by proxy for each share of Common Stock standing in his name on the transfer books of the Corporation and every holder of Class B Stock shall be entitled to ten votes in person or by proxy for each share of Class B Stock standing in his name on the transfer books of the Corporation.

- (ii) Except as otherwise provided herein and as may be otherwise required by law, the provisions of these Amended and Restated Articles of Incorporation shall not be modified, revised, altered or amended, repealed or rescinded in whole or in part, unless authorized by a majority of the votes of the outstanding shares of stock of the Corporation entitled to vote, with each share of Common Stock and each share of Class B Stock having the number of votes per share set forth in clause (i) of this paragraph A.
- (iii) Following the initial issuance of shares of Class B Stock, the Corporation may not effect the issuance of any additional shares of Class B Stock (except in connection with stock splits and stock dividends) unless and until such issuance is authorized by the holders of a majority of the outstanding shares of Common Stock of the Corporation entitled to vote, and by the holders of a majority of the shares of the outstanding shares of Class B Stock entitled to vote, each class voting separately.
- (iv) Except as provided in paragraph A(iii) and paragraph D of this Section 2 and as may be otherwise required by law, the holders of Common Stock and Class B Stock shall vote together as a single class, subject to any voting rights which may be granted to holders of Preferred Stock.
- B. Dividends and Distributions. Subject to the rights of the holders of Preferred Stock, and subject to any other provisions of this Amended and Restated Certificate of Incorporation as amended from time to time, holders of Common Stock and Class B Stock shall be entitled to such dividends and other distributions in cash, stock or property of the Corporation as may be declared thereon by the Board of Directors from time to time out of assets or funds of the Corporation legally available therefor, provided that in the case of dividends or other distributions payable in stock of the Corporation other than the Preferred Stock, including distributions pursuant to stock splitups, divisions or combinations, which occur after the date shares of Class B Stock are first issued by the Corporation, only shares of Common Stock shall be distributed with respect to Common Stock and only shares of Class B Stock shall be distributed with

respect to Class B Stock. In no event will shares of either Common Stock or Class B Stock be split, divided or combined unless the other is also split, divided or combined equally.

C. Other Rights. Except as otherwise required by the Delaware General Corporation Law or as otherwise provided in this Amended and Restated Certificate of Incorporation, each share of Common Stock and each share of Class B Stock shall have identical powers, preferences and rights, including rights in liquidation.

#### D. Transfer.

- (i) No person holding shares of Class B Stock of record (hereinafter called a "Class B Holder") may transfer, and the Corporation shall not register the transfer of, such shares of Class B Stock, whether by sale, assignment, gift, bequest, appointment or otherwise, except to a "Permitted Transferee." A "Permitted Transferee" shall mean, with respect to each person from time to time shown as the record holder of shares of Class B Stock:
  - (a) In the case of a Class B Holder who is a natural person,  $% \left( 1\right) =\left( 1\right) ^{2}$ 
    - (1) The spouse of such Class B Holder, any lineal descendant of a great grandparent of either the Class B Holder or the spouse of the Class B Holder, including adopted children:
    - (2) The trustee of a trust (whether testamentary, intervivos or a voting trust) principally for the benefit of such Class B Holder and/or one or more of his Permitted Transferees described in each subclause of this clause (a);
    - (3) Any organization to which contributions are deductible for federal income, estate or gift tax purposes or any split-interest trust described in Section 4947 of the Internal Revenue Code of 1986, as it may from time to time be amended (hereinafter called a "Charitable Organization");
    - (4) A corporation, of which outstanding capital stock entitled to a majority of the votes in the election of directors is owned beneficially solely by, or a partnership, of which a majority of the partnership interests entitled to participate in the management of the partnership is owned beneficially solely by, the Class B Holder and/or one or more of

his or her Permitted Transferees determined under this clause (a), provided that if by reason of any change in the ownership of such stock or partnership interests, such corporation or partnership would no longer qualify as a Permitted Transferee, all shares of Class B Stock then held by such corporation or partnership shall be converted automatically into shares of Common Stock effective upon the date of such change in ownership of such stock or partnership interests, and stock certificates formerly representing such shares of Class B Stock shall thereupon and thereafter be deemed to represent the like number of shares of Common Stock; and

- (5) The estate of such Class B Holder.
- (b) In the case of a Class B Holder holding the shares of Class B Stock in question as trustee pursuant to a trust (other than pursuant to a trust described in clause (f) below), "Permitted Transferee" means (1) any person transferring Class B Stock to such trust and (2) any Permitted Transferee of any such transferor determined pursuant to clause (a) above.
- (c) In the case of a Class B Holder which is a Charitable Organization holding record and beneficial ownership of the shares of Class B Stock in question, "Permitted Transferee" means any Class B Holder.
- (d) In the case of a Class B Holder which is a corporation or partnership (other than a Charitable Organization) acquiring record and beneficial ownership of the shares of Class B Stock in question upon its initial issuance by the Corporation, "Permitted Transferee" means (1) a partner of such partnership or shareholder of such corporation at the time of issuance, and (2) any Permitted Transferee (determined pursuant to clause (a) above) of any such partner or shareholder referred to in subclause (1) of this clause (d).
- (e) In the case of a Class D Holder which is a corporation or partnership (other than a Charitable Organization or a corporation or partnership described in clause (d) above) holding record and beneficial ownership of the shares of Class B Stock in question, "Permitted Transferee" means (1) any person transferring such shares of

Class B Stock to such corporation or partnership and (2) any Permitted Transferee of any such transferor determined under clause (a) above.

- (f) In the case of a Class B Holder holding the shares of Class B Stock in question as trustee pursuant to a trust which was irrevocable at the time of issuance of the Class B Stock, "Permitted Transferee" means (1) any person to whom or for whose benefit principal may be distributed either during or at the end of the term of such trust whether by power of appointment or otherwise and (2) any Permitted Transferee of any such person determined pursuant to clause (a) above.
- (g) In the case of a Class B Holder which is the estate of a deceased Class B Holder or which is the estate of a bankrupt or insolvent Class B Holder, which holds record and beneficial ownership of the shares of Class B Stock in question, "Permitted Transferee" means a Permitted Transferee of such deceased, bankrupt or insolvent Class B Holder as determined pursuant to clause (a), (b), (c), (d), (e) or (f) above, as the case may be.
- (h) Any Class B Holder may transfer all or any part of such holder's Class B Stock to any Class B Holder which, at the time of such transfer, owns not less than 50,000 shares of Class B Stock (as adjusted for stock splits and stock dividends); provided, however, that such proposed transfer shall be authorized by the holders of a majority of the outstanding shares of Common Stock of the Corporation entitled to vote, and by the holders of a majority of the outstanding shares of Class B Stock entitled to vote, each Class voting separately.
- (ii) Notwithstanding anything to the contrary set forth herein, any Class B Holder may pledge such holder's shares of Class B Stock to a pledgee pursuant to a bona fide pledge of such shares as collateral security for indebtedness due to the pledgee, provided that such shares shall remain subject to the provisions of this Paragraph D. In the event of foreclosure or other similar action by the pledgee, such pledged shares of Class B Stock may (a) be transferred only to a Permitted Transferee of the pledgor or (b) converted into shares of Common Stock and transferred to the pledgee, as the pledgee may elect.

- (iii) For purposes of this Paragraph D:
  - (a) The relationship of any person that is derived by or through legal adoption shall be considered a natural one.
  - (b) Each joint owner of shares of Class B Stock shall be considered a "Class B Holder" of such shares.
  - (c) A minor for whom shares of Class B Stock are held pursuant to a Uniform Gifts to Minors Act or similar law shall be considered a Class B Holder of such shares.
  - (d) Unless otherwise specified, the term "person" means both natural persons and legal entities.
  - (e) Each reference to a corporation shall include any successor corporation resulting from merger or consolidation; and each reference to a partnership shall include any successor partnership resulting from the death or withdrawal of a partner.
- (iv) Any transfer of shares of Class B Stock not permitted hereunder shall result in the conversion of the transferee's shares of Class B Stock into shares of Common Stock, effective the date on which certificates representing such shares are presented for transfer on the books of the Corporation. The Corporation may, in connection with preparing a list of shareholders entitled to vote at any meeting of shareholders, or as a condition to the transfer or the registration of shares of Class B Stock on the Corporation's books, require the furnishing of such affidavits or other proof as it deems necessary to establish that any person is the beneficial owner of shares of Class B Stock or is a Permitted Transferee.
- (v) If at any time the number of outstanding shares of Class B Stock as reflected on the stock transfer books of the Corporation falls below 300,000 shares, or such higher number as results from adjustments for stock splits or stock dividends, the outstanding shares of Class B Stock shall automatically be deemed converted into shares of Common Stock and certificates formerly representing outstanding shares of Class B Stock shall thereupon and thereafter represent the like number of shares of Common Stock.
- (vi) Shares of Class B Stock shall be registered in the names of the beneficial owners thereof and not  $% \left\{ 1\right\} =\left\{ 1\right\} =\left\{$

in "street" or "nominee" names. Notwithstanding the foregoing, trusts may transfer shares into nominee name. The Corporation shall note on the certificates for shares of Class B Stock the restrictions on transfer and registration of transfer imposed by this Paragraph D.

(vii) The term "beneficial ownership" and derivations thereof shall have the same meaning given thereto under the Securities Exchange Act of 1934, as amended, or any successor statute, and the rules and regulations promulgated thereunder.

#### E. Conversion Rights.

(i) Subject to the terms and conditions of this Paragraph E, each share of Class B Stock shall be convertible at any time or from time to time, at the option of the respective holder thereof, at the office  $% \left( 1\right) =\left( 1\right) \left( 1\right$ of any transfer agent for Common Stock, and at such other place or places, if any, as the Board of Directors may designate, into one (1) fully-paid and nonassessable share of Common Stock. In order to convert Class B Stock into Common Stock, the holder thereof shall (a) surrender the certificate or certificates for such Class B Stock at the office of said transfer agent (or other place as provided above), which certificate or certificates, if this Corporation shall so request, shall be duly endorsed to the Corporation or in blank or accompanied by proper instruments of transfer to the Corporation (such endorsements or instruments of transfer to be in form satisfactory to the Corporation), and (b) give written notice to the Corporation that such holder elects to convert said Class B Stock, which notice shall state the name or names in which such holder wishes the certificate or certificates for Common Stock to be issued. The Corporation will issue and deliver at the office of said transfer agent (or other place as provided above) to the person for whose account such Class B Stock was so surrendered, or to his nominee or nominees, a certificate or certificates for the number of full shares of Common Stock to which such holder shall be entitled as soon as practicable after such deposit of a certificate or certificates of Class B Stock, accompanied by the requisite written notice. Such conversion shall be deemed to have been made as of the date of such surrender of the Class B Stock to be converted; and the persons entitled to receive the Common Stock issuable upon conversion of such Class B Stock shall be treated for all purposes as the record holder or holders of such Common Stock on such date.

- (ii) The issuance of certificates for shares of Common Stock upon conversion of shares of Class B Stock shall be made without charge for any stamp or other similar tax in respect of such issuance. However, if any such certificate is to be issued in a name other than that of the holder of the share or shares of Class B Stock converted, the person or persons requesting the issuance thereof shall pay to the Corporation the amount of any tax which may be payable in respect of any transfer involved in such issuance or shall establish to the satisfaction of the Corporation that such tax has been paid or is not required to be paid.
- (iii) The Corporation covenants that it will at all times reserve and keep available, solely for the purpose of issue upon conversion of the outstanding shares of Class B Stock, such number of shares of Common Stock as shall be issuable upon the conversion of all such outstanding shares.

## Section 3. Preferred Stock.

- A. The Preferred Stock may be issued in one or more series and may be with such voting powers, full or limited, or without voting powers, and with such designations, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions thereof, as shall be fixed by the Board of Directors pursuant to authority hereby expressly granted to it, and as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors pursuant to authority expressly vested in it by these provisions.
- B. Any Preferred Stock or series thereof may be made subject to redemption at such time or times and at such price or prices as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors as hereinabove provided.
- C. The holders of Preferred Stock or of any series thereof shall be entitled to receive dividends at such rates, on such conditions and at such times as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors as hereinabove provided, payable in preference to, or in such relation to, the dividends payable on any other class or classes of stock, or cumulative or noncumulative as shall be so stated and expressed.
- D. The holders of Preferred Stock or of any class or of any series thereof, shall be entitled to such rights upon the dissolution of, or upon any distribution of the assets of, the Corporation as shall be stated and expressed in the resolution or

resolutions providing for the issue of such stock adopted by the Board of Directors as hereinabove provided.

E. Subject to Section 2A(iii) of this Article Four, any Preferred Stock of any class or of any series thereof may be made convertible into, or exchangeable for, shares of any other class or classes or of any other series of the same or of any other class or classes of stock of the Corporation, or shares of any class or series of stock of any other Corporation, at such price or prices or at such rates of exchange and with such adjustments as shall be stated and expressed or provided for the issue of such stock adopted by the Board of Directors as hereinabove provided.

Section 4. Issuance of Common Stock, Class B Stock and Preferred Stock. The Board of Directors of the Corporation may from time to time authorize by resolution the issuance of any or all shares of the Common Stock, the Preferred Stock and, subject to Section 2A(iii) of this Article Four, the Class B Stock, herein authorized in accordance with the terms and conditions set forth in this Amended and Restated Certificate or Incorporation for such purposes, in such amounts, to such persons, corporations, or entities, for such consideration, and in the case of the Preferred Stock, in one or more series, all as the Board of Directors in its discretion may determine and without any vote or other action by the shareholders, except as otherwise required by law. Except for the payment of one stock dividend to holders of Common Stock within 120 days of the effective date of this amendment (which 120-day period may be extended by the Board of Directors), at any time shares of Class B Stock are outstanding, the Board of Directors may not issue shares of Common Stock in the form of a distribution or distributions pursuant to a stock dividend or split-up, division or combination of the shares of Common Stock except where such shares are issuable both (i) only to the holders of the then outstanding shares of Common Stock and (ii) only in conjunction with and in the same ratio as a stock dividend or split-up, division or combination of the shares of Class B Stock.

NINTH: Every person (and the heirs, executors and administrators of such person) who is or was a director, officer, employee or agent of the Corporation or of any other company, including another corporation, partnership, joint venture, trust or other enterprise which such person serves or served as such at the request of the Corporation shall be indemnified by the Corporation against all judgments, payments in settlement (whether or not approved by court), fines, penalties and other reasonable costs and expenses (including fees and disbursements of counsel) imposed upon or incurred by such person in connection with or resulting from any action, suit, proceeding, investigation or claim, civil, criminal, administrative, legislative or other (including any criminal action, suit or proceeding in which such person enters a plea of guilty or nolo contendere or its equivalent), or any appeal relating thereto, which is brought or

threatened either by or in the right of the Corporation or such other company (herein called a "derivative action") or by any other person, governmental authority or instrumentality (herein called a "third-party action") and in which such person is made a party or is otherwise involved by reason of his being or having been such director, officer, employee or agent or by reason of any action or omission, or alleged action or omission by such person in his capacity as such director, officer, employee or agent if either (a) such person is wholly successful, on the merits or otherwise, in defending such derivative or third-party action or (b) in the judgment of a court of competent jurisdiction or, in the absence of such a determination, in the judgment of a majority of a quorum of the Board of Directors of the Corporation (which quorum shall not include any director who is a party to or is otherwise involved in such action) or, in the absence of such a disinterested quorum, in the opinion of independent legal counsel (i) in the case of a derivative action, such person acted in good faith in what he reasonably believed to be the best interest of the Corporation and was not adjudged liable to the Corporation or such other company or (ii) in the case of a third-party action, such person acted in good faith in what he reasonably believed to be the best interest of the Corporation or such other company, and, in addition, in any criminal action, had no reasonable cause to believe that his action was unlawful; provided that, in the case of a derivative action, such indemnification shall not be made in respect of any payment to the Corporation or such other company or any stockholder thereof in satisfaction of judgment or in settlement unless either (x) a court of competent jurisdiction has approved such settlement, if any, and the reimbursement of such payment or (y) if the court in which such action has been instituted lacks jurisdiction to grant such approval or such action is settled before the institution of judicial proceedings, in the opinion of independent legal counsel the applicable standard of conduct specified in the preceding sentence has been met, such action was without substantial merit, such settlement was in the best interests of the corporation or such other company and the reimbursement of such payment is permissible under applicable law. In case such person is successful, on the merits or otherwise, in defending part of such action or, in the judgment of such a court or such quorum of the Board of Directors or in the opinion of such counsel, has met the applicable standard of conduct specified in the preceding sentence with respect to part of such action, he shall be indemnified by the Corporation against the judgments, settlements, payments, fines, penalties and other costs and expenses attributable to such part of such

The directors may authorize the advancement of such amounts necessary to cover the reasonable costs and expenses incurred by any director, officer or employee in connection with the action, suit, proceeding, investigation or claim prior to final disposition thereof to the extent permitted under Delaware law.

The foregoing rights of indemnification and advancement of expenses shall be in addition to any rights to which any such director, officer, employee, or agent may otherwise be entitled under the Certificate of Incorporation, any agreement or vote of stockholders or at law or in equity or otherwise.

No director shall have any personal liability to the Corporation or its stockholders for any monetary damages for breach of fiduciary duty as a director, except that this Article shall not eliminate or limit the liability of each director (i) for any breach of such director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which such director derived an improper personal benefit. This Article shall not eliminate or limit the liability of such director for any act or omission occurring prior to the date when this Article becomes effective.

3. The amendment of the Restated Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

Signed and attested to on January 14, 1987.

/s/ Robert A. Freece

Robert A. Freece, Vice President

Attest:

/s/ William J. Spires
----William J. Spires,
Secretary

# State of Delaware Office of the Secretary of State

I, WILLIAM T. QUILLEN, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "VISHAY INTERTECHNOLOGY, INC.", FILED IN THIS OFFICE ON THE SEVENTH DAY OF DECEMBER, A.D. 1988, AT 10 O'CLOCK A.M.

/s/ William T. Quillen

SEAL

William T. Quillen, Secretary of State

AUTHENTICATION: 7067571 DATE: 03-24-94

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RESTATED CERTIFICATE OF INCORPORATION

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VISHAY INTERTECHNOLOGY, INC.

It is hereby certified that:

- 1. The name of the corporation (hereinafter called
- the "Corporation") is Vishay Intertechnology, Inc.
- 2. The Restated Certificate of Incorporation of the Corporation, as amended, is hereby further amended by striking out the first section of Article Fourth thereof and by substituting the following section in lieu thereof:

FOURTH: Section 1. Classes and Number of Shares. The total number of shares of all classes of stock which the Corporation shall have authority to issue is 41,000,000 shares. The classes and the aggregate number of shares of stock of each class which the Corporation shall have authority to issue are as follows:

- (i) 25,000,000 shares of Common Stock,\$0.10 par value per share (hereinafter the "Common Stock");
- (ii) 15,000,000 shares of Class B Common Stock, \$0.10 par value per share (hereinafter the "Class B Stock"); and
- (iii) 1,000,000 shares of Preferred Stock, \$1.00 par value per share, with such rights, privileges, restrictions and preferences as the Board of Directors may authorize from time to time (hereinafter the "Preferred Stock").
- 3. The Amendment of the Restated Certificate of Incorporation, as amended, herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

Signed and attested to on November 30, 1988.

/s/ Robert A. Freece Robert A. Freece Vice President

Attest:

/s/ William J. Spires William J. Spires Secretary

# State of Delaware Office of the Secretary of State

I, WILLIAM T. QUILLEN, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMEMNDMENT OF "VISHAY INTERTECHNOLOGY, INC.", FILED IN THIS OFFICE ON THE NINETEENTH DAY OF MAY, A.D. 1993, AT 9 0'CLOCK A.M.

/s/ William T. Quillen

SEAL

William T. Quillen, Secretary of State

AUTHENTICATION: 7067570 DATE: 03-24-94

CERTIFICATE OF AMENDMENT
OF
RESTATED CERTIFICATE
OF INCORPORATION
OF
VISHAY INTERTECHNOLOGY, INC.

## It is hereby certified that:

- 1. The name of the corporation (hereinafter called the "Corporation") is Vishay Intertechnology, Inc.
- 2. The Restated Certificate of Incorporation of the Corporation, as amended, is hereby further amended by striking out the first paragraph of Article Fourth thereof and by substituting in lieu of said paragraph of said Article the following new paragraph:

"FOURTH: Section 1. Classes and Number of Shares. The total number of shares of all classes of stock which the Corporation shall have authority to issue is 51,000,000 shares. The classes and the aggregate number of shares of stock of each class which the Corporation shall have authority to issue are as follows:

- (i) 35,000,000 shares of CommonStock, \$0.10 par value per share (hereinafter the "Common Stock");
- (ii) 15,000,000 shares of Class B
  Common Stock, \$0.10 par value per share
  (hereinafter the "Class B Stock"); and
- (iii) 1,000,000 shares of Preferred Stock, \$1.00 par value per share, with such rights, privileges, restrictions and preferences as the Board of Directors may authorize from time to time (hereinafter the "Preferred Stock").

3. The amendment of the Restated Certificate of Incorporation, as amended, herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

Signed and attested to on May 18, 1993.

/s/Robert A. Freece

Robert A. Freece Vice President

Attest:

/s/ William J. Spires
-----William J. Spires
Secretary

EXHIBIT 3.2

AMENDMENT NO. 1
TO THE
AMENDED AND RESTATED BY-LAWS
OF
VISHAY INTERTECHNOLOGY, INC.
(a Delaware Corporation)

Pursuant to Article II.2 of the Amended and Restated By-laws of Vishay Intertechnology, Inc. (the "By-laws"), the By-laws are hereby amended as follows:

"The number of directors constituting the whole board shall not be less than three nor more than twelve, except that where all the shares of stock of the corporation are owned beneficially and of record by less than three stockholders, the number of directors may be less than three but not less than the number of such stockholders."

In all other respects, the By-laws shall remain unchanged.

AMENDED AND RESTATED

BY-LAWS

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VISHAY INTERTECHNOLOGY, INC. (A Delaware Corporation)

ARTICLE I

## STOCKHOLDERS

1. CERTIFICATES REPRESENTING STOCK. Every holder of stock in the corporation shall be entitled to have a certificate signed by, or in the name of, the corporation by the Chairman or Vice-Chairman of the Board of Directors, if any, or by the President or a Vice-President and by the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary of the corporation certifying the number of shares owned by him in the corporation. If such certificate is countersigned by a transfer agent other than the corporation or its employee, or by a registrar other than the corporation or its employee, any other signature on the certificate may be a facsimile. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

Whenever the corporation shall be authorized to issue more than one class of stock or more than one series of any class of stock and whenever the corporation shall issue any shares of its stock as partly paid stock, the certificates representing shares of any such class or series or of any such partly paid stock shall set forth thereon the statements prescribed by the General Corporation Law. Any restrictions on the transfer or

registration of transfer of any shares of stock of any class or series shall be noted conspicuously on the certificate representing such shares.

The corporation may issue a new certificate of stock in place of any certificate theretofore issued by it, alleged to have been lost, stolen, or destroyed, and the Board of Directors may require the owner of any lost, stolen, or destroyed certificate, or his legal representative, to give the corporation a bond sufficient to indemnity the corporation against any claim that may be made against it on account of the alleged loss, theff, or destruction of any such certificate or the issuance of any such new certificate.

- FRACTIONAL SHARE INTERESTS. The corporation may, but shall not be required to, issue fractions of a share. In lieu thereof it shall either pay in cash the fair value of fractions of a share, as determined by the Board of Directors, to those entitled thereto or issue scrip or fractional warrants in registered or bearer form over the manual or facsimile signature of an officer of the corporation or of its agent, exchangeable as therein provided for full shares, but such scrip or fractional warrants shall not entitle the holder to any rights or a shareholder except as therein provided. Such scrip or fractional warrants may be issued subject to the condition that the same shall become void if not exchanged for certificates representing full shares of stock before a specified date, or subject to the condition that the shares of stock for which such scrip or fractional warrants are exchangeable may be sold by the corporation and the proceeds thereof distributed to the holders of such scrip or fractional warrants, or subject to any other conditions which the Board of Directors may determine.
- 3. STOCK TRANSFERS. Upon compliance with provisions restricting the transfer or registration of transfer of shares of stock, if any, transfers or registration of transfers of shares of stock of the corporation shall be made only on the stock ledger of the corporation by the registered holder thereof, or by his attorney thereunto authorized by power of attorney duly executed and filed with the Secretary of the corporation or with a transfer agent or a registrar, if any, and on surrender of the certificate or certificates for such shares of stock properly endorsed and the payment of all taxes due thereon.
- 4. RECORD DATE FOR STOCKHOLDERS. For the purpose of determining the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to express consent to or dissent from any corporate action in writing without a meeting, or for the purpose of determining stockholders entitled to receive payment of any dividend or other distribution or the allotment of any rights, or entitled to

exercise any rights in respect of any change, conversion, or exchange of stock, or for the purpose of any other lawful action, the directors may fix, in advance, a date as the record date for any such determination of stockholders. Such date shall not be more than sixty days nor less than ten days before the date of such meeting, nor more than sixty days prior to any other action. If no record date is fixed, the record date for the determination of stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held; the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. When a determination of stockholders of record entitled to notice or to vote at any meeting of stockholders has been made as provided in this paragraph, such determination shall apply to any adjournment thereof; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

MEANING OF CERTAIN TERMS. As used herein in respect of the right to notice of a meeting of stockholders or a waiver thereof or to participate or vote thereat or to consent or dissent in writing in lieu of a meeting, as the case may be, the term "share" or "shares" or "share of stock" or "shares of stock" or "stockholder" or "stockholders" refers to an outstanding share of shares of stock and to a holder or holders of record of outstanding shares of stock when the corporation is authorized to issue only one class of shares of stock, and said reference is also intended to include any outstanding share or shares of stock and any holder or holders of record of outstanding shares of stock of any class upon which or upon whom the certificate of incorporation confers such rights where there are two or more classes or series of shares of stock or upon which or upon whom the General Corporation Law confers such rights notwithstanding that the certificate of incorporation may provide for more than one class or series of shares of stock, one or more of which are limited or denied such rights thereunder; provided, however, that no such right shall vest in the event of an increase or a decrease in the authorized number of shares of stock of any class or series which is otherwise denied voting rights under the provisions of the certificate of incorporation, including any Preferred Stock which is denied voting rights under the provisions of the resolution or resolutions adopted by the Board of Directors with respect to the issuance thereof.

## 6. STOCKHOLDERS MEETINGS.

- TIME. The annual meeting shall be held on the date and at the time fixed, from time to time, by the directors,

provided, that the first annual meeting shall be held on a date within thirteen months after the organization of the corporation, and each successive annual meeting shall be held on a date within thirteen months after the date of the preceding annual meeting. A special meeting shall be held on the date and at the time fixed by the directors.

- PLACE. Annual meetings and special meetings shall be held at such place, within or without the State of Delaware, as the directors may, from time to time, fix. Whenever the directors shall fail to fix such place, the meeting shall be held at the registered office of the corporation in the State of Delaware.
- CALL. Annual meetings and special meetings may be called by the directors or by any officer instructed by the directors to call the meeting.
- NOTICE OR WAIVER OF NOTICE. Written notice of all meetings shall be given, stating the place, date and hour of the meeting. The notice of an annual meeting shall state that the meeting is called for the election of directors and for the transaction of other business which may properly come before the meeting, and shall (if any other action which could be taken at a special meeting is to be taken at such annual meeting), state such other action or actions as are known at the time of such The notice of a special meeting shall in all instances state the purpose or purposes for which the meeting is called. If any action is proposed to be taken which would, if taken, entitle stockholders to receive payment for their shares of stock, the notice shall include a statement of that purpose and to that effect. Except as otherwise provided by the General Corporation Law, a copy of the notice of any meeting shall be given, personally or by mail, not less than ten days nor more than sixty days before the date of the meeting, unless the lapse of the prescribed period of time shall have been waived, and directed to each stockholder at his record address or at such other address which he may have furnished for such purpose in writing to the Secretary of the corporation. Notice by mail shall be deemed to be given when deposited, with postage thereon prepaid, in the United States mail. If a meeting is adjourned to another time, not more than thirty days hence, and/or to another place, and if an announcement of the adjourned time and/or place is made at the meeting, it shall not be necessary to give notice of the adjourned meeting unless the directors, after adjournment, fix a new record date for the adjourned meeting. Notice need not be given to any stockholder who submits a written waiver of notice by him before or after the time stated therein. Attendance of a person at a meeting of stockholders shall constitute a waiver of notice of such meeting, except when the stockholder attends a meeting for the express purpose of

objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice.

- STOCKHOLDER LIST. There shall be prepared and made, at least ten days before every meeting of stockholders, a complete list of the stockholders, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting either at a place within the city or other municipality or community where the meeting is to be held, which place shall be specified in the notice of the meting, or if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. The stock ledger shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by this section or the books of the corporation, or to vote at any meeting of stockholders.

- CONDUCT OF MEETING. Meetings of the stockholders shall be presided over by one of the following officers in the order of seniority and if present and acting -- the Chairman of the Board, if any, the Vice-Chairman of the Board, if any, the President, a Vice-President, a chairman for the meeting chosen by the Board of Directors, or, if none of the foregoing is in office and present and acting, by a chairman to be chosen by the stockholders. The Secretary of the corporation, or in his absence, an Assistant Secretary, shall act as secretary of every meeting, but if neither the Secretary nor an Assistant Secretary is present the Chairman for the meeting shall appoint a secretary of the meeting.

- PROXY REPRESENTATION. Every stockholder may authorize another person or persons to act for him by proxy in all matters in which a stockholder is entitled to participate, whether by waiving notice of any meeting, voting or participating at a meeting, or expressing consent or dissent without a meeting. Every proxy must be signed by the stockholder or by his attorney-in-fact. No proxy shall be voted or acted upon after three years from its date unless such proxy provides for a longer period. A duly executed proxy shall be irrevocable if it states that it is irrevocable and, if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may be made irrevocable regardless of

whether the interest with which it is coupled is an interest in the stock itself or an interest in the corporation generally.

- INSPECTORS AND JUDGES. The directors, in advance of any meeting, may, but need not, appoint one or more inspectors of election or judges of the vote, as the case may be, to act at the meeting or any adjournment thereof. If an inspector or inspectors or judge or judges are not appointed, the person presiding at the meeting may, but need not, appoint one or more inspectors or judges. In case any person who may be appointed as an inspector or judge fails to appear or act, the vacancy may be filled by appointment made by the directors in advance of the meeting or at the meeting by the person presiding thereat. Each inspector or judge, if any, before entering upon the discharge of his duties, shall take and sign an oath faithfully to execute the duties of inspector or judge at such meeting with strict impartiality and according to the best of his ability. The inspectors or judges, if any, shall determine the number of shares of stock represented at the meeting, the existence of a quorum, the validity and effect of proxies, and shall receive votes, ballots or consents, hear and determine all challenges and questions arising in connection with the right to vote, count and tabulate all votes, ballots or consents, determine the results, and do such acts as are proper to conduct the election or vote with fairness to all stockholders. On request of the person presiding at the meeting, the inspector or inspectors or judge or judges, if any, shall make a report in writing of any challenge, question or matter determined by him or them and execute a certificate of any fact found by him or them.

- QUORUM. Except as the General Corporation Law or these By-Laws may otherwise provide, the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum at a meeting of stockholders for the transaction of any business. The stockholders present may adjourn the meeting despite the absence of a quorum. When a quorum is once present to organize a meeting, it is not broken by the subsequent withdrawal of any shareholders.

- VOTING. Each stockholder entitled to vote in accordance with the terms of the Certificate of Incorporation and of these By-Laws, or, with respect to the issuance of Preferred Stock, in accordance with the terms of a resolution or resolutions of the Board of Directors, shall be entitled to one vote, in person or by proxy, for each share of stock entitled to vote held by such stockholder. In the election of directors, a plurality of the votes cast shall elect. Any other action shall be authorized by a majority of the votes cast except where the Certificate of Incorporation or the General Corporation Law prescribes a different percentage of votes and/or a different exercise of voting power. In the election of directors, voting

need not be by ballot. Voting by ballot shall not be required for any other corporate action except as otherwise provided by the General Corporation Law.

7. STOCKHOLDER ACTION WITHOUT MEETING. Any action required to be taken, or any action which may be taken, at any annual or special meeting of stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of the outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon where present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholder who have not consented in writing.

#### ARTICLE II

#### **DIRECTORS**

- 1. FUNCTIONS AND DEFINITION. The business of the corporation shall be managed by the Board of Directors of the corporation. The use of the phrase "whole board" herein refers to the total number of directors which the corporation would have if there were no vacancies.
- 2. QUALIFICATIONS AND NUMBER. A director need not be a stockholder, a citizen of the United States, or a resident of the State of Delaware. The number of directors constituting the whole board shall be not less than three nor more than ten, except that, where all the shares of stock of the corporation are owned beneficially and of record by less than three stockholders, the number of directors may be less than three but not less than the number of such stockholders. Subject to the foregoing limitation and except for the first Board of Directors, such number may be fixed from time to time by action of the stockholders or of the directors, or, if the number is not fixed, the number shall be three. The number of directors may be increased or decreased by action of the stockholders or the directors.
- 3. ELECTION AND TERM. Any director may resign at any time upon written notice to the corporation. Directors who are elected at an annual meeting of stockholders, and directors who are elected in the interim to fill vacancies and newly created directorships, shall hold office until the next annual meeting of stockholders and until their successors have been elected and qualified or until their earlier resignation or removal. In the interim between annual meetings of stockholder or of special

meetings of stockholder called for the election of directors and/or for the removal of one or more directors and for the filing of any vacancies in the Board of Directors, including vacancies resulting from the removal of directors for cause or without cause, any vacancy in the Board of Directors may be filled by the vote of a majority of the remaining directors then in office, although less than a quorum, or by the sole remaining director.

#### 4. MEETINGS.

- TIME. Meetings shall be held at such time as the Board shall fix.  $\,$
- FIRST MEETING. The first meeting of each newly elected Board may be held immediately after each annual meeting of the stockholders at the same place at which the meeting is held, and no notice of such meeting shall be necessary to the meeting, provided a quorum shall be present. In the event such meeting is not so held immediately after the annual meeting of the stockholders, it may be held at such time and place as shall be specified in the notice given as hereinafter provided for special meetings of the Board of Directors, or at such time and place as shall be fixed by the consent in writing of all of the Directors.
- PLACE. Meetings, both regular and special, shall be held at such place within or without the State of Delaware as shall be fixed by the Board.
- CALL. No call shall be required for regular meetings for which the time and place have been fixed. Special meetings may be called by or at the direction of the Chairman of the Board, if any, the Vice-Chairman of the Board, if any, or the President, or of a majority of the directors in office.
- NOTICE OR ACTUAL OR CONSTRUCTIVE WAIVER. No notice shall be required for regular meetings for which the time and place have been fixed. Written, oral or any other mode of notice of the time and place shall be given for special meetings in sufficient time for the convenient assembly of the directors thereat. The notice of any meeting need not specify the purpose of the meeting. Any requirement of furnishing a notice shall be waived by any director who signs a written waiver of such notice before or after the time stated therein.

Attendance of a Director at a meeting of the Board shall constitute a waiver of notice of such meeting, except when the Director attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of

any business because the meeting is not lawfully called or convened.  $% \begin{center} \end{center} \begin{center} \end{center}$ 

- QUORUM AND ACTION. A majority of the whole Board shall constitute a quorum except when a vacancy or vacancies prevents such majority, whereupon a majority of the directors in office shall constitute a quorum, provided that such majority shall constitute at least one-third (1/3) of the whole Any director may participate in a meeting of the Board by means of a conference telephone or similar communications equipment by means of which all directors participating in the meeting can hear each other, and such participation in a meeting of the Board shall constitute presence in person at such meeting. A majority of the directors present, whether or not a quorum is present, may adjourn a meeting to another time and place. Except as otherwise provided, and except as otherwise provided by the General Corporation Law, the act of the Board shall be the act by vote of a majority of the directors present at a meeting, a quorum being present. The quorum and voting provisions herein stated shall not be construed as conflicting with any provisions of the General Corporation Law and these By-Laws which govern a meeting of directors held to fill vacancies and newly created directorships in the Board.
- CHAIRMAN OF THE MEETING. The Chairman of the Board, if any and if present and acting, shall preside at all meetings. Otherwise, the Vice-Chairman of the Board, if any and if present and acting, or the President, if present and acting, or any other director chosen by the Board, shall preside.
- 5. REMOVAL OF DIRECTORS. Any or all of the directors may be removed for cause or without cause by the stockholders. One or more of the directors may be removed for cause by the Board of Directors.
- 6. COMMITTEES. The Board of Directors may, by resolution passed by a majority of the whole Board, designate one or more committees of the whole Board, designate one or more committees, each committee to consist of two or more of the directors of the corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. Any such committee, to the extent provided in the resolution of the Board, shall have and may exercise the powers of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it. In the absence or disqualification of any member of any such committee or committees, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another

member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

7. ACTION IN WRITING. Any action required or permitted to be taken at any meeting of the Board of Directors or any committee thereof may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or committee.

### ARTICLE III

#### **OFFICERS**

- 1. EXECUTIVE OFFICERS. The directors may elect or appoint a Chairman of the Board of Directors, a President, one or more Vice Presidents (one or more of whom may be denominated "Executive Vice President" or "Senior Vice President"), a Secretary, one or more Assistant Secretaries, a Treasurer, one or more Assistant Treasurers, and such other officers as they may determine. Any number of offices may be held by the same person.
- 2. TERM OF OFFICE; REMOVAL. Unless otherwise provided in the resolution of election or appointment, each officer shall hold office until the meeting of the Board of Directors following the next meeting of shareholders and until his successor has been elected and qualified. The Board of Directors may remove any officer for cause or without cause.
- 3. AUTHORITY AND DUTIES. All officers, as between themselves and the corporation, shall have such authority and perform such duties in the management of the corporation as may be provided in these By-Laws, or, to the extent not so provided, by the Board of Directors.
- 4. THE CHAIRMAN OF THE BOARD OF DIRECTORS. The Chairman of the Board of Directors, if present and acting, shall preside at all meetings of the Board of Directors; otherwise, the President, if present, shall preside, or if the President does not so preside, any other Director chosen by the Board shall preside.
- 5. THE PRESIDENT. The President shall be the chief executive officer of the corporation.  $\label{eq:president}$
- 6. VICE PRESIDENT. Any Vice President that may have been appointed, in the absence or disability of the President, shall perform the duties and exercise the powers of the

President, in the order of their seniority, and shall perform such other duties as the Board of Directors shall prescribe.

- 7. THE SECRETARY. The Secretary shall keep in safe custody the seal of the corporation and affix it to any instrument when authorized by the Board of Directors, and shall perform such other duties as may be prescribed by the Board of Directors
- 8. THE TREASURER. The Treasurer shall have the care and custody of the corporate funds, and other valuable effects,  $\,$ including securities, and shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation and shall deposit all monies and other valuable effects in the name and to the credit of the corporation in such depositories as may be designated by the Board of Directors. The Treasurer shall disburse the funds of the corporation as may be ordered by the Board, taking proper vouchers for such disbursements, and shall render to the President and directors, at the regular meetings of the Board, or whenever they may require it, an account of all his transactions as Treasure and of the financial condition of the corporation. If required by the Board of Directors, the Treasurer shall give the corporation a bond for such term, in such sum and with such surety or sureties as shall be satisfactory to the Board for the faithful performance of the duties of his office and for the restoration to the corporation, in case of his death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in his possession or under his control belonging to the corporation.

ARTICLE IV

CORPORATE SEAL AND CORPORATE BOOKS

The corporate seal shall be in such form as the Board of Directors shall prescribe.

The books of the corporation may be kept within or without the State of Delaware, at such place or places as the Board of Directors may, from time to time, determine.

### ARTICLE V

### FISCAL YEAR

The fiscal year of the corporation shall be fixed, and shall be subject to change, by the Board of Directors.

### ARTICLE VI

# CONTROL OVER BY-LAWS

The power to amend, alter and repeal these By-Laws and to adopt new By-Laws shall be vested in the Board of Directors; provided, that the Board of Directors may delegate such power, in whole or in part, to the stockholders; and provided, further, that any By-Law, other than an initial By-Law, which provides for the election of directors by classes for staggered terms shall be adopted by the stockholders.

Performance-Based Compensation Plan for Chief Executive Officer of Vishay Intertechnology, Inc.

The following is a summary description of the Performance-Based Compensation Plan for the Chief Executive Officer of Vishay Intertechnology, Inc. (the "Company"), which was approved by the Compensation Committee of the Board of Directors of the Company on February 25, 1994.

### Background

The plan was adopted to allow the Chief Executive Officer's compensation above \$1 million to be deductible under Section 162(m) of the Internal Revenue Code, to the extent that it is "performance based". The plan must be approved by the Board of Directors (excluding the Chief Executive Officer) and by the holders of a majority of the issued and outstanding shares of Common Stock of the Company present in person or by proxy and voting thereon at the next Annual Meeting.

Material Plan Terms

The material features of the plan are as follows:

- \* Prior to the start of each fiscal year (unless applicable regulations permit determination at a later date), the Compensation Committee will establish performance targets applicable to the Chief Executive Officer, which targets shall be linked exclusively to after-tax profits of the Company.
- \* The Chief Executive Officer shall be awarded cash bonuses under this plan if these certain performance targets are met.
- \* The amount of the bonus, if any, each year shall be determined under parameters preset by the Committee, including:
  - a threshold of after-tax profits above which a performance bonus shall be granted,
  - specified ranges of after-tax profits above the threshold and the bonus to be awarded for each range, calculated as a percentage of after-tax profits;

- a threshold of after-tax profits below which the Chief Executive Officer's base salary will be reduced by a specified percentage;
- e. a ceiling level of after-tax profits above which no additional performance-based bonus will be

### Criteria for Selecting Parameters:

In selecting the parameters each year, the Compensation Committee may consider, among others factors, the following:  $\frac{1}{2} \left( \frac{1}{2} \right) = \frac{1}{2} \left( \frac{1}{2} \right) \left( \frac$ 

- the Company's financial performance in view of the performance of companies similar in size and character;
- the compensation of Chief Executive Officers of companies similar in size and character;
- \* the Company's financial performance in comparison to previous years; and
- \* the Chief Executive Officer's years of dedication and service to the Company.

Application of Plan for 1994 -- an Illustration

Base Salary: \$ 600,000

Threshold of after-tax profits above which

a performance-bonus shall be granted: \$25,000,000

Ranges of after-tax profits and the bonus to be awarded, calculated as a % of such after-tax profits:

a. \$25 million to \$50 million 3%

b. \$50 million to \$75 million 1%

Threshold above which no additional

bonus is granted: \$75,000,000

Threshold below which portion of base salary to be rescinded:

\$21,000,000

Possible reduction of base salary: 15%

For example, if in 1994 the Company earns \$62 million in aftertax profits, the Chief Executive Officer shall earn \$1,470,000:

base: \$ 600,000
3% of \$25 million: 750,000
1% of \$12 million: 120,000

TOTAL: \$1,470,000

Maximum Bonus Opportunity:

The bonus the Chief Executive Officer may receive in respect of any fiscal year shall not exceed 3% of after-tax profits above \$25 million.

Duration of Plan

If the Plan is approved by the Board of Directors and the stockholders, it may remain in effect without further stockholder approval until the annual meeting of stockholders in 1999, unless materially amended prior to such meeting.

## Exhibit 11

Vishay Intertechnology, Inc.

## Statement Regarding Computation of Per Share Earnings

(In thousands, except per share amounts)

PRIMARY AND FULLY DILUTED EARNINGS PER SHARE:	1993	Year Ended December 1992	
Weighted average number of common shares outstanding	21,228	17,269	16,649
Effect of assumed conversion of convertibl subordinated debentures	e	2,097	
Total	•	19,366	,
Earnings before cumulative effect of accounting change		\$30,413	
Cumulative effect of accounting change for income taxes	1,427		
Net Earnings		30,413	20,890
Add interest on convertible subordinated debentures, net of income tax effect		2,721	
Total		\$33,134	\$20,890
Earnings per share:			
Before cumulative effect of accounting change	\$2.01	\$1.71	\$1.25
Accounting change for income taxes	\$0.07		
Net earnings per share	\$2.08 ======	\$1.71 	\$1.25 =======

Exhibit 22

## COMPANY SUBSIDIARIES (As of March 25, 1994)

Name	Jurisdiction	Percent of Ownership
Vishay Micromesures SA	France	100%
Nippon Vishay, K.K.	Japan	100%
Vishay F.S.C., Inc.	U.S. Virgin Islands	100%
VSH Holdings, Inc.	Delaware	100%
Roederstein Electronics, Inc.	Delaware	100%
Measurements Group, Inc.	Delaware	100%
Measurements Group GmbH	Germany	100%
Grupo Da Medidas Iberica S.L.	Spain	100%
Vishay Israel Limited	Israel	90%
Vishay Israel North Ltd.	Israel	100%
Z.T.R. Electronics Ltd.	Israel	100%
Vishay International Trade Ltd.	Israel	100%
Dale Israel Electronics Industries, Ltd.	Israel	100%
Draloric Israel Ltd.	Israel	100%
V.I.E.C. Ltd.	Israel	100%
Vilna Equities Holding, B.V.	Netherlands	100%
Visra Electronics Financing B.V.	Netherlands	100%
Measurements Group (UK) Ltd.	U.K.	100%
Vishay Beteiligungs GmbH	Germany	79.90% by Vishay Israel 7.56% by Vishay 9.01% by Vilna 3.53% by Dale

Nai	me	Jurisdiction	Percent of Ownership
-	Draloric Electronics, GmbH	Germany	100%
	Roederstein GmbH	Germany	100%
	Roederstein-Produktionsgesell- schaft GmbH	Germany	100%
	Roederstein Electronics Portugal Lda.	Portugal	95%
	Roederstein Bauelemente Vertrieb GmbH	Germany	51%
	Roederstein Bauelemente Vertrieb GmbH	Germany	75%
	Roederstein Bauelemente Vertrieb GmbH	Germany	70%
	Roederstein Bauelemente Vertrieb A.G.	Switzerland	100%
	Roederstein Vertrieb elektro- nischer Bauelemente & Co.	Austria	70%
	Roederstein Vertrieb elektro- nischer Bauelemente Ges. mbH	Austria	77.78%
	Klevestav-Roederstein Festi- gheter AB	Sweden	50%
	Djie Roederstein Electronische Onderdelen B.V.	Netherlands	40%
	N.V. Roederstein Electronics Components S.A.	Belgium	48%
	Fabrin-Roederstein A.S.	Denmark	40%
	OY OKAB-Roederstein AB	Finland	44.4%
	Roederstein Finland OY	Finland	40%
	ROGIN Electronic S.A.	Spain	33%
	Roederstein Norge AS	Norway	40%

Name	Jurisdiction	Percent of Ownership
Roederstein-Hilfe-GmbH	Germany	100%
Draloric Electronic SPOL S RO	Czech Republic	100%
Sfernice S.A.	France	99.8%
Roederstein-Electronique France S.A.R.L.	France	97.94%
Nicolitch S.A.	France	100%
Gravures Industrielles Mulhousiennes S.A.	France	100%
Sfernice Ltd.	U.K.	100%
Aztronic S.A.	France	100%
Ultronix, Inc.	Delaware	100%
Ohmtek, Inc.	New York	100%
Techno Components Corp.	Delaware	100%
E-Sil Components Ltd.	U.K.	100%
Vishay Components (UK) Ltd.	U.K.	100%
Steatite-Roederstein, Ltd.	England	100%
Grued Corp.	Delaware	100%
Con-Gro, Corp.	Delaware	100%
Gro-Con, Inc.	Delaware	100%
Angstrohm Precision, Inc.	Delaware	100%
Angstrohm Holdings, Inc.	Delaware	100%
Alma Components Ltd.	Guernsey	100%
Vishay Resistor Products (UK) Ltd.	U.K.	100%
Heavybarter, Unlimited	U.K.	100%
Vishay-Mann Limited	U.K.	100%

Name	Jurisdiction	Percent of Ownership
Dale Holdings, Inc.	Delaware	100%
Dale Electronics, Inc.	Delaware	100%
Componentes Dale de Mexico S.A. de C.V.	Mexico	100%
Electronica Dale de Mexico S.A. de C.V.	Mexico	100%
Vishay Electronic Components Asia Pte., Ltd.	Singapore	100%
Jeffers Electronics, Inc.	Delaware	100%
Jefel de Mexico S.A. de C.V.	Mexico	100%
Nytron Inductors, Inc.	South Carolina	100%
The Colber Corporation	New Jersey	100%
Dale Test Laboratories, Inc.	South Dakota	100%
Angstrohm Precision, Inc.	Maryland	100%
Bradford Electronics, Inc.	Delaware	100%
Vishay Sprague Holdings Corp.	Delaware	100%
Sprague Palm Beach, Inc.	Delaware	100%
Sprague North Adams, Inc.	Massachusetts	100%
Sprague Sanford, Inc.	Maine	100%
Vishay Sprague, Inc.	Delaware	100%
Sprague Asia, Ltd.	Hong Kong	100%
Sprague France S.A.	France	100%
Vishay Sprague Canada Holdings, Inc.	Canada	100%
Sprague Electric of Canada, Ltd.	Canada	100%

Note: Names of Subsidiaries are indented under name of Parent.

Exhibit 23

Consent of Independent Auditors

We consent to the incorporation by reference in the Registration Statements (Form S-8 No. 33-7850 and No. 33-7851) pertaining to the 1986 Employee Stock Plan of Vishay Intertechnology, Inc. and the 1986 Employee Stock Plan of Dale Electronics, Inc. and in the related Prospectuses of our report dated February 10, 1994 (except for Note 6, as to which the date is March 25, 1994) with respect to the consolidated financial statements and schedules of Vishay Intertechnoloy, Inc. included in the Annual Report (Form 10-K) for the year ended December 31, 1993.

/s/ ERNST & YOUNG

Philadelphia, Pennsylvania March 25, 1994