VISHAY

The DNA of tech.™

Investor Presentation

MAY 2021

- VISHAY TODAY
- GROWTH DRIVERS
- TARGETS & PROJECTIONS
- Q1 FINANCIALS & METRICS

NOTES ON FORWARD-LOOKING STATEMENTS

Comments in this presentation other than statements of historical fact may constitute forward-looking statements. Words such as “believe,” “estimate,” “will be,” “will,” “would,” “expect,” “anticipate,” “plan,” “project,” “intend,” “could,” “should” or other similar words or expressions often identify forward-looking statements. Such statements are based on current expectations only, and are subject to certain risks, uncertainties and assumptions, many of which are beyond our control. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results, performance or achievements may vary materially from those anticipated, estimated or projected. Factors that could cause actual results to materially differ are described in our filings with the U.S. Securities and Exchange Commission, including our annual reports on Form 10-K and quarterly reports on Form 10-Q, specifically in the sections titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Risk Factors .” The Company undertakes no obligation to update any forward-looking statements.

NON-GAAP FINANCIAL MEASURES

Management uses measures which are not recognized in accordance with U.S. generally accepted accounting principles (“GAAP”) to evaluate its business, and may refer to such measures in this presentation. These measures are considered “non-GAAP financial measures” under the U.S. Securities and Exchange Commission rules. These non-GAAP financial measures are intended to supplement our GAAP measures of performance and liquidity. These non-GAAP measures may include: adjusted net earnings, adjusted gross margin, adjusted operating margin, adjusted earnings per share, free cash, cash available to enhance stockholder value, EBITDA, Adjusted EBITDA, EBITDA margin, breakeven point, contribution margin, and various measures and metrics “excluding VPG”.

“Adjusted net earnings” is net earnings (loss) determined in accordance with GAAP, adjusted for various items that Management believes are not indicative of the intrinsic operating performance of the Company, such as restructuring and severance costs, asset write-downs, impairment of goodwill, the direct impact of the COVID-19 outbreak, and other significant charges or credits that are important to understanding our intrinsic operations. The measurement is used by Management to evaluate our performance, and also is a key performance metric for executive compensation. Reconciling items to arrive at adjusted net earnings are more fully described in the Company’s annual report on Form 10-K and its quarterly reports on Forms 10-Q.

“Adjusted gross margin” is gross margin determined in accordance with GAAP (net revenue less costs of products sold and certain other period costs), adjusted to exclude items that Management believes are not indicative of the intrinsic operating performance of the Company, such as losses on purchase commitments, the direct impact of the COVID-19 outbreak, and unusual inventory write-downs. It may be expressed in dollars or as a percentage of net revenue. The measurement is used by Management to evaluate the performance of our business segments, as well the business as a whole. Reconciling items to arrive at adjusted gross margin are also considered in the calculation of adjusted operating margin and adjusted net earnings. Such reconciling items are more fully described in the Company’s annual report on Form 10-K and its quarterly reports on Forms 10-Q.

“Adjusted operating margin” is operating income determined in accordance with GAAP, adjusted for items that Management believes are not indicative of the intrinsic operating performance of the Company. It may be expressed in dollars or as a percentage of net revenue. The measurement is used by Management to evaluate our performance. Reconciling items to arrive at adjusted gross margin are also considered in the calculation of adjusted operating margin; and reconciling items to arrive at adjusted operating margin are also considered in the calculation of adjusted net earnings. Such reconciling items are more fully described in the Company’s annual report on Form 10-K and its quarterly reports on Forms 10-Q.

“Adjusted earnings per share” is “adjusted net earnings” divided by the weighted average diluted shares outstanding for a period, adjusted for the effect of reconciling items, if applicable, on the diluted weighted average shares outstanding. For example, some potential common shares which are anti-dilutive to the computation of GAAP earnings per share may be dilutive after considering reconciling items.

“Free cash” is cash generated from operations in excess of our capital expenditure needs and net of proceeds from the sale of assets. Management uses this measure to evaluate our ability to fund acquisitions, repay debt, and otherwise enhance stockholder value through stock buy-backs or dividends.

“Cash available to enhance stockholder value” is “free cash” less cash paid for acquisitions (including acquisition-related restructuring) and less debt principal payments. While internal growth and targeted acquisitions also enhance stockholder value through the generation of “free cash”, Management uses this measure to evaluate our ability to fund further enhancements to stockholder value, such as stock buy-backs or dividends.

“EBITDA” is earnings before interest income and expense, provision for income taxes, depreciation expense, and amortization expense. Management believes that EBITDA provides additional information with respect to a company’s performance and ability to meet its future capital expenditures and working capital requirements, particularly when evaluating acquisition targets.

“Adjusted EBITDA” is EBITDA adjusted for relevant reconciling items used to calculate adjusted net earnings (described above). Adjusted EBITDA is substantially similar to, but not identical to, a measure used in the calculation of financial ratios required for covenant compliance under Vishay’s revolving credit facility.

“EBITDA Margin” is “adjusted EBITDA” divided by net revenues.

“Breakeven point” represents the quantity of output where total revenues and total operating costs are equal (in other words, where the operating income is zero). Management uses this measurement in evaluating our cost structure.

“Contribution margin,” sometimes referred to as “variable margin,” is calculated as net revenue less costs that vary with respect to quantity produced (or another output-related driver). It may be expressed in dollars or as a percentage of net revenue. Management uses this measure to determine the amount of profit to be expected for any increase in revenues in excess of the break-even point.

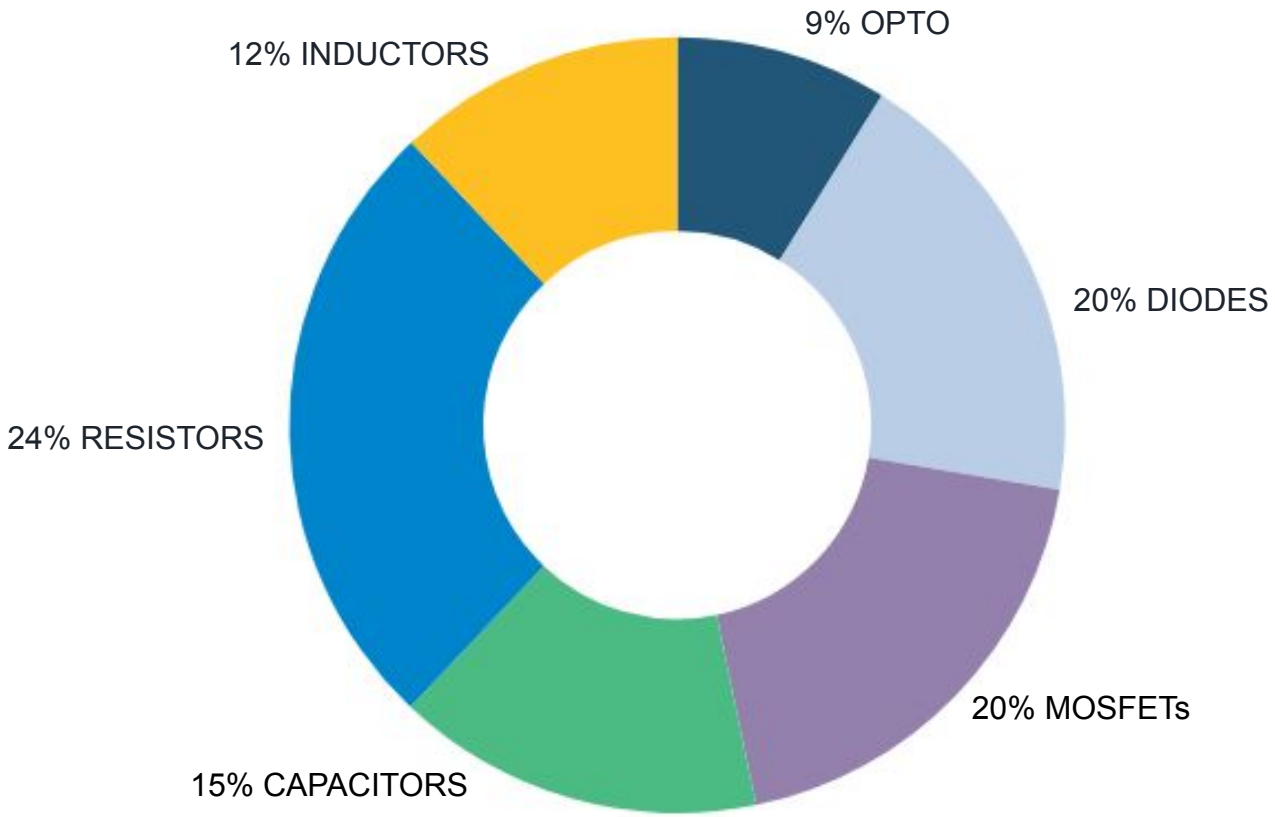
Measurements “excluding VPG” reflect the historical businesses which are still part of Vishay today. The Company spun-off VPG on July 6, 2010. While VPG does not qualify as a “discontinued operation” under GAAP, Management believes that certain evaluations “excluding VPG” are meaningful, particularly when evaluating growth and other performance metrics. Historical VPG data is reported as a separate operating segment in Vishay’s annual report on Form 10-K and its quarterly reports on Forms 10-Q during the periods it was included in Vishay’s consolidated financial statements: This discrete data is the basis to calculate any measurements “excluding VPG”. These measures do not have uniform definitions and accordingly, these measures, as calculated by Vishay, may not be comparable to similarly titled measures used by other companies. Such measures should not be viewed as alternatives to GAAP measures of performance or liquidity. However, Management believes such measures are meaningful to an evaluation of our business, as described above.

Drive Stockholder Value

- Intensified organic growth, supplemented by targeted acquisitions.
- Regular cash dividend program.
- Opportunistic stock buy-backs.
- Maintaining prudent capital structure.

Broad Product Portfolio

Revenues 2020: $2.5 billion



51% PASSIVES

49% SEMICONDUCTORS

Vishay Today

- Broad and competitive product and technology portfolio:

  Solution provider and valuable partner for customers.

- Broad market penetration
  - Wide range of end markets.
  - Balanced geographic manufacturing footprint.
  - Right mix of sales channels.
- Contribution margin of 45% plus.
- Reliable generation of “free cash.”

Broadest Line of Discrete Semiconductors and Passive Components

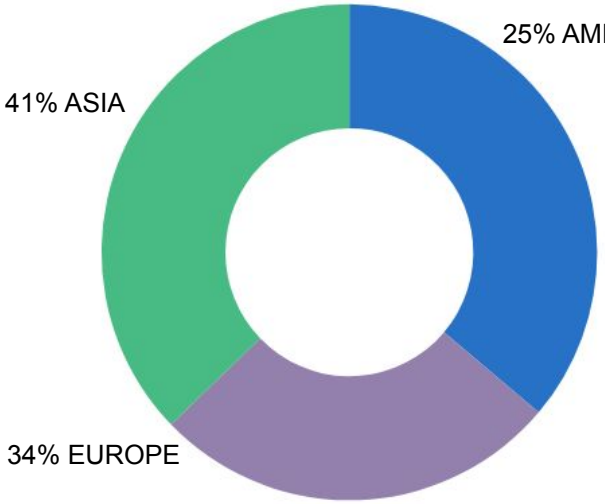
	SEMICONDUCTORS						PASSIVE COMPONENTS					
	DIODES		MOSFETs		OPTO		CAPACITORS		RESISTORS			INDUCTORS
	Rectifiers	Small Signal TVS/ESD	MOSFETs	Power ICs	IR Comp., Sensors	Opto-couplers	Aluminum, Ceramic	Power, Film, Tantalum	Film, Power	SMD Resistors	Variable, Sensors	Inductors, Magnetics
VISHAY	●	●	●	○	●	●	○	●	●	●	○	●
Bourns		○								○	●	●
Broadcom					○	●						
Cyntec									○	○		●
Diodes Inc.	●	○	○	●								
Infineon	○	○	●	●								
KOA									●	●		○
Kyocera/AVX	○						●	●				○
Murata							●				○	●
Nichicon							●	○			○	
Nexperia	○	●	○	●								
ON Semi	●	●	●	●	○	●						
Panasonic						○	●	●		●	○	●
Renesas	○	○	●	●		●						
Rohm	●	○	○	○	○			○		●		
Sharp					○	○						
ST Micro	●	●	●	○	○							
Taiyo Yuden							●					●
TDK/EPCOS							●	●			●	●
Toshiba	○	○	●	●	○	●						
Yageo/Kemet							●	●	○	●		●

Source: Company estimates

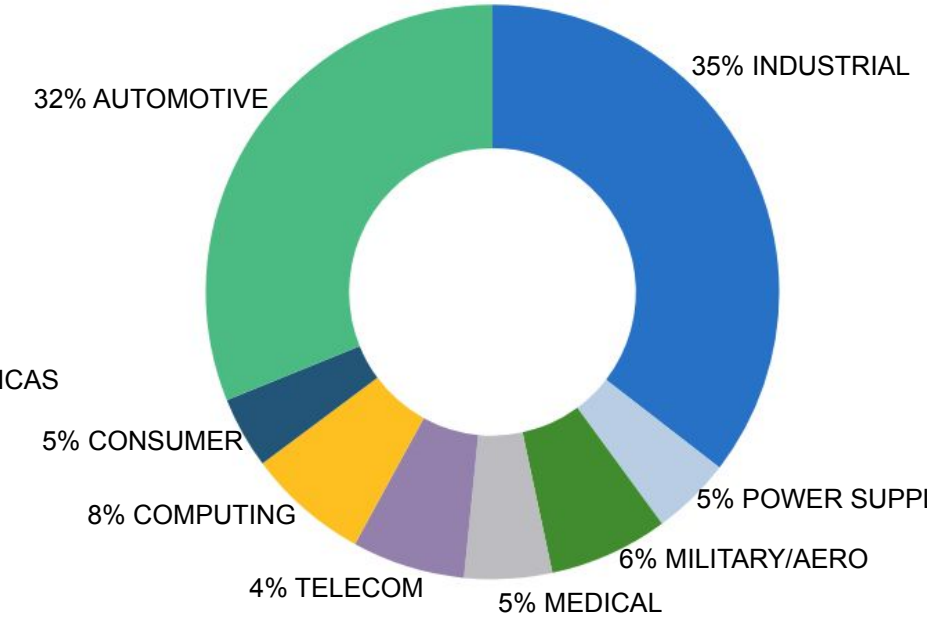
● = Major Position ○ = Minor Position

Broad Market Penetration

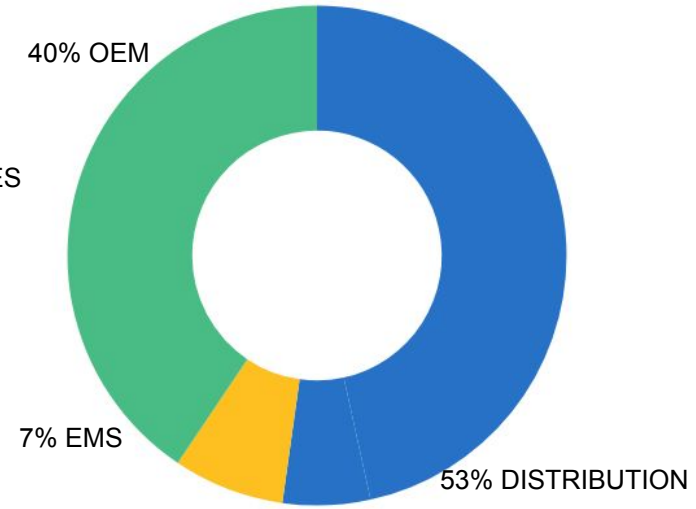
Revenues 2020: $2.5 billion



REGIONS



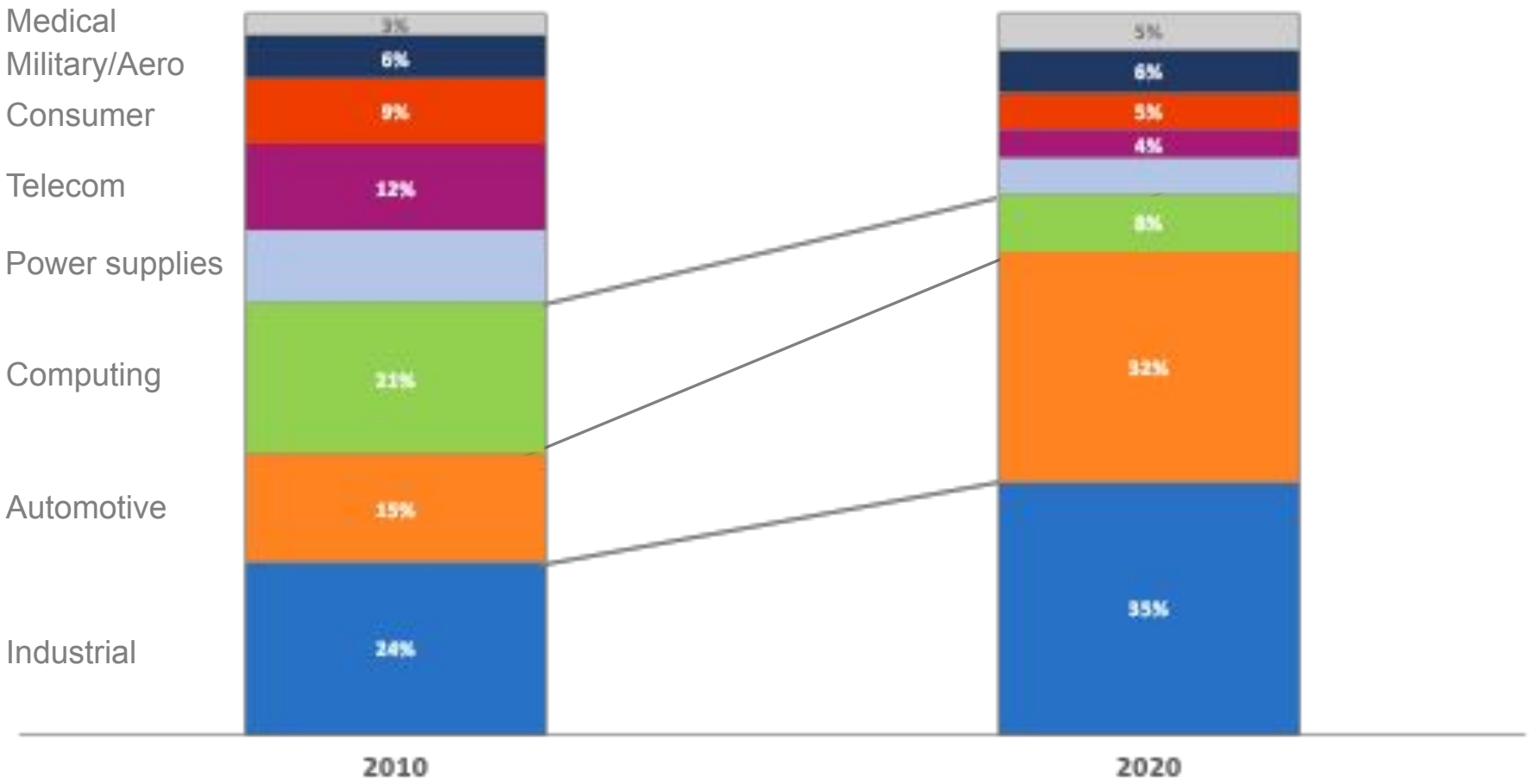
END MARKETS



SALES CHANNELS

Well-Positioned to Capitalize on Growth Markets

Revenue Split by End Market



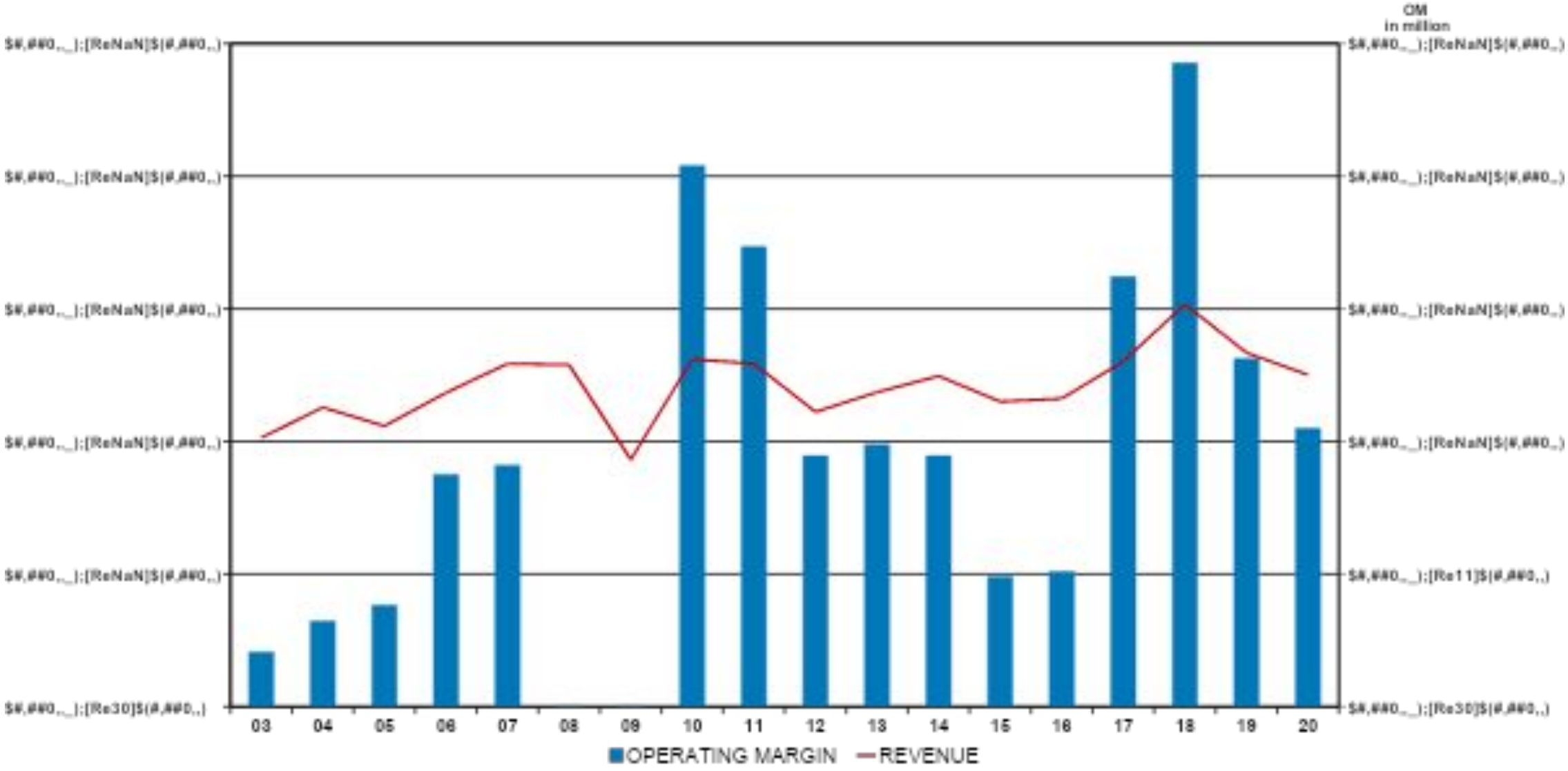
Broad Customer Base

OEM

EMS

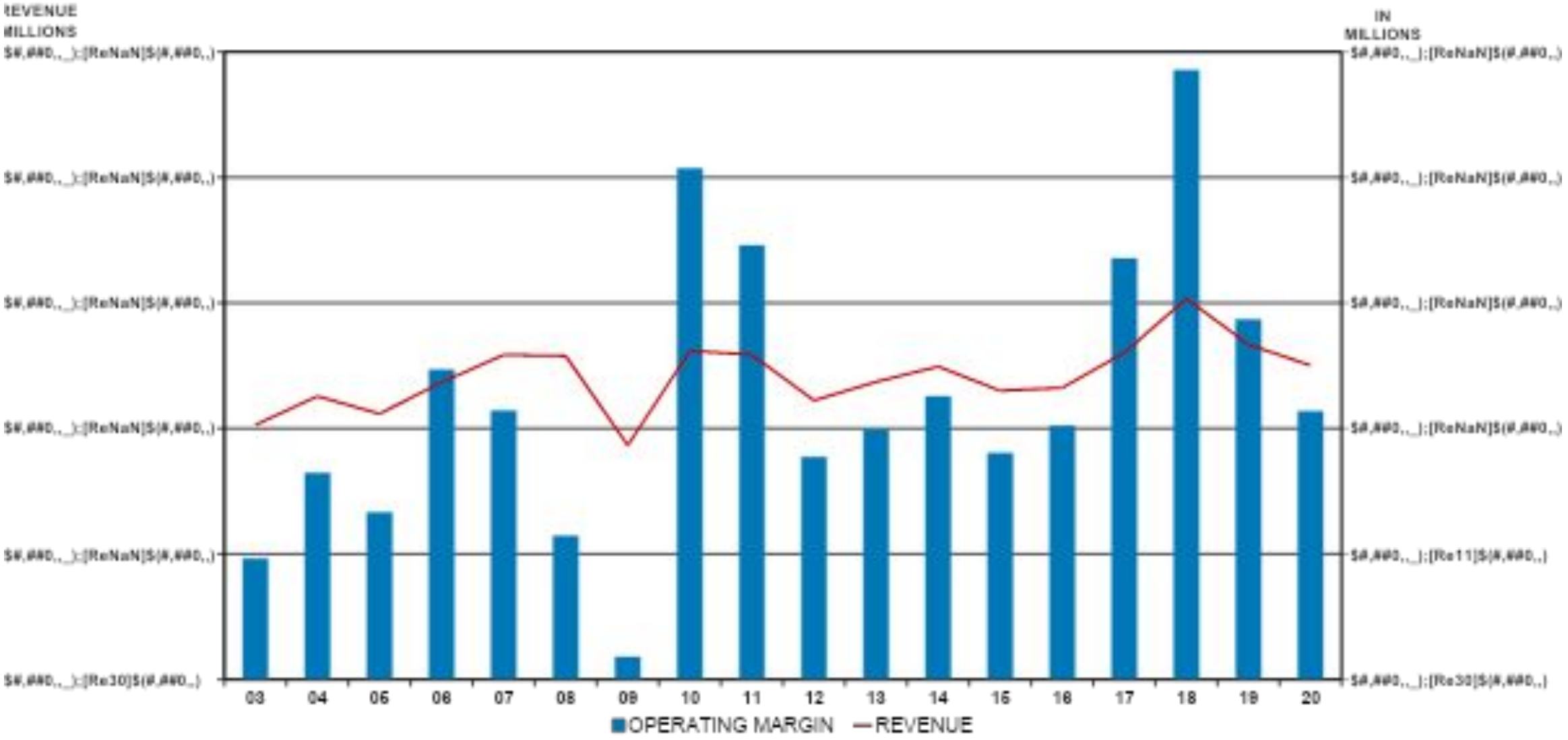
DISTRIBUTION

Revenue and GAAP Operating Margin



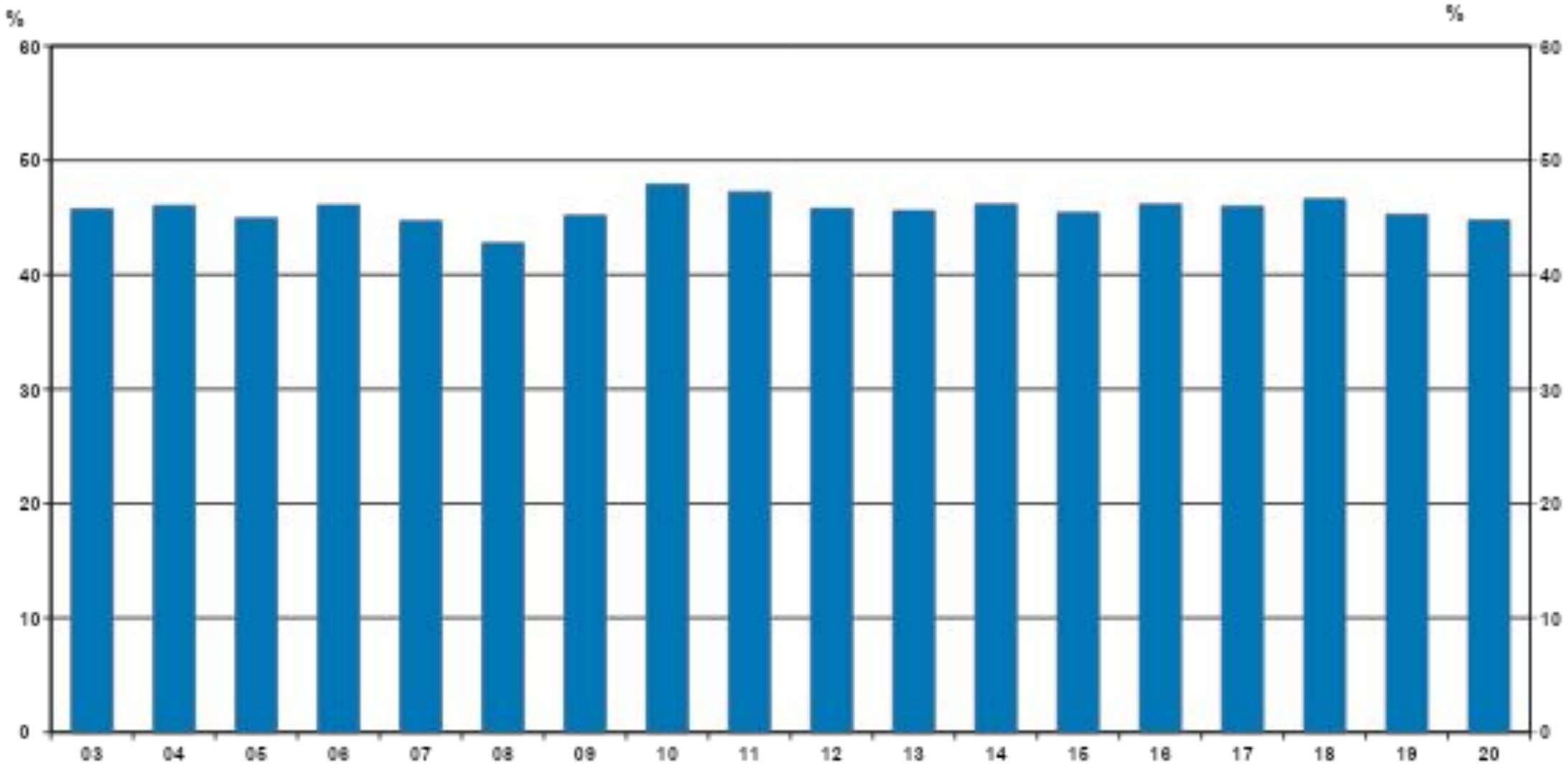
1) Excl. VPG spin-off in 2010.

Revenue and Adjusted Operating Margin



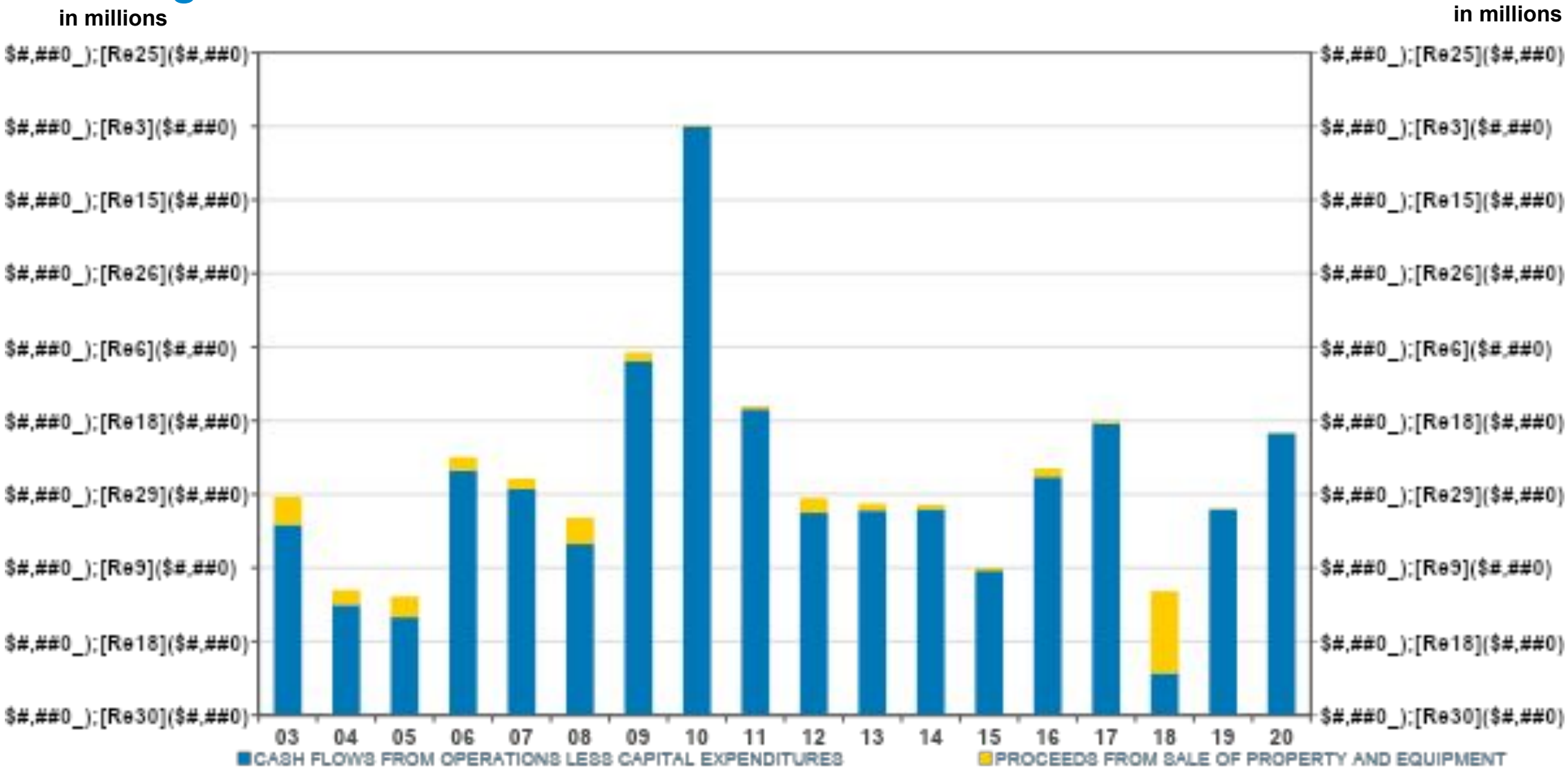
1) Excl. VPG spin-off in 2010.

Contributive Margin



1) Excl. VPG spin-off in 2010.

Strong Generation of Free Cash



Reconciliation of GAAP to Adjusted

in millions USD	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
Loss on purchase commitments, Ta write-downs													6		16	(1)	17	18
Product quality claims															3			
Restructuring and severance costs	1	24		11	19	19	21	3				36	57	15	38	27	46	29
Asset write-downs												1	5	4	7	11	27	1
U.S. pension settlement charges					79		16											
Executive compensation charges								(2)		6								
Settlement agreement gain												(28)						
Executive employment agreement charge												58						
Impairment of goodwill and indefinite-lived intangibles					2	63							1,629					
Terminated tender offer expenses													4					
Contract termination charge														19				
Siliconix transaction-related charges																4		
Purchased in-process R&D																10	2	
Environmental remediation															4			
Gain on sale of building									(12)				(5)	(3)				
COVID-19 adjustments	3																	

1) Excl. VPG spin-off in 2010.

Annualized Cash Dividend $0.38

Enhancing stockholder value:

- Increased quarterly dividend by 12% to $0.095 Q2 2019.
- Increased quarterly dividend by 26% to $0.085 Q2 2018.
- Increased quarterly dividend by 8% to $0.0675 Q4 2017.
- Increased quarterly dividend by 4% to $0.0625 Q1 2016.
- Initiated quarterly cash dividend of $0.06 in Q1 2014.

Future dividends subject to Board approval.

Stock Buybacks

- In 2017 spent $39.9 million to repurchase 2.3 million shares.
- In 2016 spent $23.2 million to repurchase 1.8 million shares.
- From 2010 – 2012, repurchased 44.3 million shares with the proceeds of convertible debt offerings.

Growth Drivers

Vishay is well positioned to participate in the markets expected to show solid growth over the next years.

- Connectivity
- Mobility
- Sustainability

Connectivity

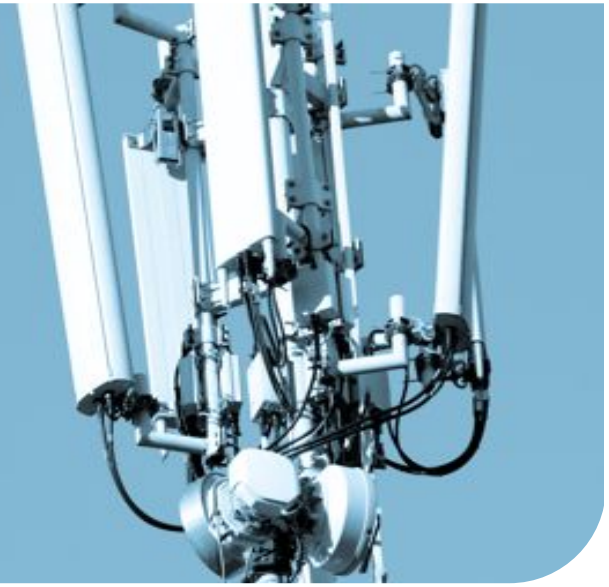
5G- Next-Gen Wireless Platform

Good frequency response

High stability

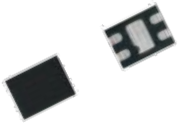
Long life

Ultra precision



High frequency SMD resistors for impedance matching

High Q HIFREQ MLCCs for RF circuit tuning



Smart load switches

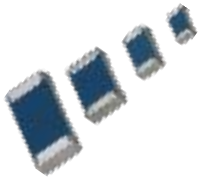
IHLP®, IHSR composite power inductors

Low profile, low ESR polymer tantalum capacitors

microBUCK® regulator ICs

MOSFETs: MICRO FOOT®, ChipFET®, PowerPAIR®, and PowerPAK®

VRPower® DrMOS integrated power stages with current sensing



Thin film SMD chips for high accuracy amplifiers

Connectivity

Gaming Consoles

Low profile

High efficiency

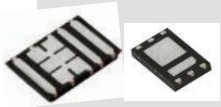
Small solution size

High power density

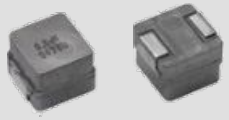
Low profile, low ESR polymer tantalum capacitors

VRPower® Integrated power stage

Load switch with programmable current limit and slow rate control



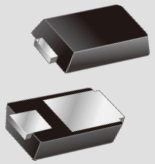
PowerPAK® MOSFETs



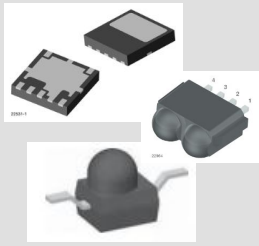
IHLP® inductors

ESD protection diodes and arrays

TMBS® diodes



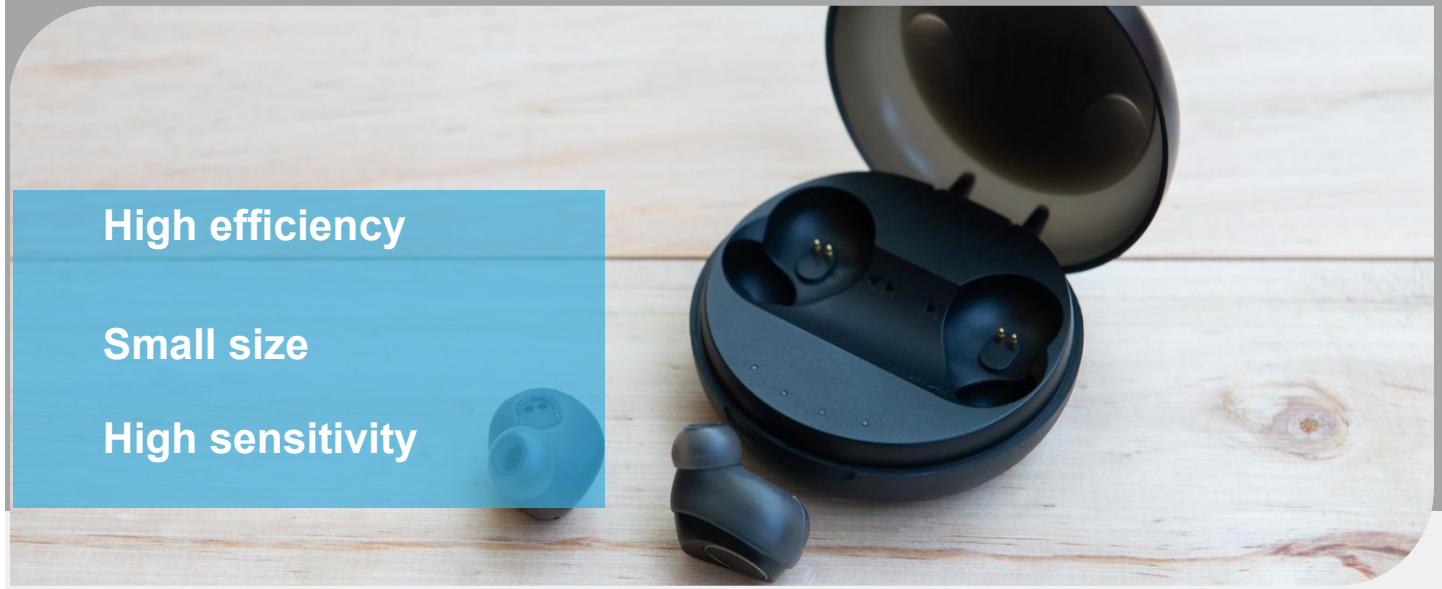
Diodes and rectifiers



Optical sensors, IR receivers and transmitters

Connectivity

True Wireless Stereo - TWS

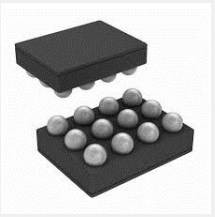


- High efficiency
- Small size
- High sensitivity

Proximity sensor with interrupt, VCSEL, and I^2C interface

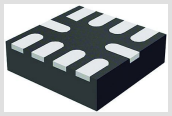
IHLP; IHHP, IFCS power inductors

TMBS® diodes



Ultra low Ron Bi-directional battery switches

microBUCK® regulator ICs

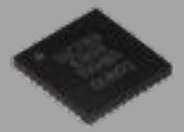


Analog switches

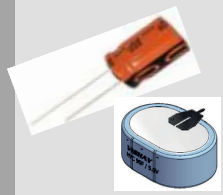
MICRO FOOT® MOSFETs

Connectivity

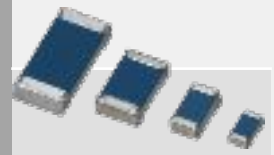
Server Power



VRPower® integrated power stages



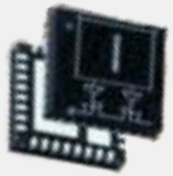
ENYCAP™ EDLC capacitors for memory backup



Thin film SMD resistors: ultra stable, low drift

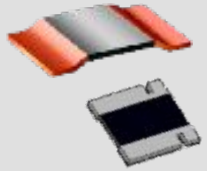
TMBS® diodes

PowerPAK® 8x8 high voltage MOSFETs



microBUCK® regulator ICs

IHLP® power inductors

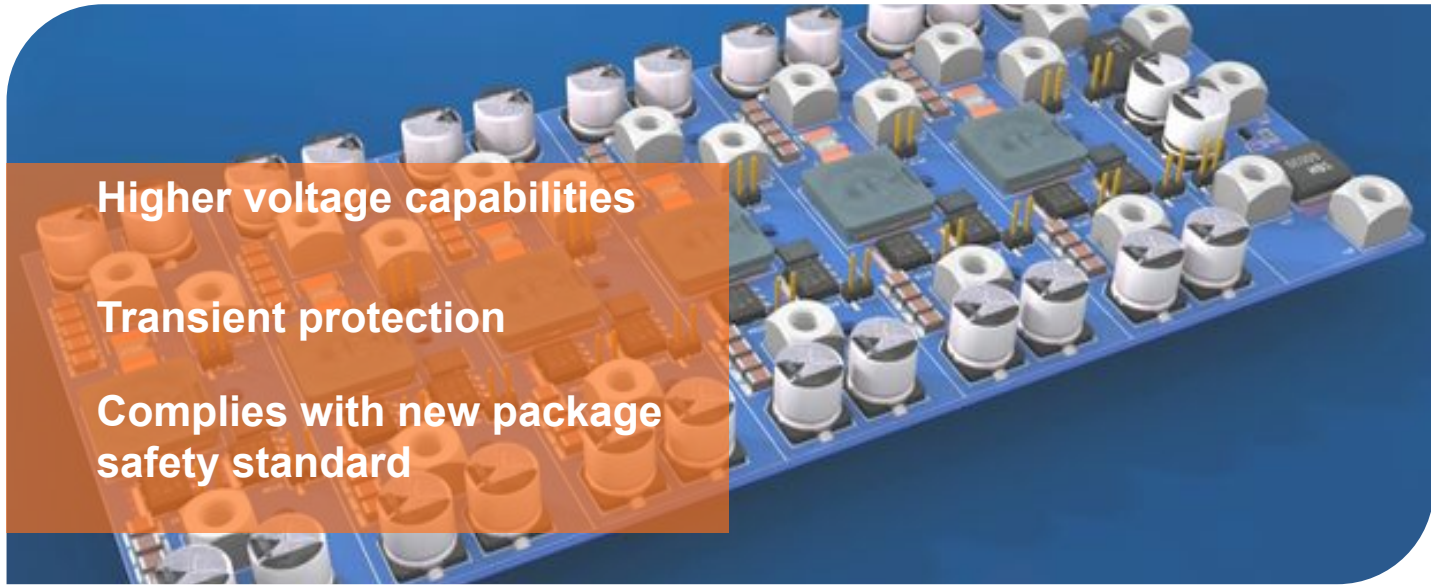


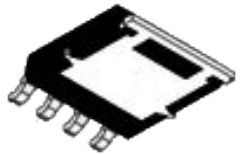
Power Metal Strip® current sense resistors

Low profile, low ESR, high CV vPolyTan™ storage capacitors

Mobility

48 V / 12 V Dual-Voltage Solutions





PowerPAK® 8x8L MOSFETs

Customized filters and transformers

IHLP®, IHTH power inductors

MKT1820 film capacitors for EMI filtering

Power Metal Strip® 4-terminal current sense resistors

SMPC Schottky: low V_F and ultra low ringing voltage

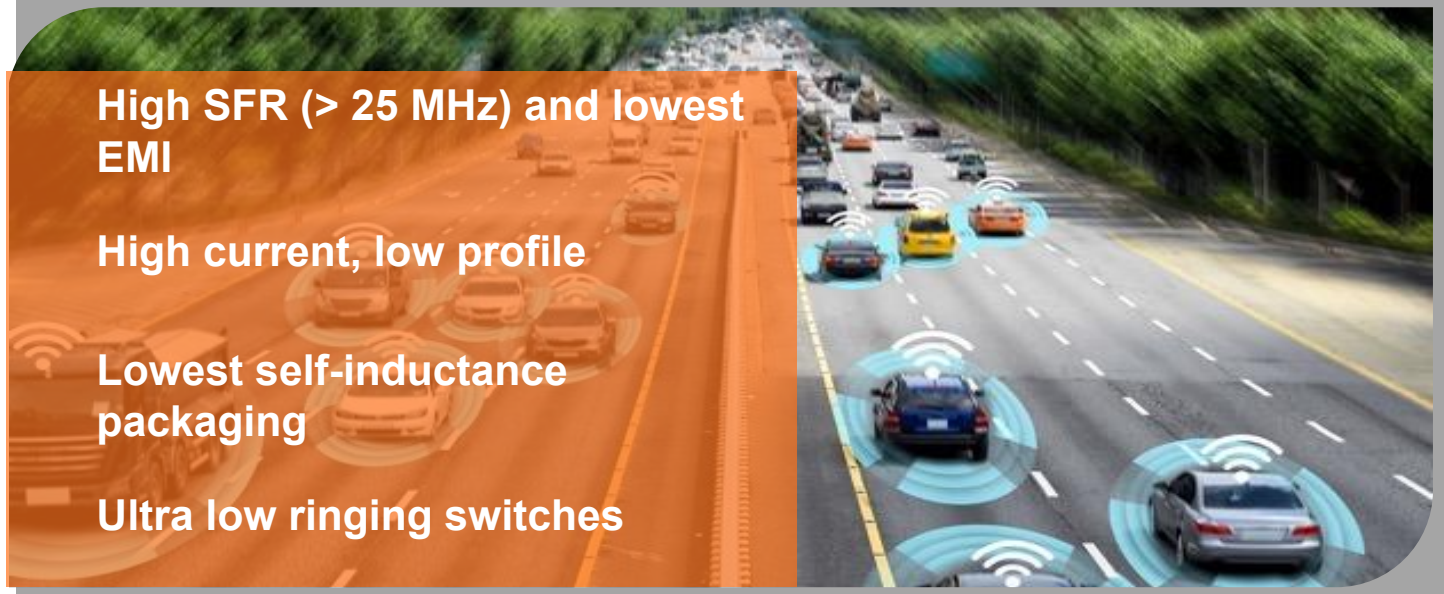
Surface-mount PAR® transient voltage suppressors

HCTF high current thermal fuses

Thin film MELF resistors as gate drivers

Mobility

Driver Assistance and Information



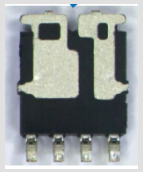
High SFR (> 25 MHz) and lowest EMI

High current, low profile

Lowest self-inductance packaging

Ultra low ringing switches

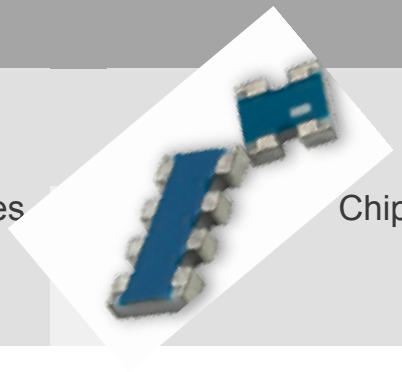
IHLP® power inductors, size 1212 or 1616



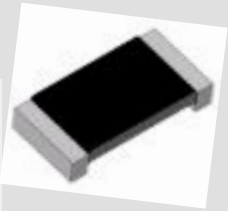
Asymmetric MOSFETs

IR bulk emitters and SEDs

MicroSMP Schottky diodes



Chip resistor arrays

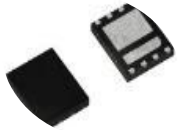


WSLP0603 shunt resistors

Sustainability

Collaborative Robots

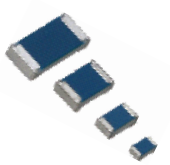
4.5 V to 60 V input, up to 10 A synchronous buck regulators



Power MOSFETs

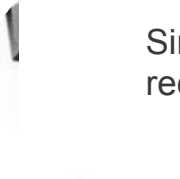
Magnetic encoders, high accuracy, high resolution

Triple-channel transmissive optical sensors for “turn and push” encoding



Pulse proof, high power thick film chip resistors

High power infrared emitting diodes, 940 nm, GaAlAs, MQW



Single-phase in-line bridge rectifiers

Power Metal Strip® resistors, low value (down to 0.001 Ω)

Ruggedized electrical double-layer energy storage capacitors

Sustainability

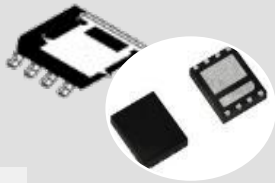
Cordless – Power Tools

- Long life, high reliability
- High peak power
- High current density

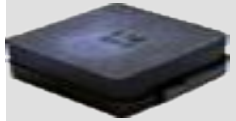
Power Metal Strip® resistors, low value (down to 0.001 Ω)

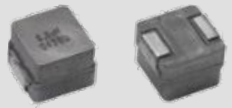
MELF resistors for gate driver and voltage sensing

Polymer tantalum



PowerPAK® 8x8L MOSFETs and reverse cooled





IHLP® power inductors

NTC thermistors and assemblies

Rectifiers and diodes

Sustainability

Grid Quality – Circuit Breakers

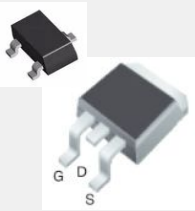
Long life, high reliability

Safety approvals

Transient-resistant

Professional thin film resistors

MELF resistors



Low and High Voltage MOSFET‘s

Standard recovery rectifiers and Zener diodes

IEC 60384-14 approved ceramic capacitors

High voltage and high power thick film resistors

Power inductors and monolithic chip inductors

Optocouplers, power phototriacs

Sustainability

Smart Grid – Power Meters

Long life, high reliability

Safety approvals

Custom designs

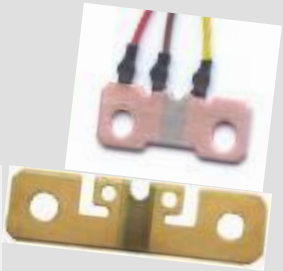
IR receivers, detectors, and emitters

MELF resistors

Optocouplers and solid state relays

Aluminum and EDLC boost and storage capacitors

Interference suppression film capacitors



Power Metal Strip® current sense resistors

TARGETS AND PROJECTIONS

Goals

- Increase EPS
    - Organic growth.
    - Acquisitions.
- Focus on maintaining prudent financial structure.

- **Concrete Growth Plan built business by business from the bottom up.**

Drive Organic Growth

Strong organic growth strategy

1. Focused Development of New Products

- MOSFETs: Gen4 and Gen5 high voltage (600 V to 800 V), Gen V mid voltage (80 V to 200 V), GaN devices, high voltage automotive, many new packages including bond-wireless
- microBRICK® (with integrated power inductor), smart power stages, smart e-Fuse, and Automotive Grade microBUCK® and analog switches
- Diodes: Gen3 TMBS® Schottky in newest e-SMP packages, Micro SMF / DFN packages, low clamping TVS, 650 V SiC Schottky, and Gen 5 (Ultra) fast recovery in 600 V to 1200 V
- Diversify further in power inductors: low DCR (IHVR), IHLP 1008 for automotive, high frequency, high current common / differential mode, and automotive haptic feedback actuators
- Sensors and Opto: high precision magnetic encoders, under-display opto sensors, automotive SSR, new high power IR emitters, and high speed optocouplers
- Resistors: 0201 high precision thin film, Power Metal Plate® current sense, RF for mmWave up to 70 GHz, and new generation automotive high power thick film
- Capacitors: high voltage and hi-rel polymer and high energy wet tantalum, rugged EDLC, automotive high humidity film and safety ceramic, and high voltage ceramic

2. Ensure Product Availability For Key Product Lines

Get ahead of demand curve for Vishay's strategic growth products to ensure sufficient capacity during demand spikes:

- New generation MOSFETs (all voltage ranges), integrated power devices
- Semiconductor Automotive Grade: smaller and lower profile packages
- Load dump TVS diodes, surface-mount rectifiers, and automotive power modules
- Opto: MOCVD for GaAs, high power IR emitters, and transmissive optical sensors
- Power Inductors: high current and specials, various custom magnetics
- Power Metal Plate® current sense and standard shunt, MELF, and thin film resistors
- High power ESTA power electronic, DC-Link film and high voltage ceramic capacitors

3. Asia Growth Plan:
Improve Market Penetration in Industrial and Auto

Leverage in Asia Vishay's strength in automotive and industrial, in addition to the traditional Asian focus markets, computing and consumer:

- Transportation — automotive (local customers), railroad
- Energy — infrastructure, wind and solar, oil exploration
- Equipment and instrumentation

By a strong technical sales force in Asia with focus on China

13% CAGR for Automotive in Asia 2012 – 2020

Assumptions

- Stable economic environment.

- ASP decline per year for Vishay's products:

  Passives 0% - 3%

  Semis 3% - 5.5%,

  product line specific.

- Inflation rates for salaries, wages and overhead:

  1.8% - 10.0%, location specific.

- Stable FX rates.

Operational Parameters

- Contributive margin at historical levels of 45%+
  - As consequence of selling price decline, cost reduction in material price and manufacturing, and mix development, by specific product line.
  - Proven track record for last 10+ years of 45%+ margin.
- Fixed cost increases per year:
  - Selling, R&D and engineering costs ≤ 3.5%
  - G&A and manufacturing fixed costs ≤ 2.5%
  - Depreciation & Amortization ≤ 1%

Supplement Organic Growth with Acquisitions

- Three types of small to mid-size acquisitions targeted:
  - Synergetic.
  - Specialty.
  - Closing technological gap.
- Cash payback incl. restructuring of < 8 years.
- Accretive to earnings in less than 12 months.

In Summary

- Grow at least with the market with CAGR of revenues of between 3% and 6%.
- Grow net income with CAGR of 10% to 20%.
- Maintain prudent capital structure.
- Continued strong generation of cash available to enhance stockholder value.

FINANCIALS AND METRICS
Q1 2021

Highlights Q1 2021

- Revenues Q1 of $765 million.
- Gross margin Q1 of 26.5%.
- Operating margin Q1 of 12.7%.
- EPS Q1 of $0.49; adjusted EPS of $0.46.
- Free Cash for the trailing 12 months Q1 of $211 million.
- Guidance Q2 2021 for revenues of $790 to $830 million and at a gross margin of 27.3% plus/minus 60 basis points at Q1 exchange rates.

Quarterly Financials Results

in millions, except per share amounts	Q1 2021	Q4 2020	Q1 2020
Net revenues	$765	$667	$613
Gross profit	$203	$152	$147
	26.5%	*22.8%*	*24.0%*
Operating income	$97	$60	$47
	12.7%	*9.0%*	*7.7%*
Net earnings attributable to Vishay stockholders	$71	$38	$27
Weighted average shares outstanding for EPS	145	145	145
EPS	$0.49	$0.26	$0.19
EBITDA	$133	$96	$84
	17.4%	*14.4%*	*13.8%*

Adjusted Quarterly Financials Results

in millions, except per share amounts	Q1 2021	Q4 2020	Q1 2020
Net revenues	$765	$667	$613
Gross profit	$203	$153	$150
	26.5%	*22.9%*	*24.5%*
Operating income	$97	$60	$51
	12.7%	*8.9%*	*8.3%*
Net earnings attributable to Vishay stockholders	$67	$41	$31
Weighted average shares outstanding for EPS	145	145	145
EPS	$0.46	$0.28	$0.21
EBITDA	$133	$96	$91
	17.4%	*14.4%*	*14.8%*

Reconciliation of GAAP to Adjusted

in millions	Q1 2021	Q4 2020	Q1 2020
GAAP net earnings attributable to Vishay stockholders	$71	$38	$27
Reconciling items affecting gross profit			
Impact of the COVID-19 pandemic	-	$0	$3
Other reconciling items affecting operating income			
Impact of the COVID-19 pandemic	-	($1)	$0
Reconciling items affecting other income (expense)			
Loss on early extinguishment of debt	-	$1	($3)
Reconciling items affecting tax expense (benefit):			
Change in tax regulation	($4)	-	-
Change in deferred taxes due to early extinguishment of debt	-	($0)	($1)
Effects of changes in uncertain tax positions	-	$4	-
Tax effects of pre-tax items above	-	($0)	($1)
Adjusted net earnings	$67	$41	$31

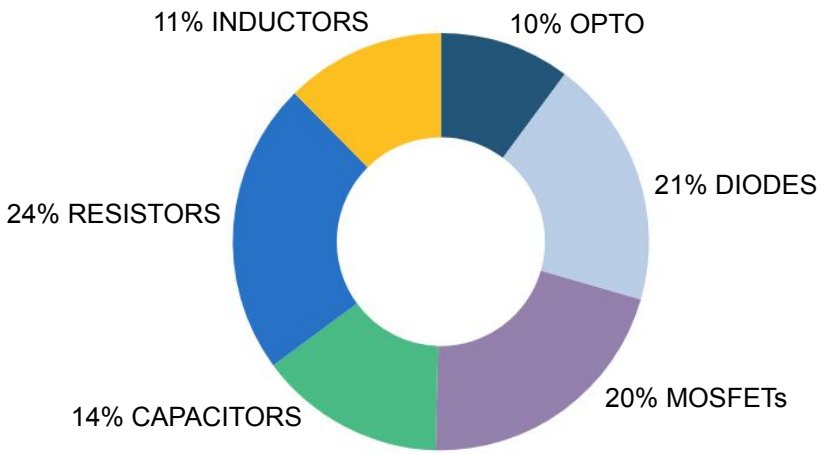
Book-to-Bill Detail

	Q1 2021	Q4 2020	Q3 2020	Q2 2020	Q1 2020
Book-to-bill Vishay	1.67	1.44	0.99	0.82	1.17
Book-to-bill distribution	1.89	1.89	0.99	0.75	1.30
Book-to-bill OEMs	1.41	0.96	1.01	0.93	1.04
Book-to-bill semiconductors	1.86	1.61	0.98	0.81	1.27
Book-to-bill passive components	1.50	1.27	1.00	0.83	1.08
Book-to-bill Americas	1.42	1.15	0.92	0.81	1.08
Book-to-bill Asia	1.86	1.75	1.04	0.86	1.29
Book-to-bill Europe	1.62	1.27	1.01	0.78	1.13

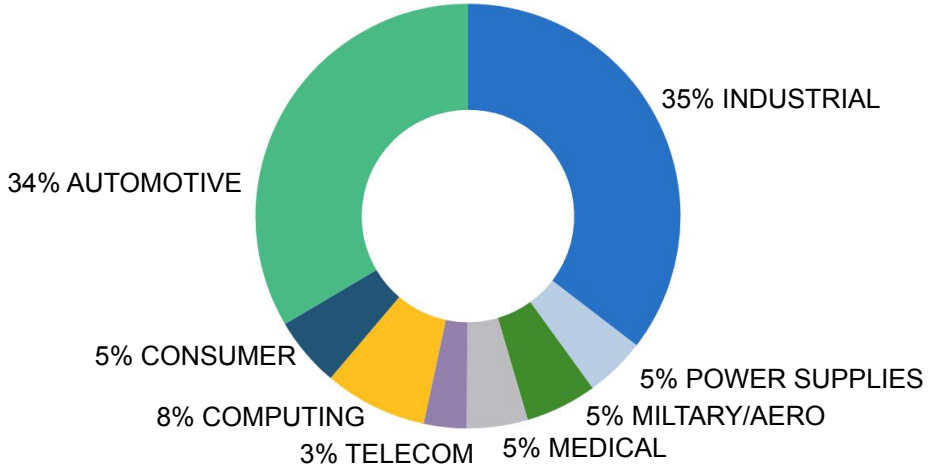
Operational Metrics

		Q1 2021	Q4 2020	Q3 2020	Q2 2020	Q1 2020
Change in ASP Vishay	vs. prior quarter	(0.5)	(0.3)	(1.1)	0.1	(1.1)
	vs. prior year	(1.4)	(2.8)	(2.7)	(2.7)	(2.9)
Change in ASP semiconductors	vs. prior quarter	(1.0)	(0.2)	(1.2)	(0.2)	(1.3)
	vs. prior year	(2.1)	(3.9)	(4.1)	(4.5)	(5.0)
Change in ASP passive components	vs. prior quarter	(0.1)	(0.5)	(0.9)	0.3	(1.0)
	vs. prior year	(0.7)	(1.7)	(1.3)	(0.9)	(0.9)
FX effect on revenues	vs. prior quarter	$3	$4	$11	($0)	($1)
	vs. prior year	$21	$14	$9	($3)	($6)
Backlog	at quarter end	$1,731	$1,240	$928	$914	$1,005
	in months	6.8	5.6	4.3	4.7	4.9

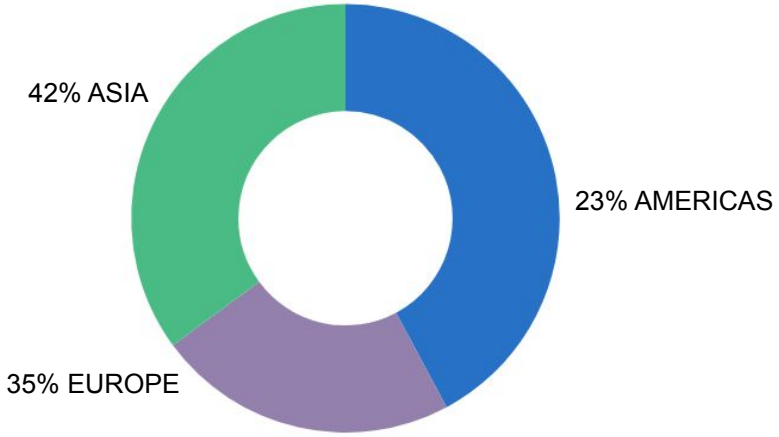
Revenues Q1 2021: $765 million



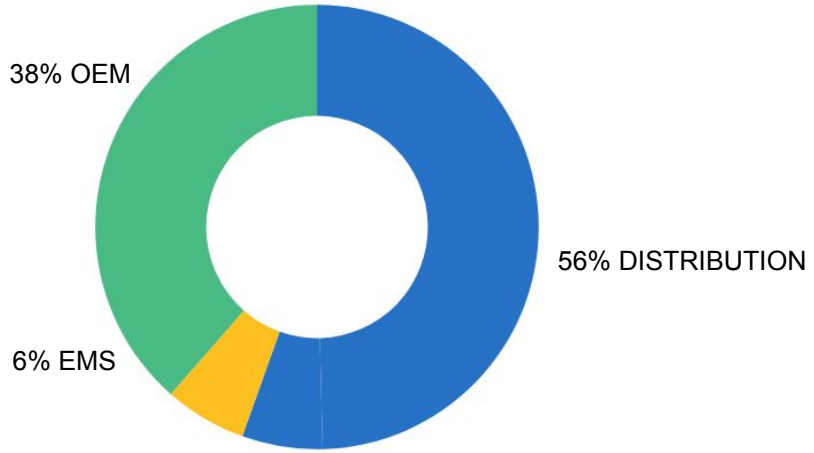
BUSINESS SEGMENTS



END MARKETS



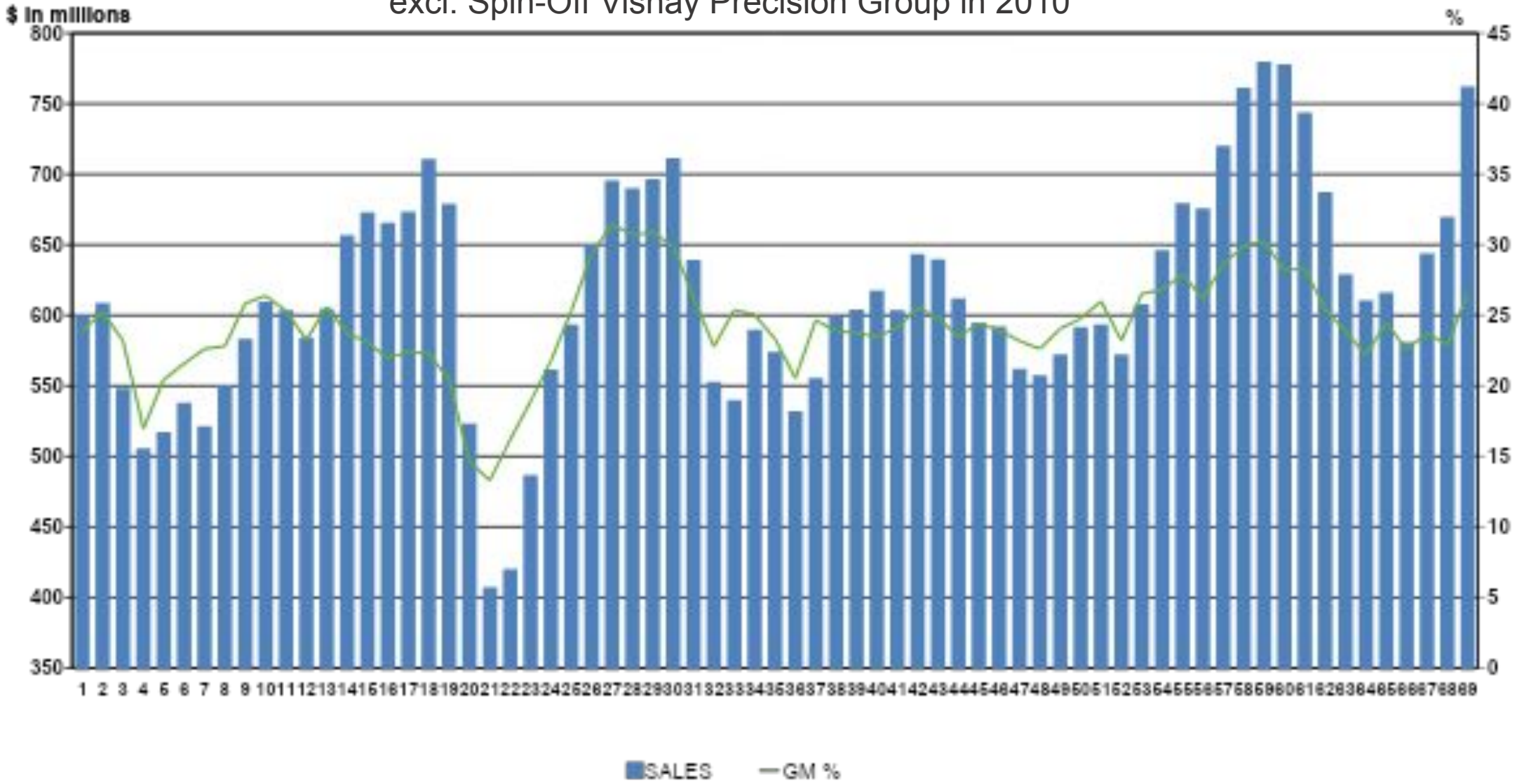
REGIONS



SALES CHANNELS

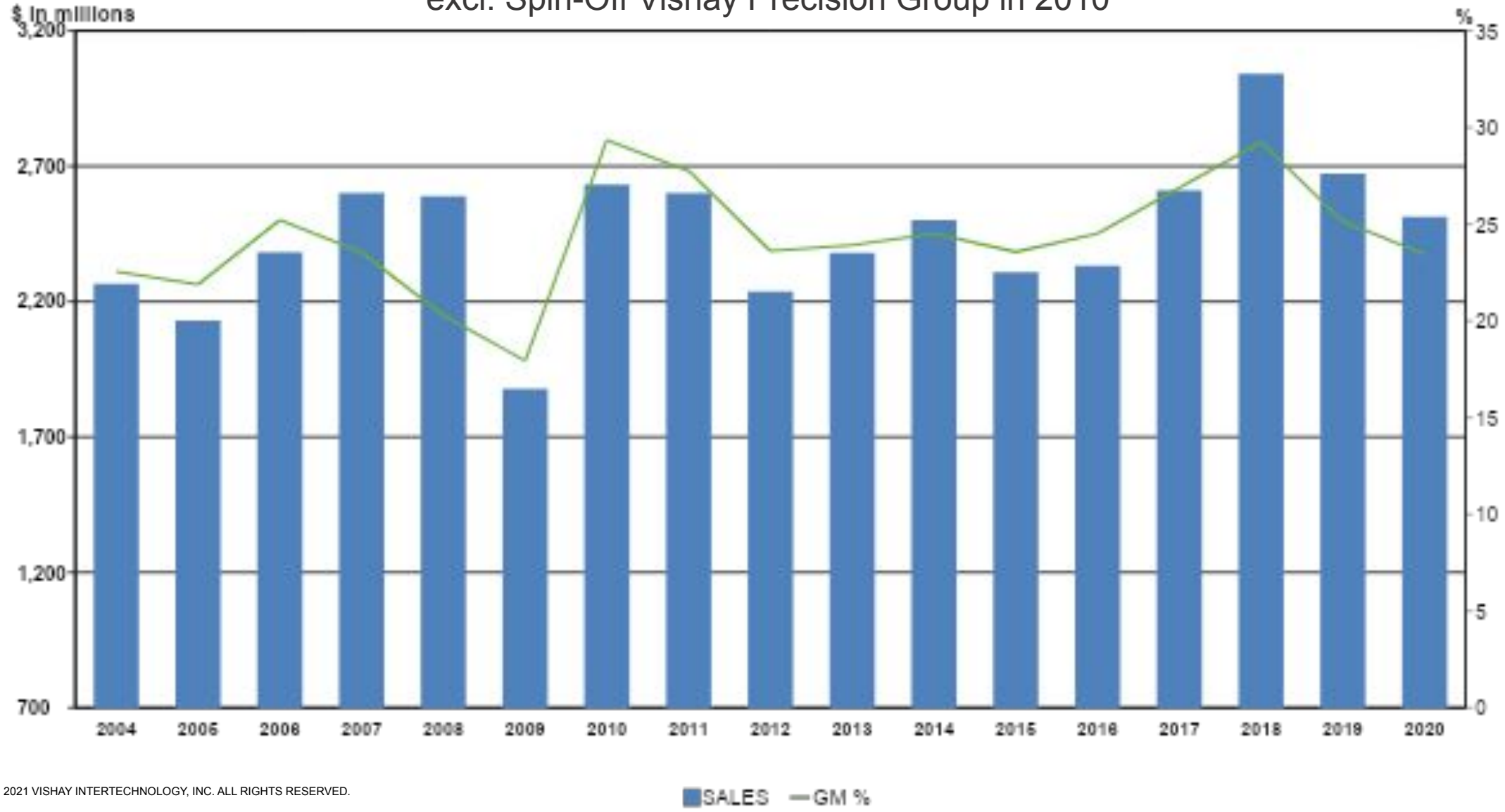
Vishay Revenues and Gross Margin % Quarterly

excl. Spin-Off Vishay Precision Group in 2010

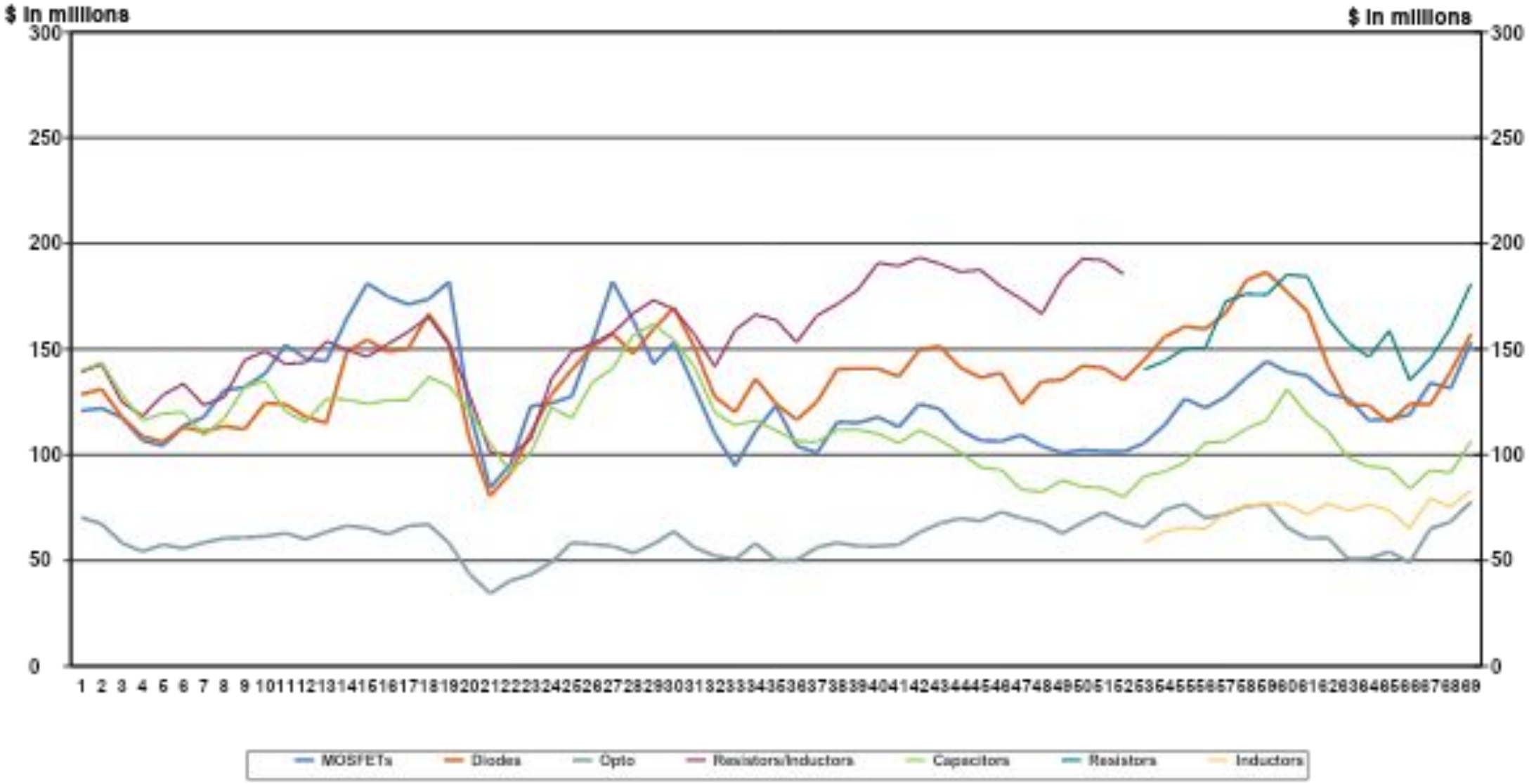


Vishay Revenues and Gross Margin % Yearly

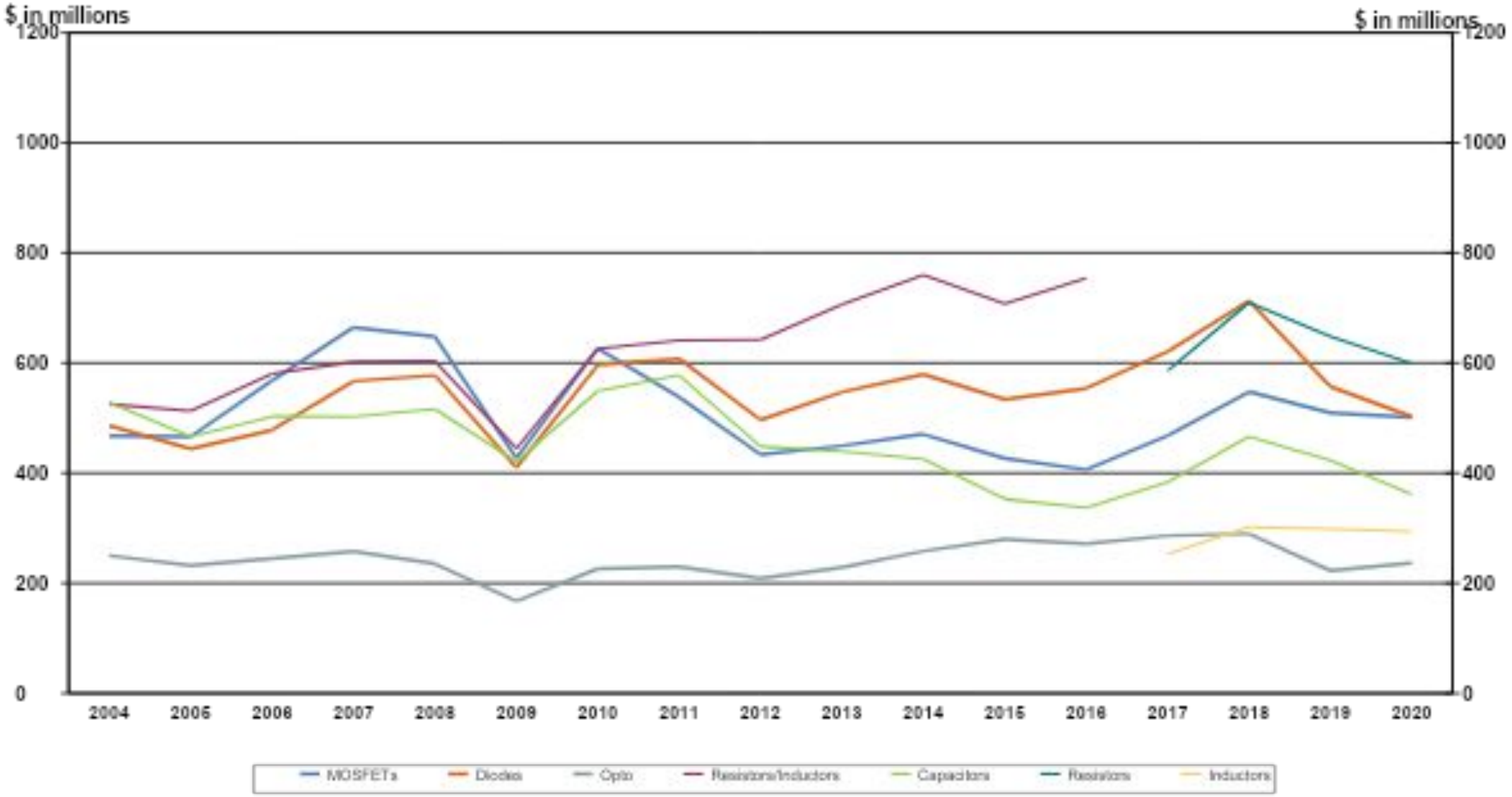
excl. Spin-Off Vishay Precision Group in 2010



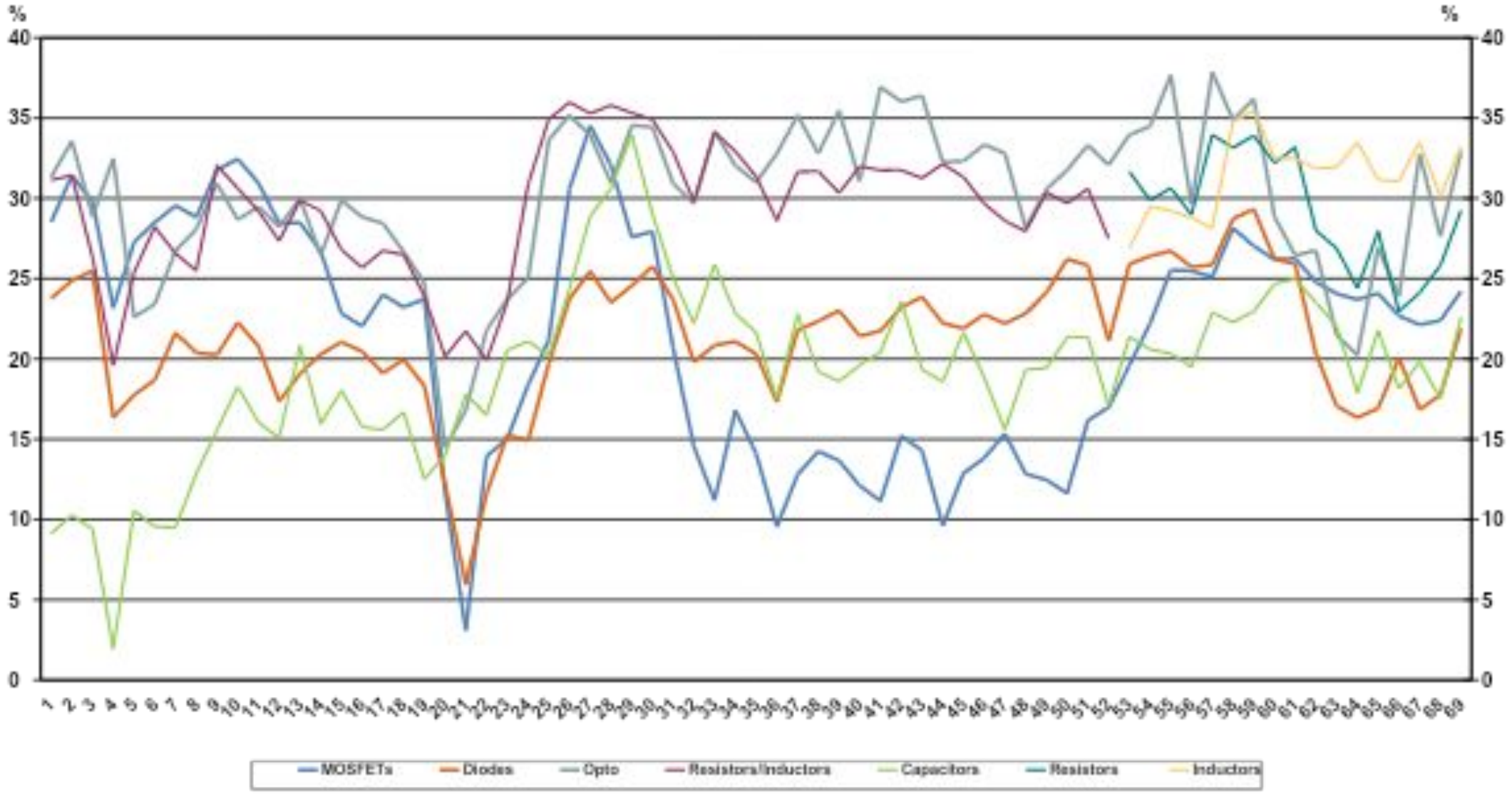
Vishay Revenues Quarterly by Product Segment



Vishay Revenues Yearly by Product Segment



Vishay Gross Margins Quarterly by Production Segment



Vishay Gross Margins Yearly by Product Segment