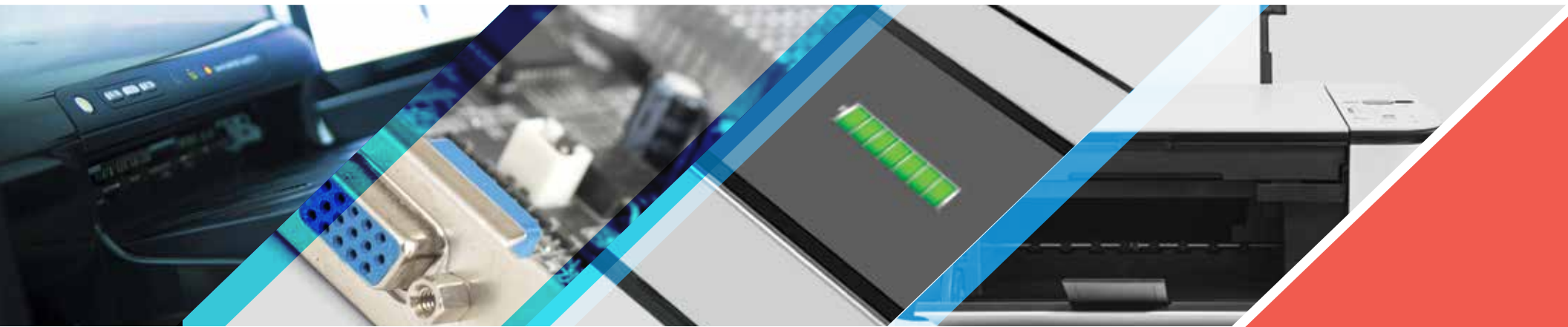




Vishay Intertechnology, Inc.

# Computer

(Computer Peripherals)



One of the World's Largest Manufacturers of  
**Discrete Semiconductors and Passive Components**



# COMPUTER



## **Computer**

### Computer Peripherals

GPU Graphics Cards	2
Wireless Charging	3
Printers	4

More information on the Engineer's Toolbox, including product datasheet links, can be found at [www.vishay.com/ref/et3](http://www.vishay.com/ref/et3).

For inquiries, please contact your local sales representative.

*Key components for*  
**COMPUTER PERIPHERALS**



**THE VISHAY ADVANTAGE**

- Power Efficiency
- Compact Dimensions
- Small Size
- Cool Operation
- High Power Rating
- ESD Protection
- High Surge Current Capabilities  
and more....

**GPU  
Graphics Cards**



**Wireless  
Charging**



**Printers**





# GPU Graphics Cards



MOSFETs  
**N-Channel 30 V (D-S) MOSFET**  
[SiRA18DP](#)

- TrenchFET® Gen IV synchronous buck high-side MOSFET with maximum  $R_{DS(on)} = 7.5\text{ m}\Omega$
- Low gate charge for low switching losses in the PowerPAK® SO-8 package



RESISTORS  
**Power Metal Strip® Resistors, Low Value (Down to 0.0005 Ω), Surface-Mount, 4-Terminal**  
[WSK0612](#)

- Extremely low resistance values from 0.0005 Ω to 0.005 Ω and tolerance of 1 %
- 4-terminal, Power Metal Strip construction offers high current sensing accuracy



MOSFETs  
**Dual N-Channel 30 V (D-S) MOSFETs**  
[SiZ900DT](#)

- Synchronous buck MOSFET power stage capable of 20 A output with  $V_{IN}$  up to 20 V
- PowerPAIR® packaging optimizes high and low side MOSFETs to increase efficiency



INDUCTORS  
**Low-Profile, High-Current IHLP® Inductors**  
[IHLP-1616AB](#)

- Very low profile, high-current inductor for DC/DC conversion
- High frequency energy storage up to 5 MHz



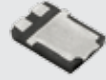
INDUCTORS  
**Low-Profile, High-Current Inductors, Winged Terminals**  
[IHLW-4040](#)

- “Wing” SMD inductor for embedding in PCB for high-current DC/DC converters
- Effective profiles down to 1.2 mm with current handling capability up to 30 A



RECTIFIERS  
**High Current Density Surface-Mount Schottky Barrier Rectifiers**  
[SS5P10-M3/86A](#)

- Very low profile – typical height of 1.1 mm
- AEC-Q101 qualified



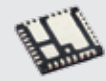
NON-LINEAR RESISTORS  
**NTC Thermistors, SMD 0402 Chip**  
[NTHS0402 100K 1 %](#)

- Standard series
- Glass protected



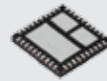
ICs  
**60 A VRPower® Integrated Power Stage Offers Highest Power Density and Efficiency**  
[SiC620CD](#)

- 3 % better efficiency with 50 °C cooler operation in a 30 % smaller footprint
- MLP5x5-31L, 5 V / 3.3 V PWM Tri-state, THWn, DSBL#, SMOD



ICs  
**50 A, 5 V / 3.3 V PWM Integrated DrMOS Power Stage**  
[SiC780A](#)

- Intel DrMOS 4.0 compliant
- MLP6x6-40L, 5 V / 3.3 V PWM Tri-state, THWn, DSBL#, SMOD



TANTALUM CAPACITORS  
**vPolyTan™ Polymer Tantalum Capacitors**  
[T55](#)

- High-capacitance, low-ESR polymer tantalum capacitors
- Stable electrical performance over temperature and voltage



MOSFETs  
**N-Channel 30 V (D-S) MOSFET**  
[SiRA04DP](#)

- TrenchFET Gen IV synchronous buck low-side MOSFET with maximum  $R_{DS(on)} = 2.15\text{ m}\Omega$
- Thermally enhanced PowerPAK SO-8 packaging



INDUCTORS  
**Low-Profile, High-Current IHLP® Inductors**  
[IHLP-4040DZ](#)

- High-current power inductor for DC/DC conversion and filtering
- High-frequency energy storage up to 5 MHz



View datasheets for these products  
[www.vishay.com/ref/et3co3a](http://www.vishay.com/ref/et3co3a)




# Wireless Charging




**RESISTORS**  
**Thick Film Chip Attenuator, Surface-Mount, Unbalanced  $\pi$  Type**   
[CZA](#)  


- SMT chip attenuator in a resistor array pkg. with frequency range: DC to 3 GHz
- Single component reduces board space and part counts, replaces 3 or more parts

**DIODES**  
**Small-Signal Zener Diodes, Dual**   
[MMBZ27VDA-V](#)  


- Peak power: 40 W at 1 ms (bidirectional)
- Dual package provides for bidirectional or separate unidirectional configurations

**INDUCTORS**  
**Wireless Charging Receiving Coil / Shield**   
[IWAS-4832](#)  


- Thin, efficient, low saturation Rx coils
- WPC and PMA compatible, custom designs available

**DIODES**  
**Surface-Mount TRANSZORB<sup>®</sup> Transient Voltage Suppressors**   
[SMA6F5.0A thru SMA6F20A](#)  


- Very low profile – typical height of 0.95 mm
- Peak pulse power: 600 W (10/1000  $\mu$ s), 4 kW (8/20  $\mu$ s)

**INDUCTORS**  
**Low-Profile, High-Current Inductors, Winged Terminals**   
[IHLW-4040CF](#)  


- “Wing” SMD inductor for embedding in PCB for high current DC/DC converters
- Effective profiles down to 1.2 mm with current handling capability up to 30 A

**MOSFETS**  
**N-Channel 30 V (D-S) MOSFET**   
[SiS402DN](#)  


- TrenchFET<sup>®</sup> MOSFET with maximum  $R_{DS} = 6$  m $\Omega$  and low gate charge for efficient switching
- Thermally enhanced PowerPAK<sup>®</sup> 1212-8 is 1/3 the size of an SO-8

**INDUCTORS**  
**Wireless Charging Transmitter Coil / Shield**   
[IWTX-4646BE-50](#)  


- Wireless charging transmitter coil, high permeability shielding for wireless charging
- High saturation powdered iron – not affected by permanent locating magnets

**RECTIFIERS**  
**Surface-Mount Schottky Barrier Rectifiers**   
[MSS2P2 / SS2P2L](#)  
[MSS2P3 / SS2P3L](#)  


- Very low profile – typical height of 0.65 mm
- AEC-Q101 qualified

**INDUCTORS**  
**High-Current Common Mode Choke**   
[ICM4743ER701V](#)  

- Small SMD common mode filter

**RESISTORS**  
**Power Metal Strip<sup>®</sup> Resistors, Low Value (Down to 0.001  $\Omega$ ), Surface-Mount**   
[WSL1206](#)  

- Low TCR element (< 20 ppm/ $^{\circ}$ C) results in accurate current sensing in application
- Power Metal Strip all-welded construction offers high pulse capacity

**INDUCTORS**  
**Wireless Charging Receiving Coil / Shield**   
[IWAS-3827](#)  

- Thin, efficient, low saturation Rx coils
- WPC and PMA compatible, custom designs available

**CERAMIC CAPACITORS**  
**Ultra-Stable Dielectric Formulation, Low Dissipation Factor (DF)**   
[MLCC High Q Capacitors](#)  

- Ultra-stable dielectric formulation, low dissipation factor (DF)
- Robust design build with wet process and noble metal electrodes

View datasheets for these products [www.vishay.com/ref/et3co3b](http://www.vishay.com/ref/et3co3b)



# Printers




CERAMIC CAPACITORS

**AC Line Rated Disc Capacitors, Class X1, 760 V<sub>AC</sub>, Class Y1, 500 V<sub>AC</sub>** 

[VY1](#)

- X1 / Y1 safety rating according to IEC 60384-14, 3rd edition
- Highest reliability and lifetime, operating temperature: -40 °C to +125 °C


OPTOELECTRONICS

**Reflective Optical Sensor with Transistor Output** 

[TCRT1000](#)

- Peak operating distance of 1 mm and typical output current of I<sub>c</sub> = 0.5 mA
- Operating range within > 20 % relative collector current: 0.2 mm to 4 mm


RESISTORS

**Sealed Conductive Plastic Motion Transducer Kit** 

[PMA](#)

- Electrical stroke can be set up at any length, easy mounting, fully sealed
- Reduced bulk, fits in small space, output type can be set up at customer request

MOSFETs

**P-Channel 60 V (D-S) Power MOSFET** 

[IRFL9014](#)

- Rugged planar p-channel technology offering a maximum R<sub>DS(on)</sub> of 500 mΩ
- SOT-223 surface-mount packaging with a maximum continuous current of 1.8 A


MOSFETs

**N- and P-Channel 40 V (D-S) MOSFET** 

[Si4599DY](#)

- TrenchFET® technology combining N and P complementary MOSFETs in one package
- Popular SO-8 dual package layout for half bridge and motor drive applications


NON-LINEAR RESISTORS

**NTC Thermistors, 2-Point Micro Chip Sensor Insulated Leads** 

[NTCLE305E4...](#)

- AEC-Q200 compliant, fast response time for exposed mounting
- Miniature insulated leads


RECTIFIERS

**High-Voltage Trench MOS Barrier Schottky Rectifier** 

[VSB3200S](#)

- Low forward voltage drop, low power losses
- Trench MOS Schottky technology

OPTOELECTRONICS

**Fully Integrated Proximity Sensor with Infrared Emitter, I<sup>2</sup>C Interface** 

[VCNL3020](#)

- Range of 20 cm with internal emitter, extended range of 1 meter with external emitters
- Programmable thresholds, emitter current, and sampling rate via I<sup>2</sup>C interface


RESISTORS

**Professional Thin Film Chip Resistors** 

[MCS0402...e3](#)

- Best in class surge handling capability, excellent overall stability class 0.5
- CECC approved acc. EN 140401-801, sulfur resistant


DIODES

**Surface-Mount TRANSZORB® Transient Voltage Suppressors** 

[P2SMA180A](#)

- Available in unidirectional 200 W peak pulse power capability with a 10/1000 μs
- Low incremental surge resistance


CERAMIC CAPACITORS

**IEC 60384-14:2005, CAN/CSA/cCSAus, and ANSI/UL CB Certificates** 

[MLCC SMD Safety Capacitor](#)

- Surface-mount design: simpler assembly and reduced board space requirement
- Available in NP0 (C0G) or X7R dielectrics

RESISTORS

**Power Metal Strip® Resistors, Low Value (Down to 0.0005 Ω), Surface-Mount** 

[WSL2816](#)

- Low resistance values from 0.002 Ω to 0.1 Ω and tolerance of 1 %
- High power of 2 W in 2816 size resistor

View datasheets for these products [www.vishay.com/ref/et3co3c](http://www.vishay.com/ref/et3co3c)





Vishay Intertechnology, Inc.



A *WORLD OF*  
*SOLUTIONS*