



Vishay Intertechnology, Inc.

# Computer

(Stationary Computing)



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





## **Computer**

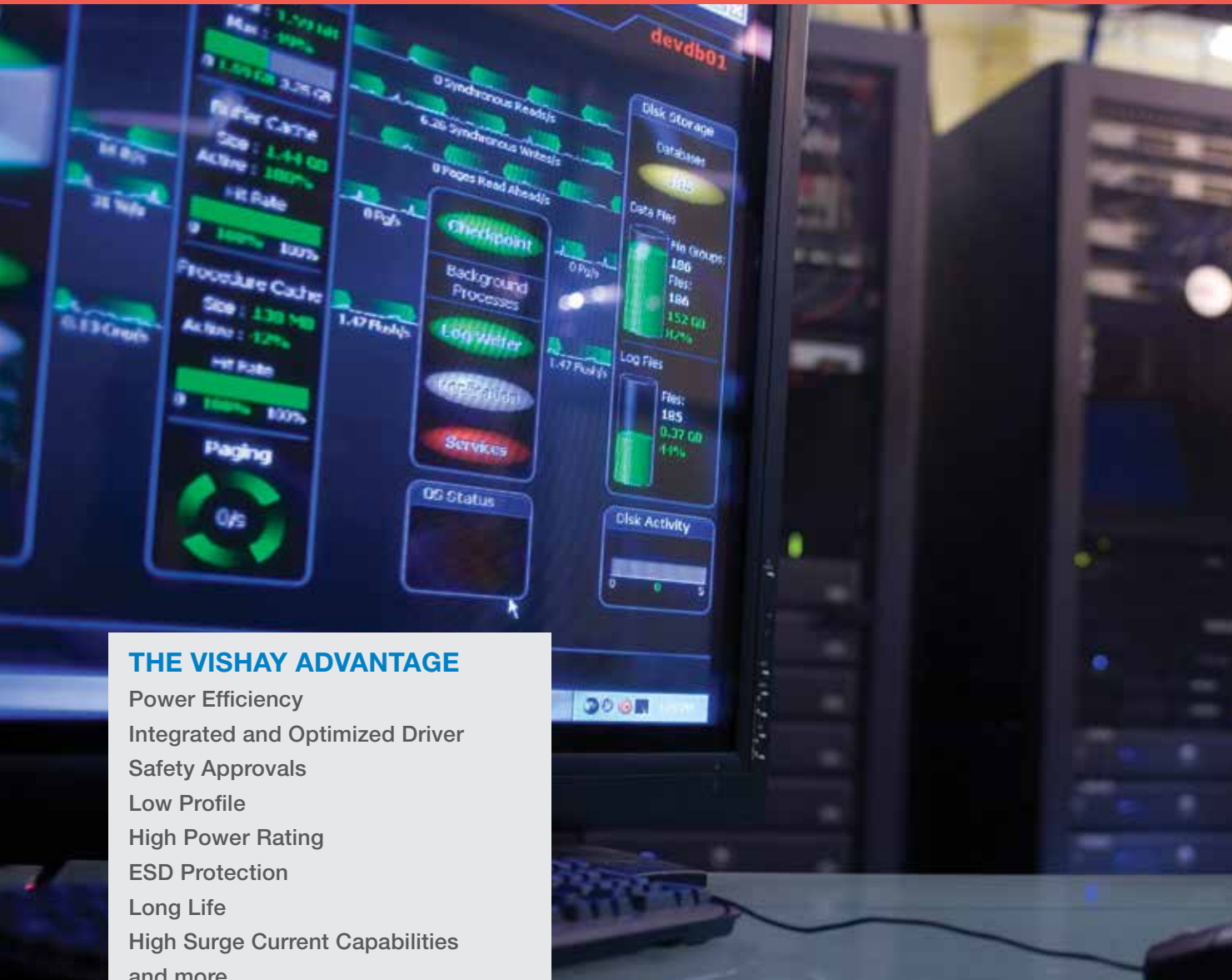
### Stationary Computing

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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 STATIONARY COMPUTING



**THE VISHAY ADVANTAGE**  
Power Efficiency  
Integrated and Optimized Driver  
Safety Approvals  
Low Profile  
High Power Rating  
ESD Protection  
Long Life  
High Surge Current Capabilities  
and more...

**Servers**



**Embedded Systems**



**SSD**



**UPS**














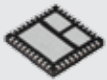
**Networking  
(Switches,  
Routers)**





# Servers



<p>ICs</p> <p><b>60 A VRPower® Integrated Power Stage</b></p> <p><a href="#">SiC620</a></p> <ul style="list-style-type: none"> <li>Thermally enhanced PowerPAK® MLP55-31L</li> <li>Vishay's Gen IV MOSFET technology and a low-side MOSFET with integrated Schottky diode</li> </ul> 	<p>RECTIFIERS</p> <p><b>Dual High-Voltage Trench MOS Barrier Schottky Rectifier</b></p> <p><a href="#">V50100PW</a></p> <ul style="list-style-type: none"> <li>Trench MOS Schottky technology</li> <li>Low forward voltage drop, low power losses</li> </ul> 	<p>RESISTORS</p> <p><b>Power Metal Strip® Resistors, Low Value (Down to 0.0005 Ω), Surface-Mount, 4-Terminal</b></p> <p><a href="#">WSK0612</a></p> <ul style="list-style-type: none"> <li>Extremely low resistance values from 0.0005 Ω to 0.005 Ω and tolerance of 1 %</li> <li>4-terminal, Power Metal Strip construction offers high current sensing accuracy</li> </ul> 
<p>MOSFETs</p> <p><b>E Series 600 V Power MOSFET</b></p> <p><a href="#">SiHG47N60E</a></p> <ul style="list-style-type: none"> <li>High-performance E Series high-voltage technology, maximum <math>R_{DS(on)}</math> 64 mΩ</li> <li>Popular TO-247 packaging, maximum continuous current of 47 A</li> </ul> 	<p>CERAMIC CAPACITORS</p> <p><b>Body Sizes: 0402 to 3838, Excellent Power Handling Capabilities</b></p> <p><a href="#">MLCC RF Capacitors</a></p> <ul style="list-style-type: none"> <li>Non-magnetic available with copper or epoxy bondable termination</li> <li>Lead-bearing termination available for hi-rel applications</li> </ul> 	<p>OPTOELECTRONICS</p> <p><b>High Luminous Intensity LEDs in 0603 ChipLED Package</b></p> <p><a href="#">VLMx1300</a></p> <ul style="list-style-type: none"> <li>Available in blue, true green, yellow green, yellow, soft orange, super red, and white</li> <li>Angle of half intensity: <math>\pm 65^\circ</math>, 1.6 mm x 0.8 mm x 0.8 mm (L x W x H)</li> </ul> 
<p>ENERGY STORAGE CAPACITORS</p> <p><b>Hybrid Storage Capacitors, 90 F</b></p> <p><a href="#">196 HVC ENYCAP™</a></p> <ul style="list-style-type: none"> <li>Power back up for memory controller, industrial PC, real time clock</li> <li>High energy density 13 Ws/g</li> </ul> 	<p>DIODES</p> <p><b>Surface-Mount TRANSZORB® Transient Voltage Suppressors</b></p> <p><a href="#">SMCJxx</a></p> <ul style="list-style-type: none"> <li>Excellent clamping capability</li> <li>AEC-Q101 qualified</li> </ul> 	<p>TANTALUM CAPACITORS</p> <p><b>Solid Tantalum Surface-Mount Chip Capacitors, TANTAMOUNT®, Molded Case, Low ESR</b></p> <p><a href="#">TR3</a></p> <ul style="list-style-type: none"> <li>Molded tantalum capacitor, low ESR</li> <li>Computer, data storage, telecoms infrastructure, networking and multiplexer, general purpose</li> </ul> 
<p>MOSFETs</p> <p><b>N-Channel 30 V (D-S) MOSFET</b></p> <p><a href="#">SiRA00DP</a></p> <ul style="list-style-type: none"> <li>TrenchFET® Gen IV technology for increased power density, maximum <math>R_{DS(on)}</math> 1 mΩ</li> <li>Thermally enhanced PowerPAK® SO-8 packaging</li> </ul> 	<p>INDUCTORS</p> <p><b>Low-Profile, High-Current IHLP® Inductors</b></p> <p><a href="#">IHLP-6767GZ</a></p> <ul style="list-style-type: none"> <li>Very large SMD power inductor for very high-current DC/DC power conversion</li> <li>High-temperature materials available up to the 155 °C continuous operation</li> </ul> 	<p>ICs</p> <p><b>50 A, 5 V / 3.3 V PWM Integrated DrMOS Power Stage</b></p> <p><a href="#">SiC780CD</a></p> <ul style="list-style-type: none"> <li>Intel DrMOS 4.0 compliant</li> <li>MLP6x6-40L, 5 V / 3.3 V PWM Tri-state, THWn, DSBL#, SMOD</li> </ul> 

View datasheets for these products [www.vishay.com/ref/et3co2a](http://www.vishay.com/ref/et3co2a)




# Embedded Systems




MOSFETs  
**P-Channel 200 V (D-S) MOSFET**  
  
[Si7431DP](#)  

- Classic TrenchFET® technology, maximum  $R_{DS(on)}$  174 mΩ
- Thermally enhanced PowerPAK® SO-8 packaging

NON-LINEAR RESISTORS  
**SMD 0402, Glass Protected NTC Thermistors**  
  
[NTCS0402 10K 5 %](#)  


- Glass protected with soft terminations
- Standard series, AEC-Q200 compliant

OPTOELECTRONICS  
**Optocoupler, Phototransistor Output, Low Input Current, SSOP-4, Half Pitch**  
  
[VOS618A](#)  

- Low input current  $I_F = 1$  mA with current transfer ratios of 600 % maximum
- SSOP-4 pkg. provides 5 mm of clearance and isolation test voltage = 3750 V<sub>RMS</sub>

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


- Ultra-low Equivalent Series Resistance (ESR)
- Higher voltage handling capability requires less voltage derating

RESISTORS  
**Power Metal Strip® Resistors, Low Value (Down to 0.0005 Ω), Surface-Mount**  
  
[WSL2512](#)  

- Low TCR element (< 20 ppm/°C) results in accurate current sensing in application
- Power Metal Strip all-welded construction offers excellent long term performance

MOSFETs  
**N-Channel 500 V Power MOSFET**  
  
[IRF820](#)  


- Rugged planar technology, maximum  $R_{DS(on)}$  3 Ω
- Popular TO-220 packaging

INDUCTORS  
**Low-Profile, High-Current IHLP® Inductors**  
  
[IHLP-2525CZ](#)  

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

TANTALUM CAPACITORS  
**Solid Tantalum Surface-Mount Chip Capacitors, TANTAMOUNT®, Molded Case**  
  
[293D](#)  


- Molded tantalum capacitor, standard industrial grade
- General purpose capacitor

DIODES  
**Surface-Mount TRANSZORB® Transient Voltage Suppressors**  
  
[SMBJxx](#)  


- 600 W peak pulse power capability with a 10/1000 μs waveform
- AEC-Q101 qualified

CERAMIC CAPACITORS  
**Economical Solution for Commodity Applications**  
  
[VJ0603V](#)  

- High capacitance in X5R, X7R, and Y5V
- Small size offers high miniaturization and board space saving

ICs  
**15 A microBUCK® Integrated FET Buck Regulator with Programmable LDO**  
  
[SiC401](#)  

- Offers a scalable design with 6 A and 10 A parts in the same footprint
- Soft-start, UVP / OVP, OCP, selectable power-saving mode, LDO, PGOOD, OTP

RESISTORS  
**QPL MIL-PRF-55342 Qualified Thin Film Resistor, Surface-Mount Chip**  
  
[M/D55342](#)  

- Case sizes 0402 to 2512 with T level and S level reliability available
- Wide range of resistance values from 10 Ω to 6.19 MΩ available


View datasheets for these products [www.vishay.com/ref/et3co2b](http://www.vishay.com/ref/et3co2b)



# SSD



**INDUCTORS**

**Low-Profile, High-Current IHLP® Inductors** 

[IHLP-1616](#)

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

**DIODES**

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

[SMA6F5.0](#)

- ESD capability: IEC 61000-4-2 level 4
- Very low profile – typical height of 0.95 mm


**TANTALUM CAPACITORS**

**vPolyTan™ Polymer Tantalum Capacitors** 

[T55](#)

- Ultra low-ESR, low profile
- Stable electrical performance over temperature and voltage


**ICs**

**2.7 V to 5.5 V Buck Regulator Offers 4 MHz Operation to Enable Complete Solution in 180 mm²** 

[SiP12107 / SiP12108](#)

- Fast transient response with current mode constant on time (CM-COT) architecture
- OVP, UVP, OTP, PGOOD, selectable PSM

**FUSES**

**Thin Film Chip Fuses** 

[MFU0603](#)

- Very low parameter spread on breaking characteristics
- Excellent long term stability of breaking characteristics


**MOSFETs**

**Dual P-Channel 20 V (D-S) MOSFET** 

[Si5999EDU](#)

- Classic TrenchFET® technology, maximum  $R_{DS(on)}$  59 mΩ
- Thermally enhanced PowerPAK® ChipFET® packaging is 1/5 the size of an SO-8

**RESISTORS**

**Thick Film Resistor / Capacitor Chip Array, Surface-Mount** 

[CRCA](#)

- Choice of X7R or Y5U dielectric characteristics
- 8-pin or 10-pin configurations


**DIODES**

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

[SMBJ3V3](#)

- Peak pulse power: 600 W (10/1000 μs)
- Excellent clamping capability


**RESISTORS**

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

[WSL2010](#)

- Low TCR element (< 20 ppm/°C) results in accurate current sensing in application
- Power Metal Strip construction offers high reliability in critical applications


**DIODES**

**4-Line Bus-Port ESD Protection** 

[VBUS54ED-FBL](#)

- Ultra compact LLP2510-10L package
- Low load capacitance  $C_D = 0.8$  pF


**INDUCTORS**

**Low-Profile, High-Current Inductors** 

[IFSC1008](#)

- Very small ferrite SMD power inductor for DC/DC conversion

**NON-LINEAR RESISTORS**

**SMD 0402, Glass Protected NTC Thermistors** 

[NTCS0402 100K 5 %](#)

- Glass protected with soft terminations
- Standard series, AEC-Q200 compliant

View datasheets for these products [www.vishay.com/ref/et3co2c](http://www.vishay.com/ref/et3co2c)



UPS



THYRISTORS

**Thyristor, High-Voltage, Phase Control SCR, 40 A** 

[VS-40TPS08PBF](#)

- Low IGT parts available
- 125 °C maximum operating junction temperature

RESISTORS

**Precision Thin Film Chip Resistors** 

[MCS0402, MCT0603, MCU0805, MCA1205 Precision](#)

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


MOSFETs

**E Series 600 V Power MOSFET** 

[SiHG47N60E](#)

- High-performance E Series high-voltage technology, maximum  $R_{DS(on)}$  64 mΩ
- Popular TO-247 packaging, maximum continuous current of 47 A


RESISTORS

**Wirewound / Metal Film Resistors, Commercial Power, Vertical Mount** 

[CPCF05](#)

- High power-to-size ratio, meets /exceeds EIA RS-344 requirements, fireproof
- PC board space saving vertical design, high thermal conductivity ceramic case


MODULES

**Dual Mode PFC, 60 A** 

[VS-EMG050J60N](#)

- Operating frequency 60 kHz to 150 kHz
- Silicon carbide PFC diode


RESISTORS

**Power Metal Strip® Resistors, Low Value (Down to 0.001 Ω), Surface-Mount** 

[WSL1206](#)

- Low TCR element (< 20 ppm/°C) results in accurate current sensing in application
- Power Metal Strip construction offers high reliability in critical applications


OPTOELECTRONICS

**2.5 A Output Current IGBT and MOSFET Driver** 

[VO3120](#)

- 2.5 A minimum peak output current in a DIP-8 or SMD package
- 25 kV/μs minimum common mode rejection and UL, cUL, VDE certified


DIODES

**Zener Diodes with Surge Current Specification** 

[BZT03C](#)

- Hermetically sealed package
- Clamping time in picoseconds


MODULES

**EMIPAK-2B PressFit Power Module 3-Level Half-Bridge Inverter Stage, 75 A** 

[VS-ETF150Y65U](#)

- Operating frequency up to 20 kHz
- Low internal inductance


FILM CAPACITORS

**Metallized Polypropylene Film Capacitor AC Filtering Radial Type** 

[MKP1847](#)

- AC filter capacitor with high RMS current capabilities
- Safe design using segmented film


OPTOELECTRONICS

**Photovoltaic MOSFET Driver with Integrated Fast Turn-Off, Solid-State Relay** 

[VOM1271](#)

- Drive current from primary side LED; one less external power supply needed
- Isolation test voltage 4500 V<sub>RMS</sub> and integrated turn-off circuitry for high speed switching

ALUMINUM CAPACITORS

**Aluminum Capacitors, Power High Ripple Current, Screw Terminals** 

[101/102 PHR-ST](#)

- Long life screw-terminal, high ripple current
- Custom made; the perfect aluminum capacitors for your application

View datasheets for these products  
[www.vishay.com/ref/et3co2d](http://www.vishay.com/ref/et3co2d)

## Networking (Switches, Routers)



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

ICs

**High-Speed, Low-Voltage, 3 W, Quad SPDT CMOS Analog Switch**



[DG2706DN](#)

- Low resistance with 0.6  $\Omega$  flatness and 0.3  $\Omega$  channel matching
- 190 MHz bandwidth and 31 pF switch on resistance, ideal for A/V signal routing

RESISTORS

**High-Stability Thin Film Flat Chip Resistors**



[TNPW0603](#)

- Excellent overall stability, endurance < 0.05 %, resistance range from 10R to 3M
- AEC-Q200 qualified, sulfur resistant, halogen-free

RECTIFIERS

**Miniature Glass Passivated Single-Phase Surface-Mount Bridge Rectifiers**



[DF08S](#)

- UL recognition, file number E54214
- High surge current capability

ENERGY STORAGE CAPACITORS

**Hybrid Storage Capacitors**



[196 HVC ENYCAP™](#)

- Power back up for memory controller, industrial PC, real time clock
- High energy density 13 Ws/g

MOSFETs

**N-Channel 150 V (D-S) MOSFET**



[Si4848DY](#)

- Classic TrenchFET® technology, maximum  $R_{DS(on)}$  85 m $\Omega$
- Popular SO-8 packaging

TANTALUM CAPACITORS

**vPolyTan™ Polymer Tantalum Capacitors**



[T55](#)

- Ultra low-ESR, low profile
- Stable electrical performance over temperature and voltage

DIODES

**Small-Signal Switching Diodes, High-Voltage**



[BAS21-G](#)

- AEC-Q101 qualified
- General purpose switching applications

CERAMIC CAPACITORS

**Body Sizes: 0402 to 3838, Excellent Power Handling Capabilities**



[MLCC RF Capacitors](#)

- Non-magnetic available with copper or epoxy bondable termination
- Lead-bearing termination available for hi-rel applications

MOSFETs

**E Series 600 V Power MOSFET**



[SiHG47N60E](#)

- High-performance E Series high-voltage technology, maximum  $R_{DS(on)}$  64 m $\Omega$
- Popular TO-247 packaging, maximum continuous current of 47 A

OPTOELECTRONICS

**Optocoupler, Phototransistor Output with Broad Operating Temperature Range**



[VO615A](#)

- 6 kV peak transient overvoltage protection in a 4-pin DIP or SMD package
- Temp. range -55  $^{\circ}$ C to +110  $^{\circ}$ C with VDE, BSI, FIMKO, UL, cUL, and CQC certification

DIODES

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



[SM6T200A](#)

- 600 W peak pulse power capability with a 10/1000  $\mu$ s waveform
- AEC-Q101 qualified

View datasheets for these products  
[www.vishay.com/ref/et3co2e](http://www.vishay.com/ref/et3co2e)







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A *WORLD OF*  
*SOLUTIONS*