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Vishay Intertechnology, Inc.

**Consumer**  
*(Home Entertainment)*



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





## **Consumer**

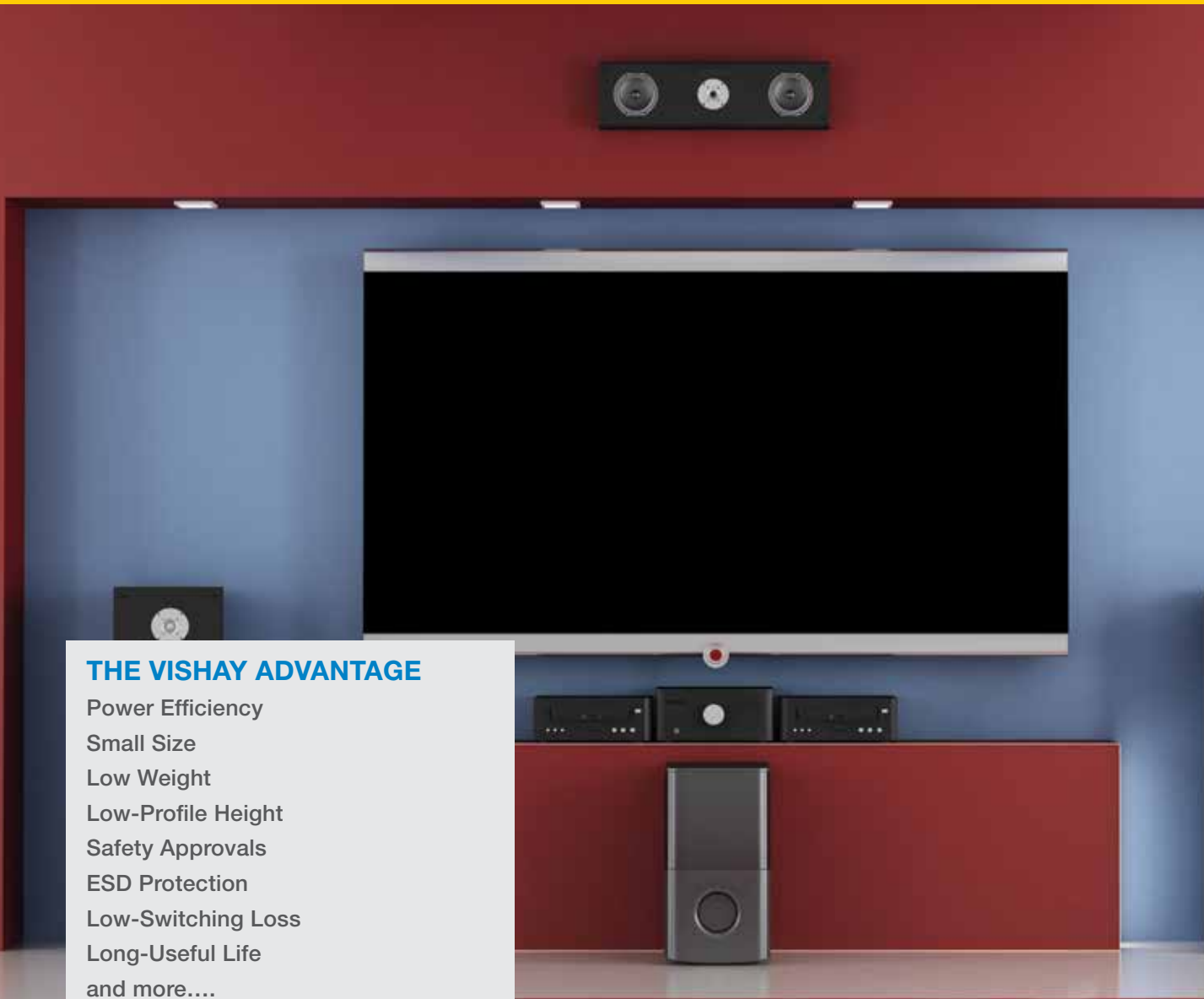
### Home Entertainment

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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*  
**HOME ENTERTAINMENT**



**THE VISHAY ADVANTAGE**

- Power Efficiency
- Small Size
- Low Weight
- Low-Profile Height
- Safety Approvals
- ESD Protection
- Low-Switching Loss
- Long-Useful Life
- and more....

**Set-Top Boxes**



**LCD TVs**



**Media Streaming  
Devices / TV  
Boxes**



**Audio Amplifiers /  
Soundbars**



**E-Readers**





# Set-Top Boxes



View datasheets for these products  
[www.vishay.com/ref/et3cn2a](http://www.vishay.com/ref/et3cn2a)

MOSFETs

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




[SiA906EDJ](#)

- TrenchFET® technology providing dual MOSFETs with maximum  $R_{DS(on)}$  46 mΩ
- 2 mm x 2 mm PowerPAK® SC-70 dual package for miniature synchronous buck applications

INDUCTORS

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




[IFSC](#)

- Very small ferrite power inductor for DC/DC conversion and filtering

RESISTORS

**Thick Film Surface-Mount Chip Resistors, Wraparound, Extremely Low Value**




[RCWE / RCWL](#)

- Low resistance values from 0.01 Ω to 0.99 Ω and tolerance of 1 %
- Thick film construction with 2x power capacity

OPTOELECTRONICS

**IR Receiver Modules for Remote Control Systems**




[TSOP34338](#)

- Industry leading range of 45 m, directivity of ± 45°, and 38 kHz carrier frequency
- Minimum irradiance of 0.08 mW/m², and featuring AGC-3 noise suppression

ALUMINUM CAPACITORS

**Aluminum Capacitors, Power, Miniaturized, General Purpose Snap-In**



[093 PMG-SI](#)

- Standard snap-in series
- Useful life: 2000 h at 85 °C

OPTOELECTRONICS

**High Luminous Intensity LEDs in 0603 ChipLED Package**




[VLMx1300](#)

- Available in blue, true green, yellow green, yellow, soft orange, super red, and white
- Angle of half intensity: ± 65°, 1.6 mm x 0.8 mm x 0.8 mm (L x W x H)

MOSFETs

**E Series 600 V N-Channel Power MOSFET**




[SiHP12N60E](#)

- High performance E Series high-voltage technology, maximum  $R_{DS(on)}$  380 mΩ
- Popular TO-220 packaging, maximum continuous current of 12 A

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

ICs

**2.7 V to 5.5 V Input 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

RECTIFIERS

**Trench MOS Barrier Schottky Rectifier**




[VT5200](#)

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

NON-LINEAR RESISTORS

**PTC Thermistors, Overload Protection for Telecommunication**




[PTCTL...](#)

- Fast protection against power contact faults
- Withstand high overload currents of up to 10 A

ICs

**10 A microBUCK® SiC402A/B Integrated Buck Regulator with Programmable LDO**



[SiC402A / SiC402B](#)

- Offers a scalable design with 6 A and 15 A parts in the same footprint
- Soft-start, UVP / OVP, OCP, selectable power-saving mode, LDO, PGOOD, OTP




# LCD TVs



View datasheets for these products  
[www.vishay.com/ref/et3cn2b](http://www.vishay.com/ref/et3cn2b)

CERAMIC CAPACITORS

**AC Line Rated Disc Capacitors** 

Class X1, 440 V<sub>AC</sub>,  
Class Y2, 300 V<sub>AC</sub>

[VY2](#)

- X1 / Y2 safety rating according to IEC 60384-14, 3rd edition
- Highest reliability and lifetime, operating temperature: -40 °C to +125 °C


MOSFETs

**N-Channel 60 V (D-S) MOSFET** 

[Si2308BDS](#)

- Classic TrenchFET® technology, maximum R<sub>DS(on)</sub> 156 mΩ
- Popular SOT-23 packaging


ICs

**6 A microBUCK® Integrated FET Buck Regulator with Programmable LDO** 

[SiC403A](#)

- Offers a scalable design with 10 A and 15 A parts in the same footprint
- Soft-start, UVP / OVP, OCP, selectable power-saving mode, LDO, PGOOD, OTP

DIODES

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

[VBUS54ED-FBL](#)

- Ultra compact LLP2510-10L package
- Low load capacitance C<sub>D</sub> = 0.8 pF


RESISTORS

**Thick Film Chip Resistors, High-Voltage** 

[CRHV](#)

- High-voltage capability (up to 3 kV), with outstanding stability (< 0.5 %)
- Can be customized to meet specific customer needs

OPTOELECTRONICS

**Ambient Light Sensor in Miniature 0805 Package with Phototransistor Output** 

[TEMT6200FX01](#)

- Wavelength of peak sensitivity of 550 nm, similar to human eye sensitivity
- Excellent linearity over operating temperature range of -40 °C to +100 °C


RECTIFIERS

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

[VI30120C](#)

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

ICs

**8-Channel, Dual 4-Channel, Triple 2-Channel Multiplexers** 

[DG9451](#)

- High-precision, low-noise signal switching, < 0.5 pC low charge injection
- Low parasitic capacitance of 16 pF C<sub>D(on)</sub>, low leakage typically of 3 pA


MOSFETs

**E Series 600 V N-Channel Power MOSFET** 

[SiHF15N60E](#)

- High performance E Series high-voltage technology, maximum R<sub>DS(on)</sub> 280 mΩ
- FullPAK packaging eliminates the need for isolation, maximum continuous current of 15 A


OPTOELECTRONICS

**High Luminous Intensity LEDs in 0603 ChipLED Package** 

[VLMx1300](#)

- Available in blue, true green, yellow green, yellow, soft orange, super red, and white
- Angle of half intensity: ± 65°, 1.6 mm x 0.8 mm x 0.8 mm (L x W x H)

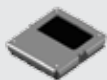
DIODES

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

[SMAJxx](#)

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

OPTOELECTRONICS













**IR Receiver Modules for Remote Control Systems** 

[TSOP57...](#)

- Industry leading range of 45 m, directivity of ± 75° in a leadless SMD package
- Low profile of 0.8 mm and featuring AGC-3 or AGC-4 noise suppression

# Media Streaming / TV Boxes



<p>RESISTORS</p> <p><b>Professional Thin Film Chip Resistors</b></p> <p><a href="#">MCT0603...e3</a></p> <ul style="list-style-type: none"> <li>• Excellent stability class 0.5, cost efficient</li> <li>• CECC approved acc. EN 140401-801, sulfur-resistant</li> </ul> 	<p>MOSFETs</p> <p><b>P-Channel 30 V (D-S) MOSFET</b></p> <p><a href="#">Si8821EDB</a></p> <ul style="list-style-type: none"> <li>• Industry leading p-channel Gen III technology, maximum <math>R_{DS(on)}</math> 76 m<math>\Omega</math></li> <li>• Industry smallest chip scale packaging with MICRO FOOT<sup>®</sup> 0.8 mm x 0.8 mm</li> </ul> 	<p>INDUCTORS</p> <p><b>Low-Profile, High-Current IHLP<sup>®</sup> Inductors</b></p> <p><a href="#">IHLP</a></p> <ul style="list-style-type: none"> <li>• Compact, high-current power inductor for DC/DC conversion and filter applications</li> <li>• High frequency operation up to 5 MHz</li> </ul> 
<p>RECTIFIERS</p> <p><b>Surface-Mount Schottky Barrier Rectifiers</b></p> <p><a href="#">MSS2P2</a></p> <ul style="list-style-type: none"> <li>• AEC-Q101 qualified</li> <li>• Very low profile – typical height of 0.65 mm</li> </ul> 	<p>FILM CAPACITORS</p> <p><b>DC Film Capacitors MKT Radial Potted Type</b></p> <p><a href="#">MKT371</a></p> <ul style="list-style-type: none"> <li>• General purpose MKT pitch 5 mm / 7.5 mm and 10 mm</li> </ul> 	<p>DIODES</p> <p><b>4-Line Bus-Port ESD Protection, Flow Through Design</b></p> <p><a href="#">VBUS54ED-FBL</a></p> <ul style="list-style-type: none"> <li>• Compact LLP2510-10L package</li> <li>• Soldering can be checked by standard vision inspection</li> </ul> 
<p>INDUCTORS</p> <p><b>Low-Profile, High-Current Inductors</b></p> <p><a href="#">IFSC</a></p> <ul style="list-style-type: none"> <li>• Very small ferrite power inductor for DC/DC conversion and filtering</li> </ul> 	<p>OPTOELECTRONICS</p> <p><b>IR Receiver Modules for Remote Control, Data Transmission, and Object Sensing</b></p> <p><a href="#">TSOPxx</a></p> <ul style="list-style-type: none"> <li>• Industry leading transmission range and noise suppression</li> <li>• Available in a variety of surface-mount and through-hole packages</li> </ul> 	<p>RESISTORS</p> <p><b>Thick Film Surface-Mount Chip Resistors, Wraparound, Extremely Low Value</b></p> <p><a href="#">RCWE / RCWL</a></p> <ul style="list-style-type: none"> <li>• Low resistance values from 0.01 <math>\Omega</math> to 0.99 <math>\Omega</math> and tolerance of 1 %</li> <li>• Thick film construction with 2x power capacity</li> </ul> 
<p>ICs</p> <p><b>2.7 V to 5.5 V Input Buck Regulator Offers 4 MHz Operation to Enable Complete Solution in 180 mm<sup>2</sup></b></p> <p><a href="#">SiP12107 / SiP12108</a></p> <ul style="list-style-type: none"> <li>• Fast transient response with current mode constant on time (CM-COT) architecture</li> <li>• OVP, UVP, OTP, PGOOD, selectable PSM</li> </ul> 	<p>DIODES</p> <p><b>Low Capacitance Bidirectional Symmetrical (BiSy) Single Line ESD Protection Diode</b></p> <p><a href="#">VBUS05A1-SD0</a></p> <ul style="list-style-type: none"> <li>• Ultra compact CLP0603 package</li> <li>• Low package height &lt; 0.3 mm</li> </ul> 	<p>OPTOELECTRONICS</p> <p><b>Optocoupler, Phototransistor Output, High Reliability, 5300 V<sub>RMS</sub></b></p> <p><a href="#">VO617A</a></p> <ul style="list-style-type: none"> <li>• High current transfer ratio, and high isolation voltage of 5300 V<sub>RMS</sub></li> <li>• Operating temperature from -55 °C to +110 °C and 5 mA trigger current</li> </ul> 

View datasheets for these products  
[www.vishay.com/ref/et3cn2c](http://www.vishay.com/ref/et3cn2c)

# Audio Amplifiers / Soundbars


**RECTIFIERS**
**High Current Density Surface-Mount Schottky Rectifiers**

[SS3P4](#)

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

**FILM CAPACITORS**
**DC Film Capacitors MKT Radial Potted Type**

[MKT370](#)

- General purpose MKT pitch 5 mm / 7.5 mm and 10 mm

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

[SMAJxx](#)

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

**MOSFETs**
**Dual N-Channel 30 V (D-S) MOSFETs**

[SiZ340DT](#)

- Synchronous Buck MOSFET power stage capable of >12 A output with  $V_{IN}$  up to 20 V
- PowerPAIR® pkg. optimizes high and low side MOSFETs to increase efficiency

**RESISTORS**
**12.5 mm Modular Panel Potentiometer, Cermet (P11S) or Conductive Plastic Elements (P11A)**

[P11S](#)

- Versatile options and dimensions available, up to 7 modules
- Compliant to RoHS, tested according to CECC, value added and customs avail.

**OPTOELECTRONICS**
**IR Receiver Modules for Remote Control Systems**

[TSOP34338](#)

- Industry leading range of 45 m, directivity of  $\pm 45^\circ$ , and 38 kHz carrier frequency
- Minimum irradiance of 0.08 mW/m<sup>2</sup>, and featuring AGC-3 noise suppression

**INDUCTORS**
**IHLD Dual Inductor for Class D Amplifiers, High Temperature up to +155 °C**

[IHLD-4032](#)

- Optimal design realizes high quality sound and low distortion
- Low coupling for minimal cross-talk between inductors

**RECTIFIERS**
**Ultrafast Rectifier, 3 A FRED Pt®**

[3EJH02](#)

- 175 °C maximum operating junction temperature
- AEC-Q101 qualified

**RESISTORS**
**Professional Thin Film Chip Resistors**

[MCS0402...e3](#)

- Excellent stability class 0.5, cost efficient
- CECC approved acc. EN 140401-801, sulfur resistant

**MOSFETs**
**E Series 600 V N-Channel Power MOSFET**

[SiHP7N60E](#)

- High performance E Series high-voltage technology, maximum  $R_{DS(on)}$  600 m $\Omega$
- Popular TO-220 packaging, maximum continuous current of 7 A

**NON-LINEAR RESISTORS**
**PTC Thermistors, Overload Protection for Telecommunication**

[PTCTL](#)

- Fast protection against power contact faults
- Withstand high overload currents of up to 10 A

**DIODES**
**Bidirectional Symmetrical (BiSy) Single Line ESD Protection Diode in LLP1006-2L**

[VCUT07B1-HD1](#)

- Ultra compact LLP1006-2L package
- Low load capacitance  $C_D = 14$  pF

View datasheets for these products  
[www.vishay.com/ref/et3cn2d](http://www.vishay.com/ref/et3cn2d)




# E-Readers



**RESISTORS**

**Thick Film Surface-Mount Chip Resistors, Wraparound, Extremely Low Value**




[RCWE](#)

- Low resistance values from 0.01  $\Omega$  to 0.99  $\Omega$  and tolerance of 1 %
- Thick film construction with 2x power capacity

**DIODES**

**4-Line Bus-Port ESD Protection, Flow Through Design**




[VBUS54ED-FBL](#)

- Compact LLP2510-10L package
- Soldering can be checked by standard vision inspection

**RECTIFIERS**

**Surface-Mount Schottky Barrier Rectifiers**




[MSS1P3](#)

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

**ESD DIODES**

**Two-Line ESD Protection in SOT-23**




[GSOT03C](#)

- ESD protection acc. IEC 61000-4-2,  $\pm 30$  kV contact and air discharge
- Space saving SOT-23 package

**ICs**

**50 m $\Omega$ , Slew Rate Controlled Load Switch in WCSP**



[SiP32461DB](#)

- 1.2 V to 5.5 V operation voltage range with low and flat  $R_{DS(on)}$
- Featuring low  $I_{O2}$  output discharge, and reverse blocking

**OPTOELECTRONICS**

**High Luminous Intensity LEDs in 0603 ChipLED Package**



[VLMx1300](#)

- Available in blue, true green, yellow green, yellow, soft orange, super red, and white
- Angle of half intensity:  $\pm 65^\circ$ , 1.6 mm x 0.8 mm x 0.8 mm (L x W x H)

**TANTALUM CAPACITORS**

**Solid Tantalum Chip Capacitors 298D MICROTAN<sup>®</sup>, 298W Extended Range MICROTAN**




[298D](#)

- High capacitance in small case sizes including 0603 and 0402 footprint
- Perfect for space constrained designs

**OPTOELECTRONICS**

**Fully Integrated Proximity and Ambient Light Sensor with I<sup>2</sup>C Interface**



[VCNL4020](#)

- Infrared emitter is included in the 4.9 mm x 2.4 mm x 0.83 mm SMD pkg.
- 16-bit resolution, proximity range of up to 20 cm with programmable thresholds

**TANTALUM CAPACITORS**

**Solid Tantalum Chip Capacitors, MICROTAN<sup>®</sup>, High CV Leadframeless Molded Low Profile**




[TL8](#)

- High capacitance in low-profile packages including 0.4 mm height in 0603 case
- Perfect for space constrained designs

**INDUCTORS**

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



[IFSC](#)

- Very small ferrite power inductor for DC/DC conversion and filtering

**MOSFETS**

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




[Si8425DB](#)

- Industry leading p-channel Gen III technology, maximum  $R_{DS(on)}$  23 m $\Omega$
- MICRO FOOT<sup>®</sup> 1.6 mm x 1.6 mm x 0.65 mm high performance chip-scale device

**ICs**

**High-Voltage, Single and Dual Supply SPDT Analog Switch with Enable Pin**



[DG469](#)

- 3.6  $\Omega$  low and flat switch on-resistance in MSOP 8 and SO8 packages
- Integrated  $V_{L1}$  and fast switching with guaranteed break before make

View datasheets for these products [www.vishay.com/ref/et3cn2e](http://www.vishay.com/ref/et3cn2e)







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## ***ABOUT TTI, INC.***

TTI Inc., a subsidiary of Berkshire Hathaway, is a world leading specialist distributor of connectors and passive, electromechanical and discrete components. TTI's philosophy is "Lead by Design", and the company differentiates itself by focusing on people, parts and processes. The company's aim is to become the distributor of choice for customers and suppliers in Europe alike by introducing new product technologies and by stocking broad and deep across its franchise base. TTI employs sophisticated inventory management processes which ensure that the company can react immediately to changes in component demand due to fluctuating markets and supply chains. For further information about TTI, please refer to: [www.ttieurope.com](http://www.ttieurope.com).



**A WORLD OF  
SOLUTIONS**

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