



Vishay Intertechnology, Inc.

Consumer

(Home Entertainment)



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





Consumer

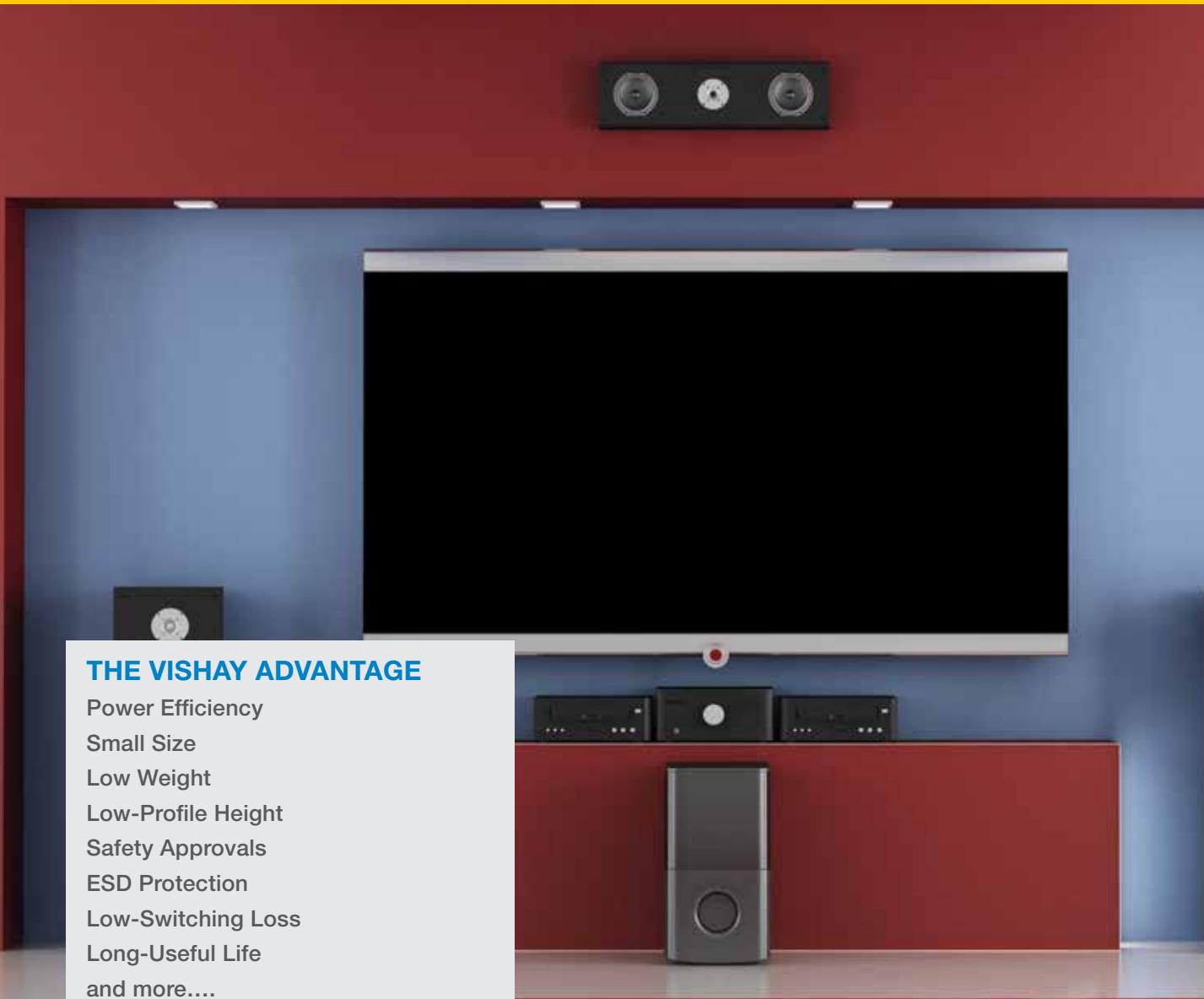
Home Entertainment

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

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



<p>MOSFETs</p> <p>Dual N-Channel 20 V (D-S) MOSFET</p>  <p>SiA906EDJ</p> <ul style="list-style-type: none"> 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 	<p>ALUMINUM CAPACITORS</p> <p>Aluminum Capacitors, Power, Miniaturized, General Purpose Snap-In</p>  <p>093 PMG-SI</p> <ul style="list-style-type: none"> Standard snap-in series Useful life: 2000 h at 85 °C 	<p>ICs</p> <p>2.7 V to 5.5 V Input Buck Regulator Offers 4 MHz Operation to Enable Complete Solution in 180 mm²</p>  <p>SiP12107 / SiP12108</p> <ul style="list-style-type: none"> Fast transient response with current mode constant on time (CM-COT) architecture OVP, UVP, OTP, PGOOD, selectable PSM
<p>INDUCTORS</p> <p>Low-Profile, High-Current Inductors</p>  <p>IFSC</p> <ul style="list-style-type: none"> Very small ferrite power inductor for DC/DC conversion and filtering 	<p>OPTOELECTRONICS</p> <p>High Luminous Intensity LEDs in 0603 ChipLED Package</p>  <p>VLMx1300</p> <ul style="list-style-type: none"> 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) 	<p>RECTIFIERS</p> <p>Trench MOS Barrier Schottky Rectifier</p>  <p>VT5200</p> <ul style="list-style-type: none"> Trench MOS Schottky technology Low forward voltage drop, low power losses
<p>RESISTORS</p> <p>Thick Film Surface-Mount Chip Resistors, Wraparound, Extremely Low Value</p>  <p>RCWE / RCWL</p> <ul style="list-style-type: none"> Low resistance values from 0.01 Ω to 0.99 Ω and tolerance of 1 % Thick film construction with 2x power capacity 	<p>MOSFETs</p> <p>E Series 600 V N-Channel Power MOSFET</p>  <p>SiHP12N60E</p> <ul style="list-style-type: none"> High performance E Series high-voltage technology, maximum $R_{DS(on)}$ 380 mΩ Popular TO-220 packaging, maximum continuous current of 12 A 	<p>NON-LINEAR RESISTORS</p> <p>PTC Thermistors, Overload Protection for Telecommunication</p>  <p>PTCTL...</p> <ul style="list-style-type: none"> Fast protection against power contact faults Withstand high overload currents of up to 10 A
<p>OPTOELECTRONICS</p> <p>IR Receiver Modules for Remote Control Systems</p>  <p>TSOP34338</p> <ul style="list-style-type: none"> Industry leading range of 45 m, directivity of $\pm 45^\circ$, and 38 kHz carrier frequency Minimum irradiance of 0.08 mW/m², and featuring AGC-3 noise suppression 	<p>CERAMIC CAPACITORS</p> <p>AC Line Rated Disc Capacitors, Class X1, 760 V_{AC}, Class Y1, 500 V_{AC}</p>  <p>VY1</p> <ul style="list-style-type: none"> X1 / Y1 safety rating according to IEC 60384-14, 3rd edition Highest reliability and lifetime, operating temperature: -40 °C to +125 °C 	<p>ICs</p> <p>10 A microBUCK® SiC402A/B Integrated Buck Regulator with Programmable LDO</p>  <p>SiC402A / SiC402B</p> <ul style="list-style-type: none"> 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

View datasheets for these products
www.vishay.com/ref/et3cn2a

LCD TVs



View datasheets for these products
www.vishay.com/ref/et3cn2b

CERAMIC CAPACITORS

AC Line Rated Disc Capacitors
 Class X1, 440 V_{AC},
 Class Y2, 300 V_{AC}


[VY2](#)

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

DIODES

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


[VBUS54ED-FBL](#)

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

RECTIFIERS

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


[VI30120C](#)

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

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

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


[Si2308BDS](#)

- Classic TrenchFET® technology, maximum R_{DS(on)} 156 mΩ
- Popular SOT-23 packaging

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

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_{D(on)}, low leakage typically of 3 pA

DIODES

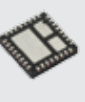
**Surface-Mount TRANSZORB®
 Transient Voltage
 Suppressors**


[SMAJxx](#)

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

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

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

MOSFETs

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


[SiHF15N60E](#)

- High performance E Series high-voltage technology, maximum R_{DS(on)} 280 mΩ
- FullPAK packaging eliminates the need for isolation, maximum continuous current of 15 A

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>Professional Thin Film Chip Resistors</p>  <p>MCT0603...e3</p> <ul style="list-style-type: none"> • Excellent stability class 0.5, cost efficient • CECC approved acc. EN 140401-801, sulfur-resistant 	<p>MOSFETs</p> <p>P-Channel 30 V (D-S) MOSFET</p>  <p>Si8821EDB</p> <ul style="list-style-type: none"> • Industry leading p-channel Gen III technology, maximum $R_{DS(on)}$ 76 mΩ • Industry smallest chip scale packaging with MICRO FOOT[®] 0.8 mm x 0.8 mm 	<p>INDUCTORS</p> <p>Low-Profile, High-Current IHLP[®] Inductors</p>  <p>IHLP</p> <ul style="list-style-type: none"> • Compact, high-current power inductor for DC/DC conversion and filter applications • High frequency operation up to 5 MHz
<p>RECTIFIERS</p> <p>Surface-Mount Schottky Barrier Rectifiers</p>  <p>MSS2P2</p> <ul style="list-style-type: none"> • AEC-Q101 qualified • Very low profile – typical height of 0.65 mm 	<p>FILM CAPACITORS</p> <p>DC Film Capacitors MKT Radial Potted Type</p>  <p>MKT371</p> <ul style="list-style-type: none"> • General purpose MKT pitch 5 mm / 7.5 mm and 10 mm 	<p>DIODES</p> <p>4-Line Bus-Port ESD Protection, Flow Through Design</p>  <p>VBUS54ED-FBL</p> <ul style="list-style-type: none"> • Compact LLP2510-10L package • Soldering can be checked by standard vision inspection
<p>INDUCTORS</p> <p>Low-Profile, High-Current Inductors</p>  <p>IFSC</p> <ul style="list-style-type: none"> • Very small ferrite power inductor for DC/DC conversion and filtering 	<p>OPTOELECTRONICS</p> <p>IR Receiver Modules for Remote Control, Data Transmission, and Object Sensing</p>  <p>TSOPxx</p> <ul style="list-style-type: none"> • Industry leading transmission range and noise suppression • Available in a variety of surface-mount and through-hole packages 	<p>RESISTORS</p> <p>Thick Film Surface-Mount Chip Resistors, Wraparound, Extremely Low Value</p>  <p>RCWE / RCWL</p> <ul style="list-style-type: none"> • Low resistance values from 0.01 Ω to 0.99 Ω and tolerance of 1 % • Thick film construction with 2x power capacity
<p>ICs</p> <p>2.7 V to 5.5 V Input Buck Regulator Offers 4 MHz Operation to Enable Complete Solution in 180 mm²</p>  <p>SiP12107 / SiP12108</p> <ul style="list-style-type: none"> • Fast transient response with current mode constant on time (CM-COT) architecture • OVP, UVP, OTP, PGOOD, selectable PSM 	<p>DIODES</p> <p>Low Capacitance Bidirectional Symmetrical (BiSy) Single Line ESD Protection Diode</p>  <p>VBUS05A1-SD0</p> <ul style="list-style-type: none"> • Ultra compact CLP0603 package • Low package height < 0.3 mm 	<p>OPTOELECTRONICS</p> <p>Optocoupler, Phototransistor Output, High Reliability, 5300 V_{RMS}</p>  <p>VO617A</p> <ul style="list-style-type: none"> • High current transfer ratio, and high isolation voltage of 5300 V_{RMS} • Operating temperature from -55 °C to +110 °C and 5 mA trigger current

View datasheets for these products
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 μ 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/m², 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 Ω
- 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




E-Readers



RESISTORS

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




[RCWE](#)

- Low resistance values from 0.01 Ω to 0.99 Ω 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, ± 30 kV contact and air discharge
- Space saving SOT-23 package

ICs

50 m Ω , 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_{O1} 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[®], 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 I²C 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[®], 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 Ω
- MICRO FOOT[®] 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 Ω 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





Vishay Intertechnology, Inc.



A *WORLD OF*
SOLUTIONS