



VISHAY[®]

Vishay Intertechnology, Inc.

**Computer /
Consumer (Entertainment) /
Telecommunications (Mobile)**



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



Computer



Consumer



Telecom

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For inquiries, please contact your local sales representative.

Key components for PORTABLE COMPUTERS



Tablet PCs



Ultrabooks



Notebooks



THE VISHAY ADVANTAGE
Power Efficiency
Optimized Performance
Small Size
Low Profile and Compact Size
High Power Rating
ESD Protection
High Surge Current Capabilities
Cost Efficiency



Tablet PCs



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

MOSFETs

P-Channel 20 V (D-S) MOSFET




[Si7655ADN](#)

- Industry leading p-channel Gen III technology, maximum $R_{DS(on)}$ 3.6 m Ω
- Thermally enhanced PowerPAK[®] 1212-8 is 1/3 the size of an SO-8

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

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

RESISTORS

Power Metal Strip[®] SMD Resistors, Very High Power (to 3 W), Low Value (to 0.0005 Ω)

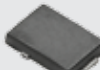


[WSLP](#)

- Very high power rating to 3 W in WSLP0603 to WSLP2512 size packages
- Extremely low resistance values from 0.0005 Ω to 0.1 Ω and tolerance of 1 %

RECTIFIERS

High Current Density Surface-Mount Trench MOS Barrier Schottky Rectifier




[V10PL45](#)

- Trench MOS Schottky technology
- Very low profile – typical height of 1.1 mm

NON-LINEAR RESISTORS

SMD 0402, Glass Protected NTC Thermistors




[NTCS0402E3](#)

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

ICs

1.1 V to 5.5 V, Slew Rate Controlled Load Switch in TDFN4



[SiP32408](#)

- Low and flat R_{ON} over the full operation voltage range of 1.1 V to 5.5 V
- Features 2.5 ms rise time, true reverse blocking, low-voltage logic control

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

DIODES

4-Line Bus-Port ESD Protection



[VBUS54ED-FBL](#)

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

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

RECTIFIERS

Surface-Mount Schottky Barrier Rectifiers




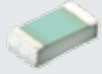



[MSS2P3](#)

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

View datasheets for these products www.vishay.com/ref/et3co1a

Ultrabooks



<p>MOSFETs</p> <p>N-Channel 30 V (D-S) MOSFET</p>  <p>SiS412DN</p> <ul style="list-style-type: none"> TrenchFET® Gen III technology, maximum $R_{DS(on)}$ 24 mΩ Thermally enhanced PowerPAK® 1212-8 is 1/3 the size of an SO-8 	<p>RESISTORS</p> <p>Professional Thin Film Chip Resistors</p>  <p>MCT0603...e3</p> <ul style="list-style-type: none"> Best in class surge handling capability, excellent overall stability class 0.5 CECC approved acc. EN 140401-801, sulfur resistant 	<p>RECTIFIERS</p> <p>High Current Density Surface-Mount Trench MOS Barrier Schottky Rectifier</p>  <p>V12P12</p> <ul style="list-style-type: none"> Trench MOS Schottky technology Very low profile – typical height of 1.1 mm
<p>INDUCTORS</p> <p>Low-Profile, High-Current IHLP® Inductors</p>  <p>IHLP-2020AB</p> <ul style="list-style-type: none"> Very low profile, high current inductor for DC/DC conversion High frequency energy storage up to 5 MHz 	<p>OPTOELECTRONICS</p> <p>Ambient Light Sensor with High-Speed and High-Sensitivity PIN Photodiode Output</p>  <p>TEMD6200FX01</p> <ul style="list-style-type: none"> Wavelength of peak sensitivity of 550 nm; similar to human eye sensitivity Excellent linearity over operating temperature range of -40 °C to +100 °C 	<p>NON-LINEAR RESISTORS</p> <p>SMD 0402, Glass Protected NTC Thermistors</p>  <p>NTCS0402</p> <ul style="list-style-type: none"> Glass protected with soft terminations Standard series, AEC-Q200 compliant
<p>MOSFETs</p> <p>Dual N-Channel 30 V (D-S) MOSFET</p>  <p>SiZ342DT</p> <ul style="list-style-type: none"> TrenchFET Gen IV technology for increased power density, maximum $R_{DS(on)}$ 11.1 mΩ PowerPAIR® packaging optimizes high and low side MOSFETs to increase efficiency 	<p>RESISTORS</p> <p>Power Metal Strip® Resistors, Low Value (Down to 0.0005 Ω), Surface-Mount, 4-Terminal</p>  <p>WSK</p> <ul style="list-style-type: none"> 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 	<p>DIODES</p> <p>Surface-Mount TRANSZORB® Transient Voltage Suppressors</p>  <p>SMAJxx (Power)</p> <ul style="list-style-type: none"> 400 W peak pulse power capability with a 10/1000 μs waveform AEC-Q101 qualified
<p>TANTALUM CAPACITORS</p> <p>vPolyTan™ Polymer Tantalum Capacitors</p>  <p>T55</p> <ul style="list-style-type: none"> High-capacitance, ultra low-ESR polymer tantalum capacitors Small case size, low profile 	<p>RECTIFIERS</p> <p>High Current Density Surface-Mount Schottky Barrier Rectifiers</p>  <p>SS3P3L, SS3P4L</p> <ul style="list-style-type: none"> Very low profile – typical height of 1.1 mm AEC-Q101 qualified 	<p>MOSFETs</p> <p>N-Channel 30 V (D-S) MOSFET</p>  <p>SiSA18ADN</p> <ul style="list-style-type: none"> TrenchFET Gen IV technology for increased power density, maximum $R_{DS(on)}$ 7.5 mΩ Thermally enhanced PowerPAK 1212-8 is 1/3 the size of an SO-8

View datasheets for these products
www.vishay.com/ref/et3co1b



Notebooks



OPTOELECTRONICS

Fully Integrated Proximity and Ambient Light Sensor with I²C Interface



[VCNL4010](#)

- Infrared emitter is included in the 3.95 mm x 3.95 mm x 0.75 mm SMD pkg.
- 16-bit resolution, proximity range of up to 20 cm with programmable thresholds

TANTALUM CAPACITORS

Solid Tantalum Surface-Mount Chip Capacitors, TANTAMOUNT[®], Molded Case, Built-In-Fuse



[TF3](#)

- Molded case, miniature built-in-fuse, low ESR, 100 % surge tested current
- Safety critical industrial, medical instrumentation, high end computing, data storage

RECTIFIERS

Dual High-Voltage Trench MOS Barrier Schottky Rectifier

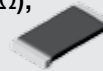


[V20120C](#)

- Trench MOS Schottky technology
- AEC-Q101 qualified

RESISTORS

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



[WSLx](#)

- Extremely low resistance values from 0.0005 Ω to 0.5 Ω and tolerance of 1 %
- Power Metal Strip all-welded construction offers high pulse capacity

MOSFETs

N-Channel 30 V (D-S) MOSFET



[SiR172ADP](#)

- High density TrenchFET[®] technology, maximum R_{DS(on)} 8.5 mΩ
- Thermally enhanced PowerPAK[®] SO-8 packaging

INDUCTORS

Low-Profile, High-Current IHLP[®] Inductors



[IHLP-2525](#)

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

DIODES

4-Line Bus-Port ESD Protection



[VBUS54ED-FBL](#)

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

NON-LINEAR RESISTORS

SMD 0603, Glass Protected NTC Thermistors



[NTCS0603](#)

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

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

ICs

46 mΩ, Slew Rate Controlled Load Switch in uDFN4 1.1 mm x 1.1 mm



[SiP32472](#)

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

MOSFETs

N-Channel 30 V (D-S) MOSFET



[SiRA04DP](#)

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

RESISTORS

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

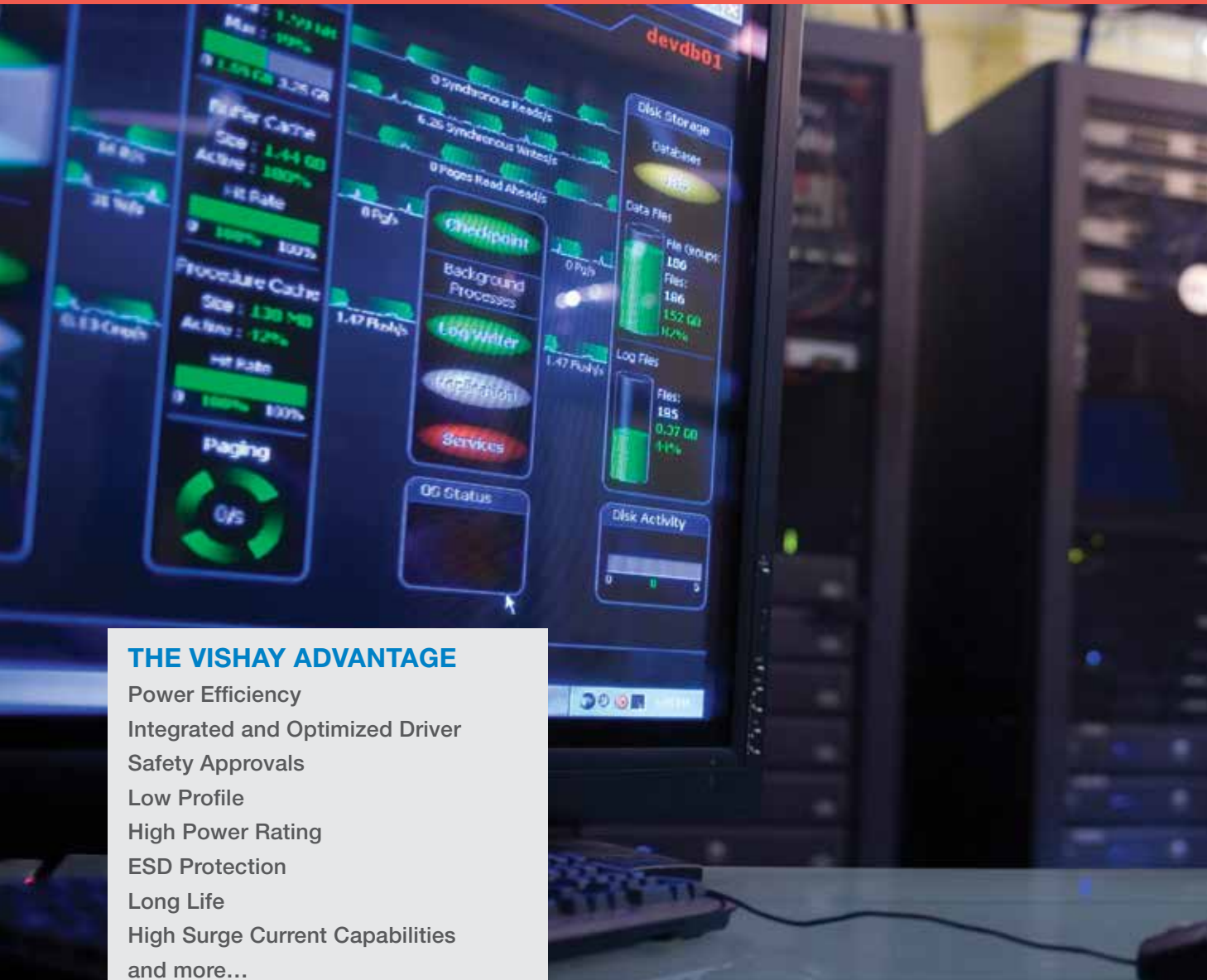


[RCWE](#)

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

View datasheets for these products
www.vishay.com/ref/et3co1c

Key components for STATIONARY COMPUTING



Servers



Embedded Systems



SSD



UPS



**Networking
(Switches,
Routers)**



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



ICs

60 A VRPower® Integrated Power Stage

[SiC620](#)

- Thermally enhanced PowerPAK® MLP55-31L
- Vishay's Gen IV MOSFET technology and a low-side MOSFET with integrated Schottky diode



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




ENERGY STORAGE CAPACITORS

Hybrid Storage Capacitors, 90 F

[196 HVC ENYCAP™](#)

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



MOSFETs

N-Channel 30 V (D-S) MOSFET

[SiRA00DP](#)

- TrenchFET® Gen IV technology for increased power density, maximum $R_{DS(on)}$ 1 mΩ
- Thermally enhanced PowerPAK® SO-8 packaging




RECTIFIERS

Dual High-Voltage Trench MOS Barrier Schottky Rectifier

[V50100PW](#)

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



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




DIODES

Surface-Mount TRANSZORB® Transient Voltage Suppressors

[SMCJxx](#)

- Excellent clamping capability
- AEC-Q101 qualified




INDUCTORS

Low-Profile, High-Current IHLP® Inductors

[IHLP-6767GZ](#)

- Very large SMD power inductor for very high-current DC/DC power conversion
- High-temperature materials available up to the 155 °C continuous operation



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



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)



TANTALUM CAPACITORS

Solid Tantalum Surface-Mount Chip Capacitors, TANTAMOUNT®, Molded Case, Low ESR

[TR3](#)

- Molded tantalum capacitor, low ESR
- Computer, data storage, telecoms infrastructure, networking and multiplexer, general purpose

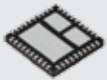


ICs

50 A, 5 V / 3.3 V PWM Integrated DrMOS Power Stage

[SiC780CD](#)

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



View datasheets for these products 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_{RMS}

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



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



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_{RMS} 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



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 Ω flatness and 0.3 Ω 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 mΩ
- 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

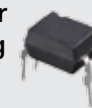


[SiHG47N60E](#)

- High-performance E Series high-voltage technology, maximum $R_{DS(on)}$ 64 mΩ
- 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 °C to +110 °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 μs waveform
- AEC-Q101 qualified

View datasheets for these products
www.vishay.com/ref/et3co2e

Key components for
COMPUTER PERIPHERALS



**GPU
Graphics Cards**



**Wireless
Charging**



Printers



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



<p>MOSFETs</p> <p>N-Channel 30 V (D-S) MOSFET</p>  <p>SiRA18DP</p> <ul style="list-style-type: none"> 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 	<p>INDUCTORS</p> <p>Low-Profile, High-Current Inductors, Winged Terminals</p>  <p>IHLW-4040</p> <ul style="list-style-type: none"> “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 	<p>ICs</p> <p>50 A, 5 V / 3.3 V PWM Integrated DrMOS Power Stage</p>  <p>SiC780A</p> <ul style="list-style-type: none"> Intel DrMOS 4.0 compliant MLP6x6-40L, 5 V / 3.3 V PWM Tri-state, THWn, DSBL#, SMOD
<p>RESISTORS</p> <p>Power Metal Strip® Resistors, Low Value (Down to 0.0005 Ω), Surface-Mount, 4-Terminal</p>  <p>WSK0612</p> <ul style="list-style-type: none"> 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 	<p>RECTIFIERS</p> <p>High Current Density Surface-Mount Schottky Barrier Rectifiers</p>  <p>SS5P10-M3/86A</p> <ul style="list-style-type: none"> Very low profile – typical height of 1.1 mm AEC-Q101 qualified 	<p>TANTALUM CAPACITORS</p> <p>vPolyTan™ Polymer Tantalum Capacitors</p>  <p>T55</p> <ul style="list-style-type: none"> High-capacitance, low-ESR polymer tantalum capacitors Stable electrical performance over temperature and voltage
<p>MOSFETs</p> <p>Dual N-Channel 30 V (D-S) MOSFETs</p>  <p>SiZ900DT</p> <ul style="list-style-type: none"> 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 	<p>NON-LINEAR RESISTORS</p> <p>NTC Thermistors, SMD 0402 Chip</p>  <p>NTHS0402 100K 1 %</p> <ul style="list-style-type: none"> Standard series Glass protected 	<p>MOSFETs</p> <p>N-Channel 30 V (D-S) MOSFET</p>  <p>SiRA04DP</p> <ul style="list-style-type: none"> TrenchFET Gen IV synchronous buck low-side MOSFET with maximum $R_{DS(on)} = 2.15\text{ m}\Omega$ Thermally enhanced PowerPAK SO-8 packaging
<p>INDUCTORS</p> <p>Low-Profile, High-Current IHLP® Inductors</p>  <p>IHLP-1616AB</p> <ul style="list-style-type: none"> Very low profile, high-current inductor for DC/DC conversion High frequency energy storage up to 5 MHz 	<p>ICs</p> <p>60 A VRPower® Integrated Power Stage Offers Highest Power Density and Efficiency</p>  <p>SiC620CD</p> <ul style="list-style-type: none"> 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 	<p>INDUCTORS</p> <p>Low-Profile, High-Current IHLP® Inductors</p>  <p>IHLP-4040DZ</p> <ul style="list-style-type: none"> 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




Wireless Charging




RESISTORS
Thick Film Chip Attenuator, Surface-Mount, Unbalanced π 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
Surface-Mount TRANSZORB[®] Transient Voltage Suppressors 
[SMA6F5.0A thru SMA6F20A](#)


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

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

RESISTORS
Power Metal Strip[®] Resistors, Low Value (Down to 0.001 Ω), Surface-Mount 
[WSL1206](#)

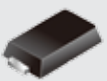
- Low TCR element (< 20 ppm/ $^{\circ}$ C) results in accurate current sensing in application
- Power Metal Strip all-welded construction offers high pulse capacity

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
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

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


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

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


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

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


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

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

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

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

- Small SMD common mode filter

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



Printers




CERAMIC CAPACITORS

AC Line Rated Disc Capacitors, Class X1, 760 V_{AC}, Class Y1, 500 V_{AC} 

[VY1](#)

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

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


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


OPTOELECTRONICS

Reflective Optical Sensor with Transistor Output 

[TCRT1000](#)

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


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


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


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

RECTIFIERS

High-Voltage Trench MOS Barrier Schottky Rectifier 

[VSB3200S](#)

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

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


MOSFETs

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

[IRFL9014](#)

- Rugged planar p-channel technology offering a maximum R_{DS(on)} of 500 mΩ
- SOT-223 surface-mount packaging with a maximum continuous current of 1.8 A


OPTOELECTRONICS

Fully Integrated Proximity Sensor with Infrared Emitter, I²C 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 I²C interface

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

Spotlight on Hybrid Storage 196 HVC ENYCAP™ Capacitors

The 196 HVC ENYCAP™ is a new series of hybrid energy storage capacitors with a low 2.5 mm profile that feature industry-high energy density of 13 Ws/g. The new capacitors provide designers with exceptional flexibility and enhanced charge and discharge performance for energy harvesting and power line backup applications. They are available with a wide variety of layouts, capacitance values, and voltage ratings. Currently available in configurations of up to six cells and with capacitance values to 90 F, the ENYCAP series includes stacked through-hole, surface-mount flat, and lay flat configurations featuring pins, tabs, and connectors. Voltage ratings range from 1.4 V up to 8.4 V.

The 196 HVC ENYCAP series provides the best energy / volume rating in the industry. Its superior specifications are especially suited for applications such as embedded computers, servers, data storage systems, professional remote controls, real-time clocks, emergency lighting, gaming and vending machines, and network equipment. The devices offer a useful life of 1000 hours at +85 °C.



KEY BENEFITS

- Polarized storage capacitor with high capacity and high energy density
- Alternative product to rechargeable backup batteries
- Soft and low transient-voltage-controlled charging characteristic
- Low profile (2.5 mm) to fit portable and compact designs
- Various layouts (flat, stacked, pins, tabs)
- Very long self-discharge time (months)
- Non-hazardous electrolyte
- RoHS-compliant

APPLICATIONS

- Power backup for memory controller, flash backup, RAID system, SRAM, DRAM
- Power failure and write cache protection for enterprise SSD and HDD
- Real-time clock power source
- Burst power support for flashlights and wireless transmitters
- Backup power for industrial PCs and industrial controls
- Storage device for energy harvesting
- Emergency light and micro UPS power source

QUICK REFERENCE DATA						
Description	Value					
	Single Cell	2 Cells	3 Cells	4 Cells	5 Cells	6 Cells
Nominal case size (Ø D x L in mm)	7 x 2.5 12 x 2.5	7 x 5 12 x 5	7 x 7.5 12 x 7.5	7 x 10 12 x 10	7 x 12.5 12 x 12.5	7 x 15 12 x 15
Stacked Through-Hole (STH)	–	35 x 25 x 7.5	35 x 25 x 10	35 x 25 x 15	–	–
Nominal case size (Ø D x L x H in mm)	7 x 7 x 2.5 12 x 12 x 2.5	7 x 14 x 2.5 22 x 24 x 2.5	13 x 14 x 2.5 22 x 24 x 2.5	14 x 14 x 2.5 24 x 24 x 2.5	–	–
Surface-Mount Flat (SMF)	–	–	–	–	–	–
Nominal case size (Ø D x L x H in mm)	14.5 x 12 x 2.5	14.5 x 24 x 2.5	14.5 x 36 x 2.5	14.5 x 48 x 2.5	14.5 x 60 x 2.5	14.5 x 72 x 2.5
Lay Flat (LFC)	–	–	–	–	–	–
Rated capacitance range, C _R	4.0 F 15.0 F	4.0 F 15.0 F 90.0 F	4.0 F 15.0 F 90.0 F	4.0 F 15.0 F 90.0 F	4.0 F 15.0 F	4.0 F 15.0 F
Tolerance on at C _R 20 °C	-20 % to +80 %					
Rated voltage, U _R	1.4 V	2.8 V	4.2 V	5.6 V	7.0 V	8.4 V
Maximum surge voltage, U _S (max. 30 s)	1.6 V	3.2 V	4.8 V	6.4 V	8.0 V	9.6 V
Minimum stored energy	4 Ws 17 Ws	9 Ws 35 Ws 230 Ws	13 Ws 52 Ws 345 Ws	18 Ws 70 Ws 460 Ws	22 Ws 87 Ws	27 Ws 105 Ws
Energy density	9 Ws/g to 13 Ws/g					
Category temperature range	4.0 F: -20 °C to +70 °C 15.0 F / 90.0 F: -20 °C to +85 °C					
Storage temperature range	-40 °C to +85 °C					
Useful life at U _R	4.0 F: at 70 °C: 1000 h at 55 °C: 2800 h at 45 °C: 5600 h 15.0 F / 90.0 F: at 85 °C: 1000 h at 70 °C: 2800 h at 60 °C: 5600 h					
Shelf life	1000 h at upper category temperature					
Climatic category IEC 60068	25/085/21					

Spotlight on vPolyTan™ Solid Tantalum Surface-Mount Chip Capacitors, Molded Case, High-Performance Polymer Type

Vishay's recent acquisition of the tantalum capacitor division of Holystone Polytech enables Vishay to offer customers five case style sizes of vPolyTan™ tantalum polymer capacitors. These devices provide lower ESR than traditional molded tantalum capacitors and are ideal for power management in portable equipment, I/O decoupling (e.g. USB ports), and energy storage in SSD cards and wireless data cards. Vishay product roadmap includes larger case size devices and higher capacitance values in existing small case size devices for smartphone and tablet applications. Contact Vishay to find out what's new in our tantalum polymer capacitor portfolio.



KEY BENEFITS

- Low ESR from 500 mΩ down to 30 mΩ
- Requires only 20 % derating
- Small sizes: J (1608-09), P (2012-12), A (3216-18), B (3528-21), and T (3528-12)
- Capacitance from 3.3 μF to 330 μF
- Voltage from 2.5 V to 10 V
- RoHS-compatible

APPLICATIONS

- Laptop computers and tablets
- Smartphones
- Wireless cards
- USB port decoupling

RESOURCES

- Datasheet: T55 – www.vishay.com/doc?40174
- For technical questions contact tantalum@vishay.com

RATINGS AND CASE CODES

μF	2.5 V	4.0 V	6.3 V	10 V
3.3			J / P	J / P
4.7			J / P / A	P / A
6.8			P / A	A
10		J / P / A	P / A	A
15		P / A	A	A
22		A / B	A	A / T / B
33		A / B	A / T / B	A / T / B
47		A / T / B	A / T / B	B / T
68		A / T / B	T / B	
100		T / B	A / B	
150		B	B	
220	B	B	B	
330	B			

CASE SIZE INFORMATION

- J (0603), P (0805), A, B, and T
- T case = B case with profile height of 1.2 mm

COMING SOON

- Large case sizes
- Higher capacitance values






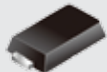






Contact your local sales contact for the latest portfolio update.



Smartwatches









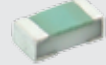




View datasheets for these products
www.vishay.com/ref/et3cn1a

<p>RESISTORS</p> <p>Professional Thin Film Chip Resistors</p>  <p>MCS0402...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 8 V (D-S) MOSFET</p>  <p>Si8805EDB</p> <ul style="list-style-type: none"> • Low on-resistance guaranteed with gate voltages down to 1.2 V • Industry smallest chipscale packaging with MICRO FOOT® 0.8 mm x 0.8 mm 	<p>INDUCTORS</p> <p>Wireless Charging Receiving Coil / Shield</p>  <p>IWAS and Custom Rx Coils</p> <ul style="list-style-type: none"> • Thin, high-efficiency, low-saturation Rx coils • Custom designs available for WPC and PMA compatibility
<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>TANTALUM CAPACITORS</p> <p>Solid Tantalum Chip Capacitors 298D MICROTAN®, 298W Extended Range MICROTAN</p>  <p>298D</p> <ul style="list-style-type: none"> • High capacitance in small case sizes including 0603 and 0402 footprint • Perfect for space constrained designs 	<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>NON-LINEAR RESISTORS</p> <p>SMD Glass Protected NTC Thermistors</p>  <p>NTCS0402</p> <ul style="list-style-type: none"> • Standard series, AEC-Q200 compliant • Glass protected with soft terminations 	<p>OPTOELECTRONICS</p> <p>Fully Integrated Proximity and Ambient Light Sensor with I²C Interface</p>  <p>VCNL4020</p> <ul style="list-style-type: none"> • 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 	<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>Ambient Light Sensor with High-Speed and High-Sensitivity PIN Photodiode Output</p>  <p>TEMD6200FX01</p> <ul style="list-style-type: none"> • Wavelength of peak sensitivity of 550 nm; similar to human eye sensitivity • Excellent linearity over operating temperature range of -40 °C to +100 °C 	<p>TANTALUM CAPACITORS</p> <p>Solid Tantalum Chip Capacitors 298D MICROTAN®, 298W Extended Range MICROTAN</p>  <p>298W</p> <ul style="list-style-type: none"> • High capacitance in small case sizes including 0603 and 0402 footprint • Perfect for space constrained designs 	<p>ICs</p> <p>50 mΩ, Slew Rate Controlled Load Switch in WCSP, Optimized for Portable / Wearable Applications</p>  <p>SiP32461</p> <ul style="list-style-type: none"> • 1.2 V to 5.5 V operation voltage range with low and flat R_{DS(on)} • Featuring low I_Q output discharge, and reverse blocking

Glasses / Goggles



View datasheets for these products
www.vishay.com/ref/et3cn1b

<p>TANTALUM CAPACITORS</p> <p>Solid Tantalum Chip Capacitors, MICROTAN®, High CV Leadframeless Molded Low Profile</p> <p>TL8</p> <ul style="list-style-type: none"> • High capacitance in low-profile packages including 0.4 mm height in 0603 case • Perfect for space constrained designs 	<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>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>NON-LINEAR RESISTORS</p> <p>SMD Glass Protected NTC Thermistors</p> <p>NTCS0402</p> <ul style="list-style-type: none"> • Standard series, AEC-Q200 compliant • Glass protected with soft terminations 	<p>OPTOELECTRONICS</p> <p>High-Speed Infrared Emitting Diode, 850 nm, SurfLight™ Surface Emitter Technology</p> <p>VSMY3850 / VSMG3700</p> <ul style="list-style-type: none"> • High radiant intensity of 17 mW/sr and high optical power of 55 mW when $I_f=100$ mA • Surface-mount PLCC2 package measuring dimensions 3.5 x 2.8 x 1.75 mm 	<p>INDUCTORS</p> <p>Wireless Charging Receiving Coil / Shield</p> <p>IWAS and Custom Rx Coils</p> <ul style="list-style-type: none"> • Thin, high-efficiency, low saturation Rx coils 
<p>ICs</p> <p>8-Channel, Dual 4-Channel, Triple 2-Channel Multiplexers</p> <p>DG9451, DG9453</p> <ul style="list-style-type: none"> • 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 	<p>RESISTORS</p> <p>Professional Thin Film Chip Resistors</p> <p>MCS0402...e3</p> <ul style="list-style-type: none"> • Excellent stability class 0.5, cost efficient • CECC approved acc. EN 140401-801, sulfur-resistant 	<p>OPTOELECTRONICS</p> <p>Ambient Light Sensor with High-Speed and High-Sensitivity PIN Photodiode Output</p> <p>TEMD6200FX01</p> <ul style="list-style-type: none"> • Wavelength of peak sensitivity of 550 nm; similar to human eye sensitivity • Excellent linearity over operating temperature range of -40 °C to +100 °C 
<p>ENERGY STORAGE CAPACITORS</p> <p>Hybrid Storage Capacitors</p> <p>196 HVC ENYCAP™</p> <ul style="list-style-type: none"> • Extreme small profile with high energy density • Instant rechargeable, suitable for solar power charging 	<p>OPTOELECTRONICS</p> <p>Fully Integrated Proximity and Ambient Light Sensor with I²C Interface</p> <p>VCNL4020</p> <ul style="list-style-type: none"> • 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 	<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 

Fitness Band / Wrist Band



View datasheets for these products
www.vishay.com/ref/et3cn1c

CERAMIC CAPACITORS

High Capacitance per Unit Size in C0G, X5R, and X7R



[VJ0201](#)

- Small size enables miniaturization and board space savings
- Small size enables component with better ESL performance

MOSFETs

P-Channel 20 V (D-S) MOSFET



[Si8817DB](#)

- Industry leading p-channel Gen III technology, maximum $R_{DS(on)}$ 76 m Ω
- Industry smallest chip scale packaging with MICRO FOOT[®] 0.8 mm x 0.8 mm

OPTOELECTRONICS

Ambient Light Sensor with Analog Output in Low Profile Package



[TEMD5510FX01](#)

- Peak sensitivity at 540 nm much like the human eye with a 7.5 mm² detector chip
- PIN photodiode with high photo sensitivity in a miniature surface-mount device

RESISTORS

Lead (Pb)-free Commodity Thick Film Chip Resistors



[CRCW0201...e3](#)

- High-volume product for commercial applications
- Very small body size, 0.6 x 0.3 mm²

DIODES

Low Capacitance Bidirectional Symmetrical (BiSy) Single Line ESD Protection Diode



[VBUS05A1-SD0](#)

- Ultra compact CLP0603 package
- Low package height < 0.3 mm

TANTALUM CAPACITORS

Solid Tantalum Chip Capacitors 298D MICROTAN[®], 298W Extended Range MICROTAN



[298W](#)

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

MOSFETs

P-Channel 20 V (D-S) MOSFET



[SiB441EDK](#)

- Industry leading p-channel Gen III technology, maximum $R_{DS(on)}$ 25.5 m Ω
- 1.6 mm x 1.6 mm PowerPAK[®] SC-70 packaging

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

OPTOELECTRONICS

High-Sensitivity PIN Photodiode in Leadless Low-Profile Package



[VEMD5010X01](#)

- 0.8 mm height SMD photodiode featuring a chip with a 7.5 mm² sensitive area
- Daylight blocking filter matched with IR emitters operating at wavelength 870 nm or 950 nm

RESISTORS

Professional Thin Film Chip Resistors



[MCS0402...e3](#)

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

ICs

200 Ω , Low-Leakage, Low-Parasitic and Low Charge Injection, Quad SPST Analog Switches



[DG2502](#)

- Power consumption < 0.01 μ W, superior switching characteristics
- Compact WCSP16 1.44 mm x 1.44 mm chip scale package

NON-LINEAR RESISTORS

SMD Glass Protected NTC Thermistors



[NTCS0402](#)

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




Clip-On / Pocket-Worn Devices



ICs

20 mΩ, Slew Rate Controlled Load Switch in WCSP6



[SiP32458](#)

- 20 mΩ low and flat R_{ON} over the full operation voltage range
- Features low I_Q, reverse blocking with guaranteed less than 10 μA leakage

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

RESISTORS

Lead (Pb)-Free Commodity Thick Film Chip Resistors



[CRCW0201...e3](#)

- High-volume product for commercial applications
- Very small body size, 0.6 mm x 0.3 mm

RESISTORS

Professional Thin Film Chip Resistors




[MCT0603...e3](#)

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

ICs

200 Ω, Low-Leakage, Low-Parasitic and Low Charge Injection, Quad SPST Analog Switches



[DG2501](#)

- Power consumption < 0.01 μW, superior switching characteristics
- Compact WCSP16 1.44 mm x 1.44 mm chip scale package

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

TANTALUM CAPACITORS

vPolyTan™ Polymer Tantalum Capacitors



[T55](#)

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

MOSFETs

P-Channel 12 V (D-S) MOSFET



[Si8457DB](#)

- TrenchFET® p-channel Gen III and MICRO FOOT® MOSFET provide extremely low on-resistance
- Ultra-small 1.6 mm x 1.6 mm max. outline, ultra-thin 0.6 mm max. height

ESD DIODES

ESD Protection Diode in LLP1006-2L



[VESD05A4A-HS4](#)

- Ultra compact LLP1006-2L package, low package height < 0.4 mm
- ESD protection acc. IEC 61000-4-2, ± 30 kV contact and air discharge

View datasheets for these products www.vishay.com/ref/et3cn1d

Spotlight on MICROTAN[®] Low-Profile High-CV Leadframeless Molded Solid Tantalum Chip Capacitor



FEATURES

- Low-profile packages with heights of 0.8 mm, 0.9 mm, and 1.0 mm
- EIA standard footprints such as 0805, A-case and B-case
- Lead (Pb)-free L-shaped terminations for superior board mounting

APPLICATIONS

- Bulk capacitance / energy storage
- Filtering
- Decoupling

**Contact us for NEW
0.4 mm Profile Height
6.3 V, 10 μ F Samples**

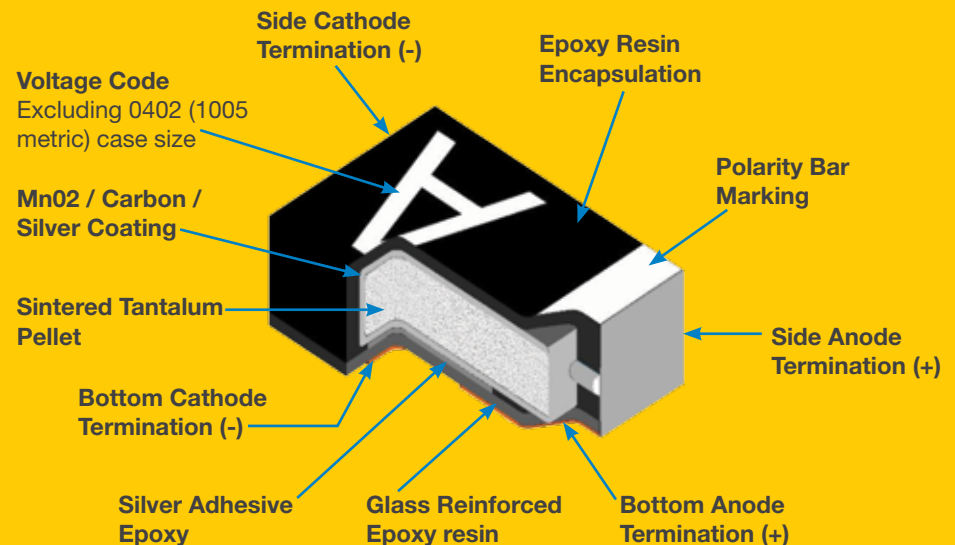
For technical questions, contact tantalum@vishay.com

The Next Generation Tantalum Chip Capacitors

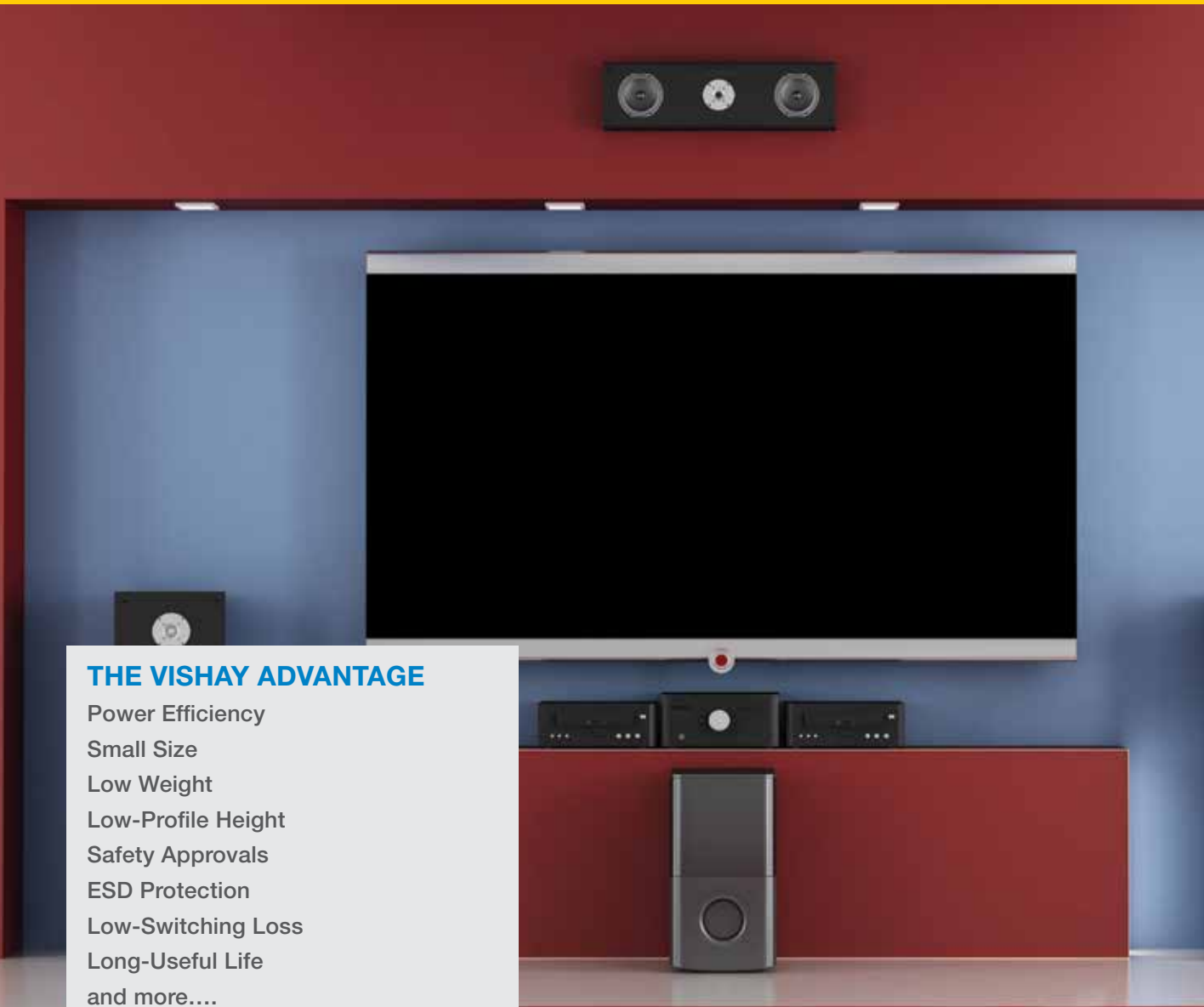
ADVANTAGES

Industry's best volumetric efficiency	→	Reduced size, higher ratings
No lead frames	→	Improved reliability, reduced ESR, reduced cost
L-shape termination design	→	Superior mechanical and electrical contact, visual inspection of solder joints
Tantalum technology	→	Unlike MLCC, no piezoelectric noise
RoHS-compliant and halogen-free	→	Environmental friendly

CONSTRUCTION



Key components for HOME ENTERTAINMENT



Set-Top Boxes



LCD TVs



Media Streaming Devices / TV Boxes



Audio Amplifiers / Soundbars



E-Readers



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




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




ALUMINUM CAPACITORS
Aluminum Capacitors, Power, Miniaturized, General Purpose Snap-In
[093 PMG-SI](#)

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



INDUCTORS
Low-Profile, High-Current Inductors
[IFSC](#)

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




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)




RECTIFIERS
Trench MOS Barrier Schottky Rectifier
[VT5200](#)

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



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




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




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




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




CERAMIC CAPACITORS
AC Line Rated Disc Capacitors, Class X1, 760 V_{AC}, Class Y1, 500 V_{AC}
[VY1](#)

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



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



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

LCD TVs



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

<p>CERAMIC CAPACITORS</p> <p>AC Line Rated Disc Capacitors Class X1, 440 V_{AC}, Class Y2, 300 V_{AC}</p> <p>VY2</p> <ul style="list-style-type: none"> • X1 / Y2 safety rating according to IEC 60384-14, 3rd edition • Highest reliability and lifetime, operating temperature: -40 °C to +125 °C 	<p>MOSFETs</p> <p>N-Channel 60 V (D-S) MOSFET</p> <p>Si2308BDS</p> <ul style="list-style-type: none"> • Classic TrenchFET® technology, maximum R_{DS(on)} 156 mΩ • Popular SOT-23 packaging 	<p>ICs</p> <p>6 A microBUCK® Integrated FET Buck Regulator with Programmable LDO</p> <p>SiC403A</p> <ul style="list-style-type: none"> • 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 
<p>DIODES</p> <p>4-Line Bus-Port ESD Protection</p> <p>VBUS54ED-FBL</p> <ul style="list-style-type: none"> • Ultra compact LLP2510-10L package • Low load capacitance C_D = 0.8 pF 	<p>RESISTORS</p> <p>Thick Film Chip Resistors, High-Voltage</p> <p>CRHV</p> <ul style="list-style-type: none"> • High-voltage capability (up to 3 kV), with outstanding stability (< 0.5 %) • Can be customized to meet specific customer needs 	<p>OPTOELECTRONICS</p> <p>Ambient Light Sensor in Miniature 0805 Package with Phototransistor Output</p> <p>TEMT6200FX01</p> <ul style="list-style-type: none"> • Wavelength of peak sensitivity of 550 nm, similar to human eye sensitivity • Excellent linearity over operating temperature range of -40 °C to +100 °C 
<p>RECTIFIERS</p> <p>Dual High-Voltage Trench MOS Barrier Schottky Rectifier</p> <p>VI30120C</p> <ul style="list-style-type: none"> • Trench MOS Schottky technology • Low forward voltage drop, low power losses 	<p>ICs</p> <p>8-Channel, Dual 4-Channel, Triple 2-Channel Multiplexers</p> <p>DG9451</p> <ul style="list-style-type: none"> • 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 	<p>MOSFETs</p> <p>E Series 600 V N-Channel Power MOSFET</p> <p>SiHF15N60E</p> <ul style="list-style-type: none"> • 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 
<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: ± 65°, 1.6 mm x 0.8 mm x 0.8 mm (L x W x H) 	<p>DIODES</p> <p>Surface-Mount TRANSZORB® Transient Voltage Suppressors</p> <p>SMAJxx</p> <ul style="list-style-type: none"> • 400 W peak pulse power capability with a 10/1000 μs waveform • AEC-Q101 qualified 	<p>OPTOELECTRONICS</p> <p>IR Receiver Modules for Remote Control Systems</p> <p>TSOP57...</p> <ul style="list-style-type: none"> • 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



View datasheets for these products
www.vishay.com/ref/et3cn2d

<p>RECTIFIERS</p> <p>High Current Density Surface-Mount Schottky Rectifiers</p>  <p>SS3P4</p> <ul style="list-style-type: none"> • Very low profile – typical height of 1.1 mm • AEC-Q101 qualified 	<p>FILM CAPACITORS</p> <p>DC Film Capacitors MKT Radial Potted Type</p>  <p>MKT370</p> <ul style="list-style-type: none"> • General purpose MKT pitch 5 mm / 7.5 mm and 10 mm 	<p>DIODES</p> <p>Surface-Mount TRANSZORB® Transient Voltage Suppressors</p>  <p>SMAJxx</p> <ul style="list-style-type: none"> • 400 W peak pulse power capability with a 10/1000 μs waveform • AEC-Q101 qualified
<p>MOSFETs</p> <p>Dual N-Channel 30 V (D-S) MOSFETs</p>  <p>SiZ340DT</p> <ul style="list-style-type: none"> • 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 	<p>RESISTORS</p> <p>12.5 mm Modular Panel Potentiometer, Cermet (P11S) or Conductive Plastic Elements (P11A)</p>  <p>P11S</p> <ul style="list-style-type: none"> • Versatile options and dimensions available, up to 7 modules • Compliant to RoHS, tested according to CECC, value added and customs avail. 	<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>INDUCTORS</p> <p>IHLD Dual Inductor for Class D Amplifiers, High Temperature up to +155 °C</p>  <p>IHLD-4032</p> <ul style="list-style-type: none"> • Optimal design realizes high quality sound and low distortion • Low coupling for minimal cross-talk between inductors 	<p>RECTIFIERS</p> <p>Ultrafast Rectifier, 3 A FRED Pt®</p>  <p>3EJH02</p> <ul style="list-style-type: none"> • 175 °C maximum operating junction temperature • AEC-Q101 qualified 	<p>RESISTORS</p> <p>Professional Thin Film Chip Resistors</p>  <p>MCS0402...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>E Series 600 V N-Channel Power MOSFET</p>  <p>SiHP7N60E</p> <ul style="list-style-type: none"> • High performance E Series high-voltage technology, maximum $R_{DS(on)}$ 600 mΩ • Popular TO-220 packaging, maximum continuous current of 7 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>DIODES</p> <p>Bidirectional Symmetrical (BiSy) Single Line ESD Protection Diode in LLP1006-2L</p>  <p>VCUT07B1-HD1</p> <ul style="list-style-type: none"> • Ultra compact LLP1006-2L package • Low load capacitance $C_D = 14$ pF




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

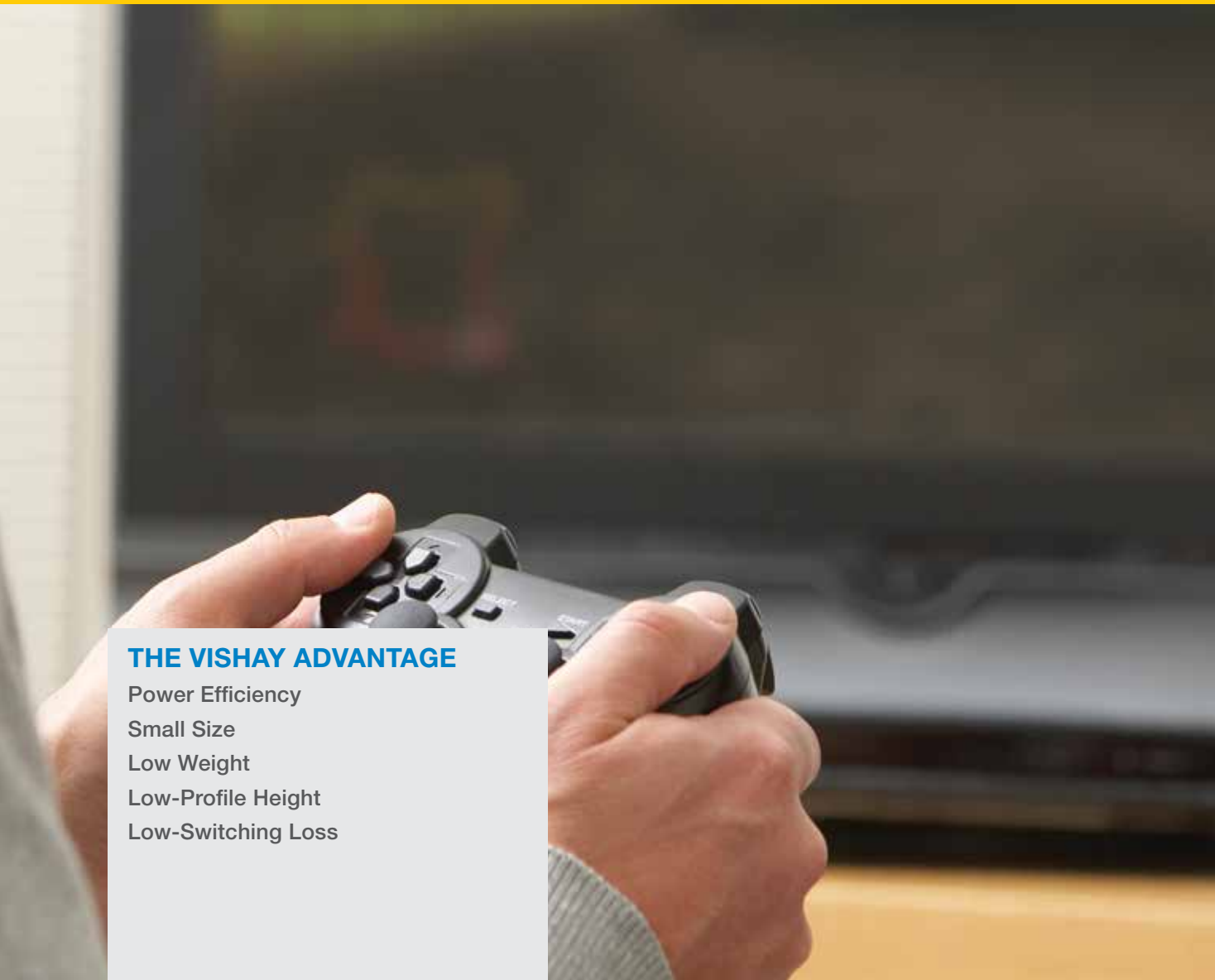


[DG469](#)

- 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

Key components for GAMING



Game Consoles



**Portable
Game Consoles**



**Accessories /
Controllers /
Steering Wheels**



THE VISHAY ADVANTAGE


- Power Efficiency
- Small Size
- Low Weight
- Low-Profile Height
- Low-Switching Loss

Game Consoles



OPTOELECTRONICS

IR Receiver Modules for Remote Control Systems



[TSOP58...](#)

- Industry leading range of 45 m, directivity of $\pm 45^\circ$ in a thru-hole package
- Minimum irradiance of 0.12 mW/m², and featuring AGC-3 or AGC-4 noise suppression

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

DIODES

Surface-Mount TRANSZORB® Transient Voltage Suppressors




[SMCJxx](#)

- AEC-Q101 qualified
- Available in unidirectional and bidirectional

ICs

60 A VRPower® Integrated Power Stage Offers Highest Power Density and Efficiency




[SiC620](#)

- 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

RESISTORS

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



[WSLx](#)

- Extremely low resistance values from 0.0005 Ω to 0.5 Ω and tolerance of 1 %
- Power Metal Strip all-welded construction offers high pulse capacity

ICs

50 A, 5 V / 3.3 V PWM Integrated DrMOS Power Stage



[SiC780](#)

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

RESISTORS

Professional Thin Film Chip Resistors

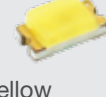


[MCS0402...e3](#)

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

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)

RECTIFIERS

Dual Trench MOS Barrier Schottky Rectifier




[VT2080C](#)

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

INDUCTORS

Low-Profile, High-Current IHLP® Inductors




[IHLP](#)

- Compact, high-current power inductor for DC/DC conversion and filter applications
- High-frequency operation up to 5 MHz

MOSFETs

N-Channel 30 V (D-S) MOSFET




[SiSA18ADN](#)

- TrenchFET® Gen IV technology for increased power density, maximum R_{DS(on)} 7.5 mΩ
- Thermally enhanced PowerPAK® 1212-8 is 1/3 the size of an SO-8

DIODES

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



[VBUS54ED-FBL](#)

- Very low profile – typical height of 0.65 mm
- Soldering can be checked by standard vision inspection

View datasheets for these products
www.vishay.com/ref/et3cn3a

Portable Gaming Consoles




<p>INDUCTORS</p> <p>Low-Profile, High-Current IHLP® Inductors</p>  <p>IHLP-1616ABER1R0M01</p> <ul style="list-style-type: none"> • High-current, very low profile power inductor for DC/DC conversion and filtering • High-frequency operation up to 5 MHz 	<p>MOSFETs</p> <p>Dual N-Channel 30 V (D-S) MOSFETs</p>  <p>SiZ340DT</p> <ul style="list-style-type: none"> • TrenchFET® Gen IV technology for increased power density, maximum $R_{DS(on)}$ 5.1 mΩ • PowerPAIR® package optimizes high and low side MOSFETs to increase efficiency 	<p>RESISTORS</p> <p>Professional Thin Film Chip Resistors</p>  <p>MCS0402...e3</p> <ul style="list-style-type: none"> • Excellent stability class 0.5, cost efficient • CECC approved acc. EN 140401-801, sulfur-resistant
<p>RECTIFIERS</p> <p>High Current Density Surface-Mount Trench MOS Barrier Schottky Rectifier</p>  <p>V8PM12</p> <ul style="list-style-type: none"> • Trench MOS Schottky technology • AEC-Q101 qualified 	<p>RESISTORS</p> <p>Thick Film Surface-Mount Chip Resistors, Wraparound, Extremely Low Value</p>  <p>RCWE</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>OPTOELECTRONICS</p> <p>High-Speed Infrared Emitting Diodes, 890 nm, GaAIAs, DH</p>  <p>VSMF2890GX01</p> <ul style="list-style-type: none"> • 890 nm emitting diode in GaAIAs technology with high radiant power of 40 mW, $I_F=100$ mA • 2.3 mm x 2.3 mm x 2.8 mm gullwing SMD pkg., ± 12° angle of half intensity
<p>ICs</p> <p>20 mΩ, Slew Rate Controlled Load Switch in WCSP6</p>  <p>SiP32458</p> <ul style="list-style-type: none"> • Low and flat R_{ON} over the full operation voltage range • Features low I_Q, reverse blocking with guaranteed less than 10 μA leakage 	<p>OPTOELECTRONICS</p> <p>Fully Integrated Proximity and Ambient Light Sensor with I²C Interface</p>  <p>VCNL4020</p> <ul style="list-style-type: none"> • 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 	<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>TANTALUM CAPACITORS</p> <p>vPolyTan™ Polymer Tantalum Capacitors</p>  <p>T55</p> <ul style="list-style-type: none"> • High-capacitance, low-ESR polymer tantalum capacitors • Stable electrical performance over temperature and voltage 	<p>ENERGY STORAGE CAPACITORS</p> <p>Hybrid Storage Capacitors</p>  <p>196 HVC ENYCAP™</p> <ul style="list-style-type: none"> • Extreme small profile with high energy density • Instant rechargeable, suitable for solar power charging 	<p>OPTOELECTRONICS</p> <p>IR Receiver Modules for Remote Control Systems</p>  <p>TSOP6236TR</p> <ul style="list-style-type: none"> • Low supply current, photo detector and preamplifier in one package • Supply voltage: 2.5 V to 5.5 V, improved immunity against ambient light


View datasheets for these products
www.vishay.com/ref/et3cn3b

*Accessories /
Controllers /
Steering Wheels*




ICs
Low-Voltage Dual SPDT Analog Switch with Negative Swing Audio Capability 
[DG2750](#)

- Supports negative swing signal down to -2 V
- 0.6 Ω low switch on resistance, and 4 pC low charge injection

TANTALUM CAPACITORS
Solid Tantalum Surface-Mount Chip Capacitors, TANTAMOUNT[®], Standard Industrial Grade 
[293D](#)


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

ICs
Low-Voltage, Fault Protection, SP3T Analog Switch (3:1 Multiplexer / Demultiplexer) 
[DG2522](#)

- 0.8 Ω low switch on-resistance and 105 MHz bandwidth
- Power over V+ rail protection with guaranteed low leakage under fault condition

TANTALUM CAPACITORS
Solid Tantalum Chip Capacitors 298D MICROTAN[®], 298W Extended Range MICROTAN 
[298D](#)

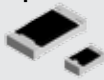
- High capacitance in small case sizes including 0603 and 0402 footprint
- Perfect for space constrained designs

NON-LINEAR RESISTORS
SMD 0603, Glass Protected NTC Thermistors 
[NTCS0603xx](#)


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

MOSFETs
P-Channel 20 V (D-S) MOSFET 
[Si2367DS](#)


- Classic TrenchFET[®] technology with on-resistance rating down to 1.8 V
- Popular SOT-23 packaging

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

ICs
1.1 V to 5.5 V, Slew Rate Controlled Load Switch 
[SiP32408](#)


- Flat row R_{ON} down to 1.2 V, 42 m Ω typical from 1.5 V to 5 V
- Slew rate controlled turn-on: 2.5 ms at 3.6 V

DIODES
Low-Capacitance Bidirectional Symmetrical (BiSy) Single Line ESD-Protection Diode 
[VBUS05A1-SD0](#)


- Ultra compact CLP0603 package
- Low package height < 0.3 mm

INDUCTORS
Low-Profile, High-Current Inductors 
[IFSC](#)

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

RESISTORS
Professional Thin Film Chip Resistors 
[MCS0402...e3](#)

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

RECTIFIERS
Surface-Mount Schottky Barrier Rectifier 
[SS32-M3](#)

- Low-profile package
- Low power losses, high efficiency, low forward voltage drop, high surge capability

View datasheets for these products
www.vishay.com/ref/et3cn3c

Key components for
TOYS



**Remote
Controlled
Helicopters /
Quadrocopters**



**Outdoor
Cameras**



THE VISHAY ADVANTAGE

- Wide Working Temperature Range
- Low Weight
- Small Size
- Long Life

Remote Controlled Helicopters / Quadrocopters

INDUCTORS

Low-Profile, High-Current IHLP® Inductors



[IHLP-2525](#)

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

OPTOELECTRONICS

High-Speed, High-Power 940 nm Infrared Emitting Diode



[VSLB3948](#)

- Radiant intensity of 65 mW/sr with $I_F = 100 \text{ mA}$
- Angle of half intensity of $\pm 22^\circ$

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

OPTOELECTRONICS

IR Receiver Modules for Remote Control Systems



[TSOP75438](#)

- Very low supply current, photo detector and preamplifier in one package
- Supply voltage: 2.5 V to 5.5 V, capable of side or top view

DISPLAYS

High-Quality Displays Offer Excellent Human-to-Machine Interface Solutions



[LCD, Color TFT, OLED](#)

- Standard and custom display / modules for flight control and monitoring
- High brightness options for LCD, OLED, and color TFT

OPTOELECTRONICS

Silicon NPN Phototransistor with High Radiant Sensitivity



[TEFT4300](#)

- Collector light current of 3.2 mA with $E_g = 1 \text{ mW/cm}^2$
- Daylight blocking filter matched with 940 nm emitters

TANTALUM CAPACITORS

vPolyTan™ Polymer Tantalum Capacitors



[T55](#)

- High-capacitance, ultra low-ESR polymer tantalum capacitors
- Small case size, low profile

ENERGY STORAGE CAPACITORS

Hybrid Storage Capacitors



[196 HVC ENYCAP™](#)

- Power back up and battery pulse power support
- Very small size and high energy density

View datasheets for these products
www.vishay.com/ref/et3cn4a

Outdoor Cameras

OPTOELECTRONICS

High-Speed, High-Power 940 nm Infrared Emitting Diode



[VSLB3948](#)

- Radiant intensity of 65 mW/sr with $I_F = 100 \text{ mA}$
- Angle of half intensity of $\pm 22^\circ$

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

DISPLAYS

High-Quality Displays Offer Excellent Human-to-Machine Interface Solutions

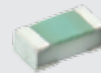


[LCD, Color TFT, OLED](#)

- Standard and custom display / modules for flight control and monitoring
- High brightness options for LCD, OLED, and color TFT

THIN FILM RESISTORS

Professional Thin Film Chip Resistors



[MCS0402](#)

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

NON-LINEAR RESISTORS

SMD Glass Protected NTC Thermistors



[NTCS0402](#)

- Glass protected with soft terminations
- Small size, high accuracy, easy to read out

OPTOELECTRONICS

Silicon NPN Phototransistor with High Radiant Sensitivity



[TEFT4300](#)

- Collector light current of 3.2 mA with $E_g = 1 \text{ mW/cm}^2$
- Daylight blocking filter matched with 940 nm emitters

ENERGY STORAGE CAPACITORS

Hybrid Storage Capacitors



[196 HVC ENYCAP™](#)

- Small size and high energy density for BT and GPS support
- Scalable, flexible voltages, easy to charge

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

View datasheets for these products
www.vishay.com/ref/et3cn4b

Spotlight on SurfLight™ – High Power IR Emitters

Vishay's SurfLight surface emitting technology is redefining performance standards for infrared emitters. With SurfLight, nearly all the light and power is emitted out the top of the chip, unlike standard infrared emitters that emit their light in all directions. With most of the light concentrated on the surface, you get higher intensity - up to five times greater than standard emitter technology - and that means fewer emitters are needed, lowering the total system cost of your application.

FEATURES

- Based on surface emitting technology
- High radiant power
- High speed
- High pulse current operation
- Peak wavelength: 850 nm or 940 nm
- High radiant intensity
- Best-in-class reliability

APPLICATIONS

- Infrared illumination for CMOS cameras (CCTV)
- Industrial
 - Machine visions, objective detection
 - Light curtains
 - Smoke detectors
 - Closed circuit television illumination
- Infrared data transmission / communication
- Automotive
 - Illumination for heads-up display

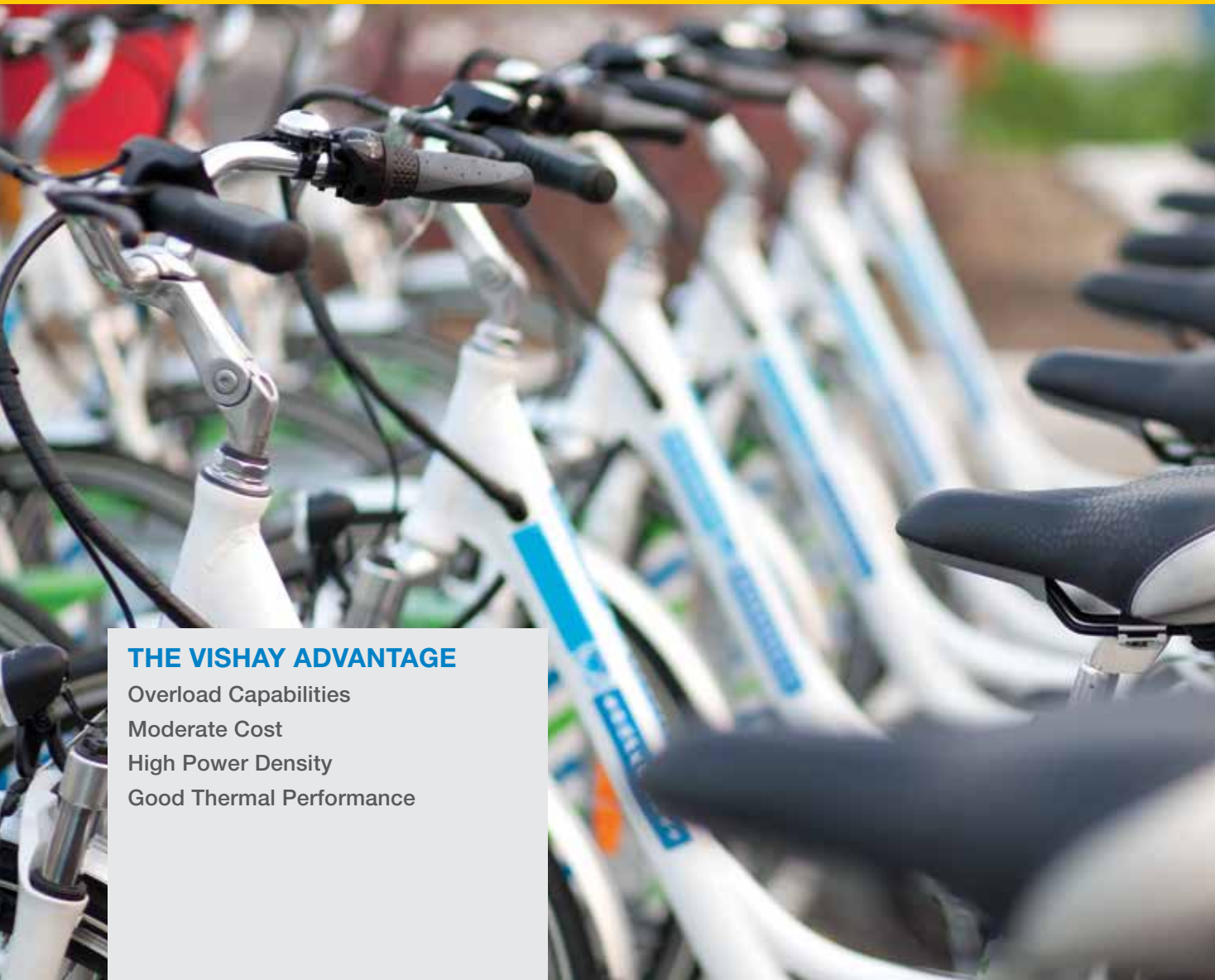
RESOURCES

- Optoelectronics product portfolio: www.vishay.com/optoelectronics
- For technical questions contact emittertechsupport@vishay.com
- Sales contact: www.vishay.com/doc?99914

	Case Type	Part Number	Angle of Half Intensity (°)	Radiant Intensity ^(A) (mW/sr)
	3 mm	VSLY3850	± 18	70
	5 mm	VSLY5850, -5940	± 3	600
	0805	VSMY1850X01, -1940X01	± 60	10
	Dome lens	VSMY2850RG, -2940RG	± 10	100
		VSMY2850G, -2940G	± 10	100
	Dome lens	VSMY2853RG, -2943RG	± 28	35
		VSMY2853G, -2943G	± 28	35
	Dome lens	VSMY2853SL, -2943SL	± 28	35
	PLCC-2	VSMY3850, -3940X01	± 60	17
	Little Star®	VSMY7850X01	± 60	170 ^(B)
		VSMY7852X01	± 60	42 ^(C)
	QFN with lens	VSMY98545	± 45	350 ^(B)
		VSMY99445DS	± 45	600 ^(B)
	Side view lens	VSMY14940	± 9	82 ^(D)

Notes: (A) $I_f = 100$ mA; (B) $I_f = 1.0$ A; (C) $I_f = 250$ mA; (D) $I_f = 70$ mA

Key components for
ELECTRIC TWO-WHEEL TRANSPORTATION



**E-Bikes /
E-Scooters**



THE VISHAY ADVANTAGE

- Overload Capabilities
- Moderate Cost
- High Power Density
- Good Thermal Performance

E-Bikes / E-Scooters


MOSFETs

**N-Channel 100 V (D-S)
175 °C MOSFET**

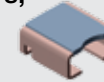


[SUM110N10-09](#)

- Classic TrenchFET® technology, maximum $R_{DS(on)}$ 9.5 mΩ
- Popular D²PAK packaging

RESISTORS

**Power Metal Strip® Resistors,
Very High Power (to 7 W)**



[WSLP2726](#)

- High power rating of 5 W to 7 W in WSLP2726 package
- Very low resistance values, 0.0005 Ω to 0.002 Ω, in 4-terminal package

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

OPTOELECTRONICS

**Fully Integrated Proximity and
Ambient Light Sensor with
I²C Interface**



[VCNL4020-GS08](#)

- 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

INDUCTORS

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

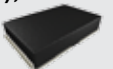


[IHLP-6767GZ-5A](#)

- Automotive Grade, high-current power inductor for DC/DC conversion
- High-temperature continuous operation up to 155 °C

RESISTORS

**Low Value (Down to 0.0005 Ω),
Surface-Mount**



[WSHM2818](#)

- Very high power rating of 7 W in small 2818 package
- Very low resistance values, 0.001 Ω to 0.10 Ω, with tolerance of 1 %

NON-LINEAR RESISTORS

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

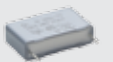


[NTCLE306E3....](#)

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

FILM CAPACITORS

**Interference Suppression Film
Capacitor – Class Y2, Radial
MKP 300 V_{AC} – Line to
Ground Application**



[MKP338 6](#)

- AEC-Q200 qualified
- Robust design

Key components for MOBILE



VHKJ79DSG7DR56YG7FH73

Smartphones



Wireless Modems



Wireless Charging



THE VISHAY ADVANTAGE

- High-Frequency Operation
- Small Size
- Low Profile
- High Q
- Optimized Impedance
- High SRF
- and more....



Smartphones



<p>RESISTORS</p> <p>Professional Thin Film Chip Resistors</p>  <p>MCS0402...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 1.2 V (G-S) MOSFET</p>  <p>SiB417AEDK</p> <ul style="list-style-type: none"> • Low on-resistance guaranteed with gate voltages down to 1.2 V • 1.6 mm x 1.6 mm PowerPAK® SC-75 package for single battery cell portable applications 	<p>INDUCTORS</p> <p>Low-Profile, High-Current Inductors</p>  <p>IFSC0806AB</p> <ul style="list-style-type: none"> • Very small, low-profile power inductor for DC/DC conversion • Operation below 5 A
<p>RECTIFIERS</p> <p>Surface-Mount ESD Capability Rectifier</p>  <p>MSE1PJ</p> <ul style="list-style-type: none"> • AEC-Q101 qualified • Very low profile – typical height of 0.65 mm 	<p>ICs</p> <p>0.8 V to 2.5 V, 28 mΩ, Slew Rate Controlled Load Switch in WCSP4</p>  <p>SiP32454, SiP32408</p> <ul style="list-style-type: none"> • Low and flat R_{ON} over the full operation voltage range • Feature true reverse current blocking and output discharge on turn off 	<p>DIODES</p> <p>3-Line On-The-Go Bus-Port Protection</p>  <p>VBUS053CZ-HAF (USB OTG)</p> <ul style="list-style-type: none"> • Compact LLP75-7L package • Low capacitance between I/O lines: 0.3 pF
<p>TANTALUM CAPACITORS</p> <p>Solid Tantalum Chip Capacitors 298D MICROTAN®, 298W Extended Range MICROTAN</p>  <p>298D</p> <ul style="list-style-type: none"> • High capacitance in small case sizes including 0603 and 0402 footprint • Perfect for space constrained designs 	<p>OPTOELECTRONICS</p> <p>Fully Integrated Proximity and Ambient Light Sensor with I²C Interface</p>  <p>VCNL4020</p> <ul style="list-style-type: none"> • 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 	<p>ICs</p> <p>Audio Jack Detector with Send / End Detect</p>  <p>DG2592</p> <ul style="list-style-type: none"> • Wide operating voltage range: 1.6 V to 5.5 V, low quiescent current of 10 μA, max. at V_{DD} = 1.8 V • Integrated sense comparator for audio L of 1.4 V ± 5 % threshold
<p>ICs</p> <p>6.5 mΩ, Bidirectional Battery Switch in Compact WCSP</p>  <p>SiP32101, SiP32102</p> <ul style="list-style-type: none"> • Bidirectional ON and OFF, ultra low R_{ON}, 6.5 mΩ (typ.) at 3.3 V, wide input voltage, 2.3 V to 5.5 V • Slew rate controlled turn on, ultra-low quiescent current: 15 pA 	<p>RESISTORS</p> <p>Power Metal Strip® Resistors, Very High Power, Low Value Surface-Mount</p>  <p>WSLP0603</p> <ul style="list-style-type: none"> • Very high power rating of 0.4 W in small 0603 package • Extremely low resistance values from 0.01 Ω to 0.1 Ω and tolerance of 1 % 	<p>INDUCTORS</p> <p>Low-Profile, High-Current IHLP® Inductors</p>  <p>IHLP-1212AB</p> <ul style="list-style-type: none"> • Very low profile high-current inductor for DC/DC conversion and filtering

View datasheets for these products www.vishay.com/ref/et3te1a




Wireless Modems



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

[SiA431DJ](#)

- Low on-resistance guaranteed with gate voltages down to 1.5 V
- 2 mm x 2 mm PowerPAK® SC-70 packaging for hand held applications

CERAMIC CAPACITORS
Robust Design Build with Wet Process

[VJ1812Y223KXGAT](#)

- High breakdown voltage
- Polymer (soft) termination options

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)


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

ICs
Low Power Consumption Current Mode Controller

[SiP2802DY](#)


- Pin-for-pin compatible with UCC280X, enhanced performance UC284X
- Advanced architecture enables complete offline and DC/DC designs with few components

RESISTORS
Power Metal Strip® Resistors, Low Value (Down to 0.005 Ω), Surface-Mount

[WSL0805](#)


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

RECTIFIERS
High-Voltage Surface-Mount Schottky Barrier Rectifier

[SS2PH10](#)


- AEC-Q101 qualified
- Very low profile – typical height of 1.0 mm

TANTALUM CAPACITORS
Solid Tantalum Chip Capacitors TANTAMOUNT®, Low Profile, Conformal Coated

[592W](#)

- Maximum capacitance in low-profile packages
- Up to 2200 μF in a single 2.0 mm height package

INDUCTORS
Low-Profile, High-Current IHLP® Inductors

[IFSC-1111AZ](#)

- Very small, low-profile power inductor for DC/DC conversion

TANTALUM CAPACITORS
vPolyTan™ Polymer Tantalum Capacitors

[T55 Series](#)

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

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

[RCWE0402](#)

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

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

View datasheets for these products
www.vishay.com/ref/et3te1b



Wireless Charging




INDUCTORS

Wireless Charging Receiving Coil / Shield

[IWAS3827](#)

- Thin, efficient, low saturation Rx coil in a smaller size with same performance
- WPC and PMA compatibility, custom sizes also available




OPTOELECTRONICS

Optocoupler with Phototransistor Output and Trigger Current of $I_F = 5\text{ mA}$

[VO617A](#)

- High current transfer ratio, and high isolation voltage of $5300\text{ V}_{\text{RMS}}$
- Operating temperature from $-55\text{ }^\circ\text{C}$ to $+110\text{ }^\circ\text{C}$ in a DIP-4 or SMD package




CERAMIC CAPACITORS

Economical Solution for Commodity Applications

[VJ...W1BC Series](#)

- High capacitance in X5R, X7R, and Y5V
- Small size enables miniaturization and board space savings



MOSFETs

N-Channel 30 V (D-S) MOSFET

[SiS472ADN](#)

- High-density technology, with maximum $R_{\text{DS(on)}}$ down to $8.5\text{ m}\Omega$
- Thermally enhanced PowerPAK[®] 1212-8 is 1/3 the size of an SO-8




RESISTORS

Power Metal Strip[®] Resistors, Low Value (Down to $0.01\text{ }\Omega$), Surface-Mount

[WSL0603](#)

- Low TCR element ($< 20\text{ ppm}/^\circ\text{C}$) results in accurate current sensing in applications
- Power Metal Strip construction offers high reliability in critical applications

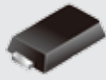


RECTIFIERS

Surface-Mount Schottky Barrier Rectifiers

[MSS2P2](#)

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




NON-LINEAR RESISTORS

SMD 0402, Glass Protected NTC Thermistors

[NTCS0402 10K 5 %](#)

- Tolerance on R_{25} down to $1\text{ }\%$
- Glass protected with flex terminations




MOSFETs

N-Channel 30 V (D-S) MOSFET

[SiA400EDJ](#)

- TrenchFET[®] technology providing low maximum $R_{\text{DS(on)}}$ of $19\text{ m}\Omega$ in a small package
- $2\text{ mm} \times 2\text{ mm}$ PowerPAK[®] SC-70 packaging



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




INDUCTORS

Wireless Charging Receiving Coil / Shield

[IWAS4832](#)

- Thin, efficient, low saturation Rx coil
- WPC and PMA compatibility, custom sizes also available




RESISTORS

Thick Film Chip Attenuator, Surface-Mount, Unbalanced Π Type

[CZA](#)

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




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

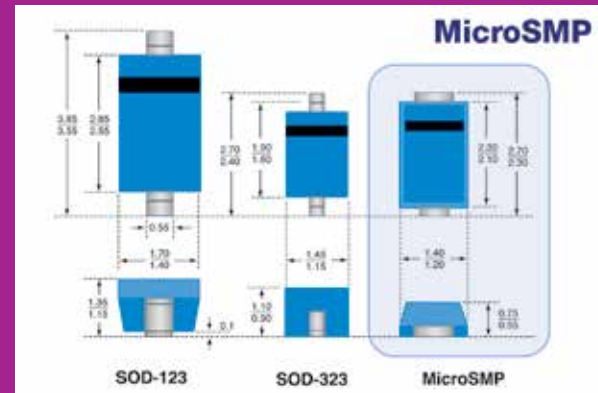


View datasheets for these products www.vishay.com/ref/et3te1c

Spotlight on Miniature Surface-Mount Packages for Rectifiers and Transient Voltage Suppressors

Vishay is a leader in miniaturization of rectifiers and transient suppression devices, providing high power density and low-profile options for space-limited applications.

MicroSMP Packaged Diodes



FEATURES

- High-power-density rectifiers and TVS in space-saving 2.5 mm by 1.3 mm footprint with a 0.65 mm height
- High forward current up to 1 A for rectifiers and 150 W (10/1000 μ s waveform) clamping power capability in TVS
- All the devices offer a high 25 A forward surge current capability for an 8.3 ms pulse for rectifiers
- Up to 175 °C maximum operation junction temperature for rectifiers
- Provides improved reliability and a longer operational life span

APPLICATIONS

- Secondary rectification and freewheeling diode functions for miniature AC/DC and DC/DC converters
- Flywheel and polarity protection for miniature power converters and portable electronics
- Polarity protection of power lines and signal lines for industrial systems
- Power and signal line protection for microprocessors, signal processing ICs, and logic circuits
- High-power voltage regulation for non-sensitive input voltage circuits in automotive and industrial electronics

Products in Focus CLP0603 ESD Diodes

VCUT050D1-SD0

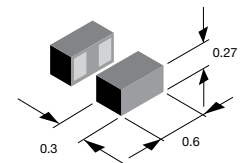
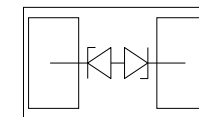
Bidirectional single line ESD diode

- 30 kV contact discharge

VBUS05A1-SD0

Low capacitance bidirectional single line ESD diode

- Low load capacitance 0.52 pF typical



To learn more about enhanced Surface-Mount Power (eSMP®) packages visit www.vishay.com/landingpage/tradeshows/diodes/





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