



Super 12

Featured Products



Build Vishay
into your Design



Thin Film Chip Resistors

TNPW 0603 e3 and MCT 0603 AT

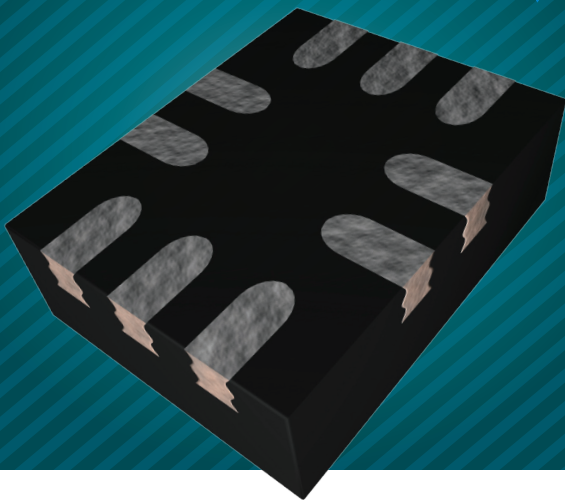
High pulse load and long-term stability devices

Features:

- 175 °C operating temperature
- High pulse load stability
- Long-term stability: $\leq 0.25\%$ (P_{70} for 1000 h)
- Excellent moisture resistance
- Meets AEC-Q200 requirements

Applications:

- Automotive (e.g., ABS, ECU, airbag)
- Telecom (e.g., base stations)
- Industrial (e.g., measurement circuits)



Two-Port, High-Speed USB 2.0 (480-Mbps) Switch 1:2 MUX/DeMUX

DG2722

Low-power analog switch

Greater than 900-MHz -3-dB bandwidth in miniQFN10

Features:

- Exceeds 900-MHz -3-dB bandwidth
- 5.6-pF switch capacitance
- Power-down protection mode
- Over 8-kV ESD HBM
- Space-saving miniQFN10 (1.4 mm x 1.6 mm)

Applications:

- Cell phones, PDAs
- MP3/MP4 players, digital cameras
- Notebook and desktop computers
- TVs and monitors



MICRO FOOT® Power MOSFETs

Si8xxxDB series

Industry's smallest MOSFET

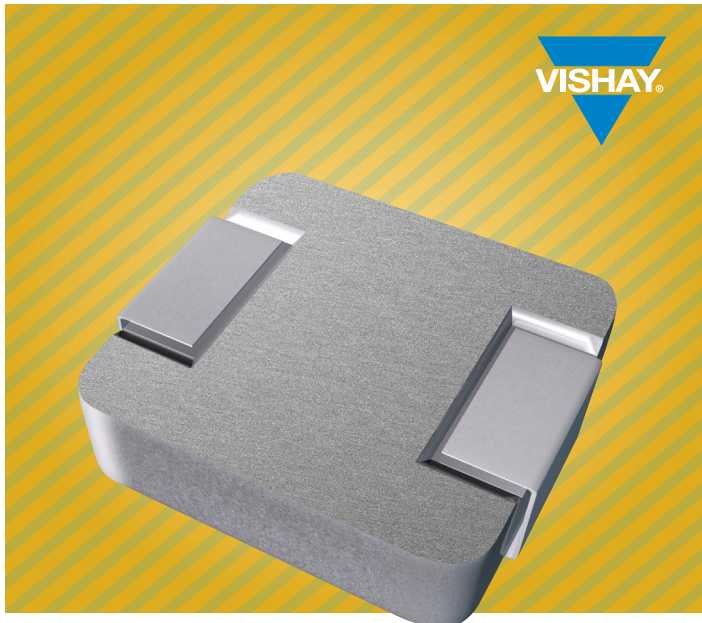
Industry's lowest on-resistance for chip-scale MOSFETs

Features:

- Smallest MOSFET footprints: 1.2 x 1.0 mm and 1.5 x 1.0 mm
- Thin profile: 0.59 mm
- Lowest on-resistance for chip-scale MOSFETs
- Low on-resistance ratings:
 - Reduce power consumption
 - Extend battery usage times

Applications (load switching):

- MP3 players
- Smart phones and cell phones
- Digital cameras
- PDAs



Surface-Mount Power Inductors

IHLP[®]-2020

Miniature (5-mm x 5-mm) surface-mount inductors
High-current, high-inductance, low-profile devices

Features:

- Low-profile options: 1.2 mm, 2.0 mm, and 3.0 mm
- Inductance values from 0.47 μH to 22 μH
- Best performance in this size vs. larger IHLP-2525
 - Saturation, core loss, and temperature stability
 - 35 % smaller footprint
 - Up to 85 % current capacity

Applications:

- DC/DC convertors (boost/buck) up to 1.5 MHz
- High-current filters
- LED drivers



VISHAY®



HVArc Guard® Surface-Mount MLCC Capacitor

VJ1206xxxxxxxxxx5Z

SMD arc-over suppression solution
Requires no conformal coating of the PCB

Features (1000 VDC, 27,000pF, X7R):

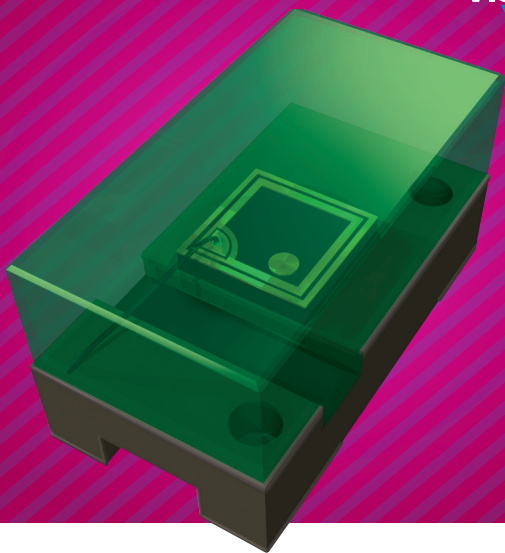
- Typically provides 2x higher breakdown voltage
- Typically provides 3x higher capacitance
- 64 % reduction in board space (1206 vs. 1812)

Applications:

- Ballasts
- Voltage multiplier circuits
- Snubber circuits



VISHAY®



Ambient Light Sensor

TEMT6200FX01

Industry's smallest light sensor – 0805 package
Controls LCD intensity with “human eye-like” response to light

Features:

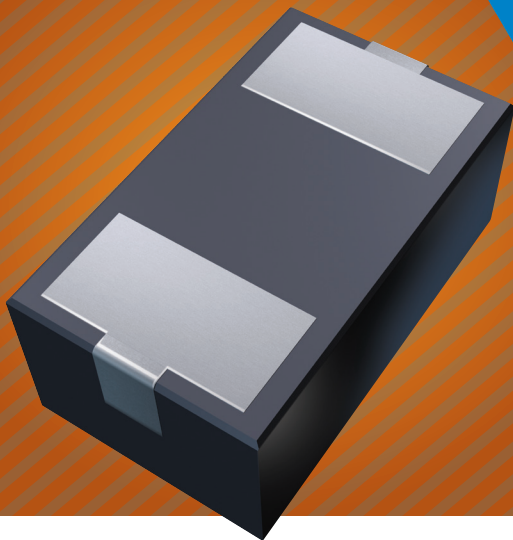
- 2.00 mm x 1.25 mm x 0.85 mm
- Linear response from 0 lux to 30 klux
- Automotive qualified AEC-Q101
- Operating temperature: -40 °C to +100 °C

Applications:

- GPS navigation systems
- Automotive and avionics instrument panels
- Street and architectural lighting
- Cell phones
- TVs and monitors



VISHAY®



Low-Capacitance ESD Diode

VBUS051BD-HD1

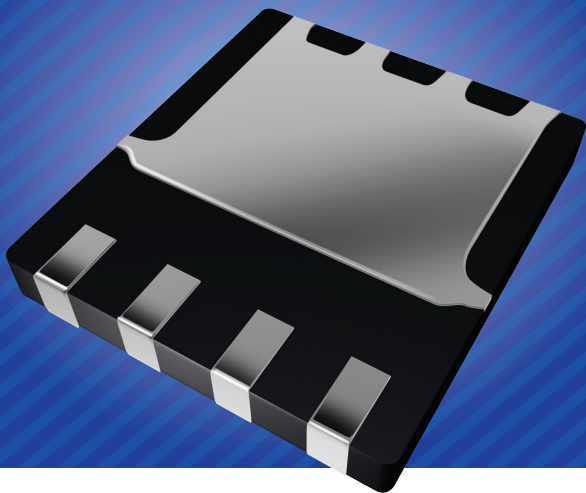
LLP1006 package with side solderability to avoid x-ray inspection

Features:

- Ultra-compact LLP1006-2L leadless package
- Easy test inspection
- Low load capacitance: 0.9 pF
- Low leakage current: $< 0.1 \mu\text{A}$
- ESD immunity: $> \pm 15 \text{ kV}$

Applications:

- Mobile communications
- Mobile consumer (e.g., MP3)
- HDMI



TrenchFET® Gen III Power MOSFETs

Si series

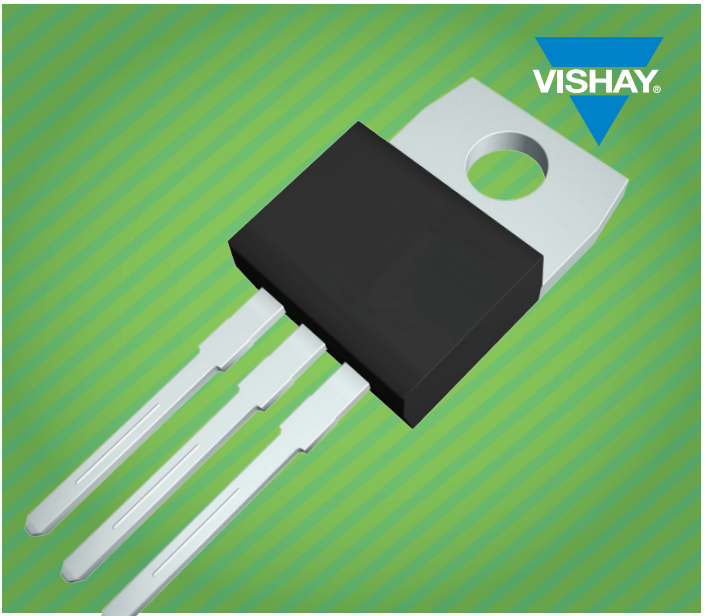
New breakthrough lowers $R_{DS(on)}$
Lowest max. on-resistance at $V_{GS} = 4.5\text{ V}$ for 30 V
in SO-8 footprint

Features:

- Record-breaking 2.25 m Ω max. on-resistance at $V_{GS} = 4.5\text{ V}$
- Record-breaking 98 m Ω – nC FOM at $V_{GS} = 4.5\text{ V}$
- Thermally advanced PowerPAK® SO-8 (additional PowerPAK 1212-8, SO-8 options)

Applications:

- Low-side MOSFET in synchronous buck converters
- Synchronous rectification
- OR-ing MOSFETs



TMBS[®] Trench MOS Barrier Schottky Rectifiers

MBR, V, VB, VF, and VI series

Industry's first commercial trench MOS barrier Schottky
Reduced switching loss improves power efficiency

Features:

- Patented trench structures, ratings: 200 V, 150 V, 120 V, 100 V, 60V
- Improved efficiency in ac-to-dc SMPS and dc-to-dc convertors
- High power density and low forward voltage
- Multiple package options

Applications:

- Adaptors for LCD monitors/TVs, mini-PCs
- PC/server power supplies
- AC/DC SMPS
- DC/DC convertors
- Telecom and server OR-ing diodes



SMPC (TO-277A) Miniature Power Package

S4P, SS, UH, and V series

Low-profile, enhanced surface-mount packages for rectifiers and TVS. High power density with special wide bottom plate designs

Features:

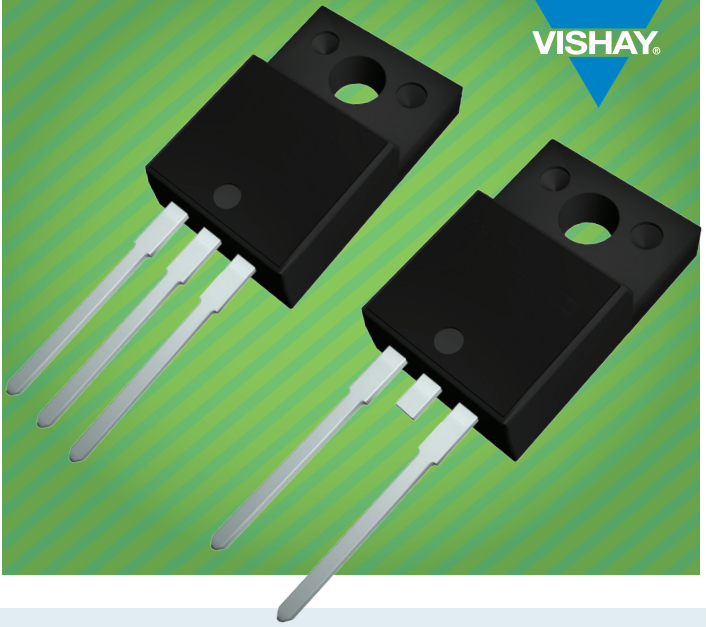
- eSMP™ family: high power density, efficiency
- Space-saving packages, e.g., 6.7 x 4.8 x 1.1 (H) mm
- Unique wide bottom plate design, excellent heat dissipation
- Low thermal resistance, AEC-Q101 qualified
- Schottky, Ultrafast, and standard rectifiers

Applications:

- Automotive (polarity/surge protection)
- Consumer: adaptors, SMPS, power supply systems for PC servers and telecom systems
- Solar cells: protection against hot spot damage



VISHAY®



600-V FRED Pt™ Hyperfast Rectifiers

8SxTH06FP, 15SxTH06FP

600-V FRED series for power factor correction
Higher system frequency efficiency, lower power losses, high T_j

Features:

- Excellent switching performance and low forward voltage drop
- +175 °C maximum operating junction temperature
- Very soft recovery at high di/dt with minimum ringing
- Extremely low leakage currents
- Lower cost alternative to SiC diodes

Applications (Power factor correction):

- SMPS
- Adaptors
- PC/server power supplies

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