



Key components for **PASSIVE SAFETY**

Airbag Control Systems



Restraint System Power Supplies



Pedestrian Protection Systems



THE VISHAY ADVANTAGE

- AEC Qualifications
- High Reliability
- Proven Performance
- Proven Lifetimes



Airbag Control Systems

RESISTORS

Thin Film Resistors, 4.7 Ω to 3.01 M Ω , 0402 to 1210 Case Sizes, 50 V to 200 V

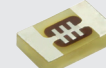


[TNPW e3](#)

- Excellent stability $|\Delta R/R| \leq 0.05\%$ after 1000 h at 70 °C, 0402 to 1210 case sizes

RESISTORS

Massive Electro-Pyrotechnic Initiator Chip Resistors



[MEPIC](#)

- Low firing energy down to 1.5 mJ, fast firing time down to 250 μ s
- Standard 0805 SMD case, alternative to bridge wire technology

MOSFETs

Dual N- and P-Channel MOSFETs in 5 mm x 6 mm PowerPAK® SO-8L, 40/-40 V, 11/30 m Ω

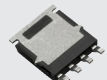


[SQJ500AEP](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Package saves board space

MOSFETs

N-Channel MOSFETs in 5 mm x 6 mm PowerPAK®, 40 V, 58 A, 6.3m Ω



[SQJ868EP](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Thermally enhanced PowerPAK SO-8L replaces DPAK in less than half of the area

RECTIFIERS

High Current Density Surface-Mount Schottky Barrier Rectifiers



[SS3P4L](#)

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

INDUCTORS

Low-Profile, High-Current IHLP® Inductors



[IHLP-4040DZ-5A](#)

- Excellent high-current performance for noise filters
- High-temperature operation up to 155 °C

DIODES

High-Power TVS, Up to 6.6 kW, Standoff with 24 V, 700 A Peak Current



[SM8S24AT](#)

- PAR® TVS in DO-218AC package for automotive load dump protection applications

TANTALUM CAPACITORS

Solid Tantalum Chip Capacitors, High CV Leadframeless Molded, Automotive Grade



[TP8](#)

- Smallest AEC-Q200 qualified tantalum capacitors with case sizes as small as 0603

ALUMINUM CAPACITORS

Aluminum Capacitors, Increased Vibration Resistance



[246CTI-V](#)

- High temperature, low impedance, high vibration capability
- High ripple current, long useful life

CERAMIC CAPACITORS

High Operating Temperature, Automotive Grade Leaded MLCC Capacitors



[HOTcap® K...H, A...R, K...R](#)

- High-reliability MLCC insert with wet build process
- High operating temperature (up to 175 °C for K...H and up to 160 °C for A...R and K...R), rated voltages: 50 V, 100 V, 200 V

TANTALUM CAPACITORS

Solid Tantalum Surface-Mount Chip Capacitors, Tantamount® Molded Case, Automotive Grade



[TH3](#)

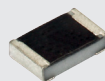
- High-temperature molded tantalum capacitors, HI-TMP®, up to 150 °C



Restraint System Power Supplies

RESISTORS

Thick Film Resistors, Pulse-Proof, Excellent Stability



[CRCW-IF e3](#)

- High pulse performance up to 10 kW
- Stability $|\Delta R/R| \leq 1\%$ after 1000 h at 70 °C

ALUMINUM CAPACITORS

Aluminum Capacitors, Increased Vibration Resistance

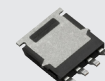


[246CTI-V](#)

- High temperature, low impedance, high vibration capability
- High ripple current, long useful life

MOSFETs

P-Channel MOSFETs in 5 mm x 6 mm PowerPAK® SO-8L, -60 V, 52 A, 18 mΩ



[SQJ459EP](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Thermally enhanced package replaces DPAK in less than half the area

RECTIFIERS

Ultrafast Rectifiers, 200 V, 1.2 A

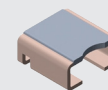


[ES07D](#)

- AEC-Q101 qualified low-profile DO-219AB (SMF) package for surface-mount applications

RESISTORS

Power Metal Strip® SMD Resistors, 4-Terminal, Low Values (Down to 0.0001 Ω)



[WSK1216](#)

- High power rating of 3 W to 5 W with TCR = 20 ppm/K
- Very low resistance values, 0.0001 Ω to 0.004 Ω, with tolerance of 1 %

INDUCTORS

Low-Profile, High-Current IHLP® Inductors

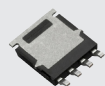


[IHLP-5050FD-5A](#)

- Excellent high-temperature performance and noise filtering

MOSFETs

N-Channel MOSFETs in 5 mm x 6 mm PowerPAK® SO-8L Rated at 40 V, 3.0 mΩ



[SQJA46EP](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Thermally enhanced PowerPAK® SO-8L replaces DPAK in less than half of the area

CERAMIC CAPACITORS

AEC-Q200 Qualified, Broad Range of Sizes and Working Voltages, C0G (NPO), X7R, and X8R



[VJ...31X RoHS Automotive MLCCs](#)

- RoHS and Green compliant parts available
- AgPd termination available for epoxy bonding

DIODES

Surface-Mount PAR® TVS



[TPSMA](#)

- AEC-Q101 qualified, $T_j = 185\text{ °C}$ capability, suitable for automotive applications
- 400 W peak pulse power capability with 10/1000 μs waveform

CERAMIC CAPACITORS

High Operating Temperature, Automotive Grade Leaded MLCC Capacitors



[HOTcap® K...H, A...R, K...R](#)

- High-reliability MLCC insert with wet build process
- High operating temperature (up to 175 °C for K...H and up to 160 °C for A...R and K...R), rated voltages: 50 V, 100 V, 200 V

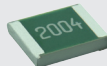


Pedestrian Protection Systems



RESISTORS

Thin Film Resistors, 4.7 Ω to 3.01 M Ω , 0402 to 1210 Case Sizes, 50 V to 200 V

[TNPW e3](#)

- Excellent stability $|\Delta R/R| \leq 0.05\%$ after 1000 h at 70 °C, 0402 to 1210 case sizes

MOSFETs

Dual N-Channel MOSFETs in 5 mm x 6 mm PowerPAK®, 12 V, 2.7 m Ω / 7.4 m Ω

[SQJ202EP](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Low-voltage, high-frequency synchronous buck applications, lower switching losses

INDUCTORS

Low-Profile, High-Current IHLP® Inductors

[IHLP-2525CZ-5A](#)

- Excellent high-temperature performance for DC/DC converter input and output filters

INDUCTORS

Low-Profile, High-Current Inductors with E-Field Shield

[IHLE-2525CD-5A](#)

- High temperature operation up to 155 °C
- Integrated e-field shield eliminates need for separate shielding

MOSFETs

Dual N-Channel MOSFETs in 5 mm x 6 mm PowerPAK®, 40 V, 11 m Ω / 22 m Ω

[SQJ942EP](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Optimized for high-frequency DC/DC applications, lower switching losses

RECTIFIERS

Surface-Mount Schottky Barrier Rectifiers

[MSS1P4](#)

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

RECTIFIERS

Schottky Diodes, 30 V, 8 A, $I_{FSM} = 150$ A

[SS8P3LHM3](#)

- Low-profile TO-277A (SMPC) package for use in low-voltage, high-frequency inverters; DC/DC converters; and polarity protection applications

MOSFETs

Dual N-Channel MOSFETs in 5 mm x 6 mm PowerPAK®, 12 V, 2.7 m Ω / 7.4 m Ω

[SQJ202EP](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Low-voltage, high-frequency synchronous buck applications, lower switching losses

INDUCTORS

Low-Profile, High-Current IHLP® Inductors

[IHLP-4040DZ-5A](#)

- Excellent high-current performance for noise filters
- High-temperature operation up to 155 °C

INDUCTORS

Low-Profile, High-Current IHLP® Inductors

[IHLP-1616BZ-A1](#)

- Shielded construction, lowest DCR/ μ H in this package size
- Excellent DC/DC energy storage up to 5 MHz

CERAMIC CAPACITORS

AEC-Q200 Qualified, Broad Range of Sizes and Working Voltages, C0G (NPO), X7R, and X8R

[VJ...31X RoHS Automotive MLCCs](#)

- RoHS and Green compliant parts available
- AgPd termination available for epoxy bonding

DIODES

Trench Schottky Rectifiers in SMPC (TO-277A), High Pulse Current up to 220 A, 150 V

[V15P15HM3](#)

- Low-profile TO-277A (SMPC) package for use in low-voltage, high-frequency inverters; DC/DC converters; and polarity protection applications