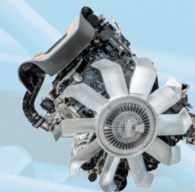


Key components for ENGINE VEHICLE CONTROL UNIT - 12 V / 24 V



**Engine
Cooling (BLDC)**



**Exhaust
Emission Control
System**

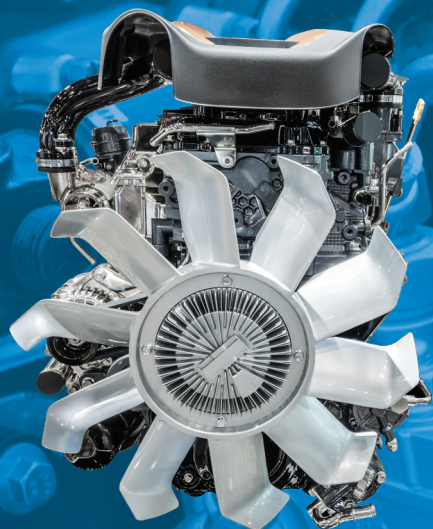


THE VISHAY ADVANTAGE

- AEC Qualifications
- High-Temperature Performance
- High Reliability
- Low Profile
- Long Life
- High Vibration Handling



Engine Cooling (BLDC)



ALUMINUM CAPACITORS

SMD Aluminum Capacitors, High Temperature Up to 150 °C, Low ESR



[260 CLA-V](#)

- High ripple current up to 1400 mA at 150 °C, capacitance up to 3300 μ F
- Useful life up to 2000 h at 150 °C, high vibration capability

NON-LINEAR RESISTORS

SMD Glass-Protected NTC Thermistors



[NTCS...e3](#)

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

MOSFETs

N-Channel MOSFETs in 8 mm x 8 mm PowerPAK®, 40 V, 200 A, 1.7 m Ω

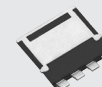


[SQJQ402E](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Low $R_{DS(on)}$, logic level MOSFET, PowerPak® 8x8L replaces D²PAK in less than half of the area

MOSFETs

N-Channel MOSFETs in 8 mm x 8 mm PowerPAK®, 40 V, 160 A, 1.2 m Ω



[SQJQ100EL](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Ultra-low $R_{DS(on)}$, thermally enhanced PowerPAK® 8x8L replaces D²PAK in less than half of the area

INDUCTORS

Low-Profile, High-Current IHLP® Inductors



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

- Lowest DCR/ μ H in this package size
- High temperature up to 155 °C, shielded construction

RESISTORS

Power Metal Strip® SMD Resistors, High Power (7 W), Low Value (Down to 0.001 Ω)



[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 %

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

CERAMIC CAPACITORS

High Operating Temperature, Automotive Grade Leaded MLCC Capacitors



[HOTcap® K...H, A...R, K...R](#)

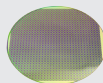
- High-reliability MLCC insert with wet build process
- High operating temperature (up to 175 °C for K...H and up to 160 °C for A...R and K...R), rated voltages: 50 V, 100 V, 200 V



Exhaust Emission Control System

MOSFETs

N-Channel MOSFETs as Known Good Die (KGD) Rated at 60 V, 71 mΩ

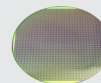


[SQC462BKGD](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Efficient KGD packaging allows high power density and reduced parasitics

MOSFETs

P-Channel MOSFETs as Known Good Die (KGD) Rated at -60 V, 14 mΩ

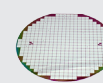


[SQC461KGD](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Efficient KGD packaging allows high power density and reduced parasitics

RECTIFIERS

Schottky Diode Chips, 15 V to 150 V, Up to 3 A



[SC036H100S6B](#)

- Wafers in box, sawn on film, Al or Ag top metal

DIODES

Surface Mount PAR® TVS, 11 V to 48 V Breakdown Voltage

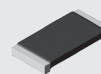


[SM8S10](#)

- AEC-Q101 qualified and high power up to 6600 W (10 x 1000 μs)
- Meet ISO7637-2 surge specification (varied by test conditions)

RESISTORS

Power Metal Strip® SMD Resistors, High Temperature (275 °C), High Power (1 W)

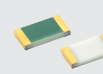


[WSLT2010...18](#)

- High temperature for harsh environments, resistance values down to 0.01 Ω
- Power Metal Strip® construction offers high reliability in critical applications

RESISTORS

Precision High-Temperature (215 °C) Thin Film Resistors, Low TCR with ± 5 ppm/°C

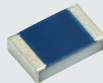


[PLTT0603](#)

- Gold terminations, Special Passivation Method (SPM)

NON-LINEAR RESISTORS

Platinum SMD Flat Chip Temperature Sensors



[PTS AT Series](#)

- Standard characteristics according to IEC 60751
- Short reaction times down to 2 s (in air)

NON-LINEAR RESISTORS

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



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

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[HOTcap® K...H, A...R, K...R](#)

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- 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