

Key components for FULL HYBRID VEHICLES (HEVs)



Electrical Motor
Drives (DC/AC)



THE VISHAY ADVANTAGE

- AEC Qualifications
- High-Temperature Performance
- High Reliability
- New High-Voltage Passive Components in SMD Packages
- High-Voltage Semiconductors
- Transient-Voltage Capabilities



Electrical Motor Drives (DC/AC)



CERAMIC CAPACITORS

High Operating Temperature, Automotive Grade Leaded MLCC Capacitors

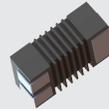


[HOTcap® K...H, A...R, K...R](#)

- 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

RESISTORS

Surface-Mount Molded Dividers, High-Voltage



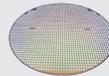
[CDMx](#)

- High voltage up to 3000 V, sulfur-resistant
- Automotive compliant terminations, wide range of resistance values and ratios

*Preliminary

MODULES

Trench FS IGBT Modules



[VS-GC30C065TB](#)

- Optimized for use with FRED Pt® Gen 4 ultrafast diodes
- Low collector-to-emitter voltages, extremely low conduction losses

RESISTORS

High-Voltage Thin Film Flat Chip Resistors, Up to 1 kV Operating Voltage, Range = 121 kΩ to 3.01 MΩ



[TNPV1210 e3](#)

- 0.1 %, 0.5 %, and 1 % tolerances
- Excellent stability $|\Delta R/R| \leq 0.05\%$ after 1000 h at 70 °C

NON-LINEAR RESISTORS

NTC Thermistors, Low Thermal Gradient Lug Sensors



[NTCALUG02A](#)

- Low thermal gradient surface temperature sensors
- High insulation voltage

RECTIFIERS

600 V, 30 A Hyperfast Rectifiers



[VS-ETH3006SHM3](#)

- TO-263AB (D²PAK) power package optimized for fast battery charging systems and main inverter applications up to 20 kW

INDUCTORS

EMI Filters with Flat Copper Wire as SMD or Leaded Up to 260 A



[Customized EMI Filters](#)

- Customized solutions for 48 V applications, low DCR, high current

FILM CAPACITORS

High-Performance DC-Link Capacitors for Automotive Traction Applications (EV/HEV)



[MKP1849](#)

- High voltage, high capacitance, high ripple current
- Customized upon request

FILM CAPACITORS

Metallized Polypropylene DC-Link Film Capacitors, 450 V_{DC} to 1200 V_{DC}



[MKP1848](#)

- OBC and HEV inverter DC link
- High ripple current, capacitance up to 400 μF