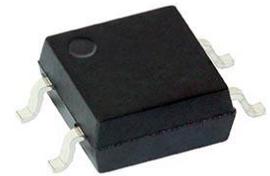




VOMDA1271 Automotive Grade Photovoltaic MOSFET Driver Features a Turn-Off Circuit in a Compact SOP-4 Package, Combines Industry's Fastest Switching Times and Highest Open Circuit Output Voltage of 8.5 V

Product Benefits:

- Offered in the compact SOP-4 package
- Integrated turn-off circuit enables a turn-off time of 0.7 ms typical, the fastest for a MOSFET driver in the SOP-4 footprint
- Turn-on time of 0.05 ms is twice as fast as competing devices
- AEC-Q102 qualified
- High isolation voltage of 3750 V
- Typical open circuit output voltage of 8.5 V
- Optically isolated
- RoHS-compliant, halogen-free, and [Vishay Green](#)



Market Applications:

- Pre-charge circuits, wall chargers, and battery management systems (BMS) for electric (EV) and hybrid electric (HEV) vehicles

The News:

Vishay Intertechnology introduces a new Automotive Grade photovoltaic MOSFET driver that is the first such device to offer an integrated turn-off circuit in the space-saving SOP-4 package. Designed to deliver high performance for automotive applications — while increasing design flexibility and lowering costs — the Vishay Semiconductors VOMDA1271 features the industry's fastest switching times and highest open circuit output voltage.

- In addition to its industry-best turn-off and turn-on times, the VOMDA1271 is the only driver in the SOP-4 package size to offer an isolation voltage of 3750 V and a typical open circuit output voltage of 8.5 V
- Combined with its microcontroller compatibility, the device's open circuit output voltage provides designers with great flexibility in driving a variety of MOSFETs
- To generate the higher voltages needed to drive IGBTs and SiC MOSFETs, two VOMDA1271 optocouplers can be used in series
- The driver enables designers to create custom solid-state relays to replace legacy electromechanical relays in next-generation vehicles to increase reliability, lower costs, and save space
- The VOMDA1271 features an AlGaAs infrared LED (IRLED), which emits light that is absorbed by a photovoltaic gate array, generating the voltage used to turn on a MOSFET. Unlike expensive isolated gate drivers, this construction simplifies designs and lowers costs by eliminating the need for an external power supply. For even greater design flexibility, the device can be driven by a microcontroller's GPIO pin



The Key Specifications:

- Turn-off time: 0.7 ms typical
- Turn-on time: 0.05 ms typical
- Isolation voltage: 3750 V
- Open circuit voltage at 10 mA: 8.5 V
- Short circuit current at 10 mA: 15 μ A typical
- Operating temperature: -40 °C to +125 °C

Availability:

Samples and production quantities of the VOMDA1271 are available now, with lead times of eight weeks.

To access the product datasheet on the Vishay Website, go to <http://www.vishay.com/ppg?80316> (VOMDA1271)

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