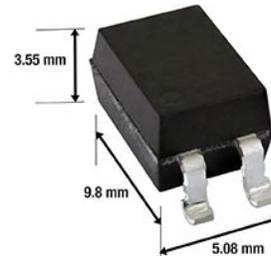


Automotive Grade Photovoltaic MOSFET Driver Boosts Reliability and Lowers Costs in High Voltage Systems; Delivers 20 V Open Circuit Voltage, 20 μ A Short Circuit Current, and 80 μ s Turn-on Time in SMD-4 Package With CTI 600 Mold Compound and 8 mm Creepage

Product Benefits:

- AEC-Q102 qualified
- Compact SMD-4 package
- Creepage distance of 8 mm
- Mold compound with a comparative tracking index (CTI) of 600
- High open circuit voltage of 20 V typical
- High short circuit current of 20 μ A
- Turn-on time of 80 μ s, which is three times faster than competing devices
- 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 in the compact SMD-4 package to provide a creepage distance of 8 mm and mold compound with a comparative tracking index (CTI) of 600. Designed to increase safety and reliability in high voltage automotive applications — while simplifying designs and reducing costs — the Vishay Semiconductors VODA1275 features the industry’s fastest turn-on times and the highest open circuit voltage and short circuit current in its class.

- Classified as providing reinforced isolation
- The device’s high open circuit voltage, high short circuit current, and fast turn-on times enable quicker and more reliable driving of MOSFETs and IGBTs in high voltage systems
- The VODA1275’s working isolation voltage of 1260 V_{peak} and isolation test voltage of 5300 V_{RMS} make it ideal for 800 V+ battery systems
- While designers previously had to use two MOSFET drivers in series to generate the higher voltages required to drive MOSFETs and IGBTs, the MOSFET driver’s high open circuit output voltage allows them to use just one, saving space and lowering costs
- The driver enables the design of custom solid-state relays to replace legacy electromechanical relays in next-generation vehicles
- The optically isolated VODA1275 draws all the current required to drive its internal circuitry from an infrared emitter on the low voltage side of the isolation barrier. This construction simplifies designs and lowers costs by eliminating the need for an external power supply



The Key Specifications:

- Package: SMD-4
- Open circuit voltage: 20 V typical at 10 mA
- Short circuit current: 20 μ A typical at 10 mA
- Turn-on time: 80 μ s
- Working isolation voltage: 1260 V_{peak}
- Isolation test voltage: 5300 V_{RMS}

Availability:

Samples and production quantities of the VODA1275 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?80495> (VODA1275)

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