

For 800 V Battery Monitoring Systems, AEC-Q102 Qualified, 1500 V 1 Form A Solid-State Relay in 4-Pin SMD-8 Package Offers V_{IORM} of 1414 V_{peak}, Low Max. Leakage Current of 1 μ A, and 5 mm Creepage Distance on Output Pins

Product Benefits:

- AEC-Q102 qualified
- 4-pin SMD-8 package
- High 1414 V_{peak} repetitive isolation voltage
- Low maximum leakage current of 1 μ A
- Low maximum turn-on and turn-off times of 150 μ s and 250 μ s, respectively, ensure fast operation
- RoHS-compliant, halogen-free, and Vishay Green
- Avalanche current capability of 0.9 mA
- Isolation test voltage of 5300 VRMS
- Operating temperature range of -40 °C to +125 °C



Market Applications:

- Isolation and leakage current monitoring in battery management systems (BMS), pre-charge relays, and on-board chargers; energy storage systems (ESS); industrial HVAC systems; and solar panels

The News:

Vishay Intertechnology introduces a new 1500 V Automotive Grade 1 Form A solid-state relay in a 4-pin SMD-8 package. Designed for 800 V battery monitoring systems in automotive, energy storage, and industrial applications, the Vishay Semiconductors VORA1150 combines a high 1414 V_{peak} repetitive isolation voltage with a low maximum leakage current of 1 μ A.

- The innovative 4-pin design of the relay allows the device to provide a 5 mm creepage distance on its output pins, as required by the DIN EN-60644-1 standard for isolation monitoring applications in 800 V battery monitoring systems
- The VORA1150 meets hipot test requirements for 800 V battery architectures in electric vehicles (EV)
- The relay's high repetitive isolation voltage and mold material with a comparative tracking index (CTI) of 600 provide increased reliability

The Key Specifications:

- Package: 4-pin SMD-8
- Load voltage: 1500 V
- Load current: 50 mA
- Max. repetitive peak isolation voltage: 1414 V_{peak}
- Max. leakage current: 1 μ A
- Max. turn-on time: 150 μ s
- Max. turn-off time: 250 μ s



NEW PRODUCT INFORMATION

Product Group: Vishay Semiconductors, Solid-State Relays / November 2025



- Repetitive avalanche rating: 0.9 mA
- Creepage: > 8 mm
- Isolation test voltage: 5300 VRMS
- Operating temperature range: -40 °C to +125 °C

Availability:

Samples and production quantities of the new 1 Form A solid-state relay 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?80372> (VORA1150)

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