

Automotive Grade Phototransistor Optocoupler Delivers High Isolation in Low Profile LSOP-4 Package for 800 V EV Batteries

Product Benefits:

- Automotive Grade with AEC-Q102 qualification
- Low profile 4-pin LSOP package
- Creepage and clearance distances of ≥ 8 mm
- Available in four current transfer ratio (CTR) ranges
- High 80 V collector-emitter voltage rating allows for more design flexibility
- Wide -40 °C to $+125$ °C operating temperature, with a junction temperature capability up to $+145$ °C
- Low coupling capacitance of 0.5 pF
- High common mode transient immunity
- RoHS-compliant, halogen-free, and Vishay Green



Market Applications:

- Grid-connected on-board chargers (OBC), DC/DC converters, battery management systems (BMS), isolated wake-up signals, and any system control with galvanic and noise isolation

The News:

Vishay Intertechnology introduces a new Automotive Grade phototransistor optocoupler designed to deliver signal transmission with high galvanic isolation for electric vehicles (EV) — including emerging 800 V battery architectures — and industrial automation systems.

- The VOLA617A consists of an infrared emitting diode, optically coupled to a silicon planar phototransistor detector in a low profile package
- While most automotive optocouplers can't be used for battery voltages exceeding 500 V — limiting them to traditional 400 V EV platforms — the ability of the VOLA617A to isolate DC voltages up to 1000 V enables its use in next-generation high voltage EV architectures
- Exceeding rigorous requirements for Automotive Grade performance and reliability, the device's robust package provides an extra safety margin by meeting dual AEC-Q102 qualification standards

The Key Specifications:

- V_{ISO} : 5000 V_{RMS}
- V_{IORM} : 1414 V_{peak}
- V_{IOWM} : 1000 V_{RMS}
- V_{IOTM} : 8000 V_{peak}
- CTR ranges:
 - 50 % to 600 %
 - 63 % to 125 %
 - 100 % to 200 %
 - 130 % to 260 %



NEW PRODUCT INFORMATION

Product Group: Vishay Semiconductors, Optocouplers / June 2026



- Collector-emitter voltage rating: 80 V
- Operating temperature range: -40 °C to +125 °C
- Coupling capacitance: 0.5 pF

Availability:

Samples and production quantities of the VOLA617A 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?80342> (VOLA617A)

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