200 A Integrated Power Module Features Half-Bridge MOSFETs With Best in Class $R_{DS(ON)}$ in Compact Transfer-Mold FlatPAK HC0 Package; Device Saves Space, Lowers Conduction Losses, and Increases Reliability in MHEVs and LEVs

Product Benefits:

- Half-bridge inverter
- Insulated 30 mm x 22.8 mm transfer-mold FlatPAK HC0 package
- 80 V power MOSFETs feature best in class on-resistance of 0.45 mΩ
- Current sensing and temperature sensing
- Electrically isolated exposed DBC substrate
- High temperature operation to +150 °C
- Qualified according to AQG-324 guidelines

Market Applications:

- 48 V traction inverters for light electric vehicles (LEV) and belt-start generator / recuperation systems for mild-hybrid electric vehicles (MHEV)

The News:

Vishay Intertechnology introduces a new 200 A power module designed to save space and increase efficiency in 48 V traction inverters for light electric vehicles (LEV) and belt-start generator / recuperation systems for mild-hybrid electric vehicles (MHEV).

- The VS-HOT200C080 integrates 80 V MOSFETs in a half-bridge configuration, a shunt resistor for current reading, bypass capacitors for improved switching performance, and an NTC for temperature sensing
- The device reduces board space requirements by up to 15 % compared to standard discrete solutions
- To increase efficiency, the low on-resistance of the power module's MOSFETs reduces conduction losses by 32 % compared to competing solutions.
- The power module's transfer-mold technology enables highly reliable performance over a wide operating temperature range from -40 °C to +150 °C, especially during power cycling — allowing the device to meet severe AQG-324 reliability requirements
- The VS-HOT200C080's FlatPAK HC0 package features signal pins and power tabs at different heights. This allows designers to have separate power and signal PCBs, simplifying designs and allowing for better routing. To save additional board space, the signal and power PCBs can be stacked

The Key Specifications:

- Drain to source voltage: 80 V
- On-resistance, Q1 (chip level) 0.45 mΩ typical
- Continuous drain current: 195 A at 80 °C
- Package: FlatPAK HC0
- Operating temperature range: -40 °C to +150 °C

Availability:
Samples and production quantities of the VS-HOT200C080 are available now, with lead times of 13 weeks. Pricing for U.S. delivery only starts at $15 per piece.

To access the product datasheet on the Vishay Website, go to
http://www.vishay.com/ppg?97360 (VS-HOT200C080)

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