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New TMBS® Rectifiers in SlimDPAK Save Space, Improve Thermal Performance and Efficiency

For Consumer Electronics, 20 A, 35 A, and 40 A Devices Feature Low 1.3 mm Profile and Forward Voltage Drop Down to 0.44 V

Product Benefits:

- Feature SlimDPAK (TO-252AE) package
- Reverse voltages from 45 V to 150 V
- High current ratings up to 40 A
- Low forward voltage drop down to 0.44 V at 20 A, 0.46 V at 35 A, and 0.49 V at 40 A
- Available in single-chip and dual-chip, center-tap common cathode configurations
- AEC-Q101 qualified version available
- Maximum operating junction temperature up to +175 °C
- MSL moisture sensitivity level of 1, per J-STD-020, LF maximum peak of +260 °C
- Ideal for automated placement
- RoHS-compliant and halogen-free



Market Applications:

- DC/DC converters and freewheeling and polarity protection diodes

The News:

Vishay Intertechnology introduces a new family of surface-mount TMBS Trench MOS Barrier Schottky rectifiers in the eSMP® series SlimDPAK (TO-252AE) package. Offering lower profiles and better thermal performance than devices in the DPAK (TO-252AA), the Vishay General Semiconductor rectifiers feature reverse voltages from 45 V to 150 V, low forward voltage drop, and industry-high current ratings.

- By combining TMBS technology with the SlimDPAK package, the rectifiers deliver current ratings up to 35 A for single-chip configurations and 40 A for dual-chip, center-tap common cathode configurations
- Footprint-compatible with the DPAK package, the devices' profile is 43 % lower, enabling ultra slim consumer electronics designs
- The rectifiers' heatsink area is 14 % larger than devices in the DPAK, allowing for typical thermal resistance down to 1.5 °C/W
- The devices' low forward voltage drop reduces power losses and improves efficiency

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The Key Specifications:

- Reverse voltage: 45 V to 150 V
- Current ratings: 20 A to 40 A
- Forward voltage drop:
  - 0.44 V to 0.74 V at 20 A
  - 0.46 V to 0.71 V at 35 A
  - 0.49 V to 0.76 V at 40 A

Availability:
Samples and production quantities of the new TMBS rectifiers are available now, with lead times of 12 weeks for larger orders.

To access the product datasheets on the Vishay Website, go to
http://www.vishay.com/diodes/rectifiers/schottky/slimdpak/

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