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[GEN2 Series SiC Schottky Diodes](#)

1200V SiC Schottky Diodes from Littelfuse Are First Products from New Platform, Offer Lower Switching Losses, Higher Efficiency

Merged pn-Schottky (MPS) structure enhances surge capability and reduces leakage current

NUREMBERG, GERMANY, May 16, 2017 — Littelfuse, Inc., the global leader in circuit protection, today introduced the first GEN2 Series of 1200V Silicon Carbide (SiC) Schottky Diodes, in conjunction with the start of the Power Conversion and Intelligent Motion (PCIM) Europe 2017 Exhibition. These SiC diodes are the first in a series of products based on the technology platform created through a partnership with Monolith Semiconductor. Additional silicon carbide products based on the technology platform, including 1200V SiC MOSFETs, are already in the pipeline and are scheduled for introduction in the near future.

GEN2 SiC Schottky Diodes are available in ratings of 1200V at currents from 5 A to 10 A in either TO-220-2L or TO-252-2L packages. Compared to standard silicon bipolar power diodes, they allow circuit designers to dramatically reduce switching losses and enable substantial increases in the efficiency and robustness of power electronics systems. They can accommodate large surge currents without thermal runaway, and operate at higher junction temperatures than their silicon counterparts. They also offer best-in-class stored capacitive charge and forward voltage drop.

Typical applications for GEN2 Series SiC Schottky Diodes include power factor correction (PFC), buck/boost stages in DC-DC converters, free-wheeling diodes in inverter stages (switch-mode power supplies, solar, UPS, industrial drives) and high-frequency output rectification—wherever improvements in efficiency, reliability, and thermal management are desired. Designers and manufacturers of industrial

power supplies, solar inverters, industrial drives, welding and plasma cutting equipment and EV/HEV charging stations will find them particularly useful.

“The merged p-n Schottky (MPS) device architecture of these new silicon carbide Schottky diodes offers circuit designers enhanced surge capability and extremely low leakage,” said Michael Ketterer, product marketing manager, Power Semiconductors at Littelfuse. “Compared to conventional silicon power diodes, these silicon carbide Schottky diodes boost converter efficiency and power density while helping to reduce system-level costs.”

GEN2 Series SiC Schottky Diodes from Littelfuse offer these key benefits:

- Best-in-class capacitive stored charge and negligible reverse recovery make them well-suited for high-frequency power switching. They also ensure negligible switching losses and reduced stress on the opposing switch.
- Best-in-class forward voltage drop ensures low conduction losses.
- A maximum junction temperature of 175°C provides for a larger design margin and relaxed thermal management requirements.

Availability

GEN2 Series SiC Schottky Diodes are available in either TO-220-2L (packed in tubes in quantities of 1,000) or TO-252-2L (DPAK) packages (in tape and reel packaging in quantities of 2,500). Sample requests may be placed through authorized Littelfuse distributors worldwide. For a listing of Littelfuse distributors, please visit Littelfuse.com.

For More Information

Additional information is available on the [GEN2 Series Silicon Carbide \(SiC\) Schottky Diodes product page](#). For technical questions, please contact: Michael Ketterer, product marketing manager, Power Semiconductors, mketterer@littelfuse.com.

About Littelfuse

Founded in 1927, Littelfuse is the world leader in circuit protection with growing global platforms in power control and sensing. The company serves customers in the electronics, automotive and industrial markets with technologies including fuses, semiconductors, polymers, ceramics, relays and sensors. Littelfuse has over 10,000 employees in more than 40 locations throughout the Americas, Europe and Asia. For more information, please visit Littelfuse.com.

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