

NEWS RELEASE

Automotive-Qualified Qspeed Silicon Diodes Feature Lowest Qrr for Efficient, High-Switching-Speed Designs

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600 V 12 A diodes can replace SiC parts in automotive applications

SAN JOSE, Calif.--(BUSINESS WIRE)-- **Power Integrations** (Nasdaq: **POWI**), the leader in high-voltage integrated circuits for energy-efficient power conversion, today announced its 600 V 12 A Qspeed diode, delivering the industry's lowest reverse recovery charge (Qrr) for a silicon diode. With a Qrr of just 14 nC at 25 °C, it improves efficiency of the PFC stage of on-board chargers and significantly reduces the thermals of the PFC MOSFETs. The AEC-Q101-qualified **QH12TZ600Q** offers the same low-switching loss performance of a silicon carbide (SiC) device without the disadvantages of moving to more expensive technology.

Power Integrations Automotive-Qualified Qspeed Silicon Diodes Feature Lowest Qrr for Efficient, High-Switching-Speed Designs. These 600 V 12 A diodes can replace SiC components in automotive applications. (Graphic: Business Wire)

Edward Ong, senior product marketing manager at Power Integrations said: "The Qrr of these new Qspeed diodes is half

that of the next best ultra-fast silicon diodes, resulting in very high system efficiency. This is particularly important for automotive on-board charger applications that require higher switching frequency to reduce volume and weight, and enables the Qspeed diodes to replace SiC devices."

The **QH12TZ600Q** uses merged PiN and Schottky diode technology to achieve high performance. Its smooth reverse recovery current transition characteristics not only increase efficiency, but also reduce EMI and peak reverse voltage stress, eliminating the need for snubbers when used as output rectifiers in on-board chargers. Devices are available in the compact, 2.5 kV isolated TO-220 package which enables direct mounting to metal heat sinking,

facilitating excellent thermal performance.

Availability & Resources

The new 600 V 12 A Qspeed diodes are priced at \$1.17 in 10,000-piece quantities. For further inquiries contact a Power Integrations sales representative or one of the company's authorized worldwide distributors: **Digikey**, **Farnell**, **Mouser**, and **RS Components**.

About Power Integrations

Power Integrations, Inc. is a leading innovator in semiconductor technologies for high-voltage power conversion. The company's products are key building blocks in the clean-power ecosystem, enabling the generation of renewable energy as well as the efficient transmission and consumption of power in applications ranging from milliwatts to megawatts. For more information, please visit www.power.com.

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