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Microchip Unveils Industry-Leading 3.3 kV Silicon Carbide (SiC) Power Devices Enabling New Levels of Efficiency and Reliability

3.3 kV SiC MOSFETs and Schottky Barrier Diodes (SBDs) extend designers' options for high-voltage power electronics in transportation, energy and industrial systems

CHANDLER, Ariz., March 21, 2022 (GLOBE NEWSWIRE) -- System designers of traction power units (TPUs), auxiliary power units (APUs), solid-state transformers (SSTs), industrial motor drives and energy infrastructure solutions require high-voltage switching technology to increase efficiency, reduce system size and weight and enhance reliability. Microchip Technology Inc. **(Nasdaq: MCHP)** today announced the expansion of its SiC portfolio with the release of the industry's **lowest on-resistance [RDS(on)] 3.3 kV SiC MOSFETs and highest current-rated SiC SBDs** available in the market, enabling designers to take advantage of ruggedness, reliability and performance. With the expansion of Microchip's SiC portfolio, designers are equipped with the tools to develop smaller, lighter and more efficient solutions for electrified transportation, renewable energy, aerospace and industrial applications.

Many silicon-based designs have reached their limits in efficiency improvements, system cost reduction and application innovation. While high-voltage SiC provides a proven alternative to achieve these results, until now, the availability of 3.3 kV SiC power devices was limited. Microchip's 3.3 kV MOSFETs and SBDs join the company's comprehensive portfolio of SiC solutions that include 700V, 1200V and 1700V die, discretes, modules and digital gate drivers.

Microchip's 3.3 kV SiC power devices include MOSFETs with the industry's lowest RDS(on) of 25 mOhm and SBDs with the industry's highest current rating of 90 amps. Both MOSFETs and SBDs are available in die or package form. These new levels of performance enable designers to simplify their design, create higher-power systems and use fewer paralleled components for smaller, lighter and more efficient power solutions.

"We focus on developments that provide our customers the ability to quickly innovate systems and move their end products into a competitive advantage position faster," said Leon Gross, vice president of Microchip's discrete product business unit. "Our new family of 3.3 kV SiC power products allows customers to move to high-voltage SiC with ease, speed and confidence and benefit from the many advantages of this exciting technology over silicon-based designs."

Microchip has released hundreds of SiC power devices and solutions to production over the last three years, ensuring designers can find the right voltage, current and package fit for

their application requirements. All Microchip SiC MOSFETs and SBDs are designed with customer confidence in mind, featuring industry-leading ruggedness and reliability. The company's devices are backed by its customer-driven obsolescence practice, which ensures devices will continue to be produced for as long as customers need them, and Microchip can produce them.

Customers can combine Microchip SiC products with the company's other devices including 8-, 16- and 32-bit microcontrollers (MCUs), power management devices, analog sensors, touch and gesture controllers and wireless connectivity solutions to create complete system solutions at a lower overall system cost.

Development Tools
The expanded SiC portfolio is supported by a range of SiC SPICE models compatible with Microchip's MPLAB® Mindi™ analog simulator modules and driver board reference designs. The Intelligent Configuration Tool (ICT) enables designers to model efficient SiC gate driver settings for Microchip's AgileSwitch® family of configurable digital gate drivers.

Availability
These 3.3 kV SiC die and discrete devices in a variety of package options are available for order in production quantities. For pricing and other information, contact a Microchip representative, authorized worldwide distributor or visit the company's purchasing portal (**MOSFET**, **SBD**).

Resources
A high-res image is available through Flickr or the editorial contact (feel free to publish):

- Application image**:** **www.flickr.com/photos/microchiptechnology/51903694879/sizes/l/**

About Microchip Technology
Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control solutions. Its easy-to-use development tools and comprehensive product portfolio enable customers to create optimal designs which reduce risk while lowering total system cost and time to market. The company's solutions serve more than 120,000 customers across the industrial, automotive, consumer, aerospace and defense, communications and computing markets. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at **www.microchip.com**.

Editorial Contact:
Brian Thorsen
480-792-7182
Brian.Thorsen@microchip.com

Reader Inquiries:
1-888-624-7435

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