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Microchip Expands Space Power Portfolio with New Radiation-Tolerant GaN Point-of-Load Converter

Power device delivers 20A of continuous current in a compact form factor for new space and traditional space applications

CHANDLER, Ariz., Oct. 14, 2026 (GLOBE NEWSWIRE) -- Microchip Technology **(Nasdaq: MCHP)** today announces the **POL-05-20S-T, a radiation-tolerant, Point-of-Load (POL) converter**, designed to address the demanding power requirements of space processing applications. The new device uses Gallium Nitride (GaN) power devices to deliver up to 20A of output current with high efficiency and power density.

The converter is supplied in a compact, 25g surface-mount package measuring 1.51” x 1.51” x 0.45”. By delivering 20A in this footprint, the device helps engineers manage the size, power and energy constraints that accompany increasingly capable onboard processing systems. The GaN-based design is intended to provide a combination of high efficiency, high power density and continuous current capability for challenging space power applications.

“Space designers are integrating increasingly powerful digital processing, creating demand for compact power solutions that can respond quickly, while operating reliably in harsh environments,” said Ronan Dillon, senior director of Microchip’s high-reliability and RF business unit. “The POL-05-20S-T extends our space power portfolio with a high-current GaN solution that helps customers achieve high power density, design flexibility and system-level reliability.”

The POL-05-20S-T is designed for high-current, fast-transient applications such as for the core voltage rails of FPGAs, microcontrollers, ASICs and other processing-intensive digital loads. It combines a synchronous buck topology with current-mode control to support fast current transients and stable operation. With a wide input range of 4.75V to 13.2V and adjustable 0.7V to 5V output, the device offers flexibility to address multiple power rails and system architectures.

Designed for harsh radiation environments, the POL-05-20S-T has electrical parameters specified before and after irradiation up to a Total Ionizing Dose (TID) of 50 krad. The device is characterized for Single Event Effects (SEE) up to a Linear Energy Transfer (LET) of 43 MeV·cm²/mg. It operates from −55°C to +100°C at full load, supporting systems exposed to wide temperature variations over the course of a mission.

To support reliable power delivery, the POL-05-20S-T incorporates remote sensing, undervoltage and overvoltage protection, soft start, an enable pin and power-good indication pin. Adjustable output voltage, a wide input range and output droop regulation further help designers tailor the converter to high-current loads requiring tight voltage regulation and rapid transient response.

Microchip delivers a comprehensive space power suite that is part of an end-to-end solution for space system designers, including EMI filters, DC-DC converters, point-of-load regulators, Hi-Rel discrete components, FPGAs and the PIC64-HPSC High-Performance Spaceflight Computing devices. Built on decades of space heritage, the portfolio helps customers simplify development, reduce design risk and accelerate deployment of mission-critical space systems. For more information about Microchip's space solutions, visit the **website**.

Pricing and Availability

The POL-05-20S-T is now available in production quantities. You can **purchase** directly from Microchip or contact a Microchip **sales representative or authorized worldwide distributor**.

Resources

High-res images available through Flickr or editorial contact (feel free to publish):
• Application image: **www.flickr.com/photos/microchiptechnology/55543010558/sizes/l**

About Microchip Technology:
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Editorial Contact:
Kim Dutton
kim.dutton@microchip.com

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