



Vishay Intertechnology microBUCK® Regulators Increase Power Density and Transient Response With Output Current Up to 40 A in Compact PowerPAK® 5 mm x 7 mm Package

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Devices Feature PMBus 1.3 Compliance for Power System Telemetry, Simplify the Design of POL Converters

MALVERN, Pa., March 24, 2021 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today broadened its offering of microBUCK® synchronous buck regulators with a new family of 15 A, 25 A, and 40 A devices featuring input voltages from 4.5 V to 20 V in the thermally enhanced 5 mm by 7 mm PowerPAK® MLP34-57 package. Delivering increased power density and transient response compared to previous-generation devices, Vishay Siliconix [SiC45x family](#) regulators offer PMBus 1.3 compliance for power system telemetry.

The high power density of the devices released today is made possible by co-packaging high performance n-channel trench MOSFETs with a PWM controller in a compact package. The regulators offer low operating current in idle mode, enabling peak efficiency up to 98 % and reducing power losses. Intended to simplify the design of high performance point of load (POL) converters, the integrated devices require minimal external components for configuration and loop compensation.

SiC45x family regulators are internally compensated over the entire V_{IN} and V_{OUT} range of operation. Highly configurable, the devices combine their wide input voltage range with an adjustable output voltage from 0.3 V to 12 V. The extremely versatile regulators are ideal for a wide range of applications, including POL converters in cloud computing, enterprise servers, and industrial computers, in addition to networking, telecom, and storage systems.

All SiC45x family devices share the same footprint to provide designers with a scalable solution offering a cost and performance optimization while accelerating design time. The regulators feature programmable switching frequencies from 300 kHz to 1.5 MHz and three operating modes: forced continuous conduction, power save, or ultrasonic.

The regulators' constant on-time (COT) architecture delivers ultrafast transient response with minimum output capacitance and tight ripple regulation over a broad load range. It also enables loop stability regardless of the type of output capacitor used. Reliable operation is guaranteed with the integration of a robust set of protection and monitoring features, including output over- and undervoltage protection (OVP / UVP), overcurrent protection (OCP) in pulse by pulse mode, differential output remote sensing, and over temperature protection (OTP) with hysteresis.

Samples and production quantities of the SiC45X family are available now, with lead times of 16 weeks. Pricing for U.S. delivery only in 1,000-piece quantities ranges from \$2.40 for the 15 A SiC453 to \$3.35 for the 40 A SiC450.

Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech.**™ Vishay Intertechnology, Inc. is a Fortune 1,000 Company listed on the NYSE (VSH). More on Vishay at www.Vishay.com.

The DNA of tech™ is a trademark of Vishay Intertechnology. microBUCK and PowerPAK are registered trademarks of Siliconix incorporated.

Link to product datasheet:

<http://www.vishay.com/ppg?77863> (SiC450, SiC451, SiC453)

Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72157718687171822>

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