Vishay Intertechnology IGBT Power Modules in Redesigned INT-A-PAK Package Reduce Conduction and Switching Losses

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Built on Trench IGBT Technology, Half-Bridge Devices Offer Choice of Low $V_{CE(ON)}$ or Low E_{off} for High-Current Inverter Stages

MALVERN, Pa., Feb. 21, 2024 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced five new half-bridge IGBT power modules in the newly redesigned INT-A-PAK package. Built on Vishay's Trench IGBT technology, the VS-GT100TS065S, VS-GT150TS065S, VS-GT200TS065S, VS-GT100TS065N, and VS-GT200TS065N offer designers a choice of two best in class technologies — low $V_{CE(ON)}$ or low E_{off} — to lower conduction or switching losses in high current inverter stages for transportation, energy, and industrial applications.

The half-bridge devices released today combine Trench IGBTs — which deliver improved power savings versus other devices on the market — with Gen IV FRED Pt® anti-parallel diodes with ultra soft reverse recovery characteristics. Offering a new gate pin orientation, the modules' compact INT-A-PAK package is now 100 % compatible with the 34 mm industry-standard package to offer a mechanical drop-in replacement.

The industrial-level devices will be used in power supply inverters for railway equipment; energy generation, distribution, and storage systems; welding equipment; motor drives; and robotics. To reduce conduction losses in output stages for TIG welding machines, the VS-GT100TS065S, VS-GT150TS065S, and VS-GT200TS065S offer an industry-low collector to emitter voltage of ≤ 1.07 V at +125 °C and rated current. For high frequency power applications, the VS-GT100TS065N and VS-GT200TS065N offer extremely low switching losses, with E_{off} down to 1.0 mJ at +125 °C and rated current.

The RoHS-compliant modules feature 650 V collector to emitter voltages, continuous collector current from 100 A to 200 A, and very low junction to case thermal resistance. UL-approved file E78996, the devices can be directly mounted to heatsinks and offer low EMI to reduce snubbing requirements.

Device Specification Table:

Part #	V_{CES}	I_C	$V_{CE(ON)}$ @ IC and +125 °C	E_{off} @ IC and +125 °C	Speed	Package
VS-GT100TS065S	650 V	100 A	1.02 V	6.5 mJ	DC to 1 kHz	INT-A-PAK
VS-GT150TS065S	650 V	150 A	1.05 V	10.3 mJ	DC to 1 kHz	INT-A-PAK
VS-GT200TS065S	650 V	200 A	1.07 V	13.7 mJ	DC to 1 kHz	INT-A-PAK
VS-GT100TS065N	650 V	100 A	2.12 V	1.0 mJ	8 kHz to 30 kHz	INT-A-PAK
VS-GT200TS065N	650 V	200 A	2.13 V	3.86 mJ	8 kHz to 30 kHz	INT-A-PAK

Samples and production quantities of the new IGBT power modules are available now, with lead times of 15 weeks.

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.

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Links to product datasheet:
http://www.vishay.com/ppg?97007 (VS-GT100TS065N)
http://www.vishay.com/ppg?97011 (VS-GT100TS065S)
http://www.vishay.com/ppg?96700 (VS-GT200TS065N)
http://www.vishay.com/ppg?97061 (VS-GT150TS065S)
http://www.vishay.com/ppg?97091 (VS-GT200TS065S)

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