Development boards feature enhancement-mode gallium nitride field effect transistors

Efficient Power Conversion Corporation (EPC) announces the availability of two development boards, the EPC9003 and the EPC9006, both featuring EPC's enhancement-mode gallium nitride (eGaN) field effect transistors (FETs). These boards demonstrate how the recent introductions of IC gate drivers, optimized for eGaN FETs, make the task of transitioning from silicon to eGaN technology simple and cost effective.

The EPC9003 development board is a half bridge configuration containing two 200 V EPC2010 eGaN FETs with a 5 A maximum output current using the low-side gate driver optimized for GaN devices, the LM5114 from Texas Instruments. The EPC2010 is designed for use in applications such as solar microinverters, class D audio amplifiers, Power over Ethernet (PoE), and synchronous rectification.

Additionally, EPC announces the availability of the EPC9006 development board containing two 100 V EPC2007 eGaN FETs with 5 A maximum output current, This board uses the LM5113 from Texas Instruments, a 100 V half bridge driver optimized for GaN transistors. The LM5113 used on this board is packaged in a 2x2 BGA package allowing for a very compact power stage with the driver and two eGaN FETs. Applications benefiting from the performance of the EPC2007 eGaN FET include high-speed DC-DC power supplies, point-of-load converters, class D audio amplifiers, hard-switched and high frequency circuits.

Both the EPC9003 and the EPC9006 are intended to simplify the evaluation process of eGaN FETs by including all the critical components on single 2" x 1.5" boards that can be easily connected into any existing converter. In addition, there are various probe points on the boards to facilitate simple waveform measurement and efficiency calculation. Quick Start Guides are included with both development

boards for reference and ease of use.

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