Ultra-high power inverter design

This paper presents the hardware development of an ultra-high power density three-phase liquid metal-cooled inverter using discrete TO-247 SiC devices. By implementing advanced thermal ...

The TIDM-02014 reference design is a 800V, 300kW SiC based inverter reference design from TI and Wolfspeed that attempts to provide a starting point for designers and engineers to achieve a high ...

Infineon"s industry-leading discrete IGBTs are compatible with Empower"s latest generation inverter in terms of packaging. Together with the high current density, ultra-low saturation voltage drop and ...

This study focuses on creating a compact and efficient power module for commercial electric vehicle applications. The designed module is capable of handling high power levels while remaining ...

This ultra-high efficiency SiC inverter is highly versatile, suitable for a wide array of applications, including traction inverters, solar inverters, data center front-end converters, battery ...

Technical approaches towards ultra-high power density EV inverter including SiC module packaging, dc-link capacitor function analysis and system level integration are discussed.

This chapter studies and summarizes the various high power density enabling tech-nologies such as wide band gap devices, cooling methods, high-speed machines, integrated drives, passive ...

This study aimed to design a high-power density three-phase inverter using a liquid immersion cooling system. The cooling system used hydrofluoroether (HFE) as a refrigerant.

High power inverters are essential for converting DC to AC electricity in industrial, renewable energy, and commercial applications. This guide explores design principles, emerging trends, and practical ...

Overall Objective: Develop technologies for next generation traction drive power electronic systems with 8x

increase in power density to achieve DOE ELT 2025 target of 100 kW/L. Focus on traction drive ...

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