



GaN inverter energy storage solution

Why should you choose a GaN string inverter?

GaN helps achieve greater power density, thus reducing the weight of the final end equipment. With an overall system efficiency close to 98% and a power density of 2.3kW/L, the string inverter reference design demonstrates great performance.

Is a GaN-based single-phase string inverter a bidirectional power conversion system?

This reference design provides an overview into the implementation of a GaN-based single-phase string inverter with bidirectional power conversion system for battery energy storage systems (BESS).

What is a 10kW single-phase inverter based on a GaN device?

A 10kW single-phase reference design based on GaN devices Figure 3 is a schematic representation of the converter. DC/DC Boost with MPPT1 Input range: 50-500V ISC: 18A Max. DC current: 14A Figure 3. Single-phase string inverter reference design block diagram Two boost converters for two independent string inputs, each 5kW rated (134kHz).

What is GaN technology?

The application of GaN converges with Delta (Electronics') core expertise in high-efficiency power electronics to maximize power density, without giving up efficiency performance. At the end of the day, the GaN technology opens the door to a new world of products that have not been possible until now.

What is GaN & how does it work?

GaN processes power more efficiently than silicon-only solutions, reducing power loss by 80% in power converters and minimizing the need for added cooling components. By packing more power into smaller spaces, GaN lets you design smaller, lighter systems.

What is a GaN power device?

The next generation of single-phase AC, 400V on-board chargers (OBCs) and high-to-low-voltage DC/DC converters in hybrid-electric (HEV) and electric vehicles (EV) are using GaN power devices to switch at higher frequencies and reduce the size of magnetics, translating to higher power density compared to silicon and SiC-based OBCs.



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