



SiC MOSFET Technology boosts efficiency in hydrogen power conversion

Silicon Carbide (SiC) is a next-generation semiconductor material known for its exceptional properties, including higher thermal conductivity, better voltage handling, and superior energy efficiency compared to traditional silicon-based components. This makes SiC an ideal choice for industries demanding high

efficiency, such as renewable energy, electric vehicles, and the hydrogen sector. SMA Altenso's latest integration of SiC MOSFET Technology into its proven power conversion unit represents a significant leap forward in the quest for more efficient and reliable power solutions in electrolysis processes.

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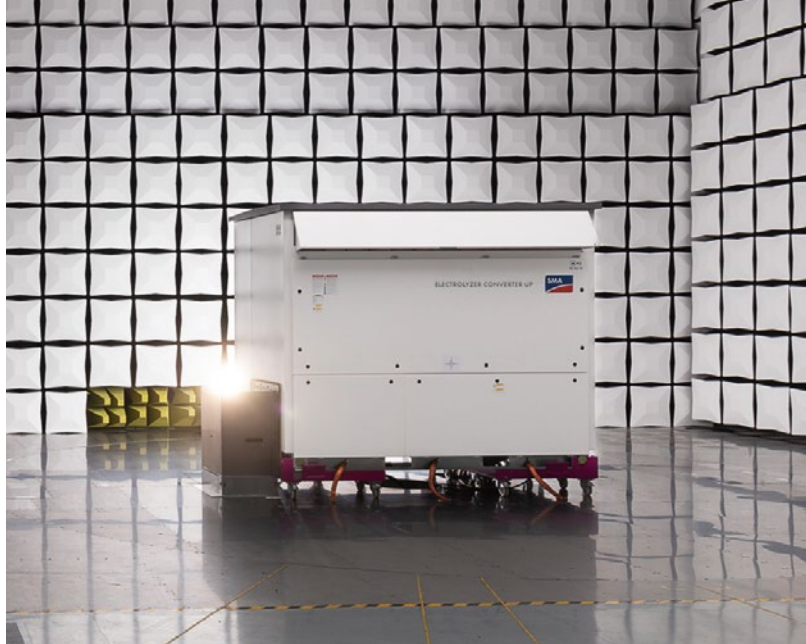
Key advantages of SiC MOSFET Technology

Up to 15% more power
in comparison to traditional solutions

Enhanced efficiency
due to superior electrical properties

Better performance under demanding conditions leads to resilient and durable power supply

Ultra-low harmonics
guarantee smooth and grid friendly operations

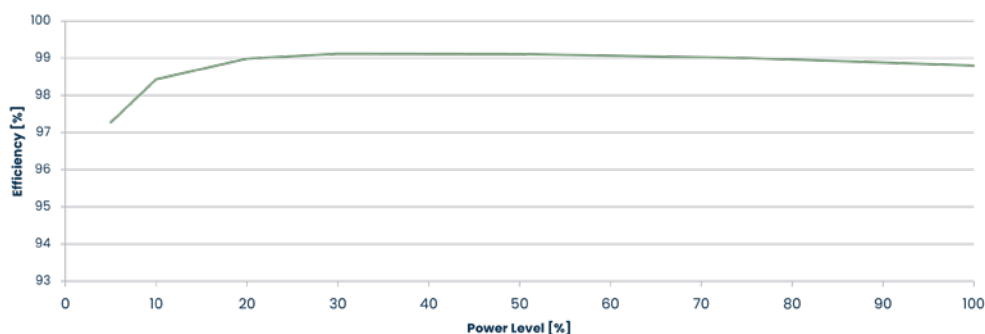


Improved energy efficiency for hydrogen production

Our SiC-enabled product ensures that more of the electrical input goes directly into hydrogen generation or fuel cell operations, reducing waste and making every kilowatt-hour count. It further

optimizes Levelized Cost of hydrogen (LCOH). With a maximum efficiency of 99.2%, operational costs in electricity can be saved compared to standard thyristor or IGBT-based converters.

SiC boosts efficiency



Further improvement of energy efficiency to a maximum of 99.2%

We can deliver both technologies:
IGBT- and SiC-based power conversion units.

For more information, visit our website or approach our sales team for an individual consultation.

SMA Altenso GmbH, a wholly owned subsidiary of SMA Solar Technology AG, is committed to fostering the flexible use of renewable energies through innovative system solutions based on SMA products, holistic engineering, and comprehensive services. With a total capacity of over 1 GW of converter power sold for hydrogen applications, the company is a global leader in the power-to-gas sector.

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