

Silicon Carbide for Energy Storage

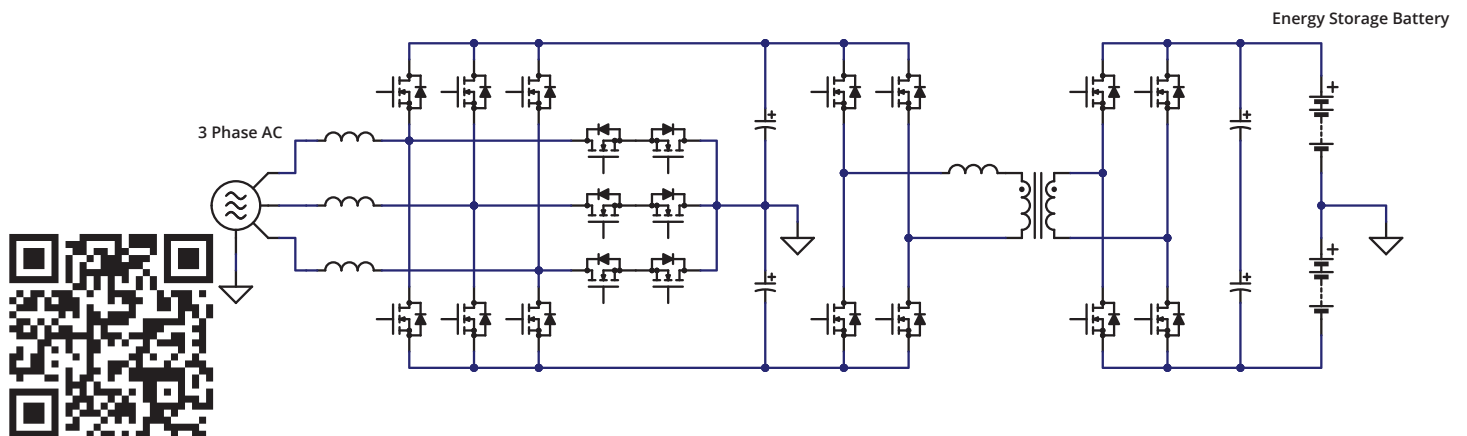
Energy storage systems, including battery energy storage systems (BESS), are increasingly using Silicon Carbide (SiC) MOSFETs in their power electronics due to the numerous advantages these devices offer. SiC MOSFETs are well-suited for energy storage applications as they can enhance the efficiency, power density, and overall performance of the system.

Using SiC MOSFETs in energy storage systems can lead to more efficient, compact, and reliable solutions. These benefits make SiC MOSFETs from SemiQ a great choice for modern energy applications such as grid-scale storage, renewable integration, uninterruptible power supplies (UPS), and electric vehicle charging stations. As SiC technology continues to evolve and become more accessible, its adoption in storage systems is expected to increase, further enhancing the performance and efficiency.

Benefits of SemiQ QSiC™ MOSFETs in Energy Storage

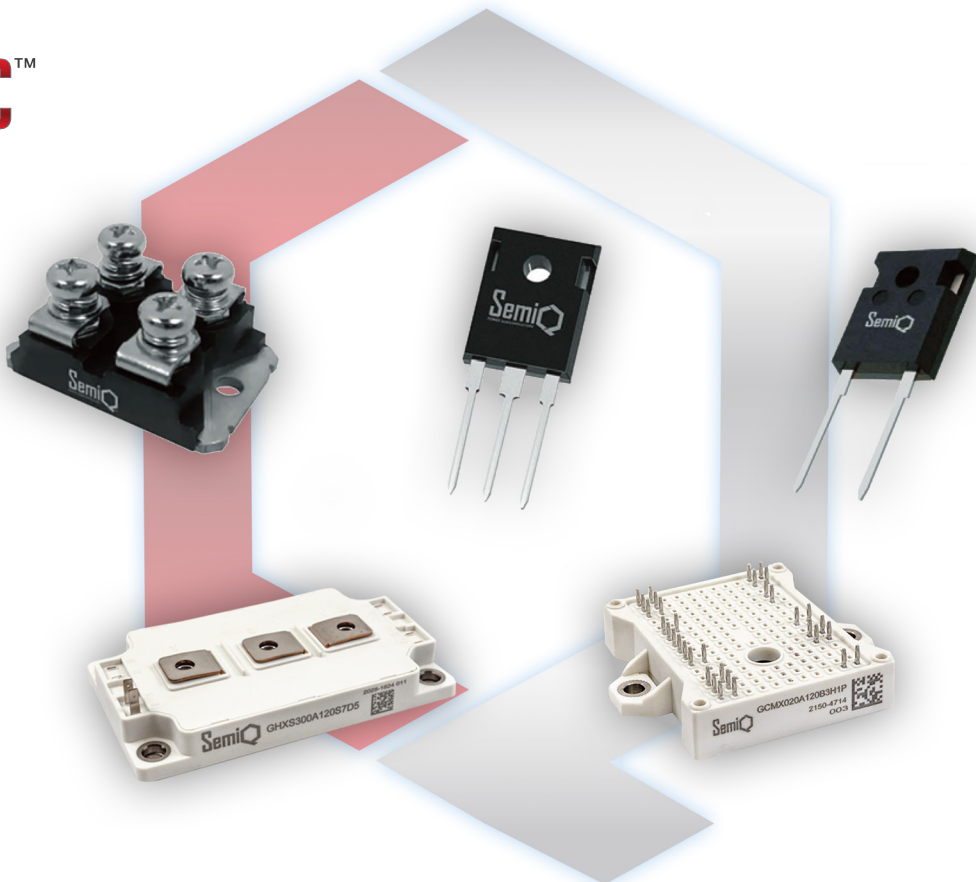
- ✓ High Efficiency
- ✓ Fast Switching Speeds
- ✓ High Power Density
- ✓ Temperature Handling
- ✓ Reduced Cooling Requirements
- ✓ Reliability and Longevity
- ✓ Voltage Rating Options

Typical Energy Storage Schematic



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Silicon Carbide (SiC) semiconductors are revolutionizing the energy storage industry, offering unparalleled benefits across various applications, particularly in applications such as grid-scale batteries and electric vehicle (EV) charging infrastructure. With their superior power handling capabilities and reduced switching losses, SiC devices enable more efficient energy conversion and management in energy storage systems. This translates to faster charging/discharging rates, increased energy density, and improved overall performance. Additionally, SiC's high temperature tolerance and durability enhance the reliability and longevity of energy storage solutions, reducing maintenance costs and downtime. By leveraging SiC semiconductors, the energy storage industry can achieve higher efficiency, lower costs, and greater reliability, facilitating the widespread adoption of renewable energy integration and electrified transportation.



SemiQ specializes in providing high-quality, efficient standard, and custom Silicon Carbide (SiC) Power Semiconductors for high-voltage applications. Our product portfolio includes MOSFETs and diodes, available in discrete, module and bare die that combine high-performance with industry-leading reliability.