

# Silicon Carbide for Solar Energy

Energy efficiency is at the forefront of Solar Technology and making the inverter more efficient decreases the payback period of designs, reduces thermal stresses, and increases lifetime.

SemiQ has the products that will enable designers to achieve higher efficiency, smaller size, and longer reliability.

Silicon Carbide power devices have many application slots within a solar inverter, as can be seen in this schematic.

## Benefits of SemiQ QSiC™ in Solar Technology



**High Efficiency**  
as high as 98% with SiC



**Reduced Heat Loss**



**More Compact Designs**

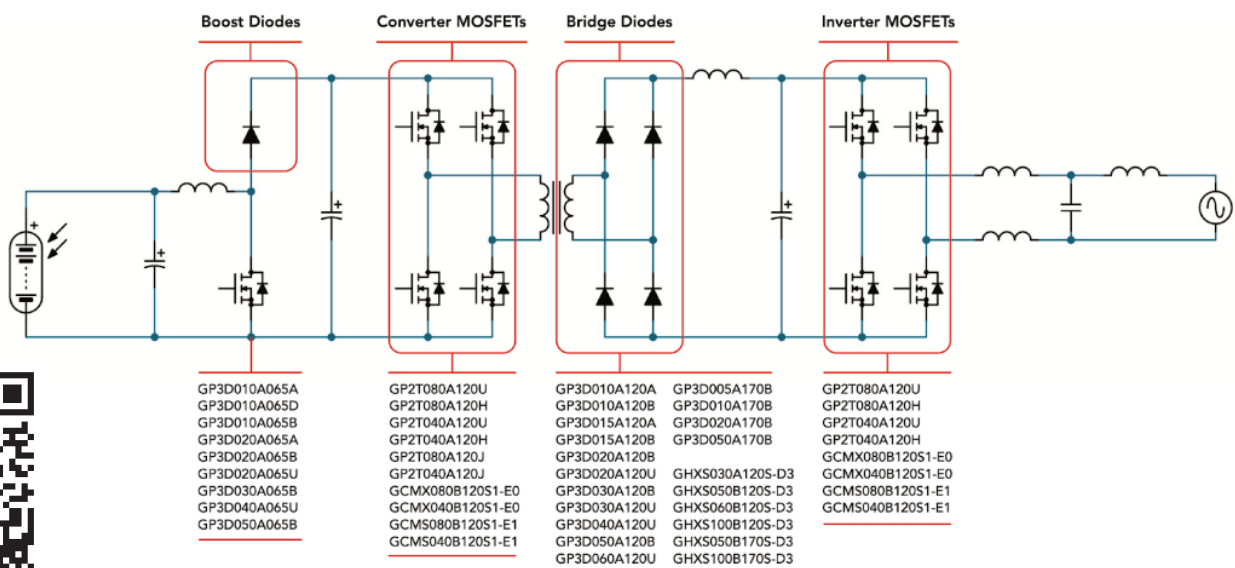


**Better Thermal Stability**



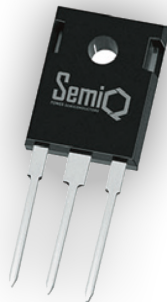
**Over 37M Hours of HTRB/H3TRB Testing**

## Typical Single Phase Solar Inverter Schematic



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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.