

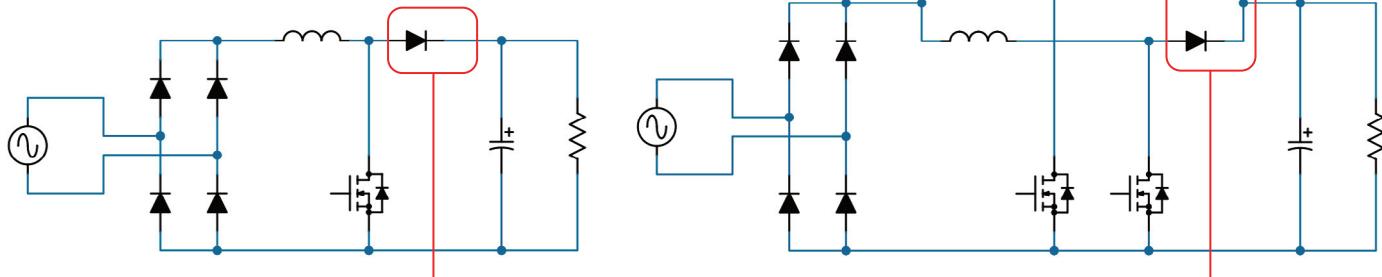
# SILICON CARBIDE SQ DIODES FOR ROBUST APPLICATIONS

SemiQ has designed a family of 650V diodes for Active Power Factor Correction applications that have a higher surge current and higher breakdown voltage rating. Although similar in performance to other 650V diodes, these diodes are built on higher voltage substrates allowing the breakdown voltage to be raised to ~1100V and increasing the surge current rating by 32% versus our GEN3 diodes.

## Benefits of SemiQ SiC in Robust Applications

- Avalanche tested and screened to at least 1000V DC blocking voltage
- Designed to maximize surge and lower thermal impedance
- Over 20 million hours of HTRB/H3TRB testing
- Standard packages for easy adoption

## Typical PFC Schematic



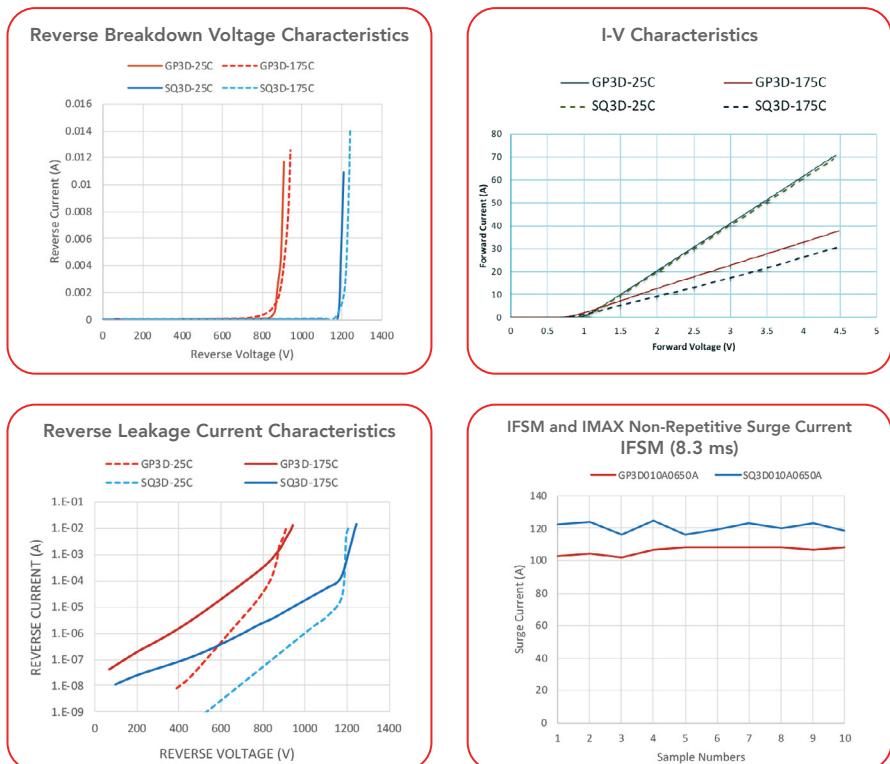
SQ3D006A065A  
 SQ3D006A065D  
 SQ3D008A065A  
 SQ3D008A065D  
 SQ3D010A065A  
 SQ3D010A065D

## SemiQ SQ diodes build upon the strengths of our industry leading GEN3 product line without performance trade-offs.

SemiQ listened to our customers when they asked for high robustness for their critical applications.

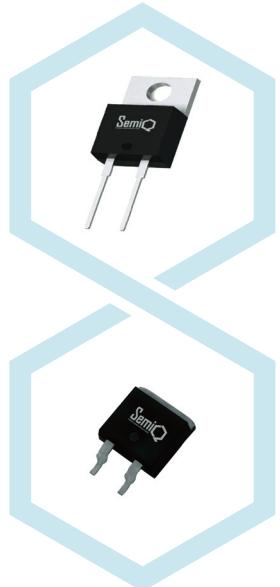
Creating this line of diodes to supplement our GEN3 product line gives customers a choice not found elsewhere. The ability of these diodes to withstand higher breakdown voltages lets designers focus less on surge protection and higher surge current ratings give extra margin.

Whether you're designing for Telecom, Aerospace, or Down Hole applications, these diodes will provide the ultimate in performance and robustness.



## SemiQ SiC 650V SQ Diodes

SemiQ Part Number	Voltage	Current Rating Per Diode	Package	Description
SQ3D006A065A	650V	6	TO-220-2L	Robust SiC Schottky Diode
SQ3D006A065D	650V	6	TO-263-2L	Robust SiC Schottky Diode
SQ3D008A065A	650V	8	TO-220-2L	Robust SiC Schottky Diode
SQ3D008A065D	650V	8	TO-263-2L	Robust SiC Schottky Diode
SQ3D010A065A	650V	10	TO-220-2L	Robust SiC Schottky Diode
SQ3D010A065D	650V	10	TO-263-2L	Robust SiC Schottky Diode



SemiQ is a designer and manufacturer of Silicon Carbide power semiconductors, focused on delivering industry-leading performance of the highest quality and reliability with a fully redundant supply chain. We have a broad product offering fitting many end applications and provide global support from design through production.

