Gen5 650V SiC Schottky Diode Series in D2-PAK Packages

Automotive Grade

GEN5 650V SIC SBD

Features

- 650 V SiC Schottky diode design for high-power conversion
- Advanced MPS structure for fast switching and surge robustness
- Low conduction and switching losses for higher efficiency
- Stable operation at high junction temperatures
- High surge current capability for transient conditions
- AEC-Q101 qualified option for automotive power systems

Benefits

Advanced SiC MPS structure for fast switching, high surge robustness, and long-term reliability in demanding power applications

Low conduction and switching losses to reduce heat generation and improve overall system efficiency in high-frequency designs

Applications

- Industrial power systems
- Renewable energy inverters
- Auxiliary power supplies

High-Efficiency Silicon Carbide MPS Diodes for High-Current Power Conversion with Automotive-Grade AEC-Q101 Option

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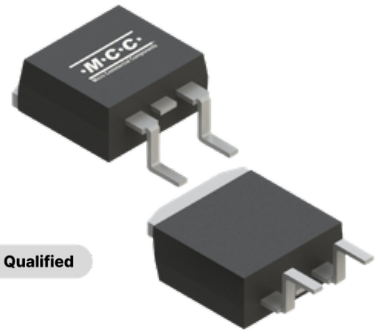
Gen5 650V SiC SBD

Reliable High-Current Silicon Carbide Diodes for Industrial, Energy, and Automotive Systems

Automotive Grade

AEC-Q Qualified



Product Attributes, Parametrics & Datasheets

Product	Type	Package	Average Forward Current IF(AV)(A)	AEC-Q101	Peak Repetitive Reverse Voltage VRRM (V)	Forward Voltage VF (V) [max] @IF(A)	At Rated Forward Current IF (A)	Reverse Voltage Leakage Current IR (uA) [max] @ VR	Datasheet
SICB2065XG5MQ	SiC Schottky Barrier Diodes (SBDs)	D2-PAK	20	Yes	650	1.3	20	25	Info
SICB2065XG5M	SiC Schottky Barrier Diodes (SBDs)	D2-PAK	20	No	650	1.3	20	25	Info

Applications:

Power Conversion & Power Management

- Switching power supplies (SMPS)
- Power factor correction (PFC) stages
- AC/DC and DC/DC converters
- Server and telecom power supplies
- High-efficiency adapters and PSU designs

Industrial & Automation

- Industrial power systems
- Factory automation power modules
- Welding equipment and induction heating
- UPS systems and backup power units
- High-reliability industrial rectifiers
- Motor drivers

Renewable Energy & Energy Infrastructure

- Renewable energy inverters
- Solar string and central inverters
- Energy storage systems (ESS)
- Wind power conversion systems
- Grid-connected power interfaces

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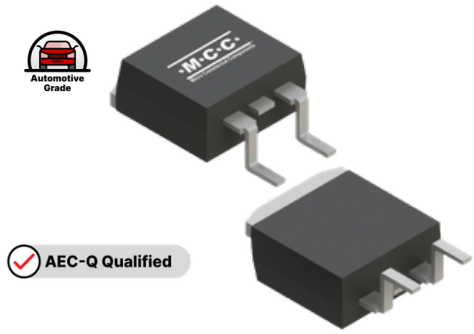
Gen5 650V SiC SBD

Gen5 SiC series combines a low forward voltage drop of 1.3 V, near-zero reverse recovery behavior



Applications:

High-Current Power Distribution

- High-current rectification stages
- High-power DC links
- Battery formation and test equipment

Charging Infrastructure

- Charging piles
- Off-board charging systems
- Fast DC charging equipment
- Power modules for charging stations

Automotive (AEC-Q101 Option)

- On-board chargers (OBC)
- DC/DC converters
- Auxiliary power supplies
- Electrified powertrain and traction inverters
- Automotive charging and power distribution modules

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