



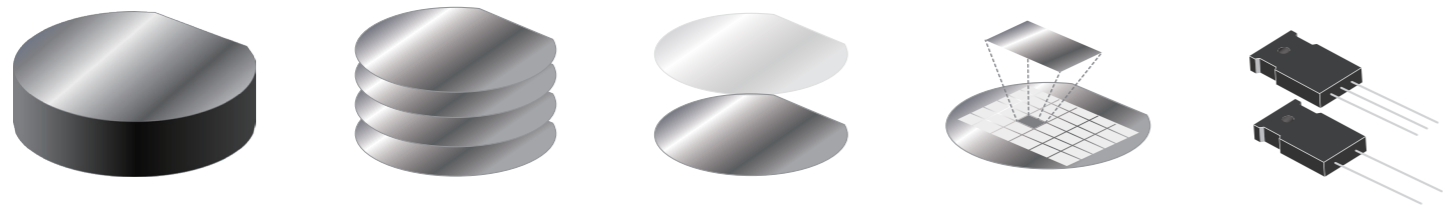
Sanan Semiconductor Silicon Carbide Power Products

About Sanan Semiconductor

The Sanan Semiconductor Changsha plant was established in July 2020 and is located in Changsha, China. This mega factory is a vertically integrated SiC manufacturing facility that provides SiC substrates, epitaxial wafers, SiC SBDs, SiC MOSFETs and also includes assembly and testing services.

The monthly capacity in 2022 was 15,000 6-inch SiC wafers. Capacity will reach 500,000 wafers annually once the building is complete. The fab is ISO 9001 and IATF 16949 certified, and its SiC SBD products are AEC-Q101 qualified.

Sanan Semiconductor provides comprehensive and flexible solutions for high-power and high-reliability applications including electric vehicles, photovoltaic inverters, server power supplies, and home appliances. Sanan Semiconductor's power electronics technology empowers the renewable energy industry and promotes a low-carbon lifestyle.



Why Sanan Semiconductor

Professionalism

Being an expert in SiC / GaN technology researching and manufacturing.

Vertical Integration

Sanan Semiconductor maintains control of the complete supply chain including capacity, cost and qualification for all materials, including wafers and devices.

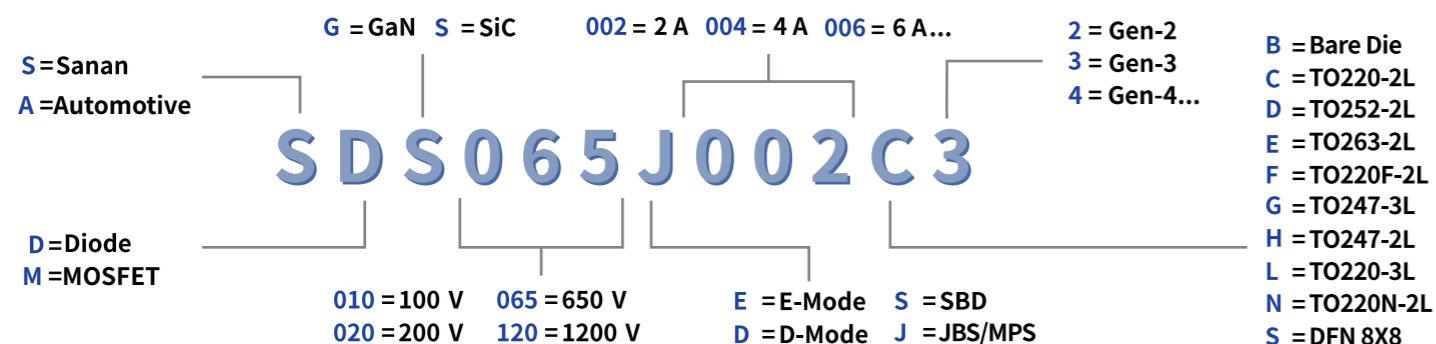
Large-scale

Sanan Semiconductor is accelerating the popularization of SiC / GaN applications through large-scale manufacturing.

Flexible Solutions

Sanan Semiconductor is helping customers earn a strong market position through various flexible and customized services.

DEVICE NOMENCLATURE GUIDE



Vertically Integrated SiC Manufacturing Platform Empowers the Renewable Energy Industry

Sanan Semiconductor's silicon carbide (SiC) power products include automotive and industrial SiC Schottky barrier diodes (SBD) and SiC MOSFETs which provide key components with higher power density and higher energy conversion efficiency for the electric vehicles and renewable energy markets. These can then be applied to high-reliability applications such as electric vehicle drivetrains, charging stations, and solar photovoltaic inverters.

Sanan Semiconductor is a member of the JEDEC JC-70 Wide Band Gap Semiconductor Standards

Committee, which collaborated with the industry to provide process technologies and products with improved reliability and quality. The company also has a portfolio of AEC-Q101 certified products,.

SiC MOSFET

- Easy to drive
- Flat $R_{ds(on)}$
- Lower capacitance
- Higher switching speed
- Low reverse recovery time

Automotive

Sanan Semiconductor is improving cruising ranges and the vehicle charging experience through higher power density and energy conversion efficiency.

SiC SBD

- Robust MPS design
- Zero reverse recovery
- Higher switching speed
- Thinner wafer platform
- AEC-Q101 qualified

SiC Diode Module

The latest SiC power diode technology and miniaturized packaging technology improve the performance of the module for high efficiency and high power density applications.

SiC SBD

Sanan Semiconductor has a broad portfolio of SiC SBDs, with more than 100M units shipped annually. The Gen-3 product portfolio is based on a thinned wafer platform, with lower Vf and better heat dissipation capabilities, providing both higher power density and longer-term reliability.

Features

- Robust MPS design
- Zero reverse recovery
- Higher switching speed
- Thinner wafer platform
- AEC-Q101 qualified

Applications

- PV inverter
- Energy storage
- Server power supply
- Base station power supply
- OBC
- Charging piles
- DC/DC
- Home appliance

Part No.	Voltage	Current	Package
SDS065J002C3	650V	2A	TO220-2L
SDS065J002D3	650V	2A	TO252-2L
SDS065J004C3	650V	4A	TO220-2L
SDS065J004C4	650V	4A	TO220-2L
SDS065J004D3	650V	4A	TO252-2L
SDS065J004D4	650V	4A	TO252-2L
SDS065J006C3	650V	6A	TO220-2L
SDS065J006E3	650V	6A	TO263-2L
SDS065J006S3	650V	6A	DFN8*8-4L
SDS065J008C3	650V	8A	TO220-2L
SDS065J008D4	650V	8A	TO252-2L
SDS065J008N3	650V	8A	TO220N-2L
SDS065J008N3	650V	8A	TO220N-2L
SDS065J008S3	650V	8A	DFN8*8-4L
SDS065J010C3	650V	10A	TO220-2L
SDS065J010C4	650V	10A	TO220-2L
SDS065J010E3	650V	10A	TO263-2L
SDS065J010N3	650V	10A	TO220N-2L
SDS065J010N3	650V	10A	TO220N-2L

Part No.	Voltage	Current	Package
SDS065J010S3	650V	10A	DFN8*8-4L
SDS065J012C3	650V	12A	TO220-2L
SDS065J016C3	650V	16A	TO220-2L
SDS065J016G3	650V	8A	TO247-3L
SDS065J016H3	650V	16A	TO247-2L
SDS065J020C3	650V	20A	TO220-2L
SDS065J020C3	650V	20A	TO220-2L
SDS065J020D3	650V	20A	TO252-2L
SDS065J020G3	650V	10A	TO247-3L
SDS065J020H3	650V	20A	TO247-2L
SDS065J020P3	650V	20	TO3PF
SDS065J030G3	650V	16A	TO247-3L
SDS065J040G3	650V	20A	TO247-3L
SDS120J002C3	1200V	2A	TO220-2L
SDS120J002D3	1200V	2A	TO252-2L
SDS120J005C3	1200V	5A	TO220-2L
SDS120J005D3	1200V	5A	TO252-2L
SDS120J010C3	1200V	10A	TO220-2L
SDS120J010D3	1200V	10A	TO252-2L
SDS120J010E3	1200V	10A	TO263-2L
SDS120J010G3	1200V	5A	TO247-3L
SDS120J010H3	1200V	10A	TO247-2L
SDS120J015C3	1200V	15A	TO220-2L
SDS120J015H3	1200V	15A	TO247-2L
SDS120J020G3	1200V	10A	TO247-3L
SDS120J020H2	1200V	20A	TO247-2L
SDS120J020H3	1200V	20A	TO247-2L
SDS120J027H3	1200V	27A	TO247-2L
SDS120J030G2	1200V	15A	TO247-3L
SDS120J030G3	1200V	30A	TO247-3L
SDS120J030H3	1200V	30A	TO247-2L
SDS120J040G2	1200V	20A	TO247-3L
SDS120J040G3	1200V	40A	TO247-3L
SDS120J040H3	1200V	40A	TO247-2L



SiC MOSFET

Based on a vertically integrated SiC manufacturing platform, Sanan Semiconductor launched its SiC MOSFET technology for renewable energy systems. This industry leading technology helps customers achieve higher power density, a more compact module design, and an overall lighter weight of the system hardware.

Features

- Easy to drive
- Flat $R_{ds(on)}$
- Lower capacitance
- Higher switching speed
- Low reverse recovery time

Applications

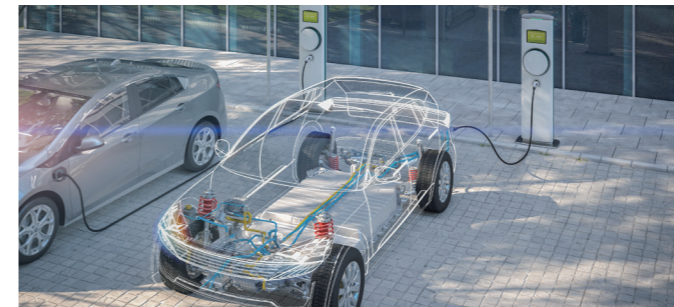
- Automotive Drive
- OBC
- Charging piles
- PV inverter
- Energy storage

Automotive

Sanan Semiconductor is improving cruising ranges and the vehicle charging experience through higher power density and energy conversion efficiency.

SiC Diode Module

The latest SiC power diode technology and miniaturized packaging technology improve the performance of the module for high efficiency and high power density applications.



Part No.	Voltage	WfrSPEC(mΩ)	Package
SMS1200020M	1200V	20mΩ	TO247-4L
SMS1200080M	1200V	80mΩ	TO247-4L
SMS1200080K	1200V	80mΩ	TO247-3L
SMS1200032M	1200V	32mΩ	TO247-4L
SMS1200075M	1200V	75mΩ	TO247-4L
SMS1200075P	1200V	75mΩ	TO263-7L
SMS1701000M	1700V	1000mΩ	TO247-3L

Part No.	Voltage	I _f	Package
ADS16B3	650V	1A	SMB
ADS065J040G3	650V	20A	TO247-3L
ADS065J020H3	650V	20A	TO247-2L
ADS065J020C3	650V	20A	TO220-2L
ADS065J020G3	650V	10A	TO247-3L
ADS065J016G3	650V	8A	TO247-3L
ADS12B3	1200V	1A	SMB
ADS120J020H3	1200V	20A	TO247-2L
ADS120J020G3	1200V	10A	TO247-3L

Voltage	I _f	Package	Description
1200V	60	SOT227	SiC Diode Module
1200V	100	SOT227	SiC Diode Module
650V	20	TO247-3L	Hybrid SiC Discrete

