



SiC/GaN power devices technologies



SiC SBD/MOSFET documents/samples

PN JUNCTION

SEMICONDUCTOR

- Focus on Wide Band Gap power devices development
- Membership at JEDEC JC-70 Participate and vote in the SiC and GaN related standards
- Bring innovative Silicon Carbide power devices/modules into the global market

Ningbo

Building 23, Area C, Digital Economy Industrial Park, Qianwan New District, Cixi City, Ningbo, Zhejiang, China

Shanghai

Room 703, Building D1, Hongqiao World Center, No.578, Lane 1588, Zhuguang Road, Qingpu District, Shanghai, China

Hangzhou

Room 1305, Building T2, Aodi International, Chaoyun Community, Yingfeng Street, Xiao-shan District, Hangzhou City, Zhejiang, China

Shenzhen

18DE, Jinyun Century Building. No.6033 Shennan Avenue, Shatou Street, Futian District, Shenzhen, Guangdong Province

PN JUNCTION

Vision



To become a global leader in SiC technology and illuminate the future of energy with China's semiconductor power!

Mission



Empowering sustainable energy with "Power Chip," maximizing the value of every watt!

Core Values



Unity of Knowledge and Action · Creating Value

CONTENTS

01

—
About Us

02

—
Our History

03

—
Properties of
WBG Semiconductors

04

—
Applications of
WBG Semiconductors

05

—
SiC SBD
(SCHOTTKY BARRIER DIODES)

06

—
SiC SBD
Application Examples

07

—
SiC MOSFET
(SCHOTTKY BARRIER DIODES)

08

—
SiC MOSFET Roadmap

09

—
SiC MOSFET
Application Examples

10

—
Products

01' About Us



PN Junction Semiconductor specializes in the design of third-generation semiconductor power devices and aims to become a globally renowned brand in this field. PN Junction Semiconductor empowers its customers with leading-edge technology and products, assisting its partners in becoming industry leaders.



PN Junction Semiconductor firmly believes that an excellent supplier of third-generation semiconductor power devices can offer advanced solutions using silicon carbide and gallium nitride technologies. This helps customers enhance product performance and drive technological innovation. PN Junction Semiconductor has mastered cutting-edge silicon carbide technology, and its product key performance is on par with international giants in the industry.



PN Junction Semiconductor consistently focuses on improving its independent research and development capabilities and has obtained over 80 core intellectual property rights. It continuously increases research and development investments, enhances its product portfolio, accelerates industry chain deployment, and promotes the widespread application of silicon carbide devices in various industries. Currently, it has been supplying in bulk to leading companies in the fields of new energy vehicles, photovoltaics, and consumer electronics.

Located in Ningbo, PN Junction Semiconductor's research and development center specialized laboratories for silicon carbide performance analysis, reliability testing, application experiments, and purification rooms. These facilities are dedicated to research, design verification, technical application experiments, product functionality testing, and reliability testing of silicon carbide power devices.

PN Junction Semiconductor possesses an efficient and reliable delivery system to meet high standards set by customers and the market. It has established a long-term strategic cooperation with X-FAB, a silicon carbide foundry with 30 years of automotive qualification history, with an annual production capacity exceeding 120KK.

Currently, PN Junction Semiconductor has established marketing teams in Ningbo, Shenzhen, South Korea, and Germany, with a global sales network coverage. We are committed to providing excellent products and services to our customers, fostering mutual development, and achieving win-win outcomes.

02' Our History

2018-2020

Seed Period

Technology Verification and Ecological Foundation Laying

Completed product technology verification, established commercialization foundation.

R&D Breakthrough	Supply Chain Cooperation Initiated	Automotive Certification Implementation	Industry Standards Participation
Completed the development of 650V/1200V/1700V series SiC MOSFET products, and advanced the layout of gallium nitride technology (signed a contract with TSMC and released a 650V series gallium nitride product).	Signed a strategic cooperation agreement with foundry X-FAB, laying the foundation for early production capacity collaboration.	Products passed AEC-Q101 automotive-grade certification, indicating compliance with automotive electronics reliability requirements.	Joined JEDEC-JC70 as one of the first member units, deeply participating in the development of technical standards for wide bandgap semiconductors.

2021-2024

Development Phase

Market Breakthrough and Scale Quantification

Promote the large-scale application of products, expand global markets, and improve supply chain and capacity layout.

Introduction to Key Customers	Market Order Coverage	Supply Chain Security Reinforcement	Technology Matrix Expansion	Headquarters and Production Capacity
SiC MOSFET series products have successfully entered the supply chain of global leading new energy vehicle brands, achieving large-scale application of automotive-grade products.	Secured bulk orders from European, Japanese, and Korean customers in overseas markets; covered leading customers in the domestic market in the field of light storage and charging (photovoltaic, energy storage, charging), completing penetration into mainstream application scenarios.	Signed a 6-year long-term supply agreement (LTA) with strategic partner X-FAB to ensure capacity stability.	Released a 2000V series SiC MOSFET, simultaneously completed the development of HPD, TPAK, HEPACK, and other automotive-grade silicon carbide modules, improving the automotive-grade product portfolio.	Settled in Ningbo, Qianwan New Area, laying a geographical and policy foundation for large-scale production.

2025-

Growth Phase

Technology Iteration and Global Scale

Promote continuous technological leadership and achieve business model upgrading and full industry chain control.

Business Model Strategic Upgrade	Technology Platform Breakthrough	Packaging Technology Innovation	New Emerging Field Layout
Transitioned from a 'virtual IDM' model to a full-process IDM (integrated device manufacturer) model, completed a 'domestic + overseas' dual-cycle supply chain layout, and strengthened independent control capabilities.	Completed the development of the fourth-generation (Gen4) silicon carbide technology platform, and released a 3300V high-voltage series SiC MOSFET, covering a broader range of industrial and energy scenarios.	Laid out next-generation PCB embedded packaging technology, enhancing product integration and performance.	Focused on expanding key customers in the AIDC (Artificial intelligence and Data Centers) field, promoting the application of silicon carbide in high-computing power scenarios.

03 · Properties of WBG Semiconductors

PNJ is one of the few domestic manufacturers that master the full capabilities of “chip design + manufacturing process”, leading the bottom-level innovation of silicon carbide chips.



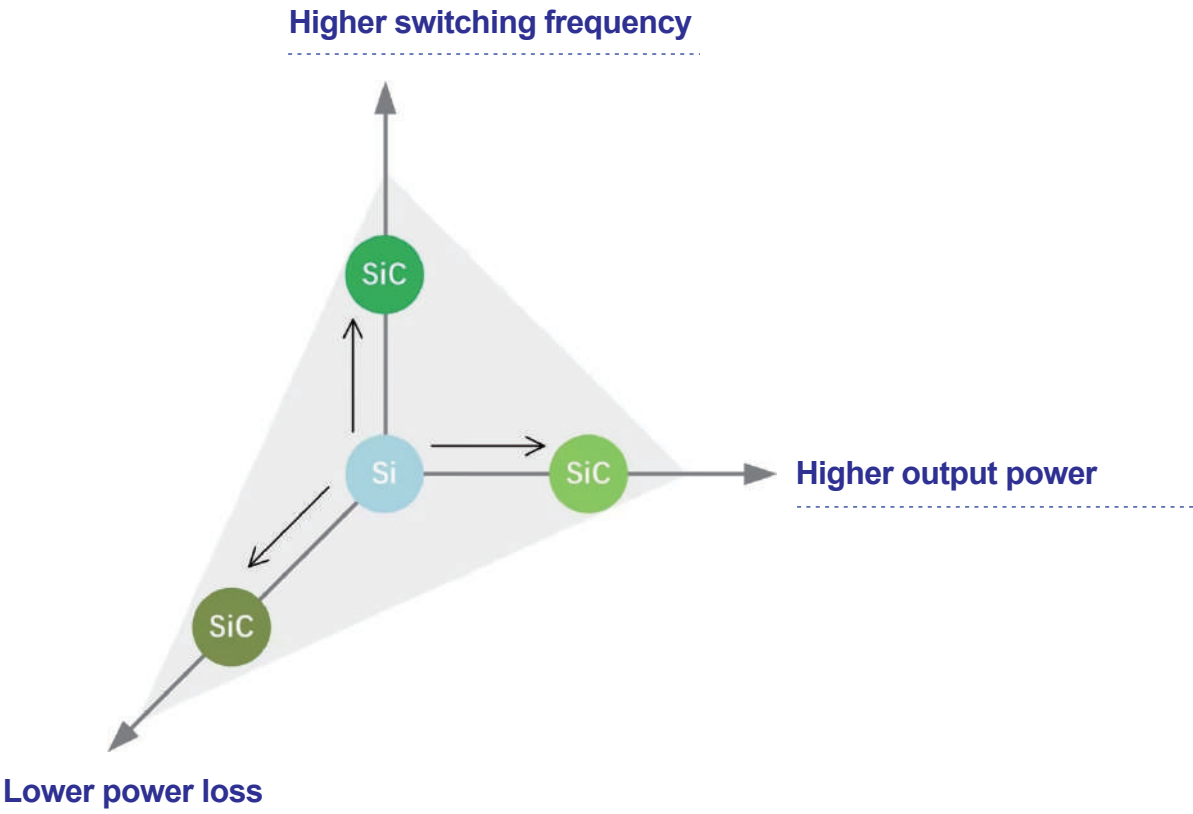
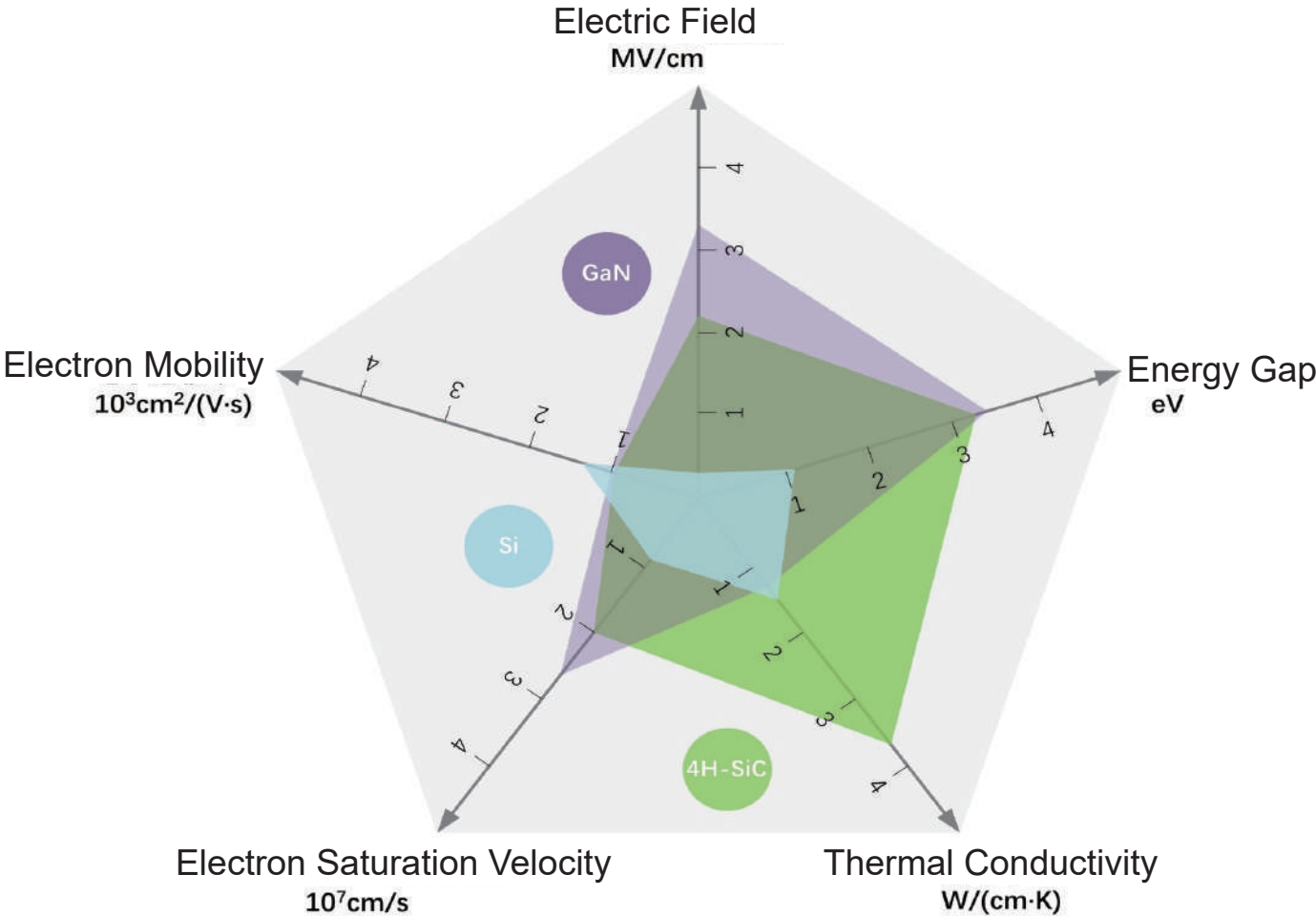
Resduce system size



Resduce system cost



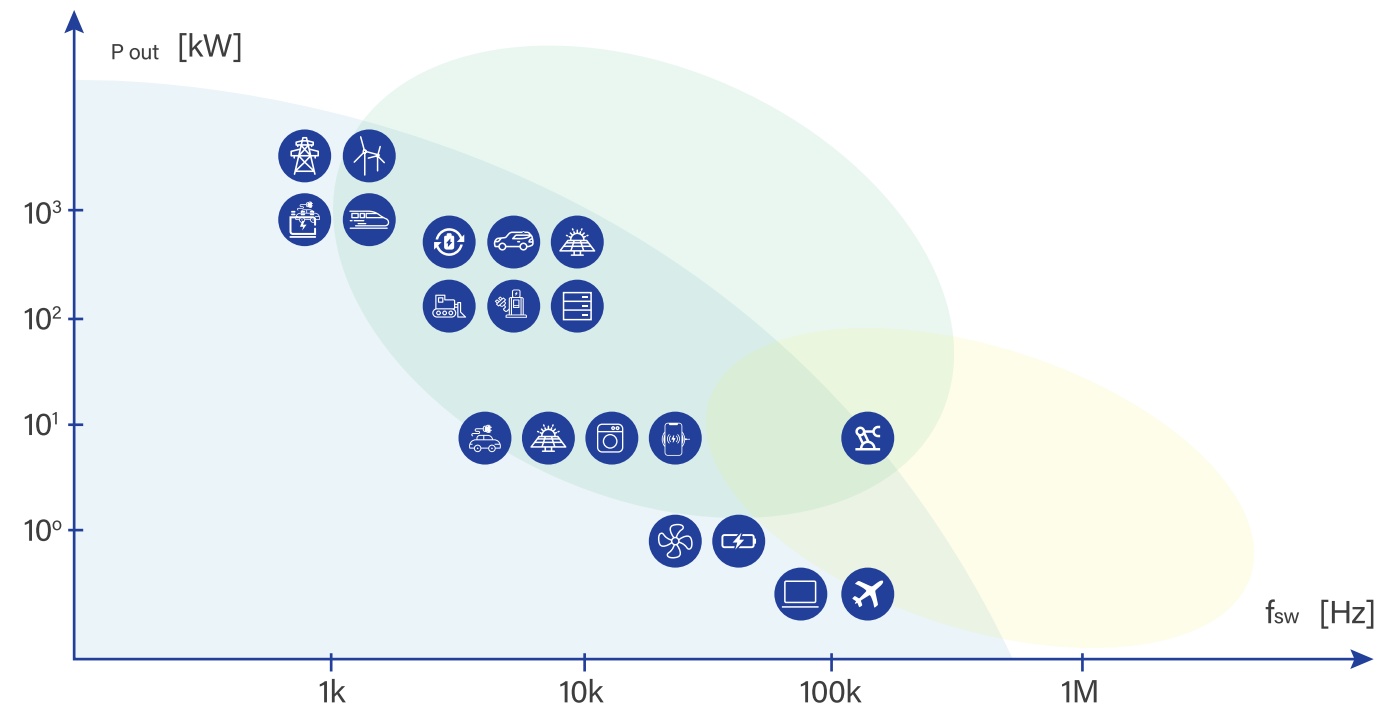
Efficient energy utilization



04 Applications of WBG Semiconductors

- Renewable Energy Vehicle/Supercharging Station
- Communication Base Station
- Data Center
- Photovoltaic Inverter/Energy Storage System
- Rail Transit
- Home Appliances

- Smart Grid
- Aerospace
- Industrial Special Power Supply
- UPS, Motor Driven



TO-220I-2



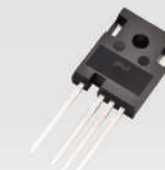
TO-263-7



MSOP9



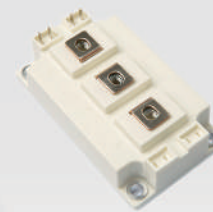
TPAK



TO-247-4C



TO-247plus-4



62mm



TO-3PF-3L

AUTOMOTIVE

EV CHARGER

SOLAR & WIND

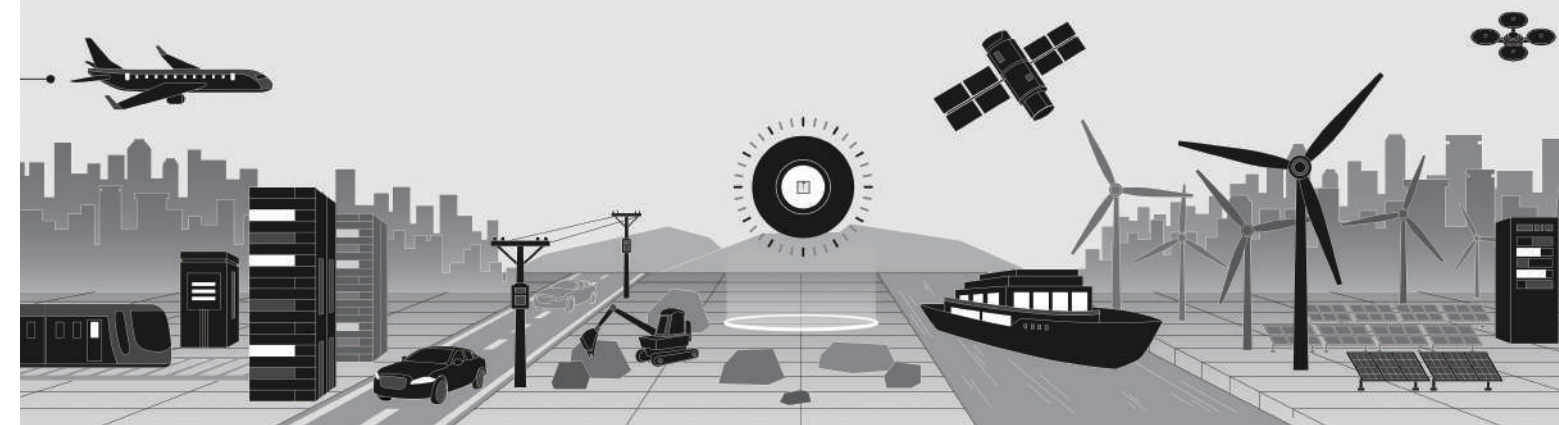
ENERGY STORAGE

POWER GRID TRANSMISSION

DATA CENTER & TELECOM

AI SERVER

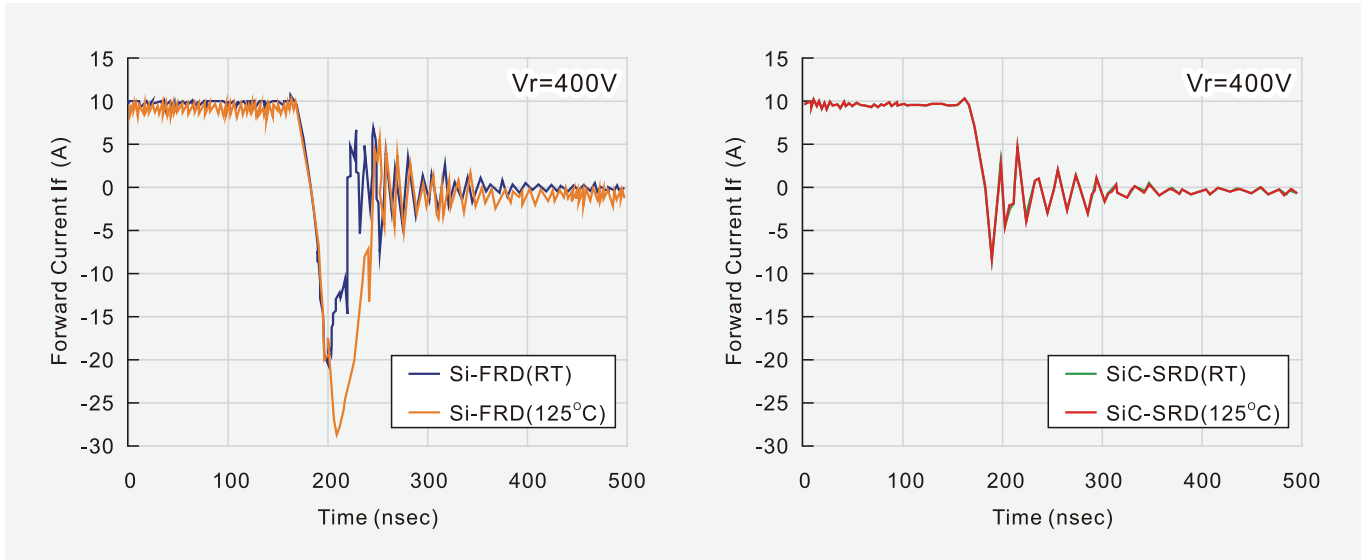
SPECIALTY POWER



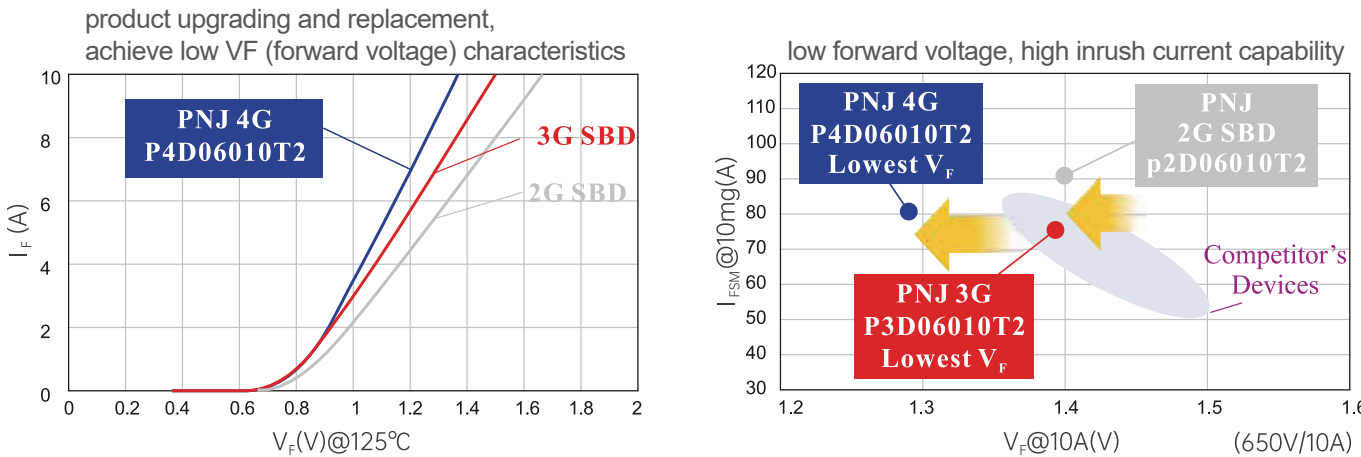
05 SiC SBD (SCHOTTKY BARRIER DIODES)

Compared to traditional silicon-based diodes, SiC SBD (**Silicon Carbide Schottky Barrier Diode**) can significantly reduce reverse recovery losses, thereby reducing the switching losses of active devices and allowing them to operate at higher switching frequencies. Additionally, SiC material has lower thermal resistance, and SiC SBD can withstand higher operating temperatures. These advantages of SiC SBD can improve converter efficiency and power density, enhance system reliability, and reduce overall costs. Therefore, SiC SBD finds extensive applications in PFC (Power Factor Correction), boost circuits, rectifier circuits, and other similar applications.

significantly reduce reverse recovery losses



improve device process, achieve low VF (forward voltage) characteristics



PFC

[SW device] 650V class
SiC SBD: P3D06xxx series

Boost

[SW device] 1200V class
SiC SBD: P3D12xxx series

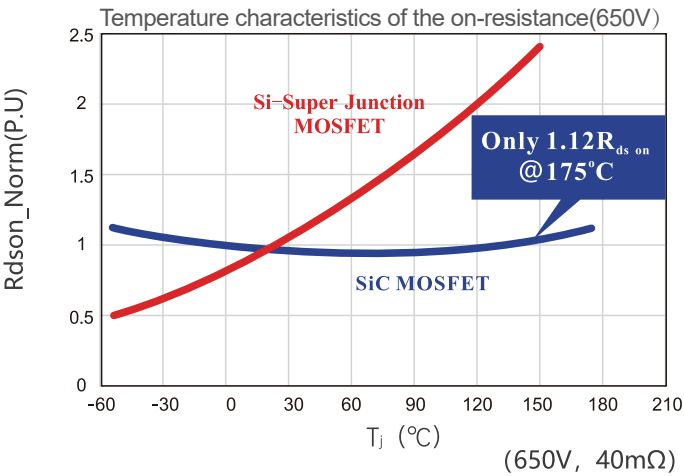
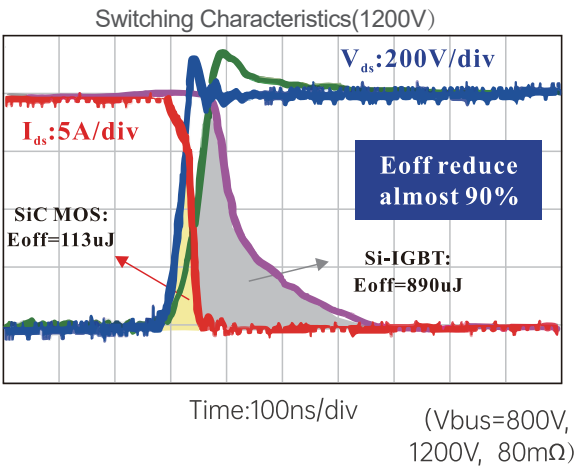
On-Board Charger

[SW device] 650V class
SiC SBD: P3D06xxx series

07 SiC MOSFET (SCHOTTKY BARRIER DIODES)

simultaneously reduce switching losses and conduction losse

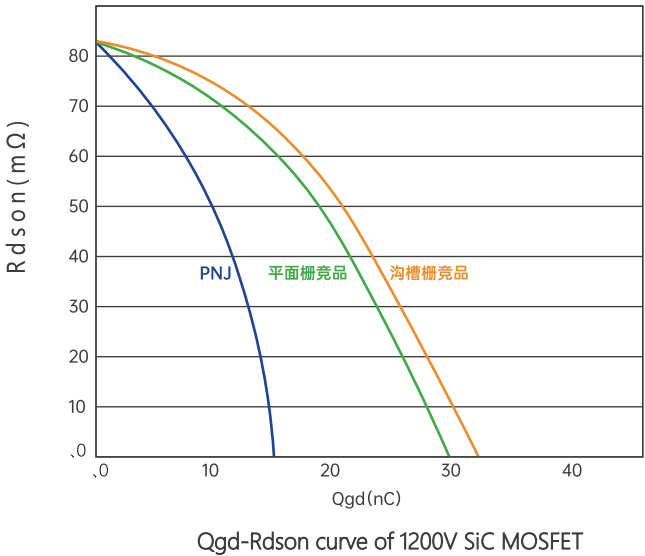
Compared to traditional silicon-based MOSFETs or IGBTs, SiC MOSFETs can significantly reduce switching losses. Additionally, SiC MOSFETs have a smaller drift in on-resistance with temperature and demonstrate significant dvantages in conduction losses during high-temperature operation. By adopting SiC MOSFETs, converters can operate at higher switching frequencies, further reducing the volume of energy storage components. Therefore, SiC MOSFETs can significantly reduce the weight, size, and cost of power electronic converters, while improving the efficiency and power density of power electronic systems.



improve device process, achieve low VF (forward voltage) characteristics

HDFM is an important characteristics to measure the performance of power devices. Lower value, lower losses, and higher efficiency.

$$HDFM=\sqrt{Qgd \cdot Rdson}$$

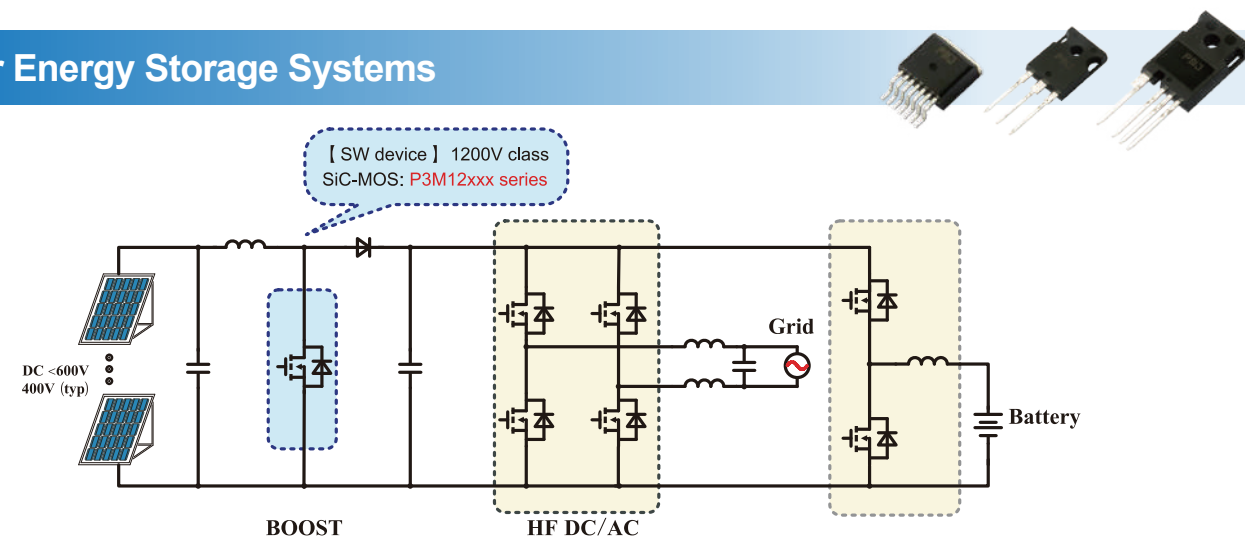


- SiC MOSFETs are available in various voltage platforms ranging from 650V to 1700V
- The HDFM (High Dynamic Figure of Merit) value is more than 50% higher than the industry average, demonstrating superior overall performance
- The short-circuit capability and gate-to-source immunity reach international leading levels
- The gate oxide reliability meets automotive-grade standards

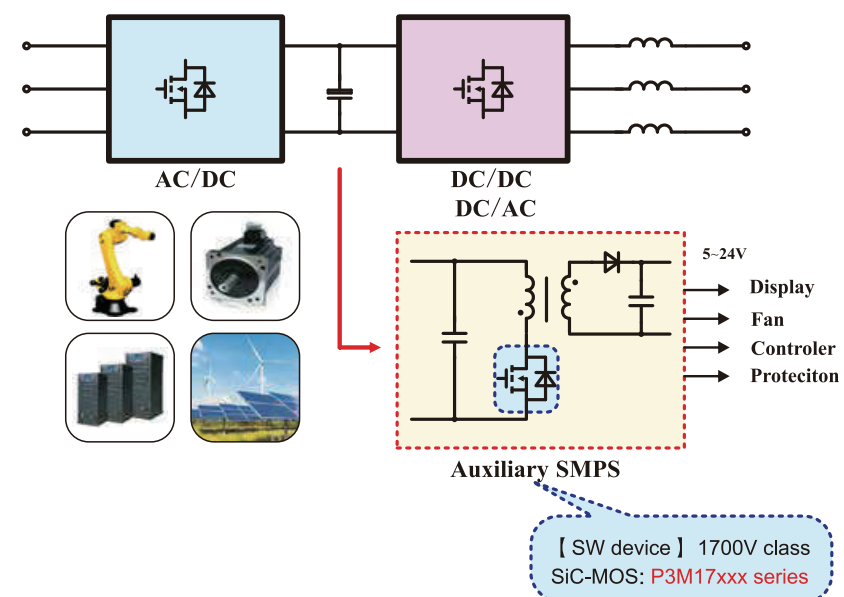
Product Line	2019	2020	2021	2022	2023	2024	2025
SiC MOSFET	Gen3 650V/1200V/1700V 4.8μm platform						
	Gen 4 650V/1200V/1700V3.2μm platform						
	TO247/TO263/TO220						
	HEPACK/TSPACK/HPD/Easy 1B						
Si MOSFET	Superjunction 650V						
	SGT 80V						

09 SiC MOSFET Application Examples

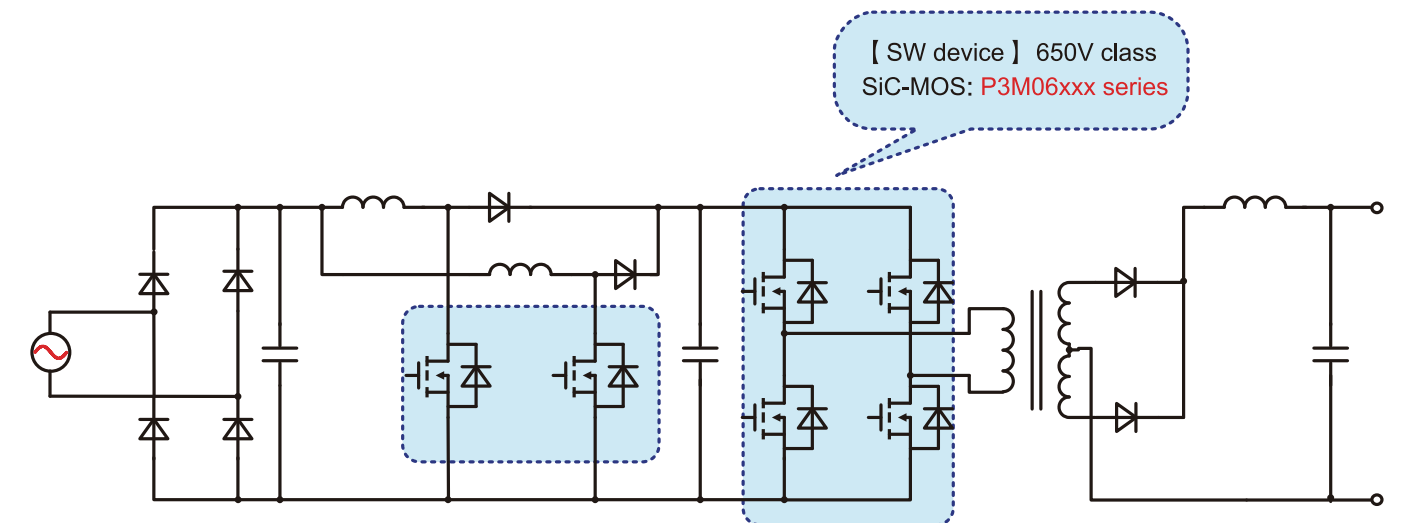
Solar Energy Storage Systems

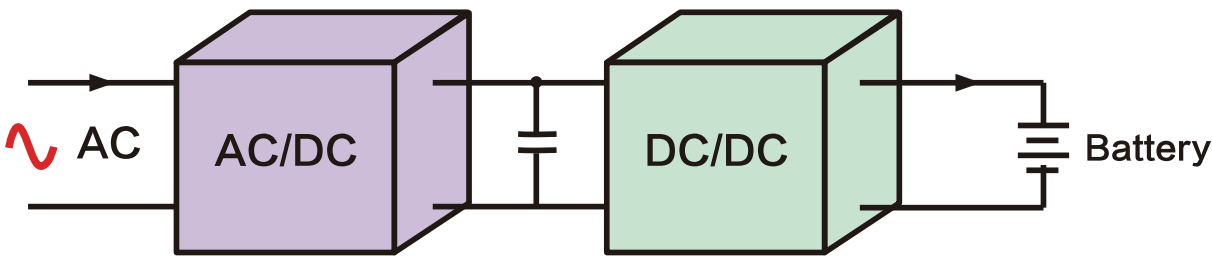


Auxiliary Power Supply for Three-phase Power Converter



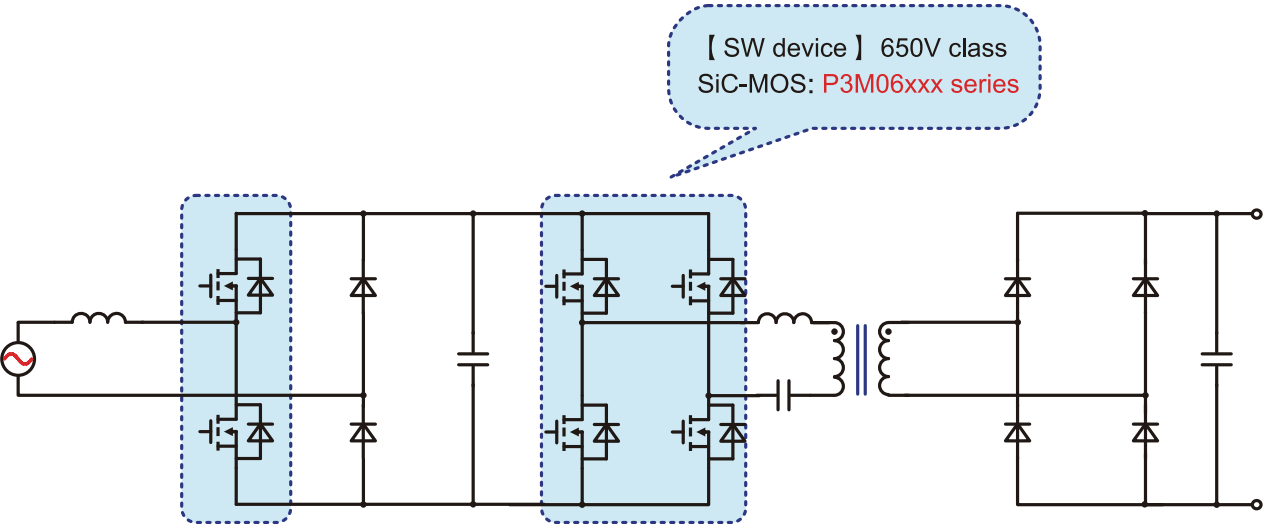
Datacenter & Server Power Supplies





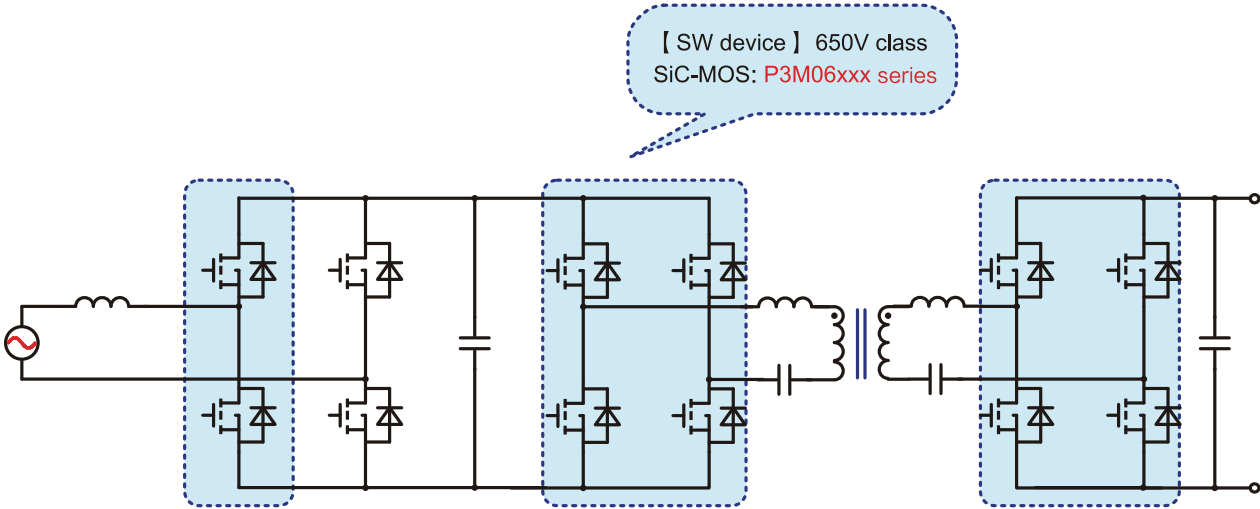
Single-Phase Uni-directional OBC

- By using SiC MOSFET, the conversion efficiency and reliability are improved
- It can meet the power requirements of 3.3kW/6.6kW



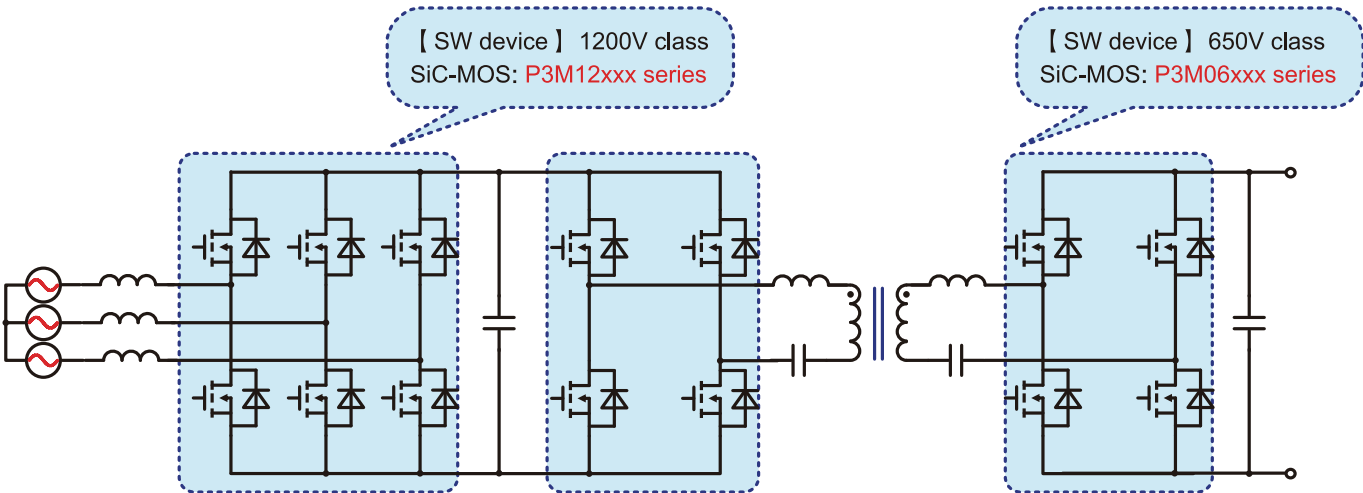
Single-Phase Bi-directional OBC

- Satisfying the needs of emergency and outdoor recreational applications
- The secondary side rectification adopts a full-bridge circuit, enabling bidirectional energy flow
- It can meet the power requirements of 3.3kW/6.6kW



Three-Phase Bi-directional OBC

- three-phase AC input
- The 1200V SiC MOSFET can simultaneously meet high voltage withstand capability and low on-state resistance ($R_{ds(on)}$)
- It can meet the high power conversion requirements of 11kW/22kW



10 PRODUCTS

SiC SBD

Product Voltage Rating	P/N	VF@25°C [V]	IF@150°C [A]	Total Capacitive Charger [nC]	IFSM@25°C [A]	Package
650V	P3D06004T2	1.25	4	17	45	TO220-2
	P3D06040K3	1.3	20X2	75X2	160X2	TO247-3
	P3D06020K2	1.3	20	75	160	TO247-2
	P3D06015F2	1.3	15	54	100	TO220F-2
	P3D06006F2	1.34	6	21	61	TO220F-2
	P3D06006T2A	1.35	6	20	60	TO220-2
	P3D06010F2	1.39	10	29	77	TO220F-2
	P3D06006I2	1.39	6	15.6	51	TO220I-2
	P3D06016K3	1.39	2×8	18.8X2	77X2	TO247-3
	P3D06008E2	1.39	8	19.6	60	TO252-2
	P3D06008G2	1.39	8	19.6	66	TO263-2
	P3D06008F2	1.39	8	16.6	61	TO220F-2
	P3D06008I2	1.39	8	19.6	65	TO220I-2
	P3D06008T2	1.39	8	19.6	60	TO220-2
	P3D06006E2	1.39	6	15.6	45	TO252-2
	P3D06006G2	1.39	6	14.4	48	TO263-2
	P3D06040G2	1.4	40	100	220	TO263-2
	P3D06040K2	1.4	40	100	230	TO247-2
	P3D06020K3A	1.4	2×10	30X2	95X2	TO247-3
	NP3D06010BD	1.4	10	24.8	/	Bare Die
	P3D06060K2	1.4	60	150	350	TO247-2
	P3D06006E3	1.4	6	15	38	TO252-3
	P3D06010T2A	1.4	10	28	105	TO220-2
	P3D06010E2A	1.42	10	29	68	TO252-2
	P3D06010G2A	1.45	10	29	76	TO263-2
	P3D06030K2	1.45	30	77	230	TO247-2
	P3D06060K3	1.45	30X2	77X2	230X2	TO247-3
	P3D06002E2	1.5	2	4.5	18	TO252-3
	P3D06004G2	1.5	4	8.03	34	TO263-2
	P3D06002G2	1.5	2	3.02	23	TO263-2
	P3D06004E2	1.5	4	9	26	TO252-2
	P3D06002T2	1.5	2	3.9	23	TO220-2
	P3D06002B0	1.6	2	14.3	13	SMB

SiC SBD

Product Voltage Rating	P/N	VF@25°C [V]	IF@150°C [A]	Total Capacitive Charger [nC]	IFSM@25°C [A]	Package
1200V	P3D12040K3	1.41	20X2	89X2	150X2	TO247-3
	P3D12030K2	1.45	30	150	280	TO247-2
	P3D12040K2	1.45	40	190	250	TO247-2
	P3D12150K2	1.5	150	346	630	TO247-2
	P3D12080K2	1.5	80	346	630	TO247-2
	P6D12002E2	1.5	2	25.2	18	TO252-2
	P3D12002B0	1.5	2	25.2	15	SMB
	P3D12005K2	1.5	5	36.8	75	TO247-2
	P3D12010K2	1.5	10	49	110	TO247-2
	P3D12010T2	1.5	10	49	126	TO220-2
	P3D12010K3	1.5	5X2	36.8X2	65X2	TO247-3
	P3D12015K2	1.5	15	57.8	130	TO247-2
	P6D12002T2	1.5	2	7.2	14	TO220-2
	P3D12015T2	1.5	15	57.8	130	TO220-2
	P3D12060K2A	1.5	60	283	297	TO247-2
	P3D12020K3	1.97	10X2	53X2	159	TO247-3
1700V	P3D17005F2	1.37	5A	49	95	TO220F-2
	P3D17005K2	1.45	5A	49	80	TO247-2
	P3D17012K2	1.46	12A	106	172	TO247-2

SiC MOSFET

Product Voltage Rating	P/N	Rds(on)@25°C [mΩ]	ID@25°C [nC]	Qgd [A]	Max Junction Temperature [°C]	Rds(on)@175°C [mΩ]	Package
650V	P3M06009L8	9	165	40	175	14	TOLL
	P3M06013T7	13	166	51	175	17	TO-263-7L-LF
	P3M06013LT	13	154	40	175	19	TOLT
	P3M06013L8	13	122	40	175	19	TOLL
	P3M06015LT	15	107	48	175	23	TOLT
	P3M06015K4	15	105	48	175	25	TO-247-4
	P3M06015K4S	15	105	48	175	25	TO-247-4S
	P3M06025PQ	25	105	33	175	32	QDPAK-22L
	P3M06025LT	25	98	38	175	30	TOLT
	P3M06025G7	25	80	36	175	28	TO-263-7
	P3M06025K3G2	25	82	38	175	34	TO-247-3
	P3M06025K4G2	25	75	38	175	45	TO-247-4
	P3M06025K4SG2	25	75	38	175	45	TO-247-4S
	P3M06025L8	25	91	25	175	29	TOLL
	P3M06035L8	35	61	17.6	175	44	TOLL
	P3M06040L8	40	66	17	175	60	TOLL
	P3M06040K3G2	40	48	21	175	60	TO-247-3
	P3M06040K4G2	40	48	21	175	60	TO-247-4
	P3M06040G7	40	52	16	175	52	TO-263-7
	P3M06060G7	60	38	37	175	77	TO-263-7
	P3M06060K4	60	40	35	175	77	TO-247-4
	I3M06060L8	60	35	15.3	150	/	TOLL

SiC MOSFET

Product Voltage Rating	P/N	Rds(on)@25°C [mΩ]	ID@25°C [A]	Qgd [nC]	Max Junction Temperature [°C]	Rds(on)@175°C [mΩ]	Package
750V	P4M07217PQ	6.4	217	48	175	10.3	QDPAK-22L
	P4M07216K4	6.8	216	96	175	10.9	TO-247-4
	P4M07216K4S	6.8	216	96	175	10.9	TO-247-4S
	P3M07008PQ	8	208	45	175	11	QDPAK-22L
	P3M07009K4	9	174	40	175	14	TO-247-4
	P3M07009K4S	9	174	40	175	14	TO-247-4
	P3M07009LT	9	158	70	175	12	TOLT
	P3M07009L8	9	138	40	175	12	TOLL
	P3M07013K4S	13	143	54	175	19	TO-247-4S
	P3M07013T7	13	166	56	175	17	TO-263-7L-LF
	P3M07013K4	13	143	54	175	19	TO-247-4
	P3M07015K3	15	108	56	175	15	TO-247-3
	P3M07015K4	15	108	56	175	25	TO-247-4
	P3M07015K4S	15	108	56	175	25	TO-247-4S
	P3M07015PQ	15	103	56	175	25	QDPAK-22L
	P3M07018LT	18	117	56	175	25	TOLT
	P3M07025T7	25	88	31	175	32	TO-263-7L-LF
	P3M07025K4	25	82	38	175	34	TO-247-4
	P3M07025PQ	25	105	42	175	32	QDPAK-22L
	P3M07025T7i	25	70	32	175	29	TO-263-7L-DBC
	P3M07025K4S	25	82	38	175	34	TO-247-4S
	P3M07025K4EG2	25	84	50	175	31	TO-247-4E
	P3M07035K4	35	57	17.6	175	44	TO-247-4
	P3M07035K4S	35	57	17.6	175	44	TO-247-4S
	P3M07040LT	40	85	18	175	62	TOLT
	P3M07040PQ	40	49	37	175	50	QDPAK-22L
	P3M07040K4	40	48	16	175	60	TO-247-4

SiC MOSFET

Product Voltage Rating	P/N	Rds(on)@25°C [mΩ]	ID@25°C [A]	Qgd [nC]	Max Junction Temperature [°C]	Rds(on)@175°C [mΩ]	Package
1200V	P3M12013T7	13	136	69	175	24	TO-263-7L-LF
	P3M12013K4S	13	127	70	175	24	TO-247-4
	P3M12013PQ	13	143	55	175	22	QDPAK-22L
	P3M12013K4	13	127	70	175	24	TO-247-4
	P3M12013T7i	13	97	69	175	24	TO-263-7L-DBC
	P3M12018PQ	18	118	15.8	175	28	QDPAK-22L
	P3M12018K4G2	18	107	52	175	31	TO-247-4
	P3M12018K4SG2	18	107	52	175	31	TO-247-4S
	P3M12018T7G2	18	119	47	175	29	TO-263-7L-LF
	P3M12018T7iG2	18	84	47	175	29	TO-263-7L-DBC
	P3M12025K4	25	82	51	175	40	TO-247-4
	P3M12025G7	25	72	47	175	41	TO-263-7
	P3M12025K4S	25	82	51	175	40	TO-247-4
	P3M12025T7G2	25	81	55	175	46	TO-263-7L-LF
	P3M12030K4EG2	30	68	43	175	52	TO-247-4E
	P3M12030L8	30	66	18	175	60	TOLL
	P3M12030K4	30	63	18	175	65	TO-247-4
	P3M12030G7	30	57	16	175	62	TO-263-7
	P3M12030T7	30	63	20	175	56	TO-263-7L-LF
	P3M12033K4C	33	59	46	175	66	TO-247-4C
	P3M12033K4E	33	65	44	175	60	TO-247-4E
	P3M12040K4B	40	52	32	175	80	TO-247-4B
	P3M12040K4D	40	52	32	175	80	TO-247-4D
	I3M12040G7	40	41	29	175	74	TO-263-7
	P3M12040K4L	40	48	15	175	85	TO-247plus-4
	P3M12040T7i	40	40	27	175	90	TO-263-7L-DBC
	P3M12040T7	40	55	27	175	90	TO-263-7L-LF
	P3M12040K3	40	44	15	175	90	TO-247-3
	P3M12040K4	40	42	15	175	90	TO-247-4
	P3M12040K4S	40	42	15	175	90	TO-247-4S
	P3M12040PQ	40	49	17	175	85	QDPAK-22L
	P3M12040K4C	40	44	33	175	84	TO-247-4C
	I3M12045K4	45	45	15	175	76	TO-247-4
	P3M12060T7G2	60	43	29	175	96	TO-263-7L-LF
	P3M12060PQ	60	37	28	175	101	QDPAK-22L
	P3M12080PQG2	80	27	28	175	166	QDPAK-22L
	P3M12080G7X	80	29	18	175	132	TO-263-7
	P3M12080T7G2	80	31	9	175	150	TO-263-7L-LF
	P3M12080G7	80	27	10	175	160	TO-263-7
	P3M12080K4	80	28	14	175	160	TO-247-4
	P3M12080T7i	80	25	18	175	151	TO-263-7L-DBC
	P3M12120K4	120	20	5.8	175	145	TO-247-4
	P3M12120K3	120	25	20.5	175	172	TO-247-3
	P3M12160K4	160	23	16	175	188	TO-247-4
	P3M12160G7	160	17	6	175	208	TO-263-7
	P3M12160K3	160	23	16	175	188	TO-247-3

SiC MOSFET

Product Voltage Rating	P/N	Rds(on)@25°C [mΩ]	ID@25°C [A]	Qgd [nC]	Max Junction Temperature [°C]	Rds(on)@175°C [mΩ]	Package
1500V	P4M15146K4	12	146	71	175	22	TO-247-4
	P4M15151T7	12	151	61	175	21	TO-263-7L-LF
	P4M15146K4S	12	146	71	175	22	TO-247-4S
	P3M15013K4C	13	133	58	175	23	TO-247-4C
	P3M15013K4	13	130	39	175	24	TO-247-4
	P3M15013K4S	13	130	39	175	24	TO-247-4S
	P3M15018K4	18	107	43	175	31	TO-247-4
	P3M15018K4S	18	107	43	175	31	TO-247-4S
	P3M15018T7i	18	84	34	175	29	TO-263-7L-DBC
	P3M15018T7	18	119	34	175	29	TO-263-7L-LF
	P3M15025K4	25	84	58	175	40	TO-247-4
	P3M15025K4S	25	84	58	175	40	TO-247-4S
	P3M15025T7	25	81	60	175	46	TO-263-7L-LF
	P3M15030K4	30	64	18	175	52	TO-247-4
	P3M15040K4	40	44	15	175	90	TO-247-4
	P3M15080K4	80	28	14	175	160	TO-247-4
1700V	P3M17025K4	25	85	37	175	55	TO-247-4
	P3M17025K4S	25	85	37	175	55	TO-247-4S
	P3M17040K4	40	61	31	175	98	TO-247-4
	P3M17040K4S	40	61	31	175	98	TO-247-4S
	P3M17080K4	80	30	14	175	200	TO-247-4
	P3M17080G7	80	35	32	175	170	TO-263-7
	P3M17700G7	700	7.7	8.3	175	1300	TO-263-7
	P3M17700K3	700	8	8.3	175	1000	TO-247-3
	P3M171K0G7	1000	6.3	2.5	175	1150	TO-263-7
	P3M171K0K3	1000	5.9	2.1	175	1400	TO-247-3
	P3M171K8P3	1800	4.6	7.6	175	2300	TO- 3PF-3L
	P3M173K0T3	2000	4	1.55	175	2800	TO-220-3
	P3M173K0G7	3000	4	1.55	175	4200	TO-263-7
	P3M173K0K3	3000	4	1.55	175	4200	TO-247-3
	P3M173K0K3E	3000	3.7	9	175	3600	TO-247-3

SiC MOSFET

Product Voltage Rating	P/N	Rds(on)@25°C [mΩ]	ID@25°C [A]	Qgd [nC]	Max Junction Temperature [°C]	Rds(on)@175°C [mΩ]	Package
2300V	P3M23020K4	20	77	82	175	64	TO-247-4
	P3M23020K4S	20	77	82	175	64	TO-247-4S
	P3M23035K4	35	61	31	175	95	TO-247-4
	P3M23035K4S	35	61	31	175	95	TO-247-4S
	P3M23080K4S	80	30	14	175	200	TO-247-4S
	P3M23080K4	80	30	14	175	200	TO-247-4
	P3M23080G7	80	34	34	175	175	TO-263-7
3300V	P3M33050K4L	50	46	29	175	170	TO-247plus-4

SGT MOSFET

Product Voltage Rating	P/N	Rds(on)@25°C [mΩ]	ID@25°C [A]	Qgd [nC]	Max Junction Temperature [°C]	Rds(on)@175°C [mΩ]	Package
60V	P1G060003D5	3	80	6.6	175	6	PDFN5*6-8L

SiC MODULE

Product Voltage Rating	P/N	Rds(on)@25°C [mΩ]	Current Rating @25°C [A]	Topology	Max Junction Temperature [°C]	Package	Qualification
750V	PAAC07750CM	1.2	800	Six pack	175	HPD	Automotive
	PAAC07600CM	2	660	Six pack	175	HPD	Automotive
	PAAC07400CM	3	450	Six pack	175	HPD	Automotive
	P3M07002TM	2.1	550	Single switch	175	TPAK	Automotive
	P3M07005TM	4.6	330	Single switch	175	TPAK	Automotive
	PAAA07090FM	25	90	Half-bridge	175	IPM-MSOP9	Automotive
	PAAA07040FM	45	40	Half-bridge	175	IPM-MSOP9	Automotive
1200V	PAAA12036FM	55	36	Half-bridge	175	IPM-MSOP9	Automotive
	PAAA12090FM	18	90	Half-bridge	175	IPM-MSOP9	Automotive
	PAAA12020FM	110	20	Half-bridge	175	IPM-MSOP9	Automotive
	PAAA12600HM2	1.9	670	Half-bridge	150	ED3	Industrial
	PAAC12600CM	2.1	630	Six-pack	175	HPD	Automotive
	PAAA12600HM	1.6	600	Half-bridge	175	ED3	Industrial
	PAAC12450CM	2.3	480	Six-pack	175	HPD	Automotive
	PAAA12450HM	2.2	450	Half-bridge	175	ED3	Industrial
	PAAA12450HM2	2.2	450	Half-bridge	175	ED3	Industrial
	PAAA12400BM	3.3	450	Half-bridge	175	62mm	Industrial
	PAAA12400BM2	3.3	450	Half-bridge	175	62mm	Industrial
	PAAA12300HM	3.3	350	Half-bridge	175	ED3	Industrial
	P3M12004TM	4.3	500	Single switch	175	TPAK	Automotive
	PAAA12350BM	4.5	350	Half-bridge	175	62mm	Industrial
	PAAA12350BM2	4.5	350	Half-bridge	175	62mm	Industrial
	PAIA12200AM	7	200	Half-bridge	150	Easy 1B	Industrial
	P3M12010TM	8	230	Single switch	175	TPAK	Automotive
	PAIA12240DM	7.6	240	Half-bridge	150	Easy 2B	Industrial
	PAIA12300DM	3.8	300	Half-bridge	150	Easy 2B	Industrial
	PAIA12100AM	10	120	Half-bridge	150	Easy 1B	Industrial
	I3D12100SM	/	150	Single switch	150	SOT227	Industrial
	I3M12100SM	18	120	Single switch	175	SOT227	Industrial
	I3M12100SM2	18	120	Single switch	175	SOT227	Industrial
	I3M12080SM	40	68	Single switch	175	SOT227	Industrial
	I3M12080SM2	40	68	Single switch	175	SOT227	Industrial
	PXIE12040VM2	40	70	PIM	150	Value2	Industrial
	PA120HB400HM	3.8	450	Half-bridge	175	ED3	Industrial
	PA120HB600HM	2.4	600	Half-bridge	175	ED3	Industrial
	PA120HB800HM	1.9	800	Half-bridge	175	ED3	Industrial
	PA120HB1K0HM	1.5	1000	Half-bridge	175	ED3	Industrial
	PAAA12800HM	1.9	800	Half-bridge	175	ED3	Industrial

SiC MODULE

Product Voltage Rating	P/N	Rds(on)@25°C [mΩ]	Current Rating@25°C [A]	Topology	Max Junction Temperature [°C]	Package	Qualification
1500V	PAAA15040FM	45	40	Half-bridge	175	IPM-MSOP9	Automotive
	PAAA15036FM	36	63	Half-bridge	175	IPM-MSOP9	Automotive
1700V	PAAA17300HM	5	350	Half-bridge	150	ED3	Industrial
	PD170TP050SM	/	215	Single switch	175	SOT227	Industrial
	PA170SS090SM	26	90	Single switch	175	SOT227	Industrial
2000V	PAAA20350PM	4.4	350	Half-Bridge	150	EASY 3B	Industrial
2300V	PA230HB450HM	2.9	450	Half-bridge	175	ED3	Industrial
	PA230HB600HM	2.4	600	Half-bridge	175	ED3	Industrial