



AI Data Center

Automotive

Energy Storage

EV Charging

Medical

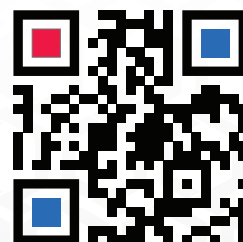
Solar Energy



Delivering superior SiC solutions

**for ultra-efficient,
high-performance, and
high-voltage applications**

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.



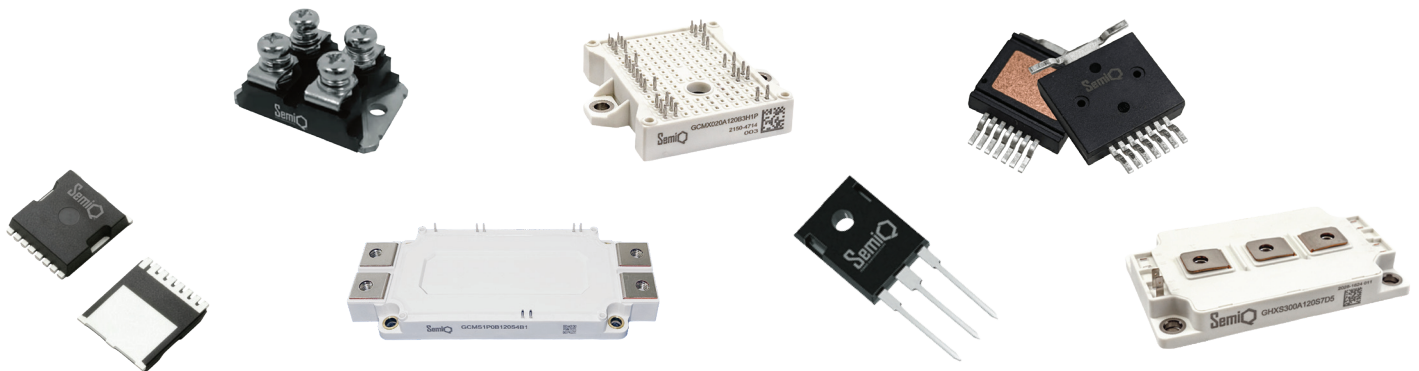
SemiQ QSiC™ Catalog

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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.

AI Data Center	Automotive	Energy Storage
• Low switching losses • Low junction to case thermal resistance • Very rugged and easy mounting • Direct mounting to heatsink (isolated package) • Lower QRR at high temperature	• High Efficiency • Enhanced Reliability • Wide Range of Voltages and Currents • Reduced Power Dissipation • Temperature Tolerance • Contribution to Sustainability	• High Efficiency • Fast Switching Speeds • High Power Density • Temperature Handling • Reduced Cooling Requirements • Reliability and Longevity • Voltage Rating Options
EV Charging	Medical	Solar Energy
• High Efficiency • Reduced Operational Temperatures • Long-term Reliability • Reduced Design Complexity versus Silicon • Over 54M Hours of HTRB/H3TRB Testing • Unidirectional and Bi-directional Conversion	• High Efficiency • Reliable Performance • Precision and Accuracy • Wide Range Of Options • Heat Management • Compact and Lightweight • High-Temperature Tolerance Advanced Technology	• High Efficiency as high as 98% with SiC • Reduced Heat Loss • More Compact Designs • Better Thermal Stability • Over 54M Hours of HTRB/H3TRB Testing





QSiC™ MOSFET Modules

SemiQ QSiC™ MOSFETs operate with near zero switching loss, greatly increasing efficiency while reducing heat dissipation and the need for large heatsinks. These benefits make the products ideal for use in solar inverters, power supplies, motor drives, and charging stations.

1700 V SiC MOSFETs

Gen 2

Part Number	V _{DC}	I _D	R _{DS(ON)}	Package
GCMX030A170S1-E1	1700 V	66 A	31 mΩ	SOT-227
GCMX015A170S1-E1	1700 V	123 A	16 mΩ	SOT-227
GCMX005A170S3B1-N	1700 V	397 A	5.3 mΩ	S3 Half Bridge

1200 V SiC MOSFETs

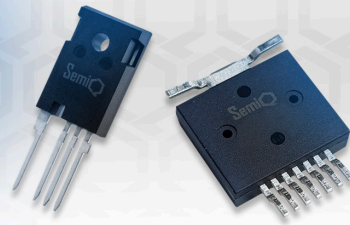
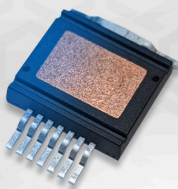
Gen 2

Part Number	V _{DC}	I _D	R _{DS(ON)}	Package
GCMX080A120B2H2P	1200 V	27 A	77 mΩ	B2 Full Bridge
GCMX040A120B2H2P	1200 V	56 A	38.0 mΩ	B2 Full Bridge
GCMX020A120B2H2P	1200 V	102 A	18.0 mΩ	B2 Full Bridge
GCMX080A120B2H1P	1200 V	27 A	77 mΩ	B2 Full Bridge
GCMX040A120B2H1P	1200 V	53 A	38 mΩ	B2 Full Bridge
GCMX020A120B2H1P	1200 V	102 A	18 mΩ	B2 Full Bridge
GCMX040A120B2B1P	1200 V	56 A	38 mΩ	B2 Half Bridge
GCMX020A120B2B1P	1200 V	102 A	19 mΩ	B2 Half Bridge
GCMX010A120B2B1P	1200 V	214 A	9 mΩ	B2 Half Bridge
GCMX010A120B3H1P	1200 V	201 A	8.9 mΩ	B3 Full Bridge
GCMX040A120B3H1P	1200 V	56 A	38 mΩ	B3 Full Bridge
GCMX020A120B3H1P	1200 V	93 A	18.1 mΩ	B3 Full Bridge
GCMX010A120B3B1P	1200 V	173 A	9 mΩ	B3 Half Bridge
GCMX005A120B3B1P	1200 V	383 A	4.4 mΩ	B3 Half Bridge
GCMX003A120S3B1-N	1200 V	625 A	3.0 mΩ	S3 Half Bridge
GCMX005A120S3B1-N	1200 V	424 A	4.8 mΩ	S3 Half Bridge
GCMX003A120S7B1	1200 V	529 A	3 mΩ	S7 Half Bridge
GCMX005A120S7B1	1200 V	348 A	4.9 mΩ	S7 Half Bridge
GCMS010B120S1-E1	1200 V	204 A	9 mΩ	SOT-227
GCMX010B120S1-E1	1200 V	204 A	9 mΩ	SOT-227
GCMS020B120S1-E1	1200 V	105 A	20 mΩ	SOT-227
GCMX020B120S1-E1	1200 V	106 A	20 mΩ	SOT-227
GCMX040B120S1-E1	1200 V	57 A	37 mΩ	SOT-227
GCMS080B120S1-E1	1200 V	30 A	77 mΩ	SOT-227
GCMS040B120S1-E1	1200 V	57 A	37 mΩ	SOT-227
GCMX080B120S1-E1	1200 V	30 A	77 mΩ	SOT-227

1200 V SiC MOSFETs

Gen 3

Part Number	V _{DC}	I _D	R _{DS(ON)}	Package
GCMX014B120B2H2P	1200 V	60 A	14.1 mΩ	B2 Full Bridge
GCMX017B120B2H2P	1200 V	60 A	15.5 mΩ	B2 Full Bridge
GCMX034B120B2H2P	1200 V	49 A	34 mΩ	B2 Full Bridge
GCMX072B120B2H2P	1200V	26A	72 mΩ	B2 Full Bridge
GCMX007B120B2B1P	1200 V	120 A	7 mΩ	B2 Half Bridge
GCMX014B120B2B1P	1200 V	102 A	14 mΩ	B2 Half Bridge
GCMX034B120B2B1P	1200 V	50A	33 mΩ	B2 Half Bridge
GCMX017B120B2T1P	1200 V	30 A	15.6 mΩ	B2 Six Pack
GCMX020A120B2T1P	1200 V	30 A	19.5 mΩ	B2 Six Pack
GCMX034B120B2T1P	1200 V	30 A	34 mΩ	B2 Six Pack
GCMX040A120B2T1P	1200 V	30 A	39 mΩ	B2 Six Pack
GCMX072B120B2T1P	1200V	27A	71 mΩ	B2 Six Pack
GCMX080A120B2T1P	1200 V	29 A	82 mΩ	B2 Six Pack
GCMX007B120B3H1P	1200 V	120 A	7.1 mΩ	B3 Full Bridge
GCMX008B120B3H1P	1200 V	120 A	8.6 mΩ	B3 Full Bridge
GCMX014B120B3H1P	1200 V	95A	13.5 mΩ	B3 Full Bridge
GCMX016B120B3H1P	1200 V	95 A	16.6 mΩ	B3 Full Bridge
GCMX007B120B3B1P	1200 V	197 A	7 mΩ	B3 Half Bridge
GCMX3P5B120B3B1P	1200 V	240 A	3.4 mΩ	B3 Half Bridge
GCMX2P3B120S3B1-N	1200 V	608 A	2.4 mΩ	S3 Half Bridge
GCMX3P5B120S3B1-N	1200 V	428 A	3.6 mΩ	S3 Half Bridge
GCMX2P3B120S7B1	1200 V	511 A	2.4 mΩ	S7 Half Bridge
GCMX3P5B120S7B1	1200 V	361 A	3.6 mΩ	S7 Half Bridge
GCMS007C120S1-E1	1200 V	189 A	7.3 mΩ	SOT-227
GCMS008C120S1-E1	1200 V	189 A	8.4 mΩ	SOT-227
GCMS014C120S1-E1	1200 V	103 A	15.0 mΩ	SOT-227
GCMS016C120S1-E1	1200 V	103 A	16.5 mΩ	SOT-227
GCMS034C120S1-E1	1200 V	53 A	34 mΩ	SOT-227
GCMS040C120S1-E1	1200 V	53 A	39 mΩ	SOT-227
GCMS080C120S1-E1	1200 V	28 A	84 mΩ	SOT-227
GCMX007C120S1-E1	1200 V	192 A	7.4 mΩ	SOT-227
GCMX008C120S1-E1	1200 V	188 A	8.4 mΩ	SOT-227
GCMX014C120S1-E1	1200 V	104 A	14.5 mΩ	SOT-227
GCMX016C120S1-E1	1200 V	103 A	16.5 mΩ	SOT-227
GCMX034C120S1-E1	1200 V	51 A	34 mΩ	SOT-227
GCMX040C120S1-E1	1200 V	53 A	39 mΩ	SOT-227
GCMX080C120S1-E1	1200 V	28 A	84 mΩ	SOT-227
GCMX1P0B120S4B1	1200 V	1160 A	1 mΩ	S4B1 Half Bridge
GCMX1P4B120S4B1	1200 V	830 A	1.4 mΩ	S4B1 Half Bridge
GCMX2P0B120S4B1	1200 V	580 A	2 mΩ	S4B1 Half Bridge
GCMS1P0B120S4B1	1200 V	1160 A	1 mΩ	S4B1 Half Bridge
GCMS1P4B120S4B1	1200 V	830 A	1.4 mΩ	S4B1 Half Bridge
GCMS2P0B120S4B1	1200 V	580 A	2 mΩ	S4B1 Half Bridge



QSiC™ MOSFETs - Discrete Packages



1200 V SiC MOSFETs - Discrete Packages

Gen 2

Part Number	V _{DC}	I _D	R _{DS(ON)}	Package
GP2T040A120U	1200 V	63 A	37 mΩ	TO-247-3L
GP2T080A120U	1200 V	35 A	77 mΩ	TO-247-3L
GP2T020A120H	1200 V	119 A	18 mΩ	TO-247-4L
GP2T040A120H	1200 V	63 A	37 mΩ	TO-247-4L
GP2T080A120H	1200 V	35 A	77 mΩ	TO-247-4L
GP2T040A120J	1200 V	66 A	38 mΩ	TO-263-7L
GP2T080A120J	1200 V	35 A	77 mΩ	TO-263-7L

1700 V SiC MOSFETs - Discrete Packages

Gen 2

Part Number	V _{DC}	I _D	R _{DS(ON)}	Package
AS2T030A170H	1700 V	83 A	28 mΩ	TO-247-4L
GP2T030A170H	1700 V	83 A	31 mΩ	TO-247-4L

1200 V SiC MOSFETs - Discrete Packages

Gen 3

Part Number	V _{DC}	I _D	R _{DS(ON)}	Package
GP3T020A120T	1200 V	122 A	18 mΩ	TCPAK
GP3T040A120T	1200 V	64 A	38 mΩ	TCPAK
GP3T080A120T	1200 V	33 A	80 mΩ	TCPAK
GP3T040A120U	1200 V	62 A	38 mΩ	TO-247-3L
GP3T072A120H	1200 V	31 A	71 mΩ	TO-247-4L
GP3T034A120H	1200 V	62 A	32 mΩ	TO-247-4L
GP3T017A120H	1200 V	120 A	15 mΩ	TO-247-4L
GP3T014A120H	1200 V	133 A	14 mΩ	TO-247-4L
GP3T080A120H	1200 V	32 A	80 mΩ	TO-247-4L
GP3T040A120H	1200 V	62 A	38 mΩ	TO-247-4L
GP3T020A120H	1200 V	115 A	18 mΩ	TO-247-4L
GP3T016A120H	1200 V	132 A	16 mΩ	TO-247-4L
GP3T080A120J	1200 V	33 A	80 mΩ	TO-263-7L
GP3T080A120TS	1200 V	27 A	80 mΩ	TSPAK
GP3T040A120TS	1200 V	50 A	38 mΩ	TSPAK
GP3T020A120TS	1200 V	89 A	18 mΩ	TSPAK
GP3T016A120TS	1200 V	101 A	16 mΩ	TSPAK





QSiC™ Schottky Diodes

Explore SemiQ QSiC™ Schottky Diodes range and revolutionize your power applications with near zero switching loss, heightened efficiency, and reduced heat dissipation. SemiQ QSiC™ Schottky Diodes are perfect for power supplies, induction heating, welding, and high-temperature settings. Elevate your power management solutions today.

SiC Diodes – Module Packages

600 V SiC Schottky Diode Modules

Part Number	V _{DC}	I _F	Package
GHXS010A060S-D3	600 V	10 A	SOT-227
GHXS020A060S-D3	600 V	20 A	SOT-227
GHXS030A060S-D3	600 V	30 A	SOT-227
GHXS030A060S-D1E	600 V	30 A	SOT-227
GHXS050A060S-D3	600 V	50 A	SOT-227

650 V SiC Schottky Diode Modules

Part Number	V _{DC}	I _F	Package
GHXS050B065S-D3	650 V	50 A	SOT-227
GHXS100B065S-D3	650 V	100 A	SOT-227

1200 V SiC Schottky Diode Modules

Part Number	V _{DC}	I _F	Package
GHXS015A120S-D1	1200 V	15 A	SOT-227
GHXS015A120S-D3	1200 V	15 A	SOT-227
GHXS030A120S-D3	1200 V	30 A	SOT-227
GHXS030A120S-D1E	1200 V	30 A	SOT-227
GHXS045A120S-D3	1200 V	45 A	SOT-227
GHXS050B120S-D3	1200 V	50 A	SOT-227
GHXS060A120S-D3	1200 V	60 A	SOT-227
GHXS100B120S-D3	1200 V	100 A	SOT-227
GHXS300A120S7D5	1200 V	300 A	S7 Half Bridge
GHXS400A120S7D5	1200 V	400 A	S7 Half Bridge

1700 V SiC Schottky Diode Modules

Part Number	V _{DC}	I _F	Package
GHXS050B170S-D3	1700 V	50 A	SOT-227
GHXS100B170S-D3	1700 V	100 A	SOT-227





QSiC™ Schottky Diodes

SiC Diodes – Discrete Packages

650 V SiC Schottky Diodes

Part Number	V _{DC}	I _F	Package
GP3D006A065A	650 V	6 A	TO-220-2L
GP3D006A065F	650 V	6 A	TO-220-2L-FP
GP3D008A065A	650 V	8 A	TO-220-2L
GP3D008A065D	650 V	8 A	TO-263-2L (D2PAK)
GP3D008A065F	650 V	8 A	TO-220-2L-FP
GP3D010A065A	650 V	10 A	TO-220-2L
GP3D010A065B	650 V	10 A	TO-247-2L
GP3D010A065D	650 V	10 A	TO-263-2L (D2PAK)
GP3D012A065A	650 V	12 A	TO-220-2L
GP3D012A065B	650 V	12 A	TO-247-2L
GP3D016A065U	650 V	16 (2 X 8) A	TO-247-3L
GP3D020A065A	650 V	20 A	TO-220-2L
GP3D020A065B	650 V	20 A	TO-247-2L
GP3D020A065U	650 V	20 (2 x 10) A	TO-247-3L
GP3D024A065U	650 V	24 (2 x 12) A	TO-247-3L
GP3D030A065B	650 V	30 A	TO-247-2L
GP3D040A065U	650 V	40 (2 x 20) A	TO-247-3L
GP3D050A065B	650 V	50 A	TO-247-2L

1200 V SiC Schottky Diodes

Part Number	V _{DC}	I _F	Package
GP3D010A120A	1200 V	10 A	TO-220-2L
GP3D010A120B	1200 V	10 A	TO-247-2L
GP3D010A120S	1200 V	10 A	DO-214AB
GP3D015A120A	1200 V	15 A	TO-220-2L
GP3D015A120B	1200 V	15 A	TO-247-2L
GP3D020A120A	1200 V	20 A	TO-220-2L
GP3D020A120B	1200 V	20 A	TO-247-2L
GP3D020A120U	1200 V	20 (2 x 10) A	TO-247-3L
GP3D030A120B	1200 V	30 A	TO-247-2L
GP3D030A120U	1200 V	30 (2 x 15) A	TO-247-3L
GP3D040A120U	1200 V	40 (2 x 20) A	TO-247-3L
GP3D050A120B	1200 V	50 A	TO-247-2L
GP3D060A120U	1200 V	60 (2 x 30) A	TO-247-3L

1700 V SiC Schottky Diodes

Part Number	V _{DC}	I _F	Package
GP3D005A170B	1700 V	5 A	TO-247-2L
GP3D010A170B	1700 V	10 A	TO-247-2L
GP3D020A170B	1700 V	20 A	TO-247-2L
GP3D050B170B	1700 V	50 A	TO-247-2L



QSiC™ Diodes and MOSFETs: Known Good Die

Known Good Die QSiC™ Diodes and MOSFETs from SemiQ provide important performance advantages, such as near-constant junction capacitance, low insertion loss, and high isolation needed for high-frequency applications. Experience the potential of cutting-edge semiconductor designs with Known Good Die QSiC™ Diodes and MOSFETs from SemiQ.

Known Good Die – SiC MOSFET

SiC MOSFET Gen 2

Part Number	V _{DC}	I _F
AS2T030A170X	1700 V	30 mΩ
GP2T020A120X	1200 V	18 mΩ
GP2T030A170X	1700 V	30 mΩ
GP2T040A120X	1200 V	37 mΩ
GP2T080A120X	1200 V	77 mΩ

Known Good Die – SiC MOSFET

SiC MOSFET Gen 3

Part Number	V _{DC}	I _F
AS3T016A120X	1200 V	16 mΩ
AS3T040A120X	1200 V	38 mΩ
GP3T014A120X	1200 V	14 mΩ
GP3T016A120X	1200 V	16 mΩ
GP3T017A120X	1200 V	15 mΩ
GP3T020A120X	1200 V	18 mΩ
GP3T034A120X	1200 V	32 mΩ
GP3T040A120X	1200 V	38 mΩ
GP3T072A120X	1200V	72 mΩ
GP3T080A120X	1200 V	80 mΩ

Known Good Die – SiC Diodes

650 V SiC Schottky Diodes

Part Number	V _{DC}	I _F
GP3D006A065X	650 V	6 A
GP3D008A065X	650 V	8 A
GP3D010A065X	650 V	10 A
GP3D012A065X	650 V	12 A
GP3D020A065X	650 V	20 A
GP3D030A065X	650 V	30 A
GP3D050A065X	650 V	50 A

1200 V SiC Schottky Diodes

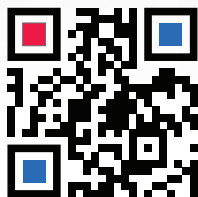
Part Number	V _{DC}	I _F
GP3D010A120X	1200 V	10 A
GP3D015A120X	1200 V	15 A
GP3D020A120X	1200 V	20 A
GP3D030A120X	1200 V	30 A
GP3D050A120X	1200 V	50 A

1700 V SiC Schottky Diodes

Part Number	V _{DC}	I _F
GP3D005A170X	1700 V	5 A
GP3D010A170X	1700 V	10 A
GP3D020A170X	1700 V	20 A
GP3D050B170X	1700 V	50 A



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