

2A, 650V Silicon Carbide Schottky Diode

Features

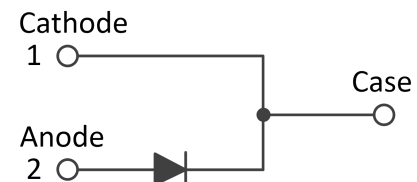
- High-Frequency Operation
- Zero Reverse Recovery Current
- Temperature-Independent Switching
- Extremely Fast Switching
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



TO-252

Applications

- Boost Diodes in PFC or DC/DC stages
- LED Lighting Power Supplies
- Power Factor Correction



Mechanical Data

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 2500 units per reel

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	GS02D065SD	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	650	V
Working peak reverse voltage	V _{RWM}	650	V
Maximum DC blocking voltage	V _{DC}	650	V
Maximum average forward rectified current	T _C =25°C	7.5	A
	T _C =135°C	3.8	
	T _C =158°C	2	
Peak forward surge current, t _p =10ms, Half Sine Pulse	I _{FSM}	18	A
Power dissipation	T _C =25°C	34	W
	T _C =110°C	14	
Operating junction temperature range	T _J	-55 to +175	°C
Storage temperature range	T _{STG}	-55 to +175	°C

Electrical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

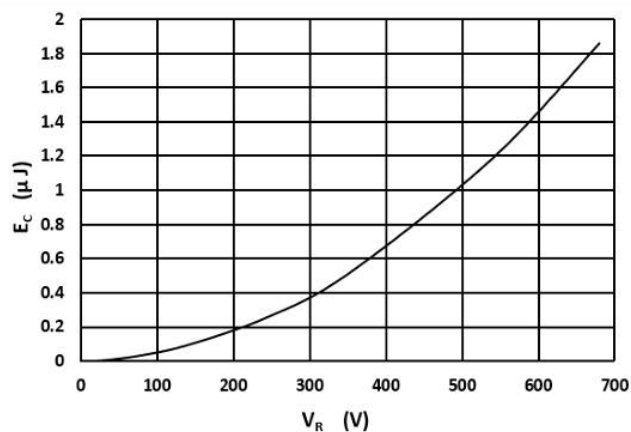
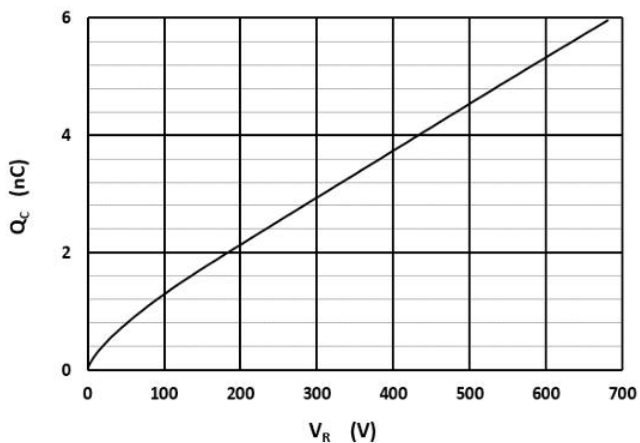
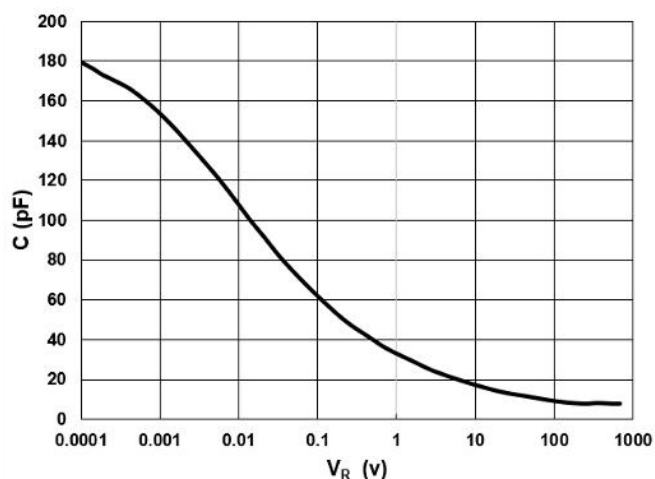
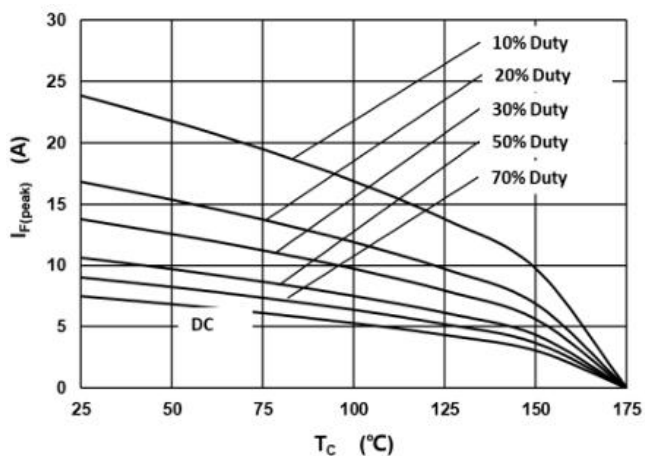
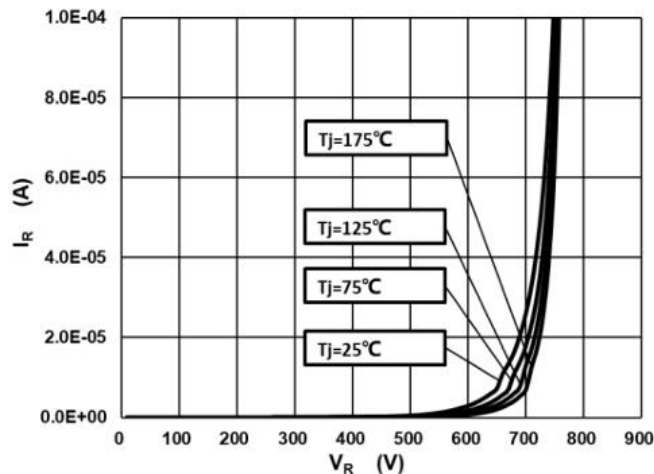
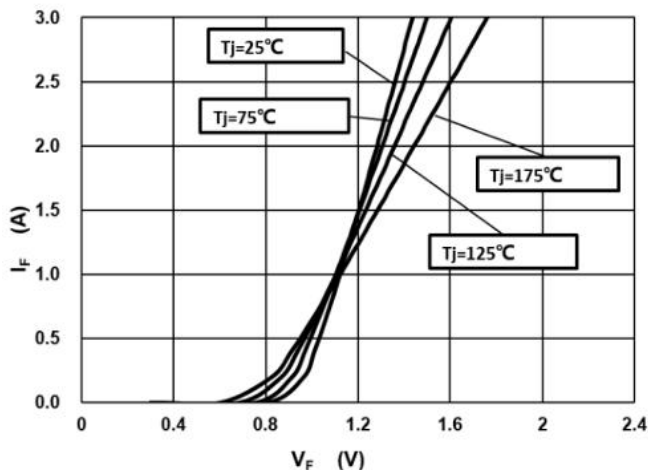
Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward drop voltage	V_F	$I_F=2\text{A}, T_J=25^{\circ}\text{C}$	1.3	1.5	V
		$I_F=2\text{A}, T_J=175^{\circ}\text{C}$	1.5	-	
Reverse leakage current @rated V_R	I_R	$V_R=650\text{V}, T_J=25^{\circ}\text{C}$	3	50	μA
		$V_R=650\text{V}, T_J=175^{\circ}\text{C}$	10	100	
Total capacitive charge	Q_C	$V_R=400\text{V}, T_J=25^{\circ}\text{C}$	3.8	-	nC
Total capacitance	C	$V_R=400\text{V}, T_J=25^{\circ}\text{C}, f=1\text{MHz}$	8	-	pF

Thermal-Mechanical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Typ	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	3.9	-	$^{\circ}\text{C}/\text{W}$

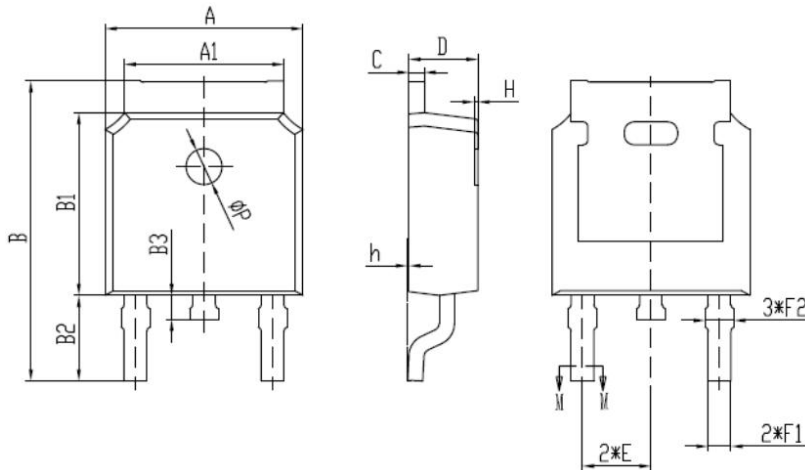
Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)



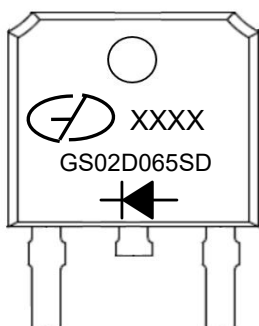
Package Outline Dimensions (Unit: millimeters)

TO-252



项目	规范(mm)	
	MIN	MAX
A	6.50	6.70
A1	5.16	5.46
B	9.77	10.17
B1	6.00	6.20
B2	2.60	3.00
B3	0.70	0.90
C	0.45	0.61
D	2.20	2.40
E	2.186	2.386
F1	0.67	0.87
F2	0.76	0.96
H	0.00	0.30
h	0.00	0.127
L	6.50	6.70
Φ P	1.10	1.30

Marking Outline



1. Logo Mark: 
2. Data code: XXXX
3. Part Name: GS02D065SD
4. Polarity : 

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