

12A, 1200V Silicon Carbide Schottky Diode

Features

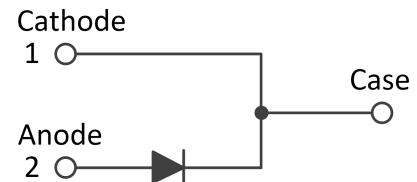
- High-Frequency Operation
- Zero Reverse Recovery Current
- Temperature-Independent Switching
- Extremely Fast Switching
- Plastic package has underwriters Laboratory Flammability Classification 94V
- Halogen-free according to IEC 61249-2-21



TO-220AC

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 50 units per plastic tube

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

Parameter	Symbol	GS12D120ST	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	1200	V
Working peak reverse voltage	V _{RWM}	1200	V
Maximum DC blocking voltage	V _{DC}	1200	V
Maximum average forward rectified current	T _C =25°C	39	A
	T _C =135°C	20	
	T _C =160°C	12	
Peak forward surge current, t _p =10ms, Half Sine Pulse	I _{FSM}	130	A
Power dissipation	T _C =25°C	150	W
	T _C =110°C	65	
Operating junction temperature range	T _J	-55 to +175	°C
Storage temperature range	T _{STG}	-55 to +175	°C

Electrical Specifications (T_A=25°C unless otherwise noted)

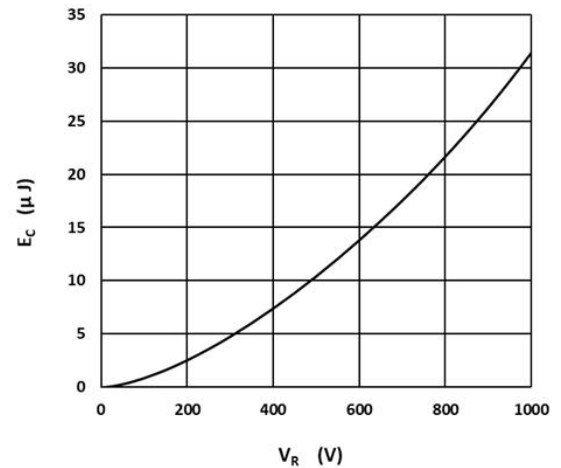
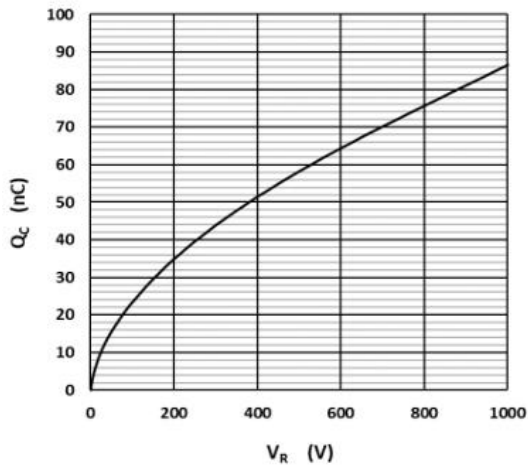
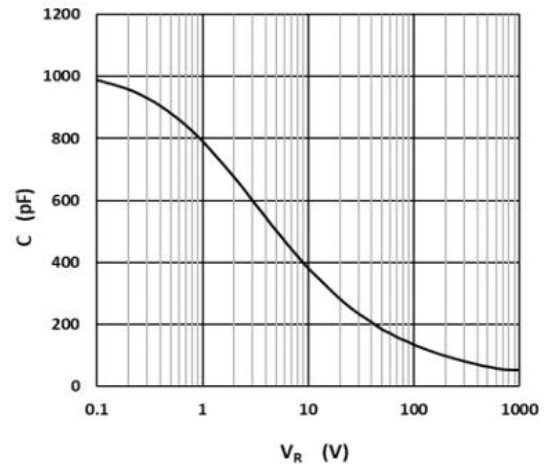
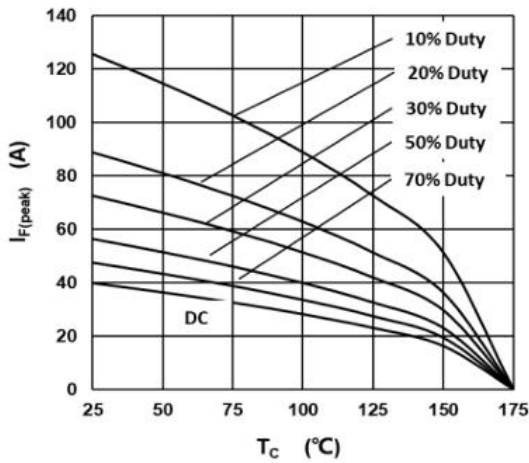
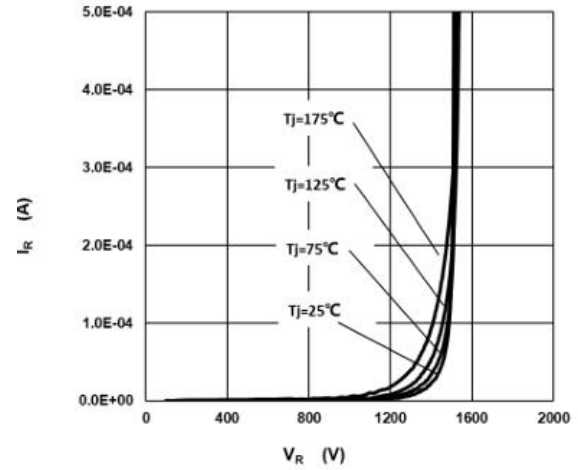
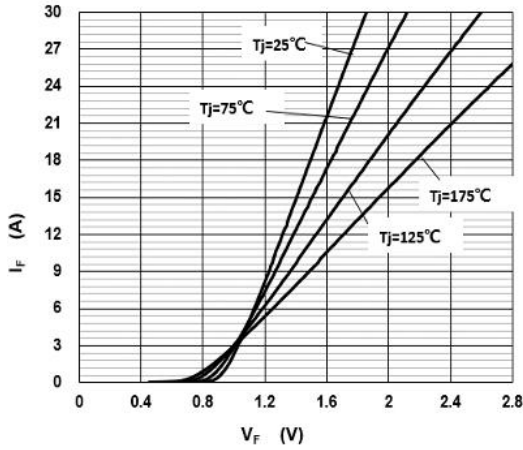
Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward drop voltage	V _F	I _F =12A, T _J =25°C	1.35	1.7	V
		I _F =12A, T _J =175°C	2.0	-	
Reverse leakage current @rated V _R	I _R	V _R =1200V, T _J =25°C	5	50	μA
		V _R =1200V, T _J =175°C	15	100	
Total capacitive charge	Q _C	V _R =800V, T _J =25°C	75.6	-	nC
Total capacitance	C	V _R =800V, T _J =25°C, f=1MHz	55	-	pF

Thermal-Mechanical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Typ	Max	Unit
Thermal Resistance, Junction to Case	R _{θJC}	1.0	-	°C /W

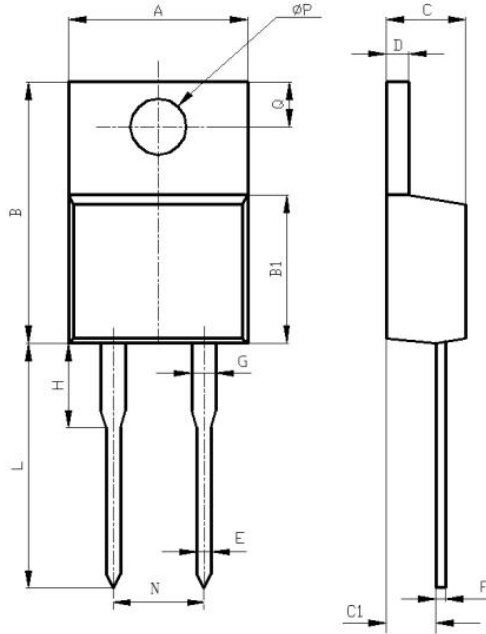
Ratings and Characteristics Curves

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



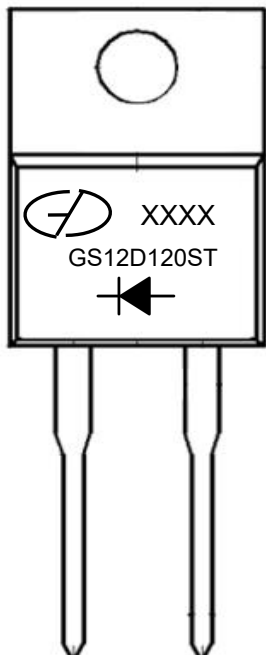
Package Outline Dimensions (Unit: millimeters)

TO-220AC



项目	规范(mm)	
	MIN	MAX
A	10.1	10.5
B	15.0	15.4
B1	8.85	9.05
C	4.50	4.70
C1	2.45	2.75
D	1.20	1.40
E	0.70	0.90
F	0.30	0.50
G	1.27	1.47
H	3.60	4.00
L	13.4	13.8
N	4.90	5.20
Q	2.40	3.00
Ø P	3.70	3.90

Marking Outline



1. Logo Mark: 
2. Data code: XXXX
3. Part Name: GS12D120ST
4. Polarity : 

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