SN0620G3

SiC Schottky Barrier Diode

Features

- Silicon Carbide Schottky Barrier Diode
- Small die size
- Low I_R
- High-Recovery Speed

Applications

- Switch mode power supplies
- Power Factor Correction
- Secondary Side Rectification
- PV Power Conditioners

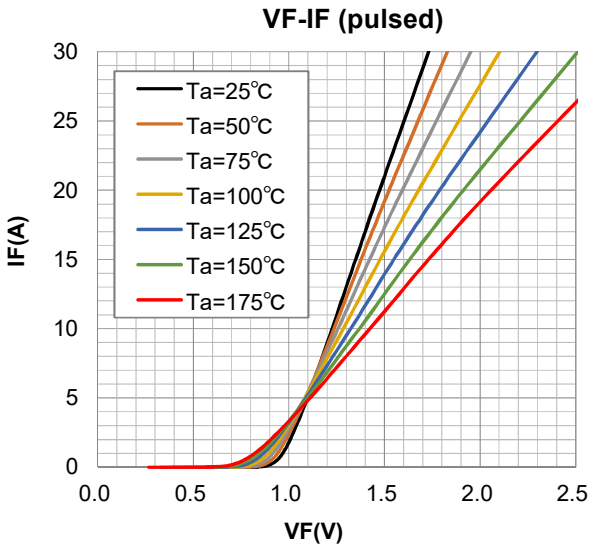
Maximim Ratings (Ta=25℃) (in case of TO-220 PKG)

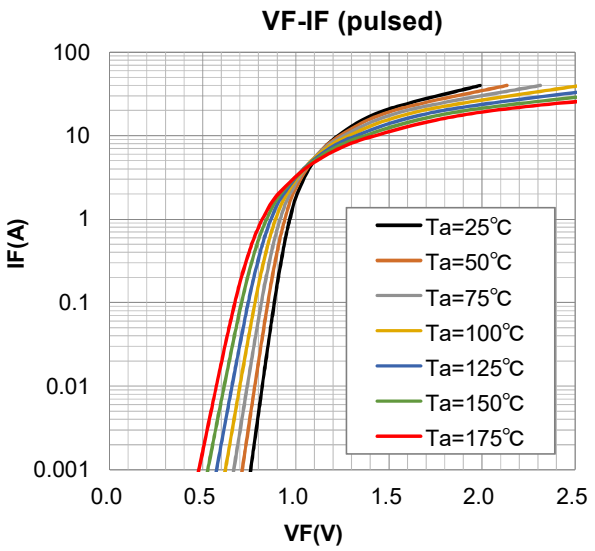
Parameter	Symbol	Conditions	Limit	Unit
Repetitive peak reverse voltage	V_{RM}		650	V
Reverse voltage (DC)	V_R		650	V
Forward current (DC)	I_F		20	A
Surge no repetitive forward current	I_{FSM}	10ms Sinusoidal	100	A
Junction temperature	Tj		175	℃
Storage temperature	Tstg		-55 to +175	℃

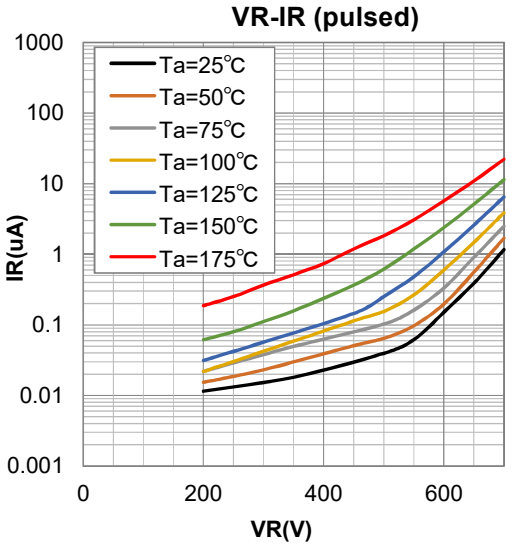
Electrical Characteristics (Ta=25℃) (in case of TO-220 PKG)

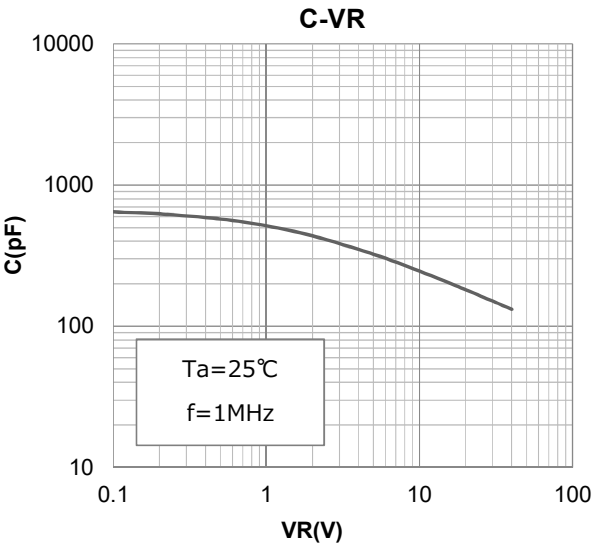
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
DC blocking voltage	V_{DC}	I_R=100uA	650	-	-	V
Forward voltage	V_F	I_F=20A, Ta=25℃	-	1.47	1.91	V
		I_F=20A, Ta=150℃	-	1.91	-	V
		I_F=20A, Ta=175℃	-	2.06	-	V
Reverse current	I_R	V_R=650V, Ta=25℃	-	0.4	400	uA
		V_R=650V, Ta=150℃	-	5	-	uA
		V_R=650V, Ta=175℃	-	11	-	uA
Total capacitance	C	V_R=1V, f=1MHz	-	514	-	pF
Total capacitive charge	Q_C	V_R=400V, di/dt=350A/us	-	47	-	nC
Switching time	tc	V_R=400V, di/dt=350A/us	-	25	-	nS

Electrical Characteristics curves (in case of TO-220 PKG)









NOTE

1) This document is for reference only.

2) Please request for the specification sheet before use.

3) Since the products are in wafer form, the values in this document are for reference only.

4) Although we strive to improve the quality of our products, they may malfunction or fail. When using this product, please implement a safety design suitable for the system within your responsibility.

5) Although this document has been prepared with great care, we assume no responsibility for any damages incurred due to errors in the provoded information.

6) If the operating environment (e.g., high temperature, high voltage, high current) is severe, the reverse current may become excessively large and the device may be destroyed due to the increased reverse

7) The absolute maximum ratings must not be exceeded even momentarily. Do not exceed the absolute maximum ratings for any of the multiple ratings.

8) In particular, when evaluating or using the product in a resin-encapsulated package or in a sealed environment, be sure to measure the temperature and confirm that the maximum junction temperature designated as the maximum ratings is not exceeded.

9) The products described in this document are intended for use in general electronic equipment (e.g., AV equipment, OA equipment, home appliances).

10) This product is not intended for use in products whose manufacture, use, or sale is prohibited by domestic or foreign laws or regulations.

11) Do not use the information contained in this document or this product for the purpose of developing destructive weapons for military use.

12) When exporting this product, please comply with applicable export laws and regulations and follow the necessary procedures.

13) The information in this document is subject to change without notice.

14) The process flow and process conditions of this product are subject to change without notice.