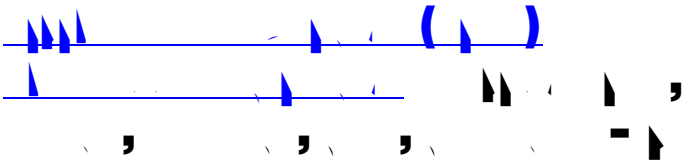


Description

Silicon Carbide (SiC) Schottky Diodes use a completely new technology that provides superior switching performance and higher reliability compared to Silicon. No reverse recovery current, temperature independent switching characteristics, and excellent thermal performance sets Silicon Carbide as the next generation of power semiconductor. System benefits include highest efficiency, faster operating frequency, increased power density, reduced EMI, and reduced system size & cost.

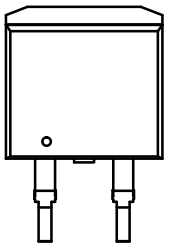
Features

- Max Junction Temperature 175°C
- Avalanche Rated 94 mJ
- High Surge Current Capacity
- Positive Temperature Coefficient
- Ease of Paralleling
- No Reverse Recovery/No Forward Recovery
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

Applications

- General Purpose
- SMPS, Solar Inverter, UPS
- Power Switching Circuits

D^2PAK2 (TO−263−2L)
CASE 418BK



ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

Symbol	Parameter		Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage		650	V
E_{AS}	Single Pulse Avalanche Energy (Note 1)		94	mJ
I_F	Continuous Rectified Forward Current @ T_C < 142°C		20	A
	Continuous Rectified Forward Current @ T_C < 135°C		22.8	
$I_{F, Max}$	Non−Repetitive Peak Forward Surge Current	T_C = 25°C, 10 μs	882	A
		T_C = 150°C, 10 μs	798	
$I_{F, SM}$	Non−Repetitive Forward Surge Current T_C = 25°C	Half−Sine Pulse, t_p = 8.3 ms	84	A
P_{tot}	Power Dissipation	T_C = 25°C	153	W
		T_C = 150°C	25.5	
T_J, T_{STG}	Operating Junction and Storage Temperature Range		−55 to +175	°C

Stresses

Figure 1. Forward Characteristics

Figure 2. Reverse Characteristics

D²PAK2 (TO−263−2L)
CASE 418BK
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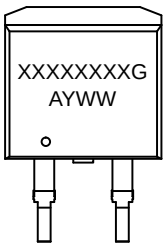
DETA

GENERIC
MARKING DIAGRAM*



XXX = Specific Device Code
A = Assembly Location
Y = Year
WW = Work Week
G = Pb−Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “ ▪”, may or may not be present. Some products may not follow the Generic Marking.