

GSMBRD20100 thru GSMBRD20200

Surface Mount Schottky Rectifiers
 Reverse Voltage 100V to 200V Forward Current 20A

Features

- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability



TO-252 (DPAK)

Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.



Schematic Diagram

Mechanical Data

- Package: TO-252 (DPAK)
Molding compound meets UL 94V-0 flammability rating
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: As marked

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	GSMBRD20100	GSMBRD20150	GSMBRD20200	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	100	150	200	V
Average Rectified Output Current @ 60Hz Sine Wave, R-load, T _C (FIG.1)	I _O	20			A
Surge (Non-Repetitive) Forward Current @ 60Hz Half Sine-Wave, 1 Cycle, T _A =25°C	I _{FSM}	130			A
Current Squared Time @ 1ms ≤ t < 8.3ms T _J =25°C	I ² t	70			A ² S
Thermal Resistance, Between Junction-to-Case	R _{θJC}	5			°C/W
Operating Junction Temperature Range	T _J	-55 to +175			°C
Storage Temperature Range	T _{STG}	-55 to +175			°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	GSMBR20100	GSMBR20150	GSMBR20200	Unit
Maximum Instantaneous Forward Voltage Drop Per Diode	V _{FM}	I _{FM} =10A	0.83	0.87	0.9	V
Maximum DC Reverse Current At Rated DC Blocking Voltage Per Diode	I _{RRM1}	V _{RM} =V _{RRM} , T _A =25°C	0.1			mA
	I _{RRM2}	V _{RM} =V _{RRM} , T _A =125°C	20			

Ratings and Characteristics Curves

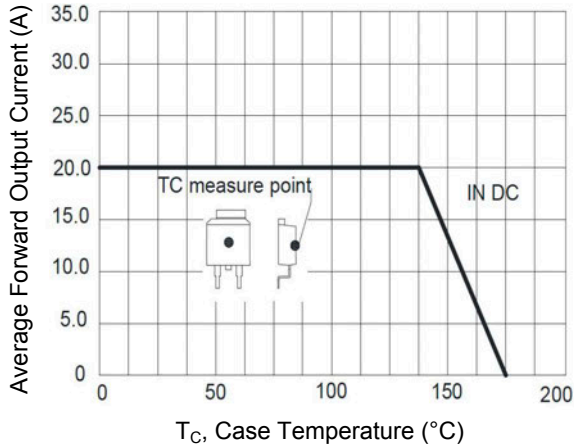


Figure 1. I_o - T_c Curve

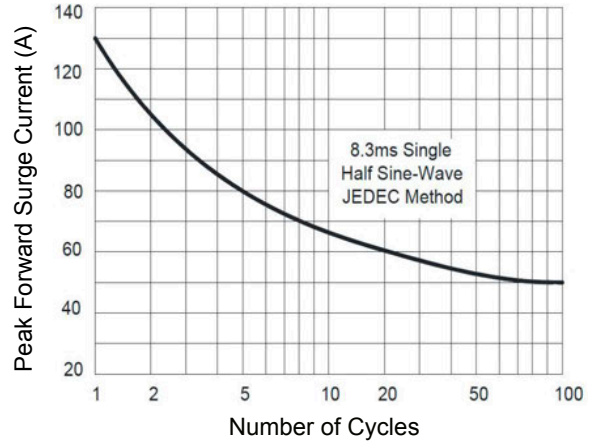


Figure 2. Surge Forward Current Capability

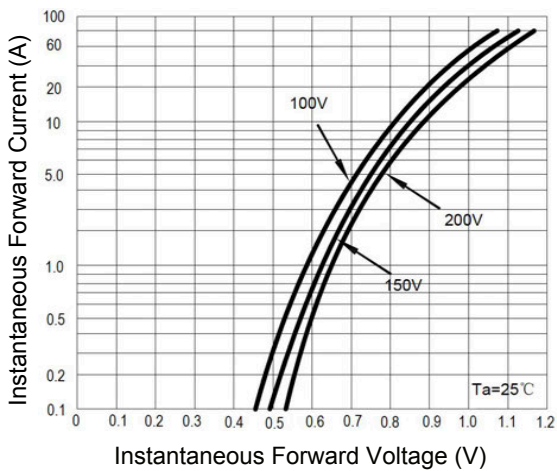


Figure 3. Forward Voltage

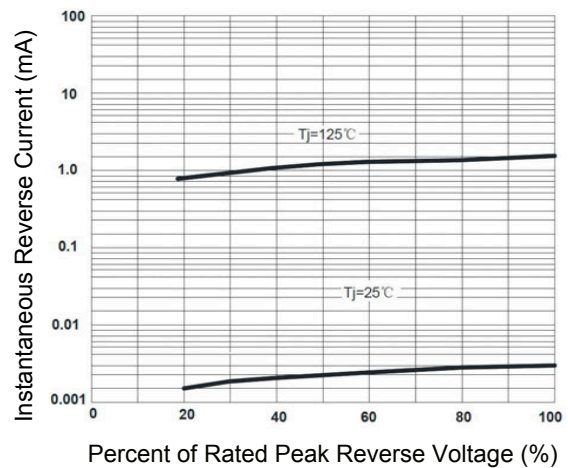
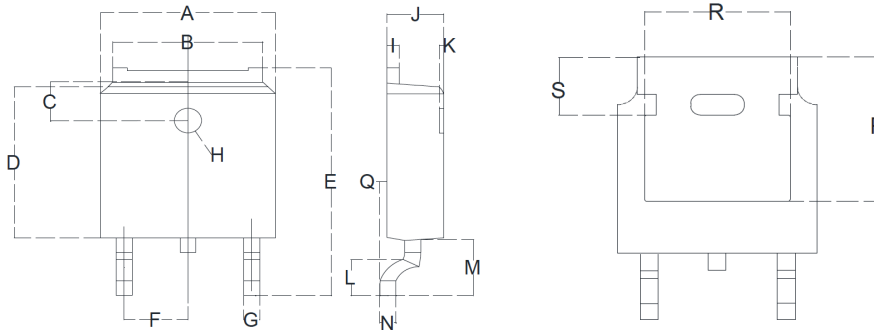


Figure 4. Instantaneous Reverse Characteristics

GSMBRD20100 thru GSMBRD20200

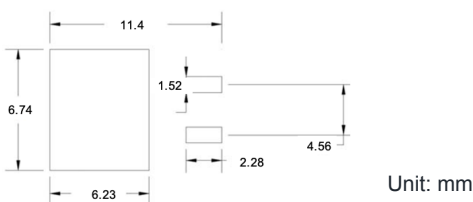
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Package Outline Dimensions TO-252 (DPAK)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	6.500	6.700	0.256	0.264
B	5.100	5.460	0.201	0.215
C	1.400	1.800	0.055	0.071
D	6.000	6.200	0.236	0.244
E	10.000	10.400	0.394	0.409
F	2.166	2.366	0.085	0.093
G	0.660	0.860	0.026	0.034
H	Φ1.050	Φ1.350	Φ0.041	Φ0.053
I	0.460	0.580	0.018	0.023
J	2.200	2.400	0.087	0.094
K	0.000	0.300	0.000	0.012
L	0.890	2.290	0.035	0.090
M	2.730	3.080	0.107	0.121
N	0.430	0.580	0.017	0.023
P	5.150	5.450	0.203	0.215
Q	0.000	0.200	0.000	0.008
R	4.500	5.100	0.177	0.201
S	1.600	2.400	0.063	0.094

Recommended Pad layout



Order Information

Device	Package	Marking	Packaging	SPQ
GSMBRD20100	TO-252 (DPAK)	MBRD20100	Tape & Reel	2,500 pcs / Reel
GSMBRD20150	TO-252 (DPAK)	MBRD20150	Tape & Reel	2,500 pcs / Reel
GSMBRD20200	TO-252 (DPAK)	MBRD20200	Tape & Reel	2,500 pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com