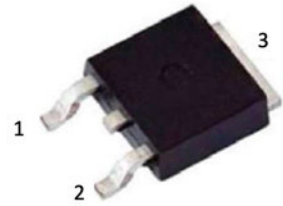


# GSMBRD20100 thru GSMBRD20200

Surface Mount Schottky Rectifiers  
 Reverse Voltage 100V-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



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

## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

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

## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

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

## Ratings and Characteristics Curves

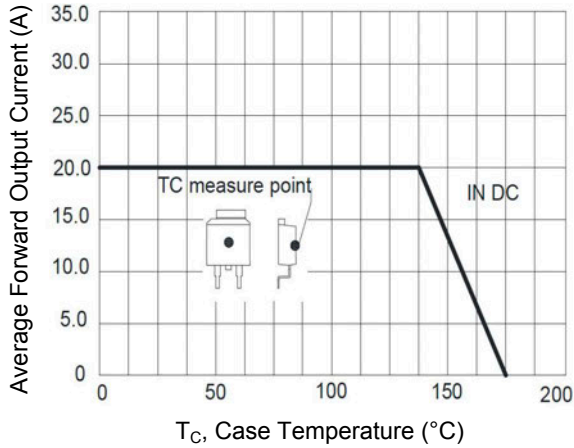


Figure 1.  $I_o$ - $T_c$  Curve

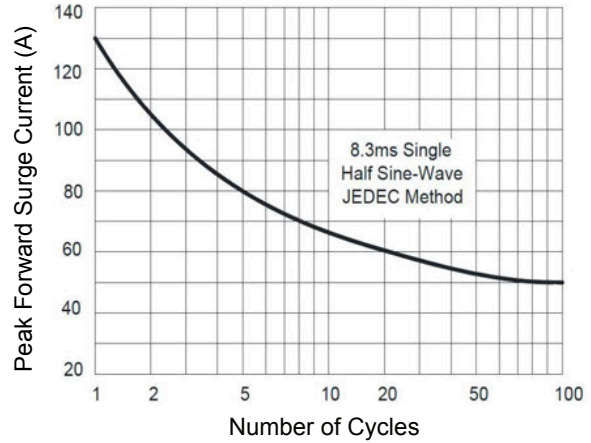


Figure 2. Surge Forward Current Capability

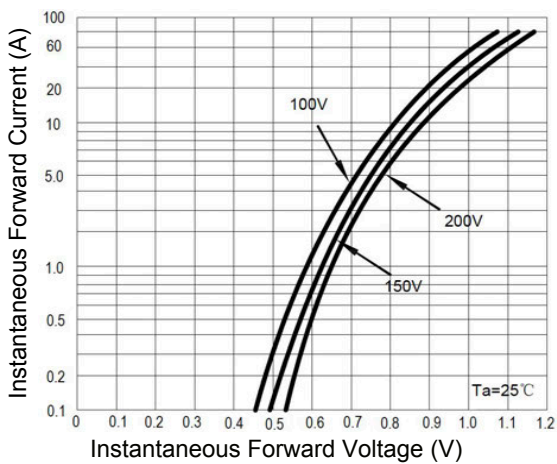


Figure 3. Typical Forward Voltage Characteristic

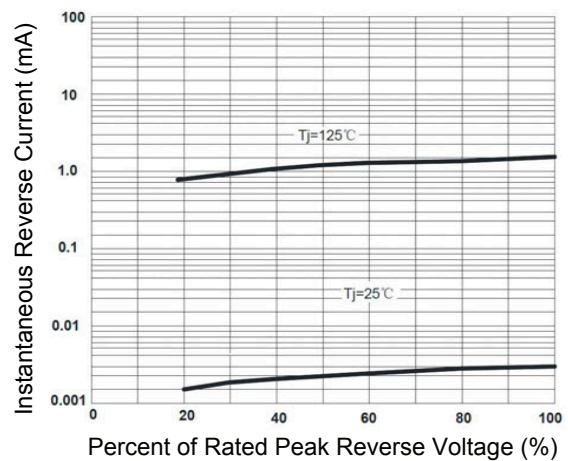
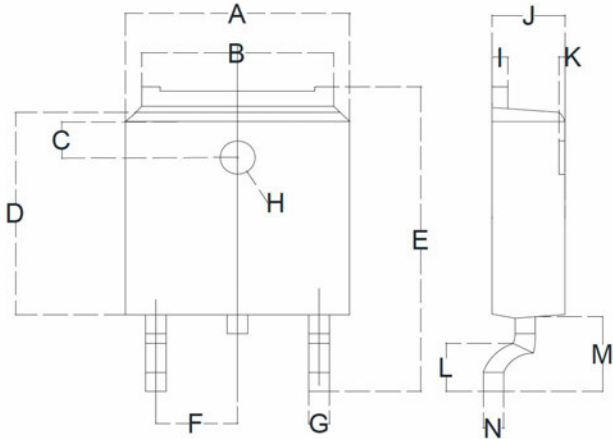


Figure 4. Instantaneous Reverse Characteristics

# GSMBRD20100 thru GSMBRD20200

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 Reverse Voltage 100V-200V Forward Current 20A

## 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

## Order Information

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