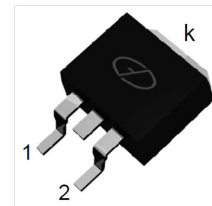


# GSBRB20150CT

Trench Schottky Barrier Rectifier  
 Reverse Voltage 150 Volts Forward Current 20 Amperes

## Features

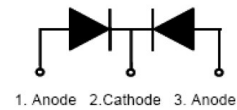
- Low forward voltage drop, low power losses
- High efficiency operation
- Plastic package has underwriters Laboratory  
 Flammability Classification 94V-0



TO-263 (D<sup>2</sup>PAK)

## Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.40grams Approximately
- 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 or tape reel packing 800/reel(TO-263)



Schematic Diagram

## Maximum Ratings & Electrical Characteristics

(T<sub>A</sub>=25°C unless otherwise noted)

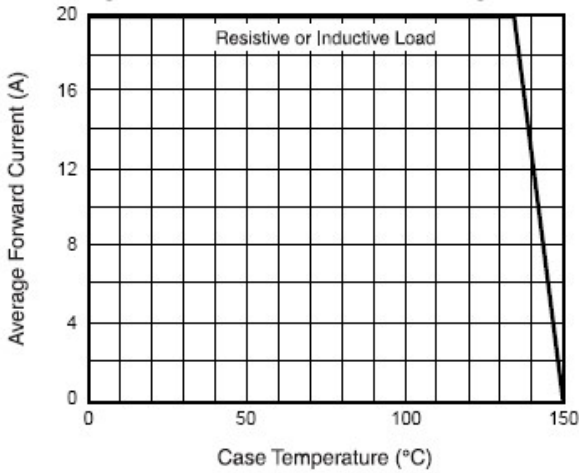
Parameter	Conditions	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V <sub>RRM</sub>	150	V
Working Peak Reverse Voltage		V <sub>RWM</sub>	150	V
Maximum DC Blocking Voltage		V <sub>DC</sub>	150	V
Maximum Average Forward Rectified Current at T <sub>c</sub> =105°C	Total Device Per Diode	I <sub>F(AV)</sub>	20 10	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load Per Diode		I <sub>FSM</sub>	150	A
Peak Repetitive Reverse Current per Leg at t <sub>p</sub> =2.0us , 1KHz		I <sub>RRM</sub>	1.0	A
Voltage Rate of Change (rated V <sub>R</sub> )		DV/dt	10000	V/us
Operating Junction Temperature Range		T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range		T <sub>STG</sub>	-55 to +150	°C
Maximum Instantaneous Forward Voltage per Leg	I <sub>F</sub> =10A T <sub>C</sub> =25°C I <sub>F</sub> =10A T <sub>C</sub> =125°C	V <sub>F</sub>	0.81 (0.76 TYP) 0.74	V
Maximum Reverse Current per Leg at Working Peak Reverse Voltage	T <sub>J</sub> =25°C T <sub>J</sub> =100°C	I <sub>R</sub>	200 15	uA mA
<b>Thermal Characteristics T<sub>A</sub>=25°C unless otherwise noted</b>				
<b>Symbol</b>	<b>Parameter</b>	<b>TYP</b>		<b>Unit</b>
R <sub>θJC</sub>	Thermal Resistance, Junction to Case per Leg	2.0		°C /W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient per Leg	62.5		°C /W

**Note:** Pulse test:300us pulse width, duty cycle=2%

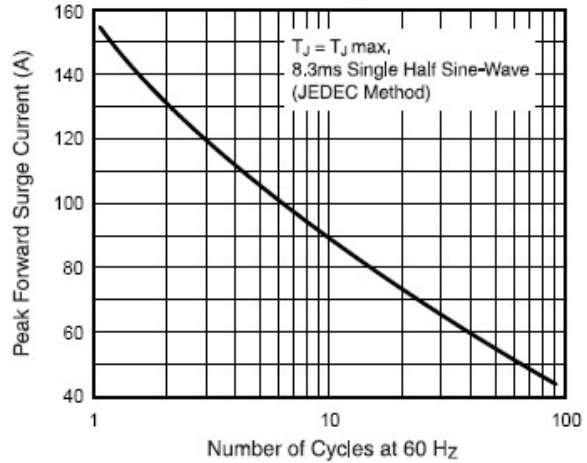
**Ratings and Characteristics Curves**

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

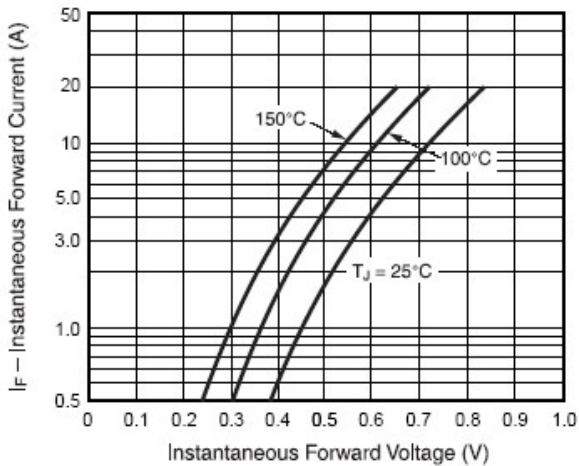
**Fig. 1 - Forward Current Derating Curve**



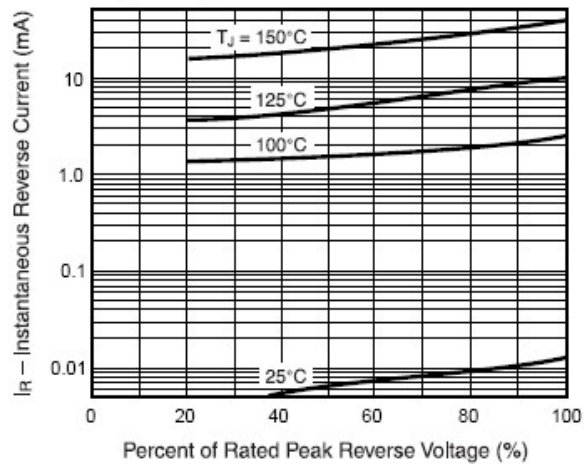
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current**



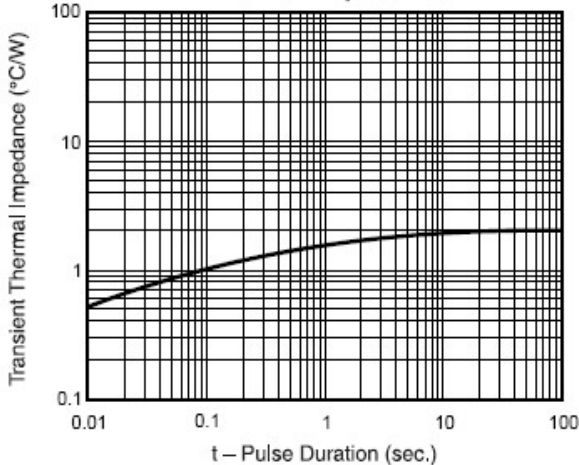
**Fig. 3 - Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Characteristics**

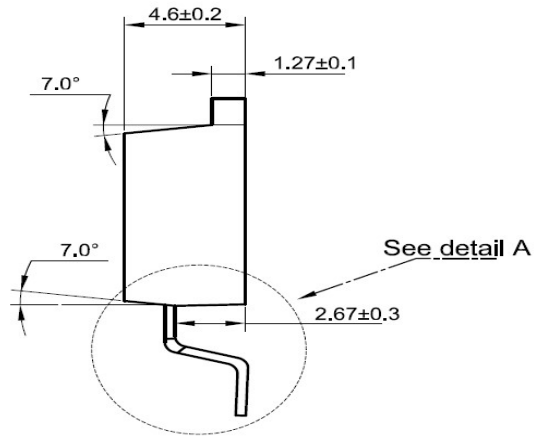
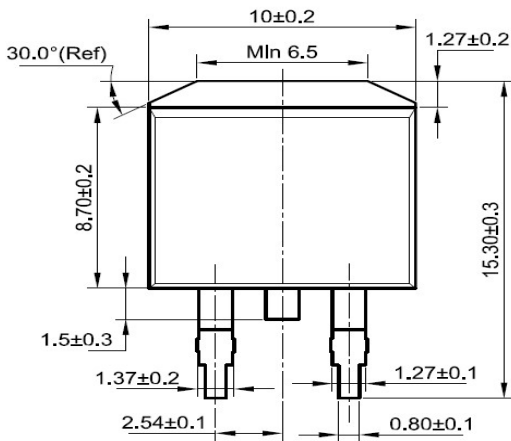


**Fig. 5 - Typical Transient Thermal Impedance**



**Package Outline Dimensions** Unit: millimeters

**TO-263**



**Detail A**

