

# SMBR30100CT-SMBRF30100CT

Trench Schottky Rectifier  
 Reverse Voltage 100 V Forward Current 30 A

## Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Low forward voltage, high efficiency



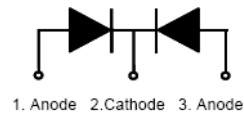
**SMBR30100CT**  
 Package: TO-220-AB



**SMBRF30100CT**  
 Package: ITO-220-AB

## Mechanical Data

- Case: epoxy, molded
- Weight: 1.9grams (approximately)
- Finish: all external surfaces corrosion resistant and terminal leads readily solderable
- Lead temperature for soldering purpose: 260°C max. for 10 sec
- 50 units per plastic tube



**Schematic Diagram**

## Maximum Ratings & Electrical Characteristics

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

Parameter	Test Conditions		Symbol	Value	Unit	
Maximum Repetitive Peak Reverse Voltage			V <sub>RRM</sub>	100	V	
Working Peak Reverse Voltage			V <sub>RWM</sub>	100	V	
Maximum DC Blocking Voltage			V <sub>DC</sub>	100	V	
Maximum Average Forward Rectified Current @ T <sub>c</sub> =105°C	Total Device		I <sub>F(AV)</sub>	30	A	
	Per Diode			15		
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load per Diode			I <sub>FSM</sub>	200	A	
Peak repetitive Reverse Current Per Leg at tp=2.0μs ,1KHz			I <sub>RRM</sub>	1.0	A	
Voltage Rate of Change (rated V <sub>R</sub> )			DV/dt	10000	V/μs	
Operating Junction Temperature Range			T <sub>J</sub>	- 55 to+150	°C	
Storage Temperature Range			T <sub>STG</sub>	- 55 to+150	°C	
Isolation Voltage (ITO-220-AB only) from Terminal to Heatsink t = 1 sec			V <sub>AC</sub>	1500	V	
Maximum Instantaneous Forward Voltage per Leg	I <sub>F</sub> =15A	T <sub>C</sub> =25°C	V <sub>F</sub>	0.72	V	
	I <sub>F</sub> =15A	T <sub>C</sub> =125°C		0.62		
Maximum Reverse Current per Leg at Working Peak Reverse Voltage	T <sub>J</sub> =25°C		I <sub>R</sub>	500	μA	
	T <sub>J</sub> =100°C			50	mA	
<b>Thermal Characteristics (T<sub>A</sub>=25°C unless otherwise noted)</b>						
Symbol	Parameter		Typ.(TO-220-AB)		Typ.(ITO-220-AB)	Unit
R <sub>θJC</sub>	Thermal Resistance, Junction to Case per Leg		2.0		4.0	°C/W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient per Leg		62.5		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)

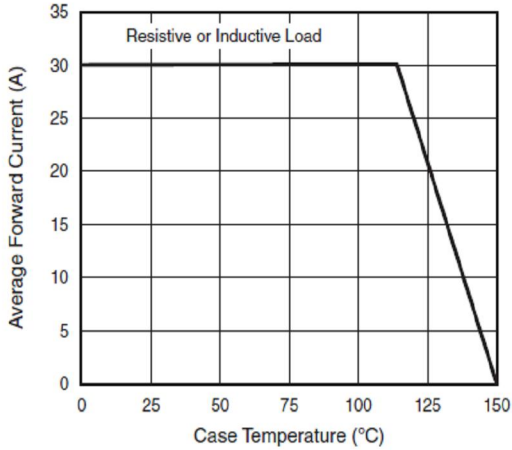


Fig. 1 - Forward Current Derating Curve

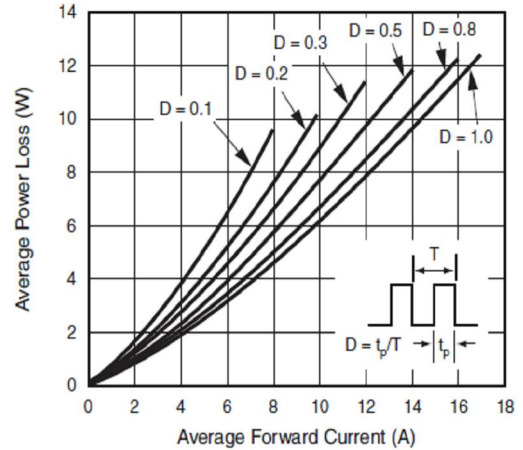


Fig. 2 - Forward Power Loss Characteristics Per Diode

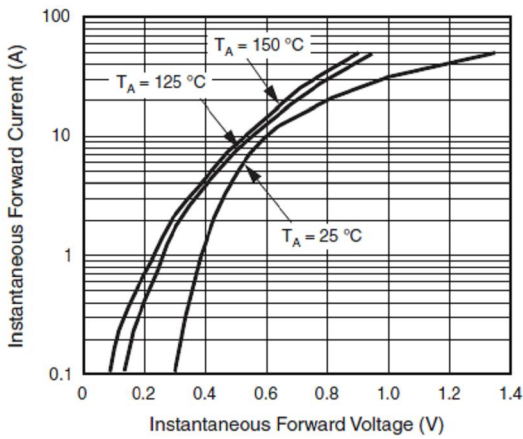


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

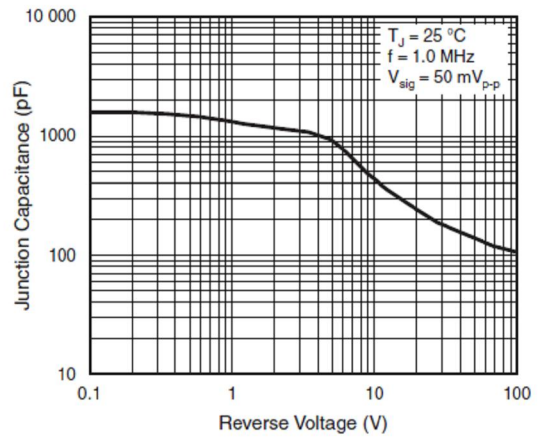


Fig. 5 - Typical Junction Capacitance

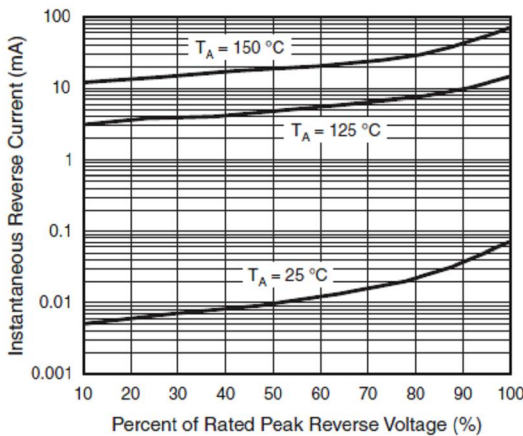


Fig. 4 - Typical Reverse Characteristics Per Diode

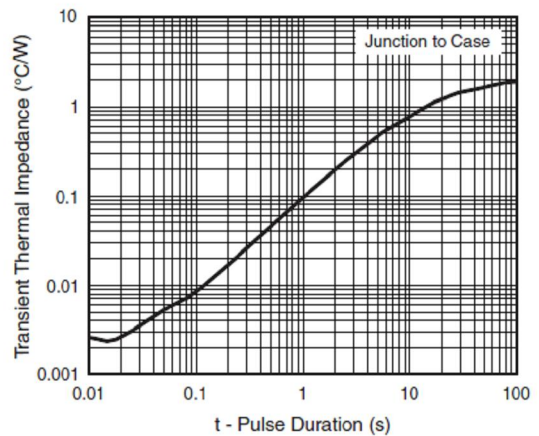


Fig. 6 - Typical Transient Thermal Impedance Per Diode

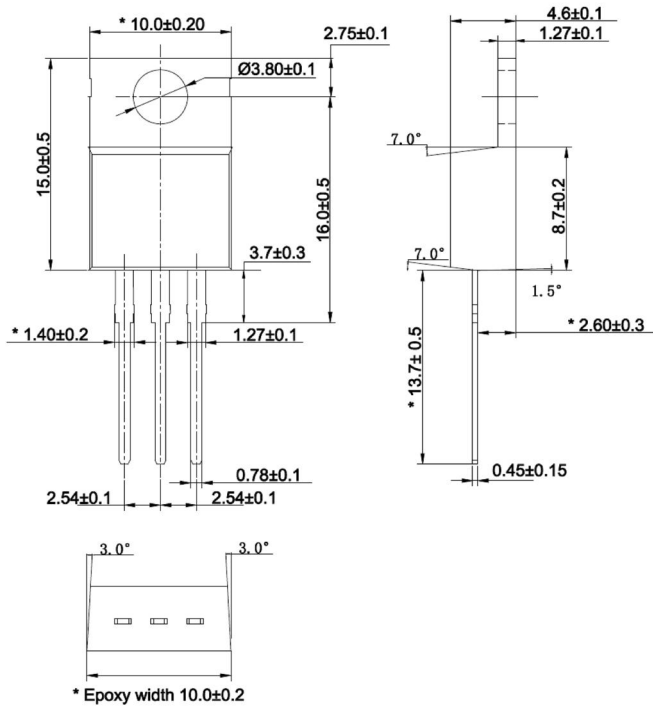
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## Package Outline Dimensions

in millimeters

**TO-220-AB**



**ITO-220-AB**

