

# MBR20100CT/MBRF20100CT

Schottky Barrier Rectifier  
 Reverse Voltage 100 V Forward Current 20 A

## Features

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



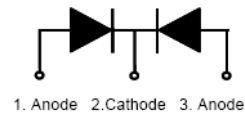
**MBR20100CT**  
 Package: TO-220-AB



**MBRF20100CT**  
 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**

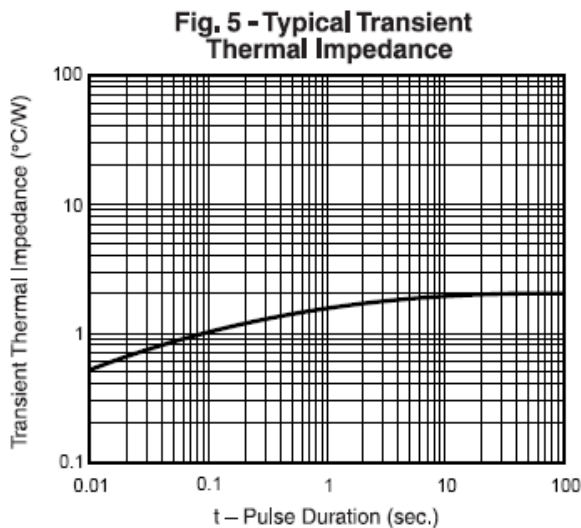
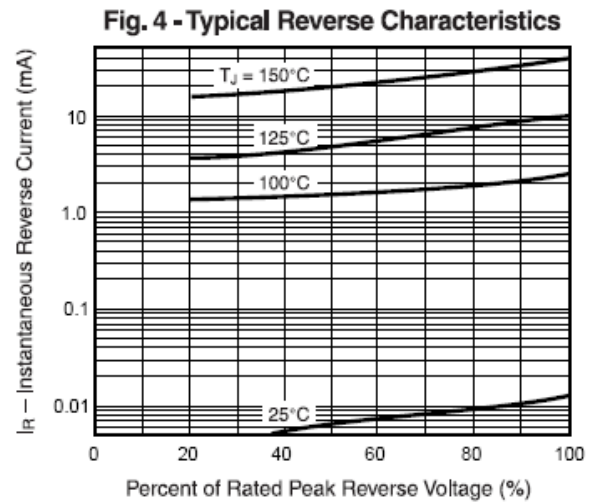
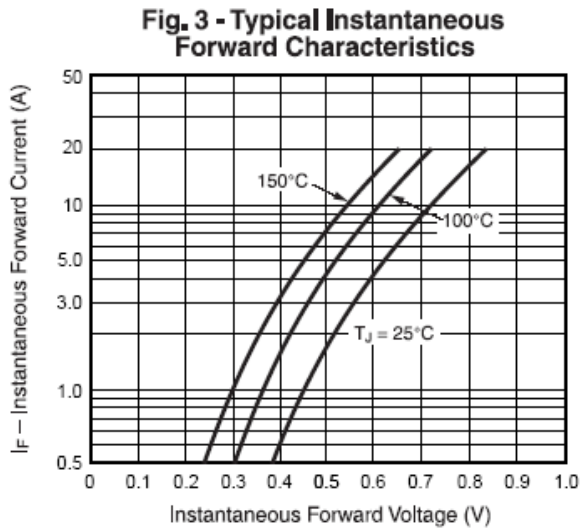
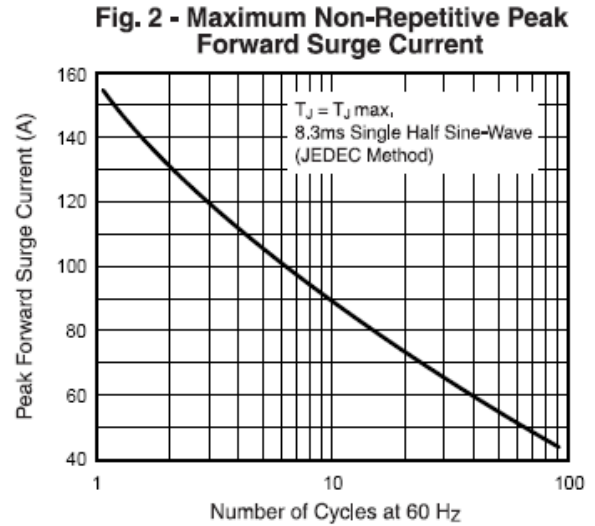
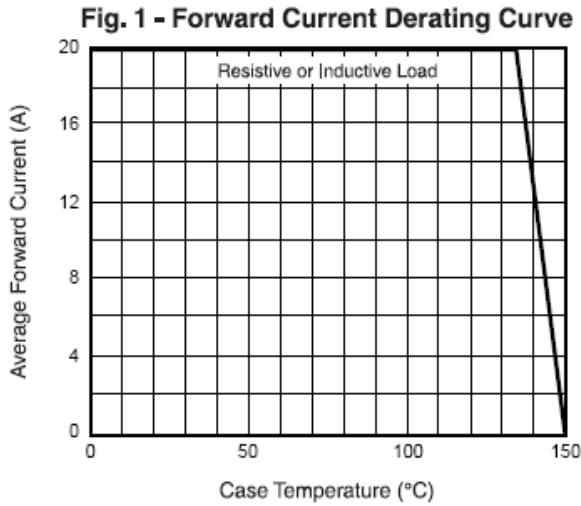
## Maximum Ratings & Electrical Characteristics

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

Parameter	Test Conditions	Symbol	Value	Unit	
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	100	V	
Working Peak Reverse Voltage		$V_{RWM}$	100	V	
Maximum DC Blocking Voltage		$V_{DC}$	100	V	
Maximum Average Forward Rectified Current @ $T_c=105^{\circ}\text{C}$	Total Device Per Diode	$I_{F(AV)}$	20 10	A	
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load per Diode		$I_{FSM}$	150	A	
Peak repetitive Reverse Current Per Leg at $t_p=2.0\mu\text{s}$ , 1KHz		$I_{RRM}$	1.0	A	
Voltage Rate of Change (rated $V_R$ )		$DV/dt$	10000	V/ $\mu\text{s}$	
Operating Junction Temperature Range		$T_J$	- 55 to+150	$^{\circ}\text{C}$	
Storage Temperature Range		$T_{STG}$	- 55 to+150	$^{\circ}\text{C}$	
Isolation Voltage (ITO-220-AB only) from Terminal to Heatsink $t = 1 \text{ sec}$		$V_{AC}$	1500	V	
Maximum Instantaneous Forward Voltage per Leg	$I_F=10\text{A}$ $T_c=25^{\circ}\text{C}$ $I_F=10\text{A}$ $T_c=125^{\circ}\text{C}$	$V_F$	0.83 0.73	V	
Maximum Reverse Current per Leg at Working Peak Reverse Voltage	$T_J=25^{\circ}\text{C}$ $T_J=100^{\circ}\text{C}$	$I_R$	200 15	$\mu\text{A}$ mA	
<b>Thermal Characteristics (<math>T_A=25^{\circ}\text{C}</math> unless otherwise noted)</b>					
<b>Symbol</b>	<b>Parameter</b>	<b>Typ.(TO-220-AB)</b>		<b>Typ.(ITO-220-AB)</b>	<b>Unit</b>
$R_{\theta JC}$	Thermal Resistance, Junction to Case per Leg	2.0		4.0	$^{\circ}\text{C}/\text{W}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient per Leg	62.5		62.5	$^{\circ}\text{C}/\text{W}$

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

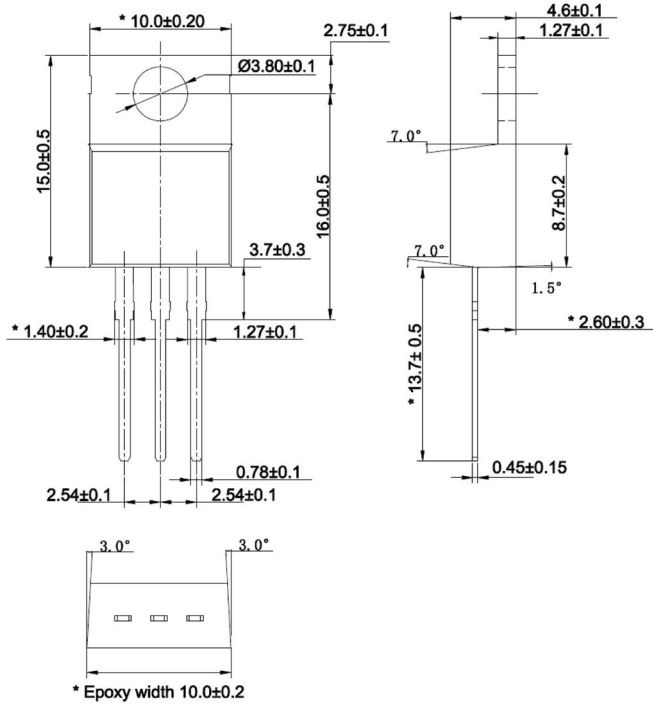
## Ratings and Characteristics Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)



## Package Outline Dimensions

in millimeters

**TO-220-AB**



**ITO-220-AB**

