

# MBR30150CT/MBRF30150CT

Schottky Barrier Rectifier  
 Reverse Voltage 150 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
- Guarding for over voltage protection



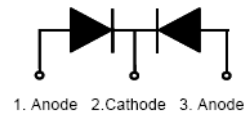
**MBR30150CT**  
 Package: TO-220-AB



**MBRF30150CT**  
 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			$V_{RRM}$	150	V	
Working Peak Reverse Voltage			$V_{RWM}$	150	V	
Maximum DC Blocking Voltage			$V_{DC}$	150	V	
Maximum Average Forward Rectified Current @ $T_c=105^\circ\text{C}$	Total Device		$I_{F(AV)}$	30	A	
	Per Diode			15		
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load per Diode			$I_{FSM}$	200	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	$I_F=15\text{A}$ $I_F=15\text{A}$	$T_c=25^\circ\text{C}$ $T_c=125^\circ\text{C}$	$V_F$	0.90 0.80	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
<b>Thermal Characteristics</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted)						
Symbol	Parameter		Typ.(TO-220-AB)		Typ.(ITO-220-AB)	Unit
$R_{\theta JC}$	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%

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

FIG. 1- FORWARD CURRENT DERATING CURVE

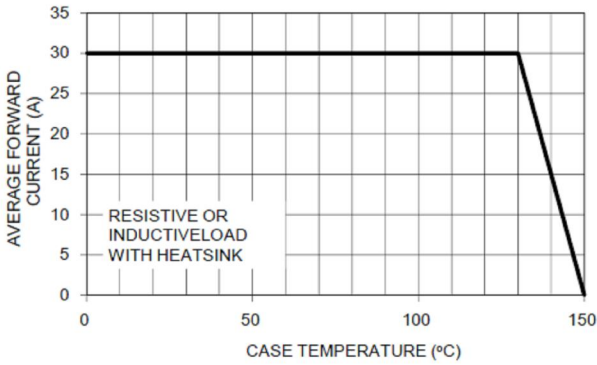


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

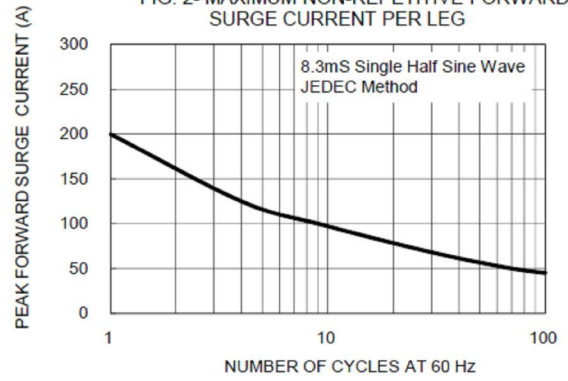


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

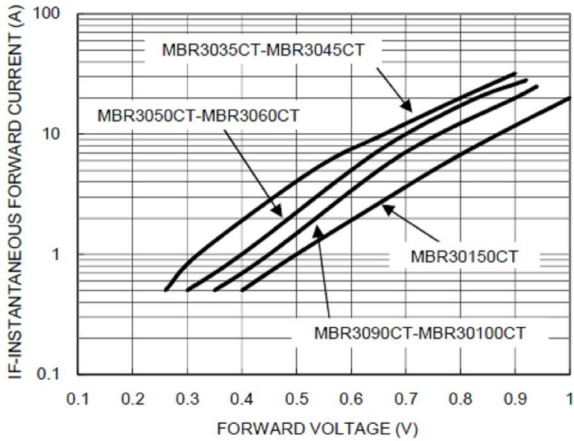


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

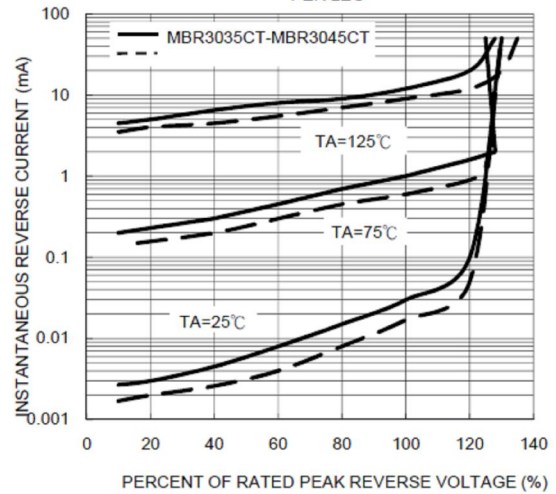


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

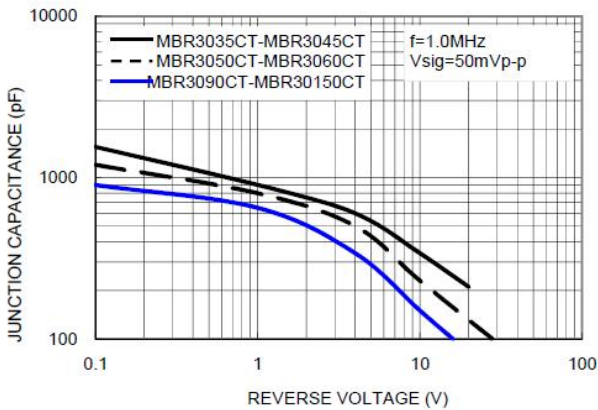
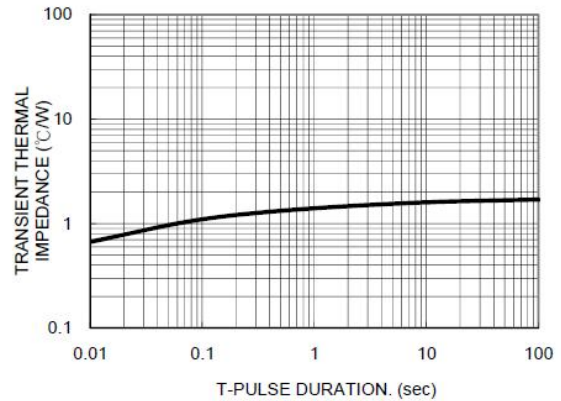


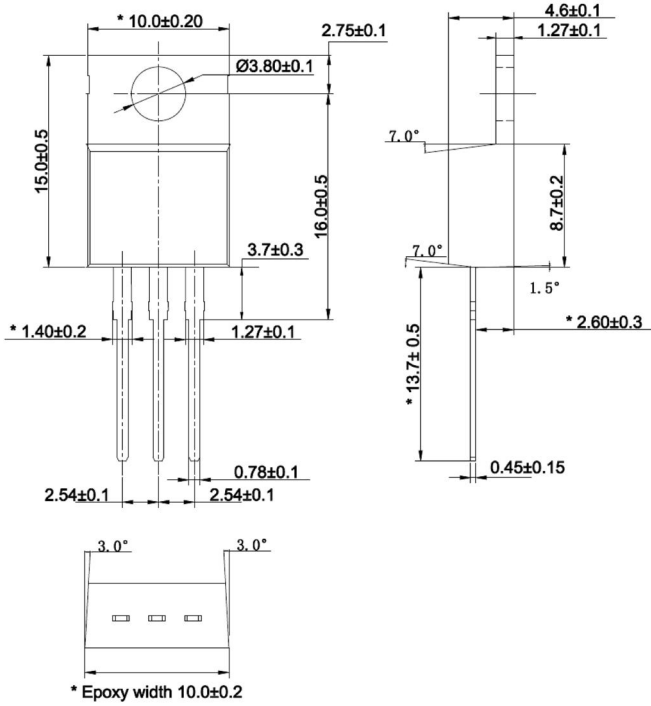
FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



## Package Outline Dimensions

in millimeters

**TO-220-AB**



**ITO-220-AB**

