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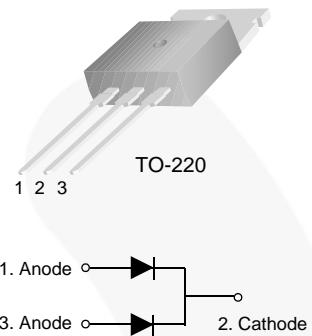
July 2014

# MBR20150CT

## Dual High Voltage Schottky Rectifier

### Features

- Low Forward Voltage Drop
- Low Power Loss and High Efficiency
- High Surge Capability
- RoHS Compliant
- Matte Tin (Sn) Lead Finish
- Terminal Leads Surface is Corrosion Resistant and able to Withstand to 260°C
- Wave Soldering or per MIL-STD-750 Method 2026.
- Dual common Cathode



### Ordering Information

Part Number	Top Mark	Package	Packing Method
MBR20150CTTU	MBR20150CT	TO-220 3L	Rail

### Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value	Unit
$V_{RRM}$	Maximum Repetitive Reverse Voltage	150	V
$V_R$	Maximum DC Reverse Voltage	150	V
$I_{F(AV)}$	Average Rectified Forward Current, at $T_C = 120^\circ\text{C}$	per Leg	A
		per Device	
$I_{FSM}$	Peak Forward Surge Current, 8.3 ms Half-Sine Wave	150	A
$T_{STG}$	Storage Temperature Range	-50 to +150	°C
$T_J$	Operating Junction Temperature	150	°C

## Thermal Characteristics<sup>(1)</sup>

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value	Unit
$R_{\theta\text{JC}}$	Thermal Resistance, Junction-to-Case per Leg	1.5	$^\circ\text{C/W}$
$R_{\theta\text{JA}}$	Thermal Resistance, Junction-to-Ambient per Leg	62.5	$^\circ\text{C/W}$

**Note:**

1. MIL standard 883-1012 and JESD51-10.

## Electrical Characteristics<sup>(2)</sup>

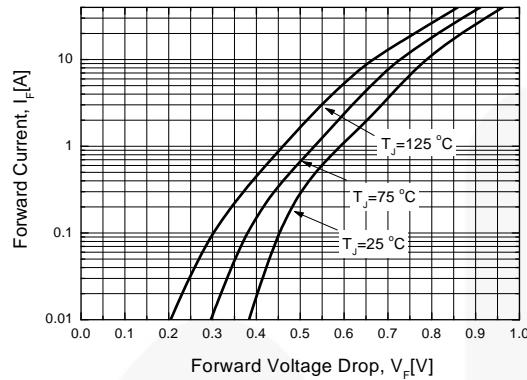
Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Max.	Unit
$I_R$	Reverse Current	$V_R = 150 \text{ V}, T_C = 25^\circ\text{C}$		0.2	mA
		$V_R = 150 \text{ V}, T_C = 125^\circ\text{C}$		2.0	
$V_F$	Forward Voltage	$I_F = 10 \text{ A}, T_C = 25^\circ\text{C}$		0.85	V
		$I_F = 10 \text{ A}, T_C = 125^\circ\text{C}$		0.75	
		$I_F = 20 \text{ A}, T_C = 25^\circ\text{C}$		0.95	
		$I_F = 20 \text{ A}, T_C = 125^\circ\text{C}$		0.85	

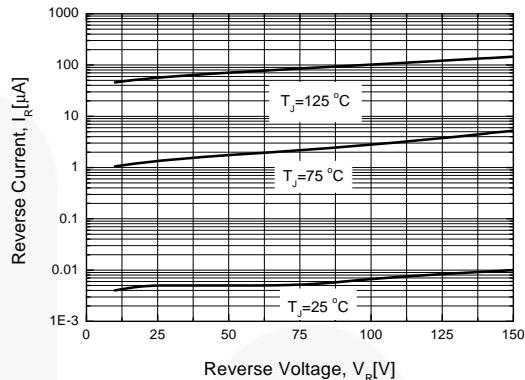
**Note:**

2. DC Item are tested by pulse test: pulse width  $\leq 300 \mu\text{s}$ , duty cycle  $\leq 2\%$ .

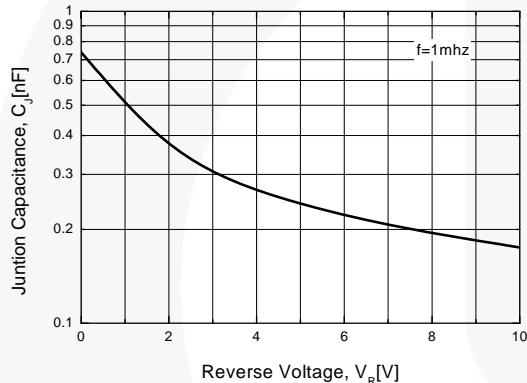
## Typical Performance Characteristics



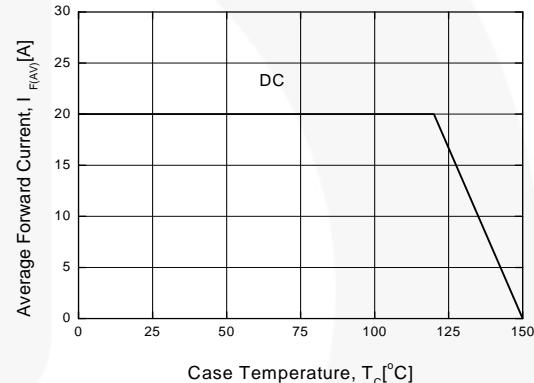
**Figure 1. Forward Current Characteristics**



**Figure 2. Reverse Leakage Current**



**Figure 3. Junction Capacitance**



**Figure 4. Power Derating**

## Physical Dimensions

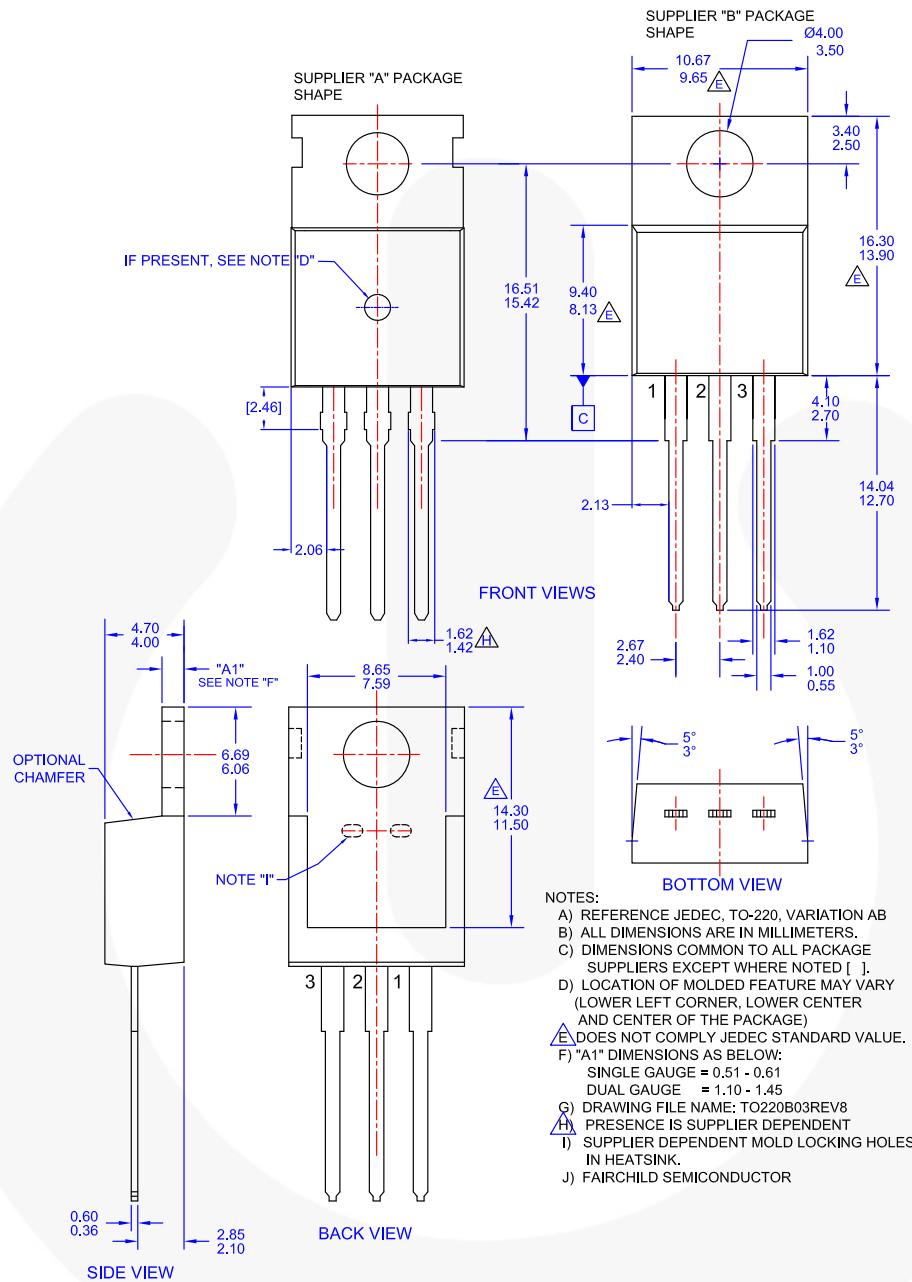


Figure 5. TO-220, MOLDED, 3LEAD, JEDEC VARIATION AB

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