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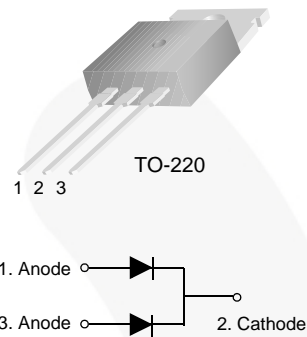


July 2014

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	10
		per Device	20
I_{FSM}	Peak Forward Surge Current, 8.3 ms Half-Sine Wave	150	A
T_{STG}	Storage Temperature Range	-50 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	150	$^\circ\text{C}$

MBR20150CT — Dual High Voltage Schottky Rectifier

Thermal Characteristics⁽¹⁾

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

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

Note:

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

Electrical Characteristics⁽²⁾

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

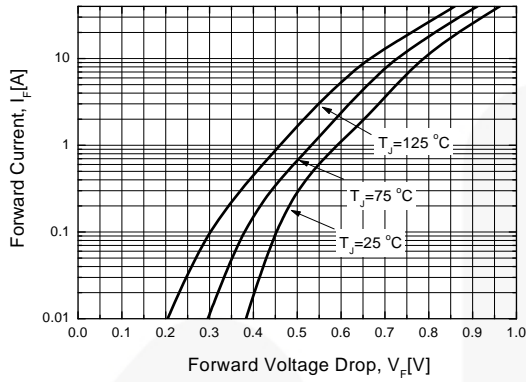


Figure 1. Forward Current Characteristics

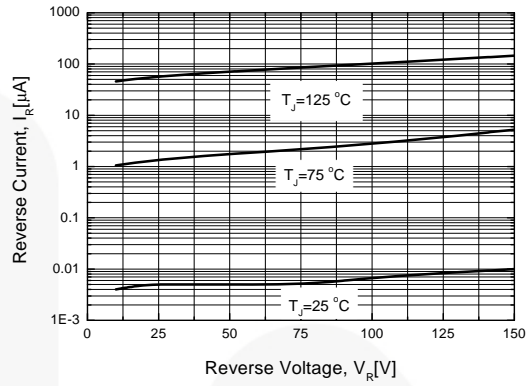


Figure 2. Reverse Leakage Current

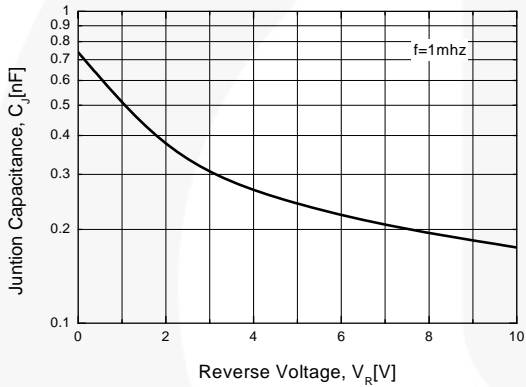


Figure 3. Junction Capacitance

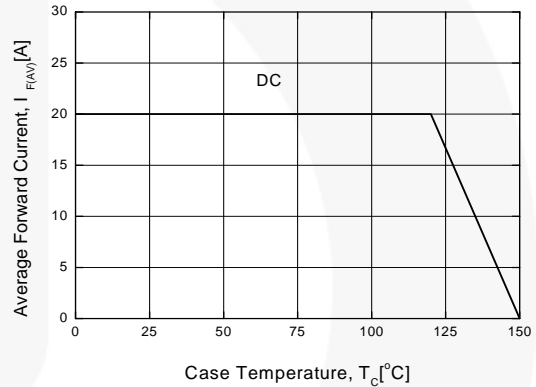


Figure 4. Power Derating

Physical Dimensions

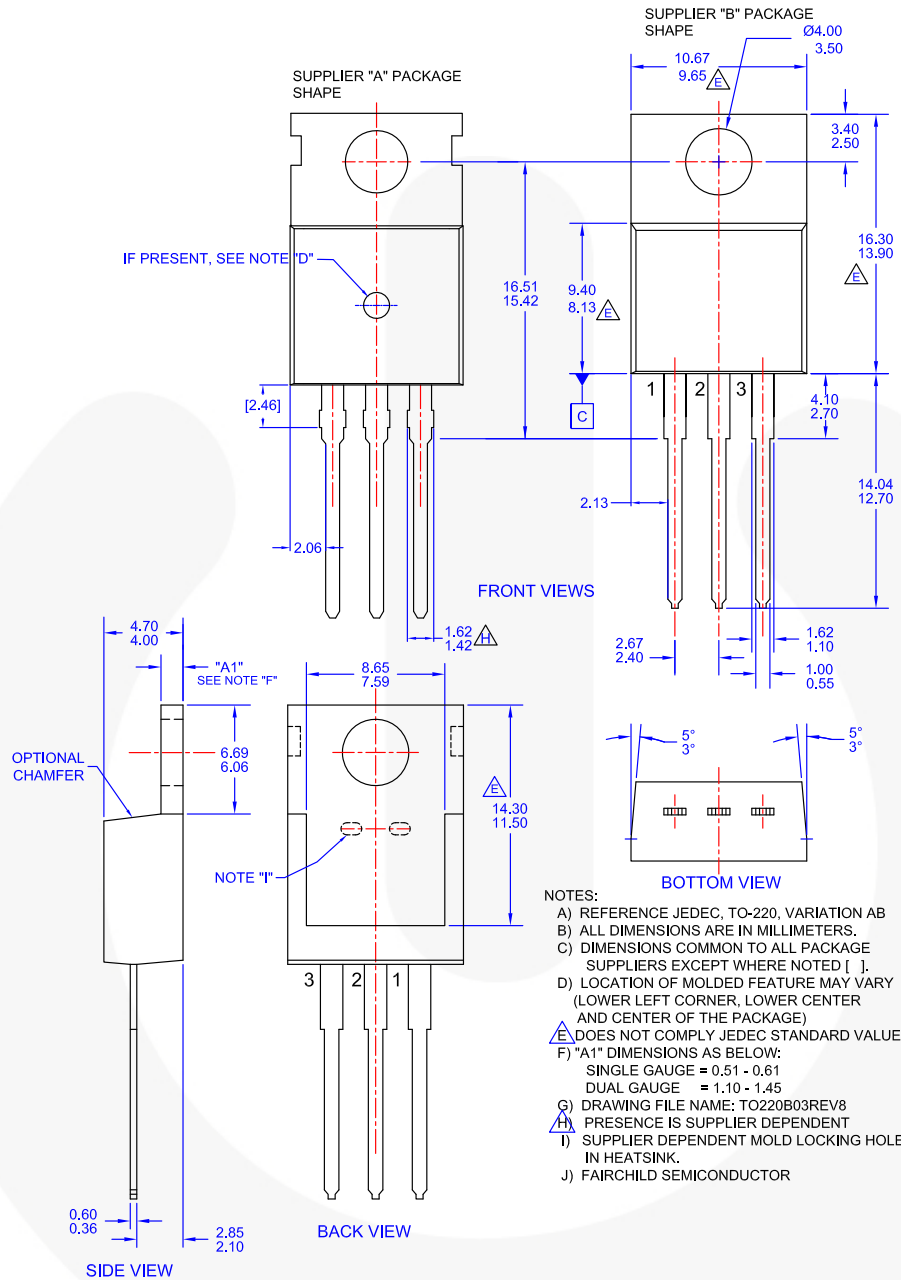


Figure 5. TO-220, MOLDED, 3LEAD, JEDEC VARIATION AB

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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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