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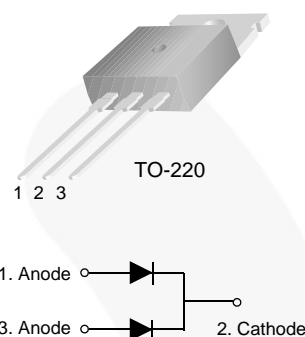
July 2014

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 | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | 150 | $^\circ\text{C}$ |

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 $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$.

Typical Performance Characteristics

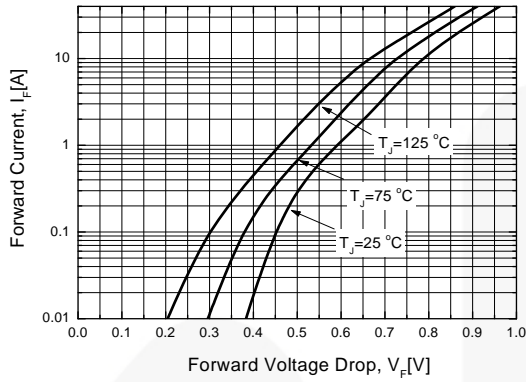


Figure 1. Forward Current Characteristics

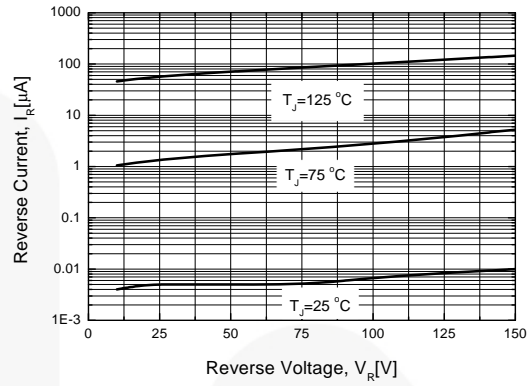


Figure 2. Reverse Leakage Current

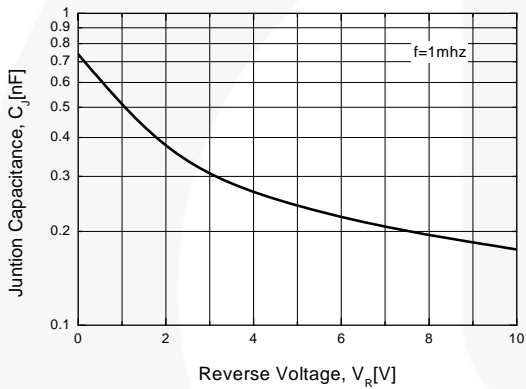


Figure 3. Junction Capacitance

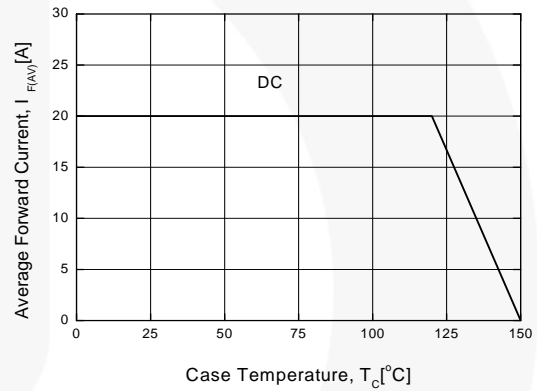


Figure 4. Power Derating

Physical Dimensions

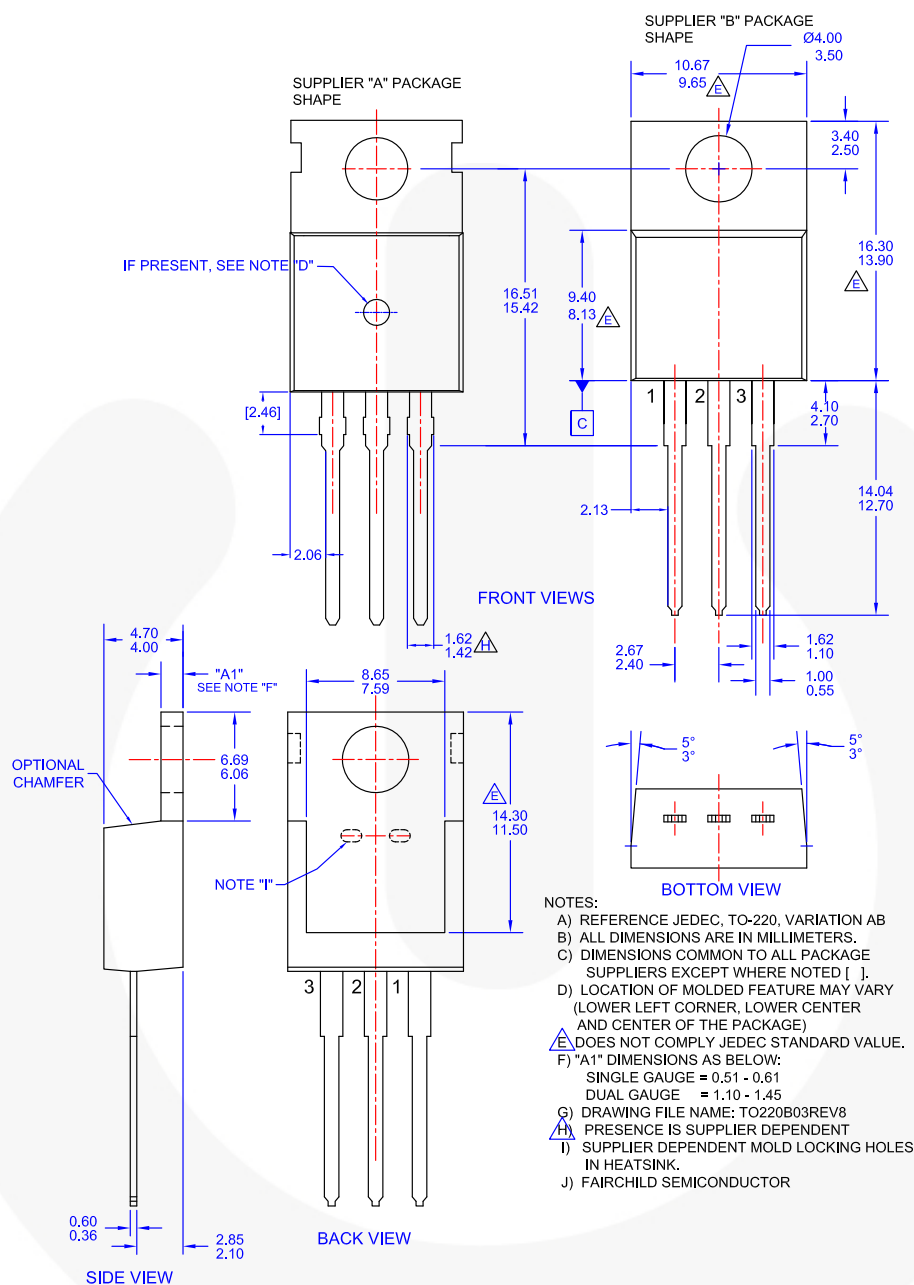


Figure 5. TO-220, MOLDED, 3LEAD, JEDEC VARIATION AB

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|--------------------------|-----------------------|---|
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