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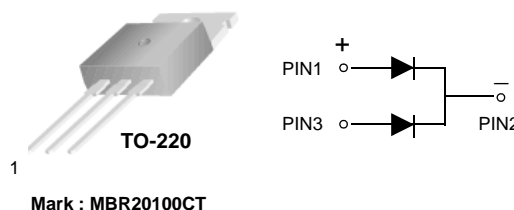
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# MBR20100CT

## 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 can withstand to 260°C



### Absolute Maximum Ratings\* $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Unit
$V_{RRM}$	Maximum Repetitive Reverse Voltage	100	V
$V_R$	Maximum DC Reverse Voltage	100	V
$I_{F(AV)}$	Average Rectified Forward Current, $T_c = 120^\circ\text{C}$	10 (Per Leg) 20 (Per Device)	A
$I_{FSM}$	Peak Forward Surge Current, 8.3ms Half Sine wave	150	A
$T_{STG}$	Storage Temperature Range	-55 to 150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	150	$^\circ\text{C}$

\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Thermal Characteristics\* $T_a = 25^\circ\text{C}$ unless otherwise noted

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

\* JESD51-10

### Electrical Characteristics\* $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Unit
$I_R$	Reverse Current	$V_R = 100\text{V}$ $T_c = 25^\circ\text{C}$ $V_R = 100\text{V}$ $T_c = 125^\circ\text{C}$		0.2 5	mA
$V_F$	Forward Voltage	$I_F = 10\text{A}$ $T_c = 25^\circ\text{C}$ $I_F = 10\text{A}$ $T_c = 125^\circ\text{C}$ $I_F = 20\text{A}$ $T_c = 25^\circ\text{C}$ $I_F = 20\text{A}$ $T_c = 125^\circ\text{C}$		0.8 0.7 0.9 0.8	V

\* 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

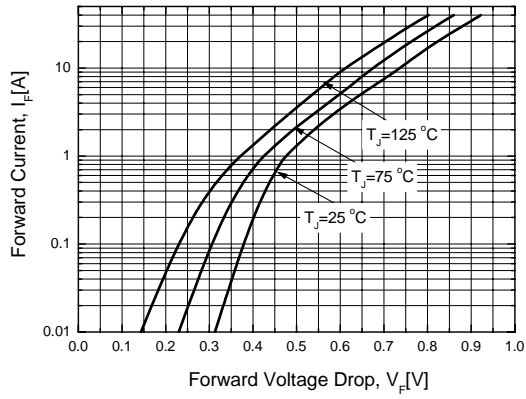


Figure 2. Reverse Leakage Current

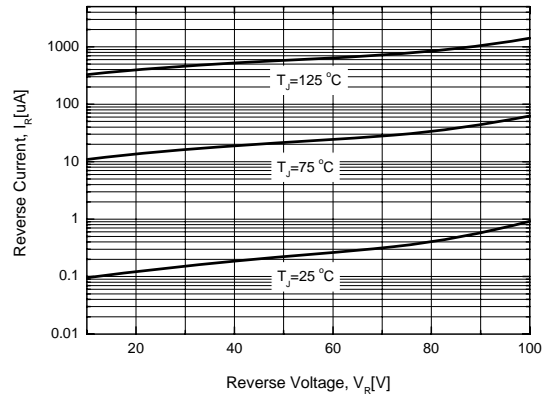


Figure 3. Junction Capacitance

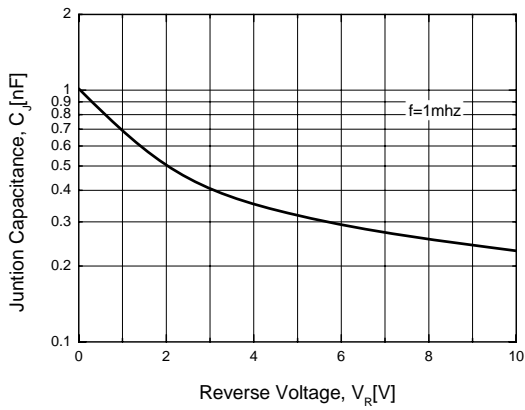
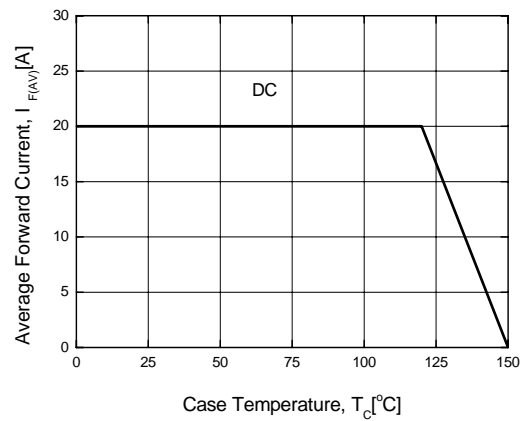
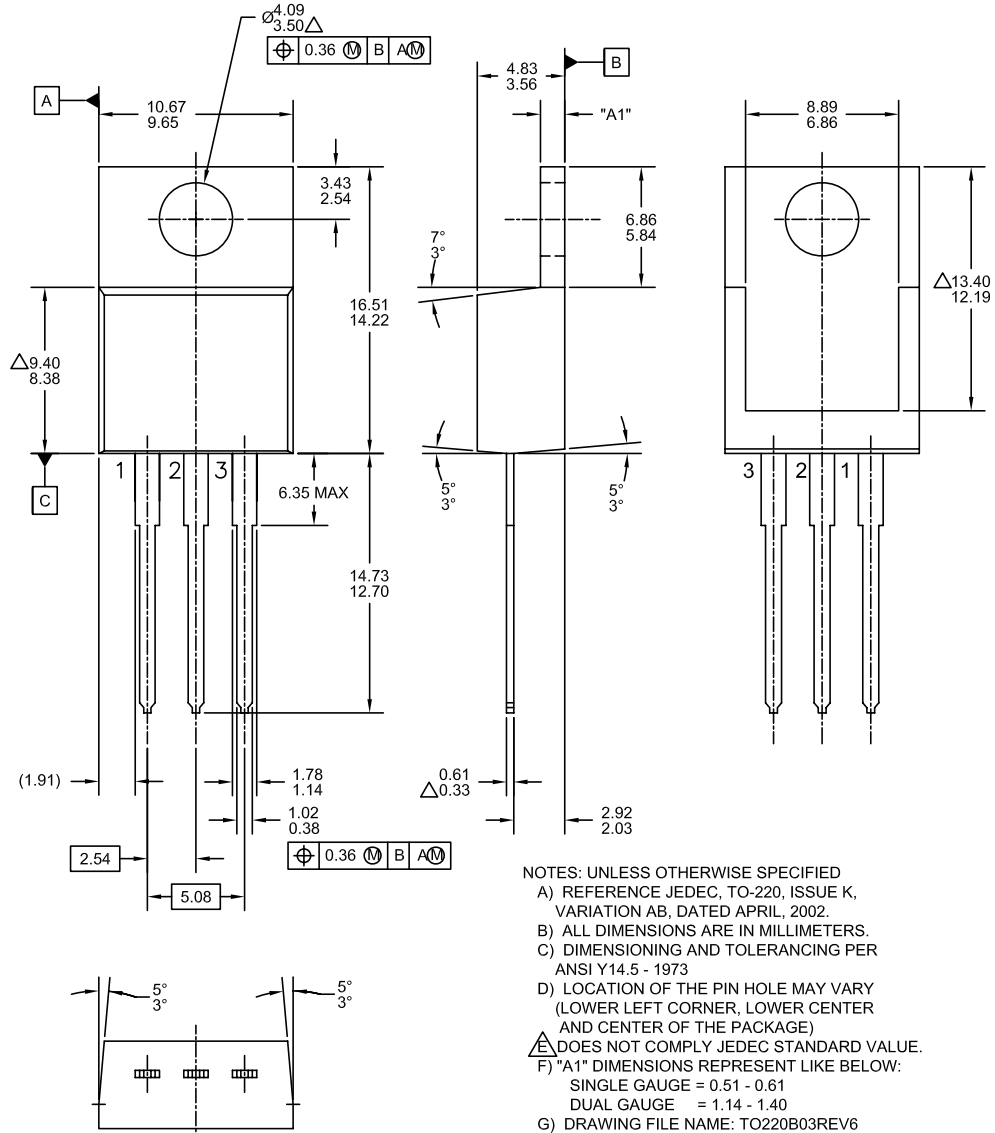


Figure 4. Power Derating



Physical Dimensions

TO-220 [ DUAL GAUGE ]



- NOTES: UNLESS OTHERWISE SPECIFIED
- REFERENCE JEDEC, TO-220, ISSUE K, VARIATION AB, DATED APRIL, 2002.
  - ALL DIMENSIONS ARE IN MILLIMETERS.
  - DIMENSIONING AND TOLERANCING PER ANSI Y14.5 - 1973
  - LOCATION OF THE PIN HOLE MAY VARY (LOWER LEFT CORNER, LOWER CENTER AND CENTER OF THE PACKAGE)
  - DOES NOT COMPLY JEDEC STANDARD VALUE.
  - "A1" DIMENSIONS REPRESENT LIKE BELOW:  
 SINGLE GAUGE = 0.51 - 0.61  
 DUAL GAUGE = 1.14 - 1.40
  - DRAWING FILE NAME: TO220B03REV6

Dimensions in Millimeters



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| Build it Now™            | Global Power Resource <sup>SM</sup> | PowerXS™                              |   |
| CorePLUS™                | Green FPS™                          | Programmable Active Droop™            |   |
| CorePOWER™               | Green FPS™ e-Series™                | QFET®                                 |   |
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