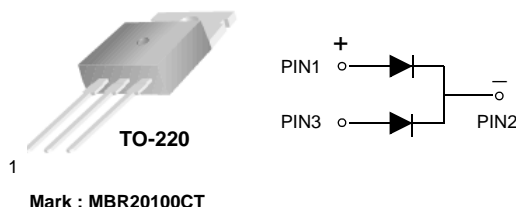


MBR20100CT

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	$^\circ\text{C/W}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient per Leg	62.5	$^\circ\text{C/W}$

* 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

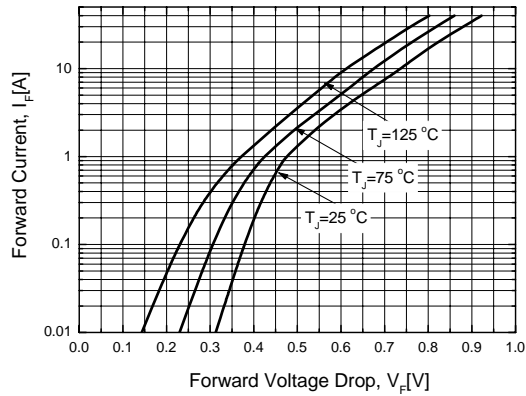


Figure 2. Reverse Leakage Current

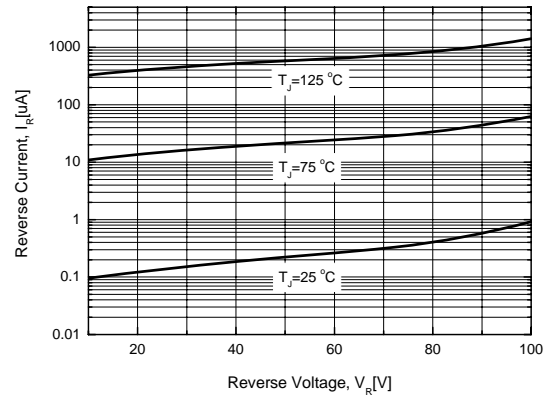


Figure 3. Junction Capacitance

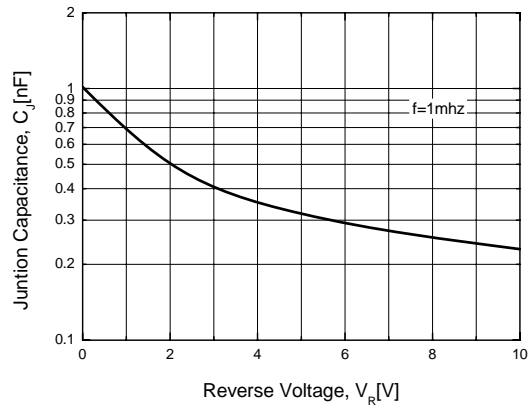
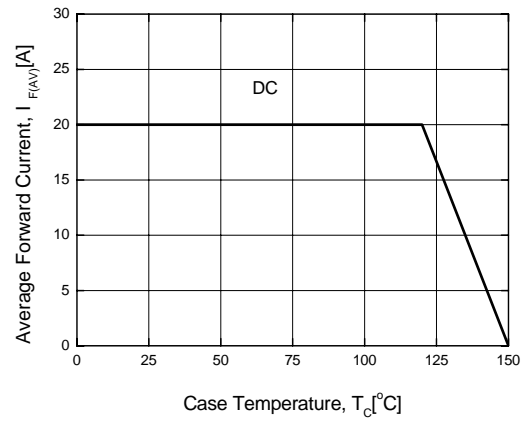
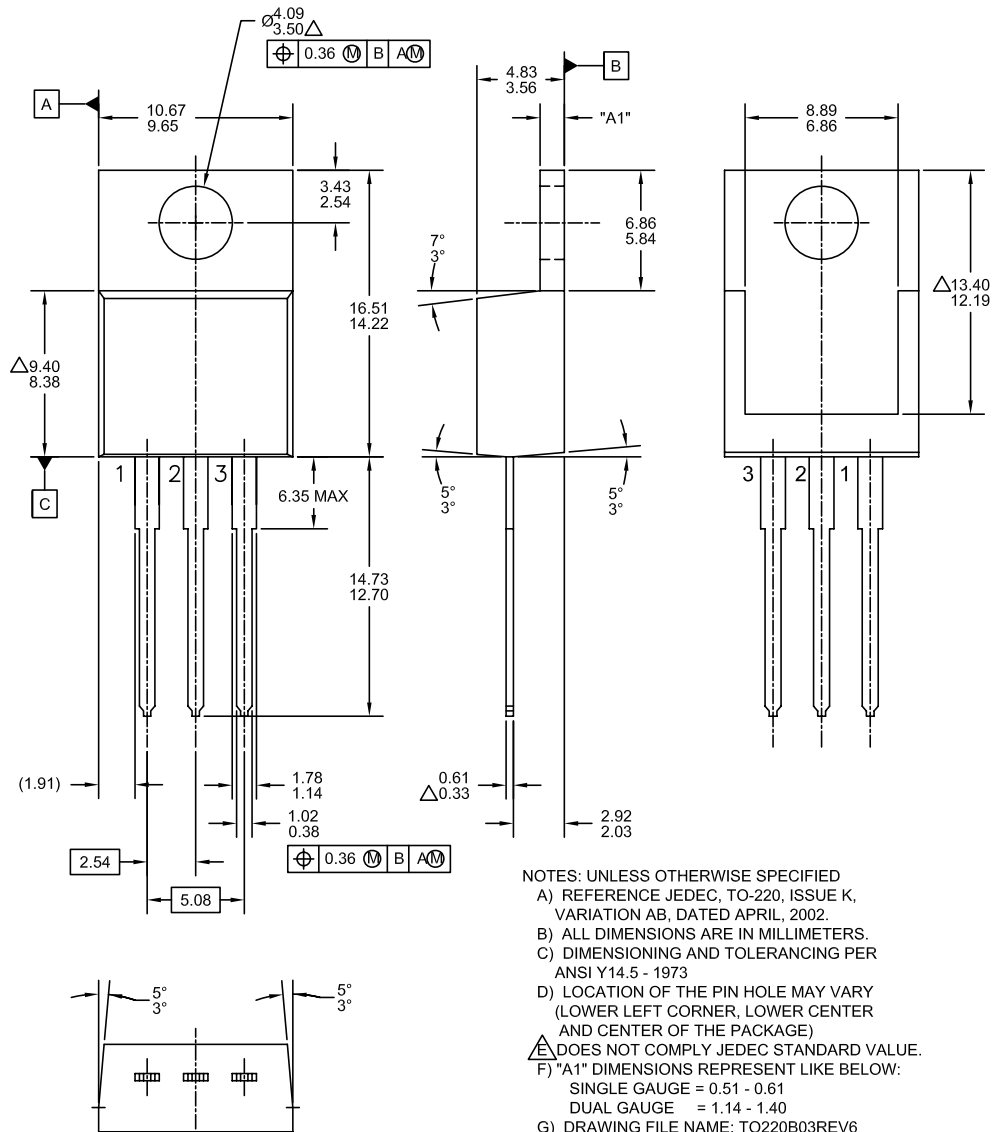


Figure 4. Power Derating



Physical Dimensions

TO-220 [DUAL GAUGE]



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

Dimensions in Millimeters



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