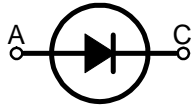
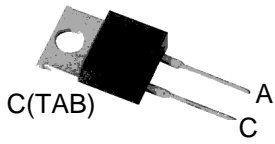


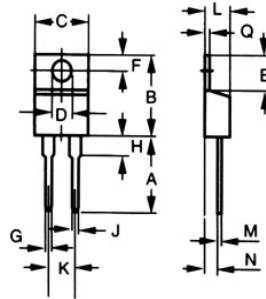
# MBR5150 thru MBR5200

Wide Temperature Range and High  $T_{jm}$  Schottky Barrier Rectifiers



A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-220AC



Dim.	Inches		Millimeter	
	Min.	Max.	Min.	Max.
A	0.500	0.580	12.70	14.73
B	0.560	0.650	14.23	16.51
C	0.380	0.420	9.66	10.66
D	0.139	0.161	3.54	4.08
E	2.300	0.420	5.85	6.85
F	0.100	0.135	2.54	3.42
G	0.045	0.070	1.15	1.77
H	-	0.250	-	6.35
J	0.025	0.035	0.64	0.89
K	0.190	0.210	4.83	5.33
L	0.140	0.190	3.56	4.82
M	0.015	0.022	0.38	0.56
N	0.080	0.115	2.04	2.49
Q	0.025	0.055	0.64	1.39

	$V_{RRM}$	$V_{RMS}$	$V_{DC}$
	V	V	V
<b>MBR5150</b>	150	105	150
<b>MBR5200</b>	200	140	200

Symbol	Characteristics	Maximum Ratings	Unit
$I_{AV}$	Maximum Average Forward Rectified Current @ $T_c=120^\circ\text{C}$	5	A
$I_{FSM}$	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	120	A
$dv/dt$	Voltage Rate Of Change (Rated $V_R$ )	10000	V/us
$V_F$	Maximum Forward Voltage (Note 1)	$I_F=5\text{A}$ @ $T_J=25^\circ\text{C}$ 0.95 $I_F=5\text{A}$ @ $T_J=125^\circ\text{C}$ - $I_F=10\text{A}$ @ $T_J=25^\circ\text{C}$ 0.95 $I_F=10\text{A}$ @ $T_J=125^\circ\text{C}$ 0.80	V
$I_R$	Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_J=25^\circ\text{C}$ 0.05 $T_J=125^\circ\text{C}$ 15	mA
$R_{\theta JC}$	Typical Thermal Resistance (Note 2)	4.5	$^\circ\text{C/W}$
$T_J$	Operating Temperature Range	-55 to +150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$

NOTES: 1. 300us Pulse Width, Duty Cycle 2%.  
 2. Thermal Resistance Junction To Case.  
 3. Measured At 1.0MHz And Applied Reverse Voltage Of 4.0V DC.

## FEATURES

- \* Metal of silicon rectifier, majority carrier conduction
- \* Guard ring for transient protection
- \* Low power loss, high efficiency
- \* High current capability, low  $V_F$
- \* High surge capacity
- \* For use in low voltage, high frequency inverters, free whelling, and polarity protection applications

## MECHANICAL DATA

- \* Case: TO-220AC molded plastic
- \* Polarity: As marked on the body
- \* Weight: 0.08 ounces, 2.24 grams
- \* Mounting position: Any



# MBR5150 thru MBR5200

## Wide Temperature Range and High $T_{jm}$ Schottky Barrier Rectifiers

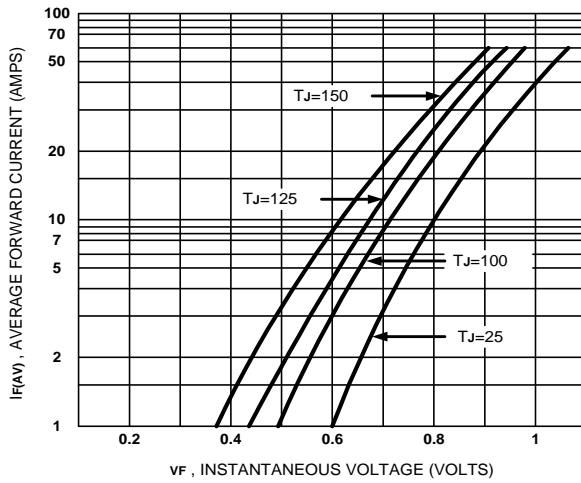


Figure 1. Typical Forward Voltage (Per Leg)

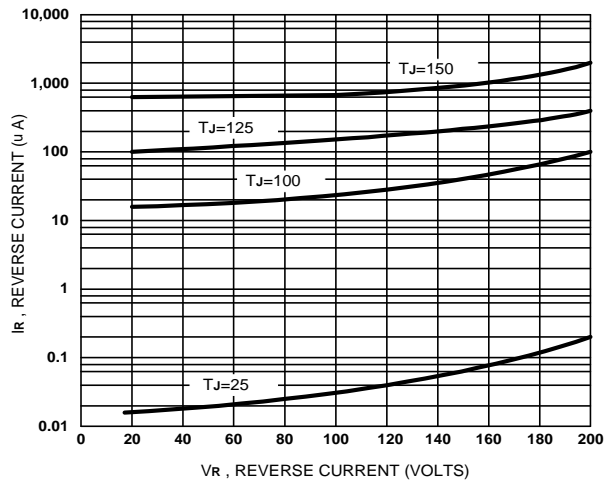


Figure 2. Typical Reverse Current (Per Leg)

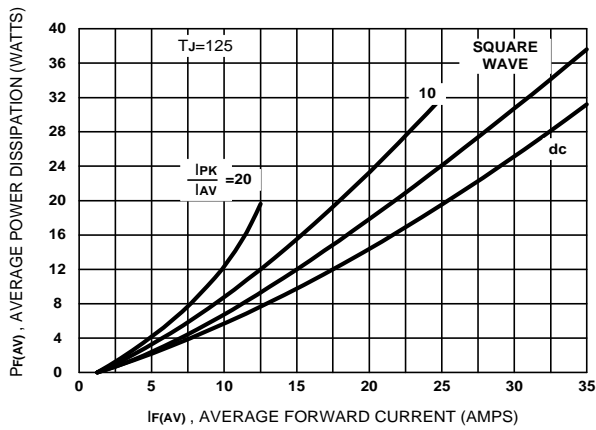


Figure 3. Forward Power Dissipation

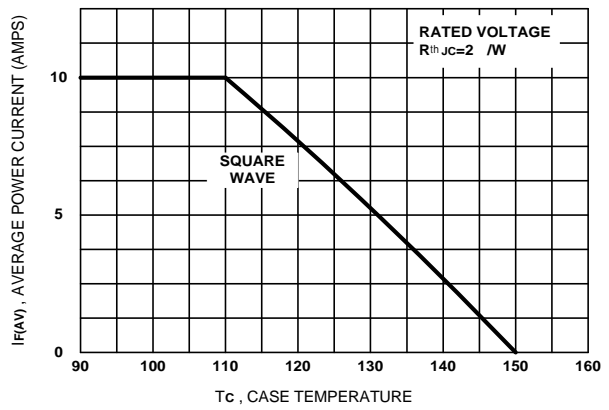


Figure 4. Forward Current Derating, Case

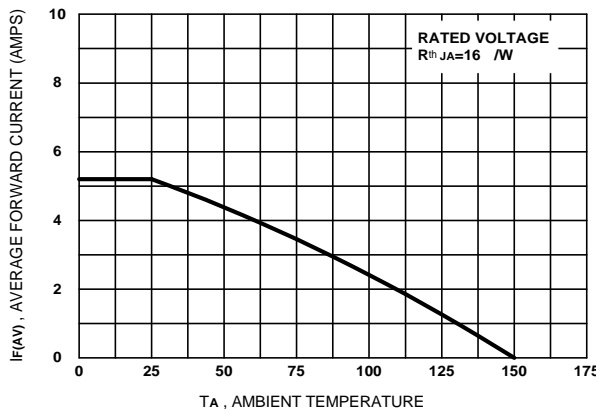


Figure 5. Current Derating, Ambient

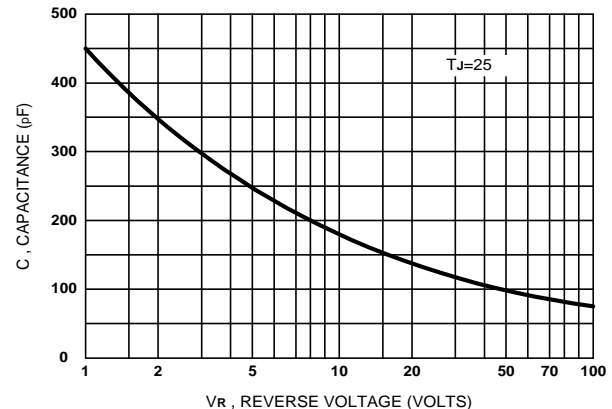


Figure 6. Typical Capacitance (Per Leg)