

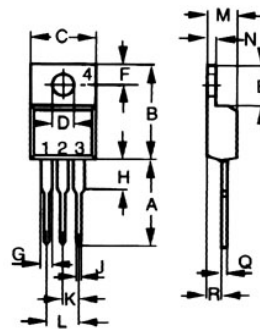
MBR10150CT thru MBR10200CT

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



A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-220AB



Dim.	Inches		Millimeter	
	Min.	Max.	Min.	Max.
A	0.500	0.550	12.70	13.97
B	0.580	0.630	14.73	16.00
C	0.390	0.420	9.91	10.66
D	0.139	0.161	3.54	4.08
E	0.230	0.270	5.85	6.85
F	0.100	0.125	2.54	3.18
G	0.045	0.065	1.15	1.65
H	0.110	0.230	2.79	5.84
J	0.025	0.040	0.64	1.01
K	0.100	BSC	2.54	BSC
M	0.170	0.190	4.32	4.82
N	0.045	0.055	1.14	1.39
Q	0.014	0.022	0.35	0.56
R	0.090	0.110	2.29	2.79

	V_{RRM}	V_{RMS}	V_{DC}
	V	V	V
MBR10150CT	150	105	150
MBR10200CT	200	140	200

Symbol	Characteristics	Maximum Ratings	Unit
$I_{(AV)}$	Maximum Average Forward Rectified Current @ $T_c=120^\circ\text{C}$	10	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)	$I_F=5A @T_J=25^\circ\text{C}$ 0.95 $I_F=5A @T_J=125^\circ\text{C}$ - $I_F=10A @T_J=25^\circ\text{C}$ 0.95 $I_F=10A @T_J=125^\circ\text{C}$ 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	$^\circ\text{C}/\text{W}$
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 wheeling, and polarity protection applications

MECHANICAL DATA

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

Sirectifier®

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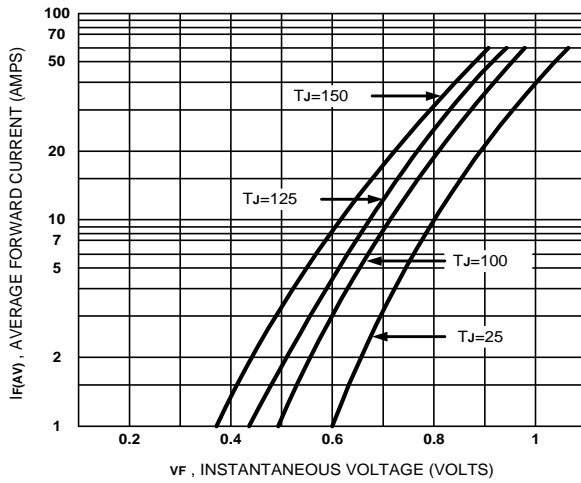


Figure 1. Typical Forward Voltage (Per Leg)

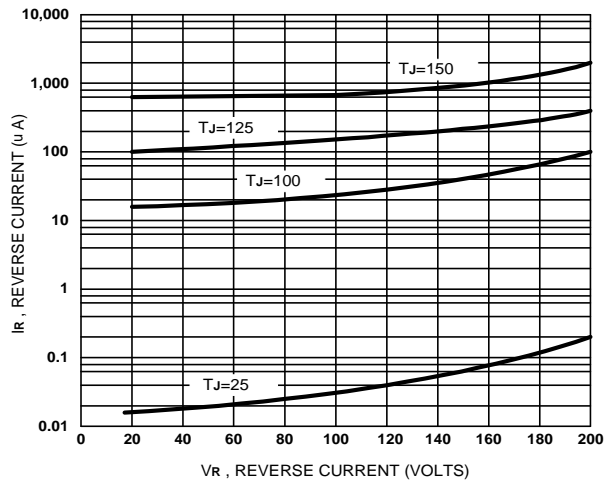


Figure 2. Typical Reverse Current (Per Leg)

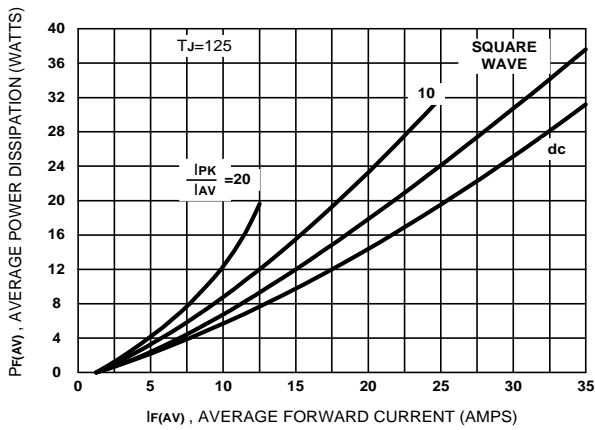


Figure 3. Forward Power Dissipation

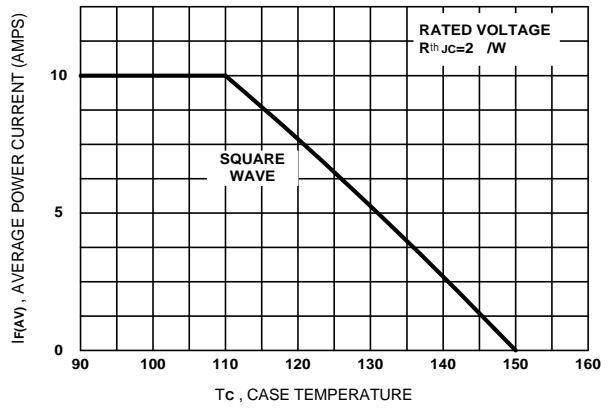


Figure 4. Forward Current Derating, Case

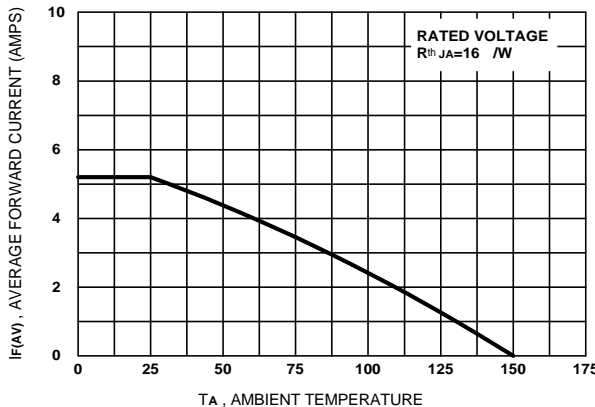


Figure 5. Current Derating, Ambient

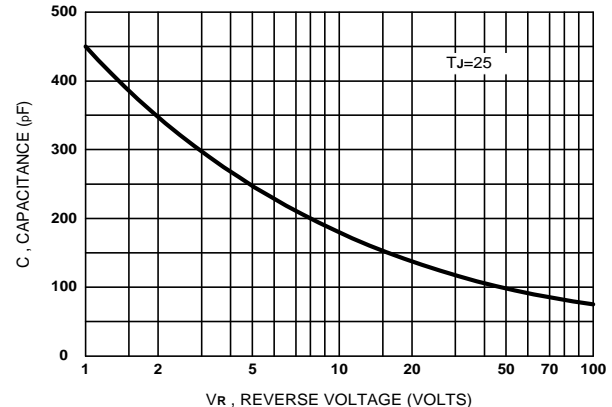


Figure 6. Typical Capacitance (Per Leg)