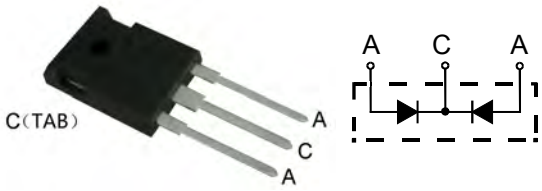
MBR30100PT thru MBR30200PT

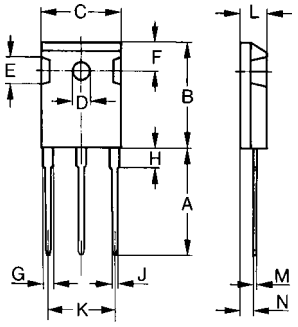
High Tjm Low IRRM Schottky Barrier Diodes



A=Anode, C=Cathode, TAB=Cathode

	V_{RRM}	V_{RMS}	V_{DC}
	V	V	V
MBR30100PT	100	70	100
MBR30150PT	150	105	150
MBR30200PT	200	140	200

Dimensions TO-247AD



Dim.	Millimeter Min.	Max.	Inches Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.610	0.640
D	3.55	3.65	0.140	0.144
E	4.32	5.49	0.170	0.216
F	5.4	6.2	0.212	0.244
G	1.65	2.13	0.065	0.084
H	-	4.5	-	0.177
J	1.0	1.4	0.040	0.055
K	10.8	11.0	0.426	0.433
L	4.7	5.3	0.185	0.209
M	0.4	0.8	0.016	0.031
N	1.5	2.49	0.087	0.102

Symbol	Characteristics	Maximum Ratings	Unit
$I_{(AV)}$	Maximum Average Forward Rectified Current @T_C=125°C	30	A
I_{FSM}	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	250	A
dv/dt	Voltage Rate Of Change (Rated V_R)	10000	V/us
V_F	Maximum Forward Voltage (Note 1) I_F=15A @T_J=25°C I_F=15A @T_J=125°C I_F=30A @T_J=25°C I_F=30A @T_J=125°C	0.85 0.70 0.98 0.85	V
I_R	Maximum DC Reverse Current @T_J=25°C At Rated DC Blocking Voltage @T_J=125°C	0.05 10	mA
$R_{\Theta JC}$	Typical Thermal Resistance (Note 2)	2.2	°C/W
C_J	Typical Junction Capacitance Per Element (Note 3)	700	pF
T_J	Operating Temperature Range	-55 to +150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°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 conducton
* 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
* RoHS compliant

MECHANICAL DATA

* Case: TO-247AD molded plastic
* Polarity: As marked on the body
* Weight: 6 grams
* Mounting position: Any

Sirectifier®

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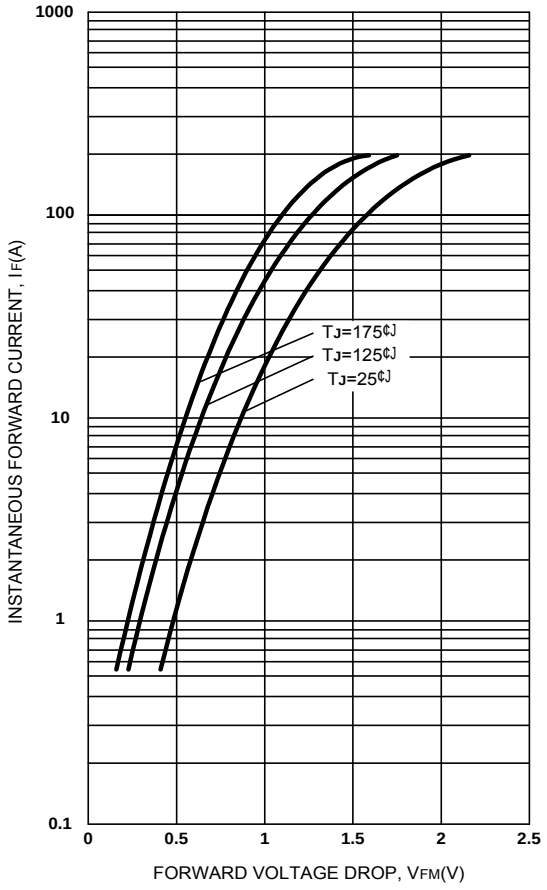

Figure 1. Max. Forward Voltage Drop Characteristics (PerLeg)

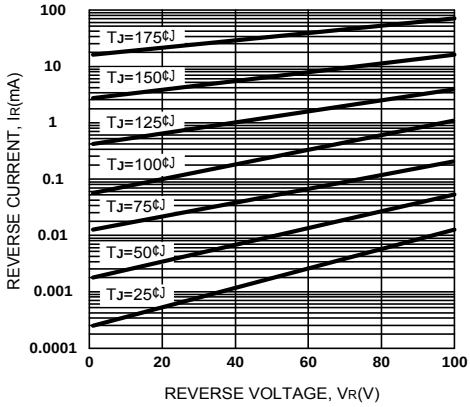

Figure 2. Typical Values Of Reverse Current Vs. Reverse Voltage (Per Leg)

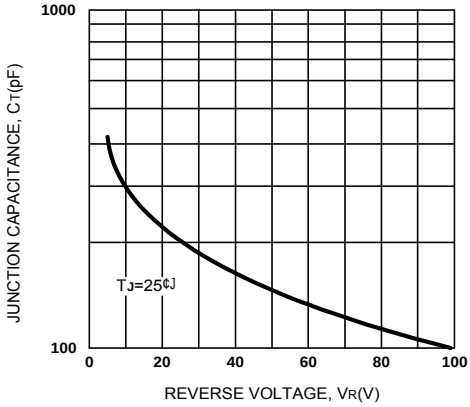

Figure 3. Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)

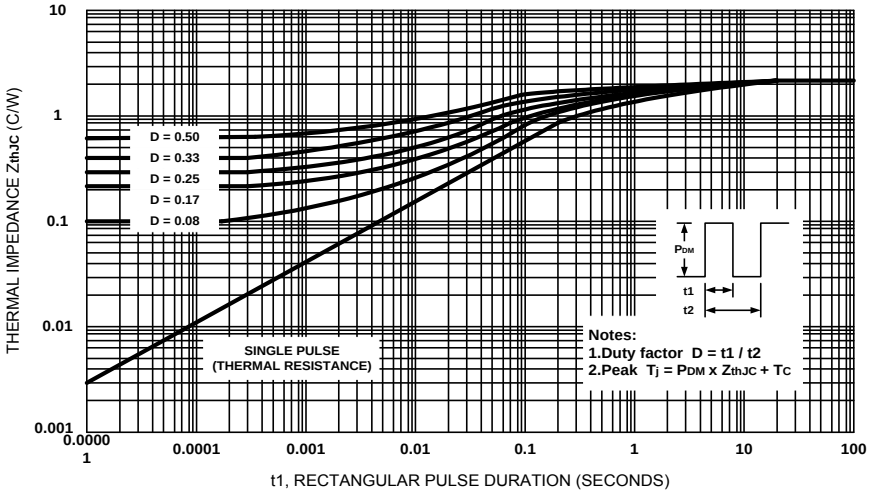

Figure 4. Max. Thermal Impedance Z_{thJC} Characteristics (PerLeg)

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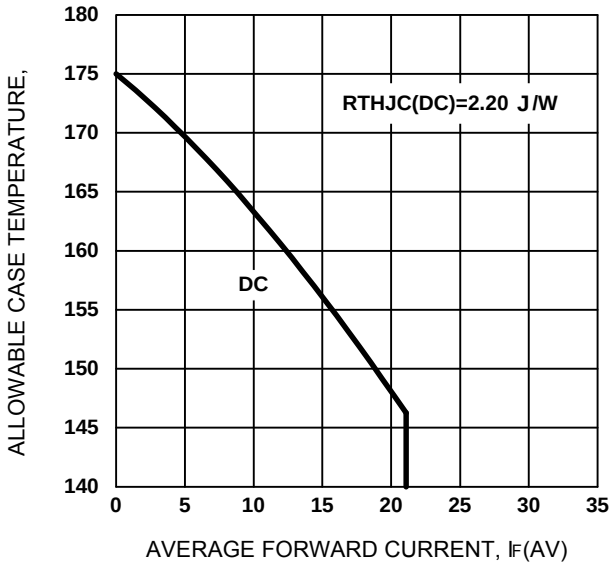

Figure 5. Max. Allowable Case Temperature Vs. Average Forward Current (PerLeg)

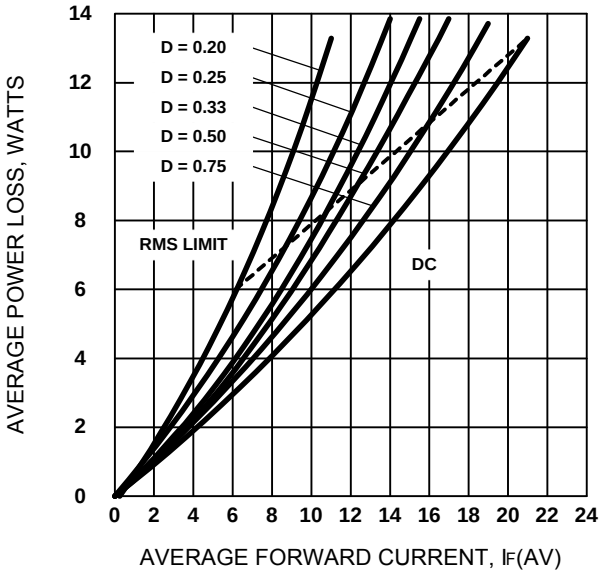

Figure 6. Forward PowerLoss Characteristics (PerLeg)

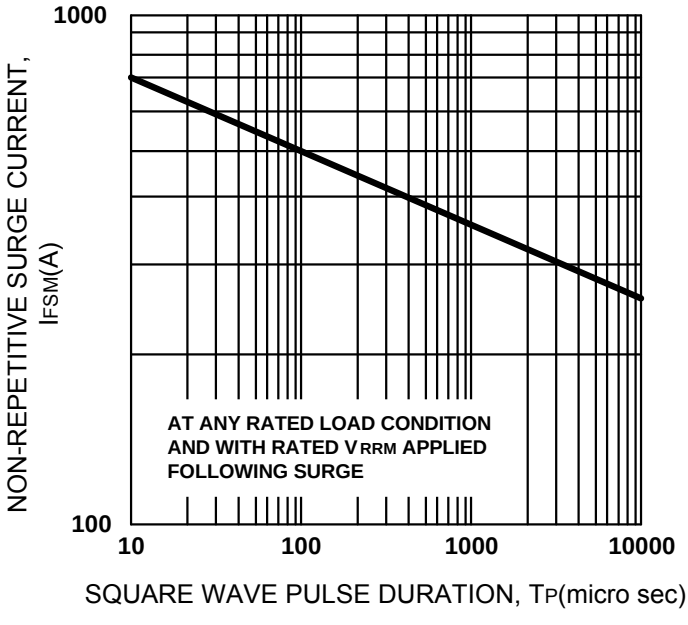

Figure 7. Max. Non-Repetitive Surge Current (Per Leg)

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