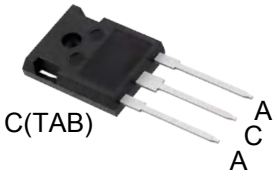
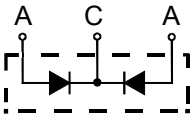
MBR3030PT thru MBR3045PT

High Tjm Low IRRM Schottky Barrier Diodes

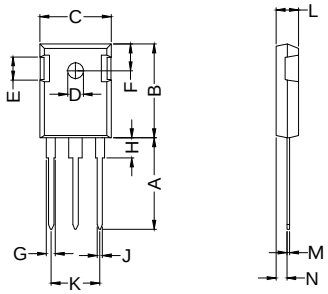




A=Anode, C=Cathode, TAB=Cathode

	V_{RRM} V	V_{RMS} V	V_{DC} V
MBR3030PT	30	21	30
MBR3035PT	35	24.5	35
MBR3040PT	40	28	40
MBR3045PT	45	31.5	45

Dimensions TO-247AD



Dim.	Millimeter		Inches	
	Min.	Max.	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	0.620	0.640
ØD	3.15	3.65	0.124	0.144
E	4.32	5.49	0.170	0.216
F	5.40	6.30	0.213	0.248
G	1.65	2.18	0.065	0.086
H	3.80	4.50	0.150	0.177
J	1.00	1.40	0.039	0.055
K	10.80	11.10	0.425	0.437
L	4.70	5.30	0.185	0.209
M	0.40	0.80	0.016	0.031
N	1.50	2.49	0.059	0.098

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)	200	A
dv/dt	Voltage Rate Of Change (Rated V_R)	10000	V/us
V_F	Maximum Forward Voltage (Note 1) I_F=20A @T_J=25°C I_F=20A @T_J=125°C I_F=30A @T_J=25°C I_F=30A @T_J=125°C	- 0.60 0.76 0.72	V
I_R	Maximum DC Reverse Current @T_J=25°C At Rated DC Blocking Voltage @T_J=125°C	1 60	mA
$R_{\theta JC}$	Typical Thermal Resistance (Note 2)	1.4	°C/W
C_J	Typical Junction Capacitance Per Element (Note 3)	500	pF
T_J	Operating Temperature Range	-55 to +150	°C
T_{STG}	Storage Temperature Range	-55 to +175	°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 compliance

MECHANICAL DATA

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

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MBR3030PT thru MBR3045PT

High Tjm Low IRRM Schottky Barrier Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

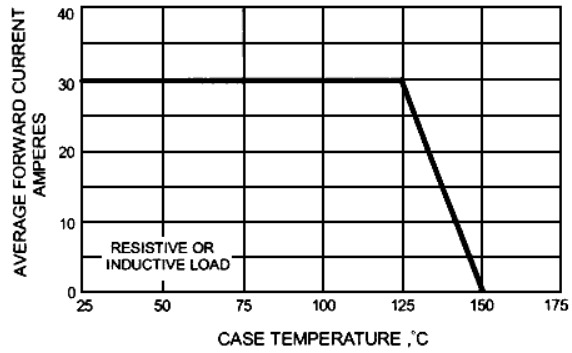


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

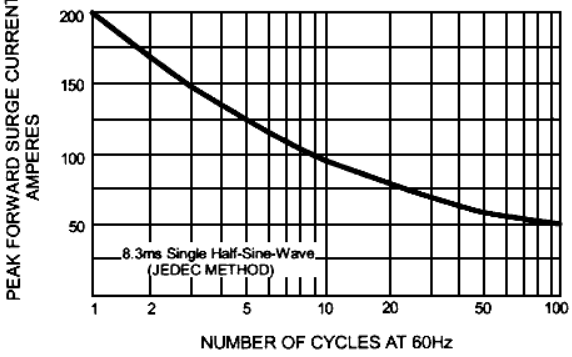


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

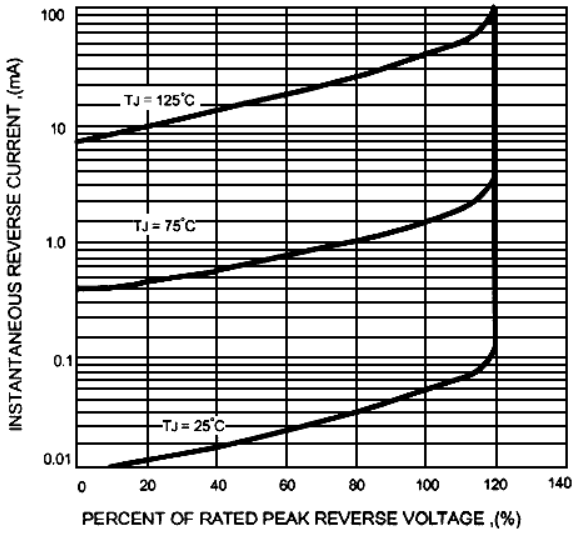


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

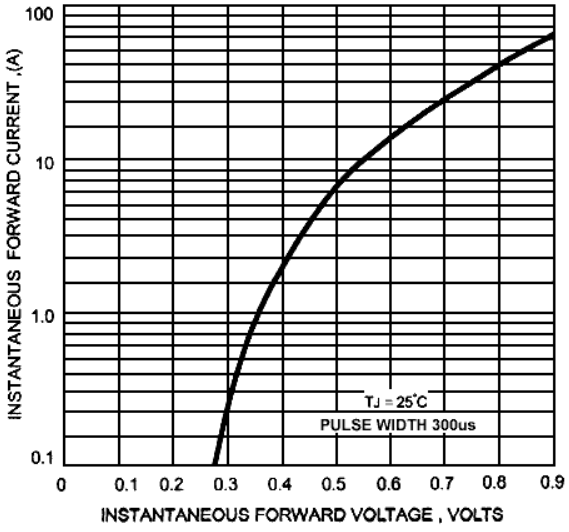
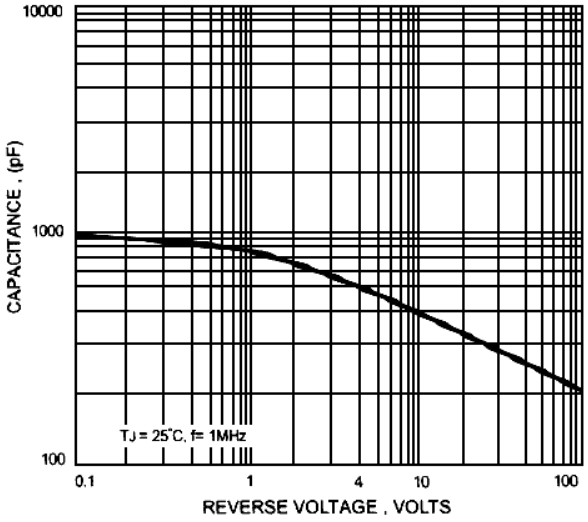


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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