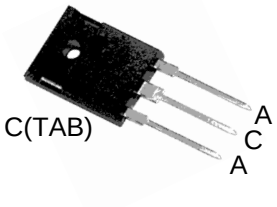
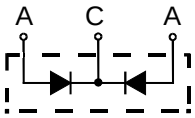
MBR3050PT thru MBR3060PT

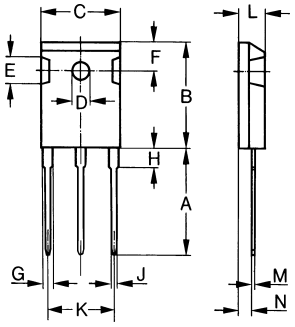
Wide Temperature Range and High T_{jm} Schottky Barrier Rectifiers





A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-247AD



Dim.	Millimeter Min.	Millimeter Max.	Inches Min.	Inches 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

	V_{RRM} V	V_{RMS} V	V_{DC} V
MBR3050PT	50	35	50
MBR3060PT	60	42	60

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	0.75 0.65 0.80 0.75	V
I_R	Maximum DC Reverse Current @T_J=25°C At Rated DC Blocking Voltage @T_J=125°C	5 100	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

MECHANICAL DATA

* Case: TO-3P molded plastic
* Polarity: As marked on the body
* Weight: 0.2 ounces, 5.6 grams
* Mounting position: Any

Sirectifier®

MBR3050PT thru MBR3060PT

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

FIG.1 - FORWARD CURRENT DERATING CURVE

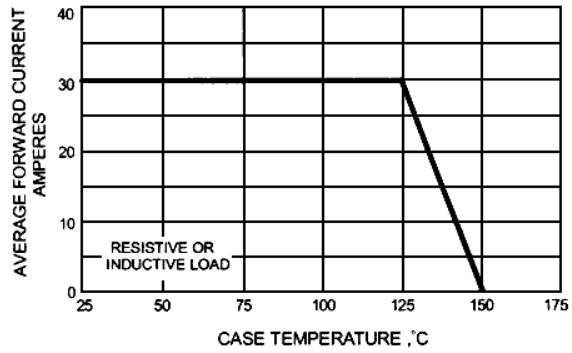


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

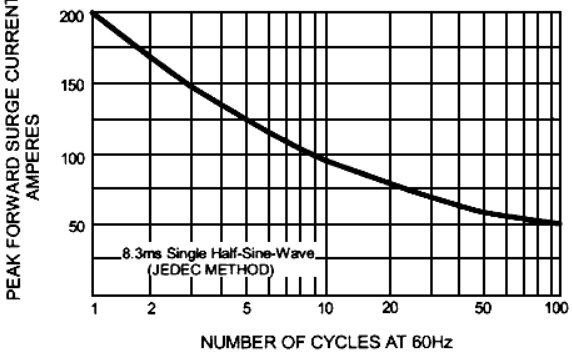


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

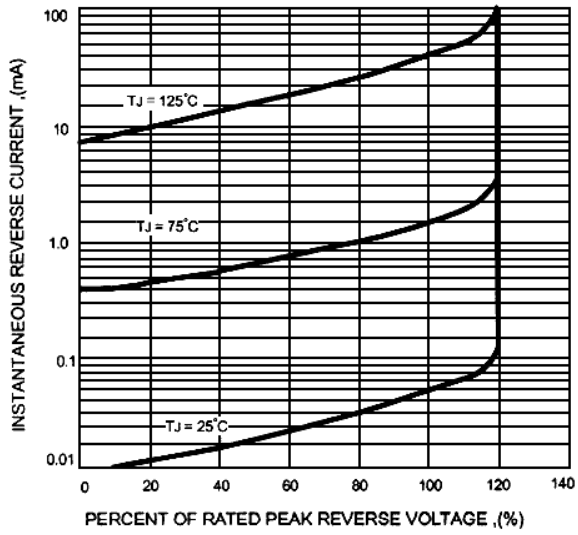


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

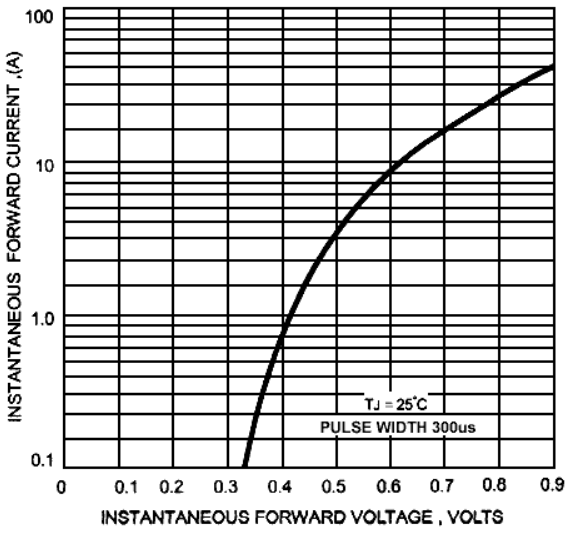
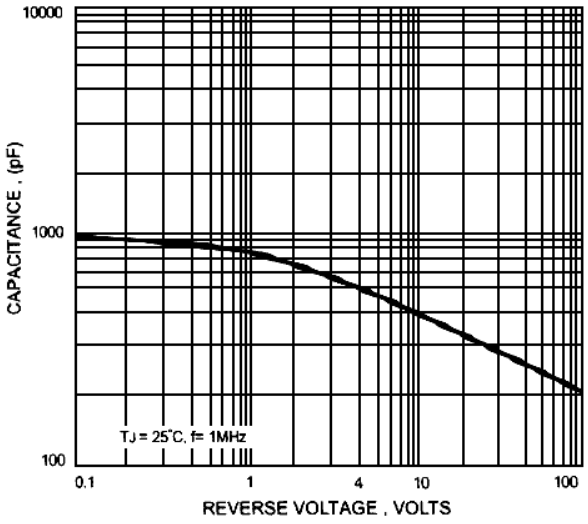


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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