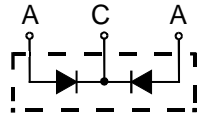
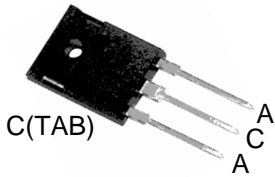


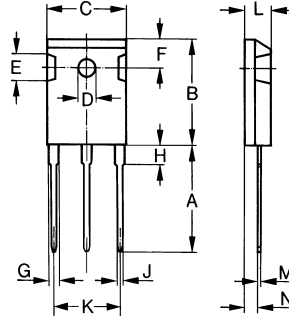
# MBR3050PT thru MBR3060PT

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



A=Anode, C=Cathode, TAB=Cathode

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	0.610	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

	$V_{RRM}$	$V_{RMS}$	$V_{DC}$
	V	V	V
<b>MBR3050PT</b>	50	35	50
<b>MBR3060PT</b>	60	42	60

Symbol	Characteristics	Maximum Ratings	Unit
$I_{(AV)}$	Maximum Average Forward Rectified Current @ $T_c=125^\circ\text{C}$	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)	$I_F=20\text{A}$ @ $T_J=25^\circ\text{C}$ 0.75 $I_F=20\text{A}$ @ $T_J=125^\circ\text{C}$ 0.65 $I_F=30\text{A}$ @ $T_J=25^\circ\text{C}$ 0.80 $I_F=30\text{A}$ @ $T_J=125^\circ\text{C}$ 0.75	V
$I_R$	Maximum DC Reverse Current At Rated DC Blocking Voltage	$@T_J=25^\circ\text{C}$ 5 $@T_J=125^\circ\text{C}$ 100	mA
$R_{\theta JC}$	Typical Thermal Resistance (Note 2)	1.4	$^\circ\text{C}/\text{W}$
$C_J$	Typical Junction Capacitance Per Element (Note 3)	500	pF
$T_J$	Operating Temperature Range	-55 to +150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range	-55 to +175	$^\circ\text{C}$

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 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



# MBR3050PT thru MBR3060PT

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

FIG.1 - FORWARD CURRENT DERATING CURVE

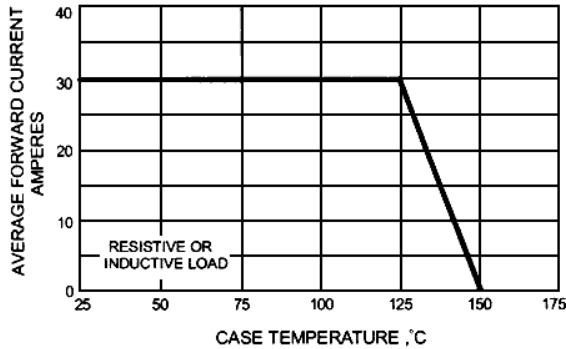


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

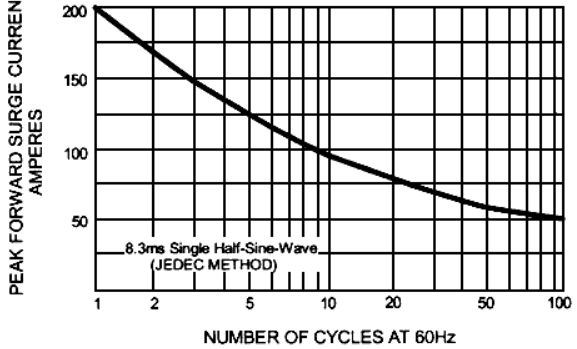


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

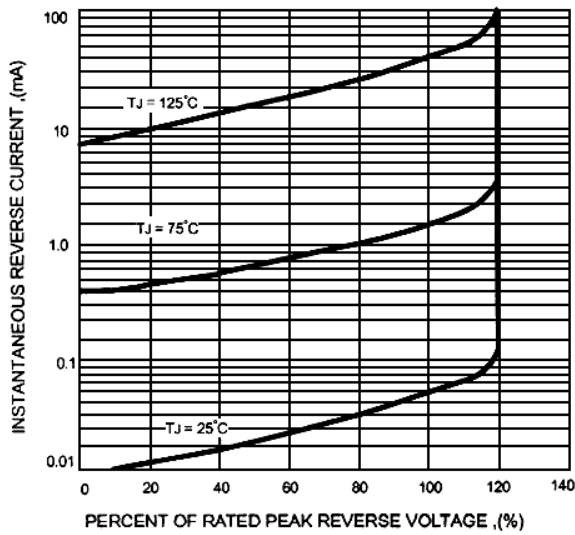


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

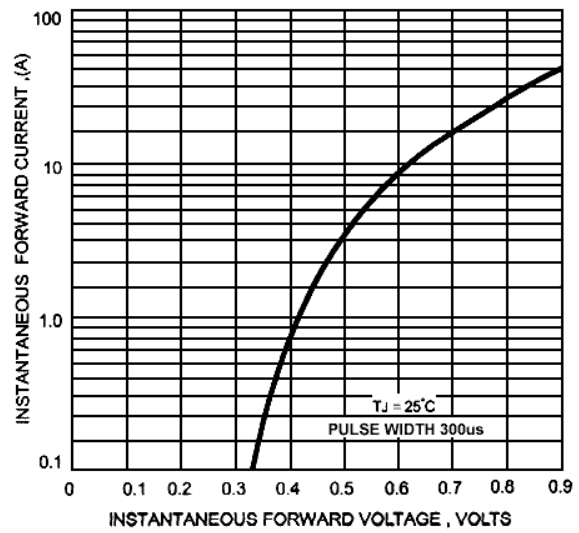


FIG.5 - TYPICAL JUNCTION CAPACITANCE

