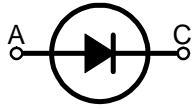
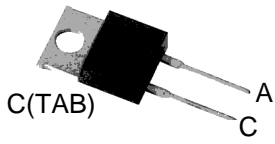


# MBR870 thru MBR8100

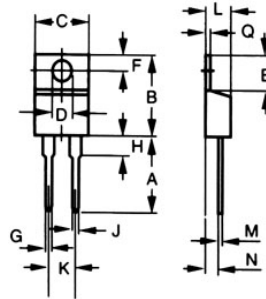
Wide Temperature Range and High  $T_{jm}$  Schottky Barrier Rectifiers



A=Anode, C=Cathode, TAB=Cathode

	$V_{RRM}$	$V_{RMS}$	$V_{DC}$
	V	V	V
<b>MBR870</b>	70	49	70
<b>MBR880</b>	80	56	80
<b>MBR890</b>	90	63	90
<b>MBR8100</b>	100	70	100

Dimensions TO-220AC



Dim.	Inches		Millimeter	
	Min.	Max.	Min.	Max.
A	0.500	0.580	12.70	14.73
B	0.560	0.650	14.23	16.51
C	0.380	0.420	9.66	10.66
D	0.139	0.161	3.54	4.08
E	2.300	0.420	5.85	6.85
F	0.100	0.135	2.54	3.42
G	0.045	0.070	1.15	1.77
H	-	0.250	-	6.35
J	0.025	0.035	0.64	0.89
K	0.190	0.210	4.83	5.33
L	0.140	0.190	3.56	4.82
M	0.015	0.022	0.38	0.56
N	0.080	0.115	2.04	2.49
Q	0.025	0.055	0.64	1.39

Symbol	Characteristics	Maximum Ratings	Unit	
$I_{(AV)}$	Maximum Average Forward Rectified Current @ $T_c=110^\circ\text{C}$	8	A	
$I_{FSM}$	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	125	A	
$dv/dt$	Voltage Rate Of Change (Rated $V_R$ )	10000	V/us	
$V_F$	Maximum Forward Voltage (Note 1)	$I_F=8\text{A}$ @ $T_J=25^\circ\text{C}$ $I_F=8\text{A}$ @ $T_J=125^\circ\text{C}$ $I_F=16\text{A}$ @ $T_J=25^\circ\text{C}$ $I_F=16\text{A}$ @ $T_J=125^\circ\text{C}$	0.85 0.75 0.95 0.85	V
$I_R$	Maximum DC Reverse Current At Rated DC Blocking Voltage	@ $T_J=25^\circ\text{C}$ @ $T_J=125^\circ\text{C}$	0.1 7	mA
$R_{\theta JC}$	Typical Thermal Resistance (Note 2)	2.0	$^\circ\text{C}/\text{W}$	
$C_J$	Typical Junction Capacitance (Note 3)	280	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 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-220AC molded plastic
- \* Polarity: As marked on the body
- \* Weight: 0.08 ounces, 2.24 grams
- \* Mounting position: Any



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# MBR870 thru MBR8100

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

FIG.1 - FORWARD CURRENT DERATING CURVE

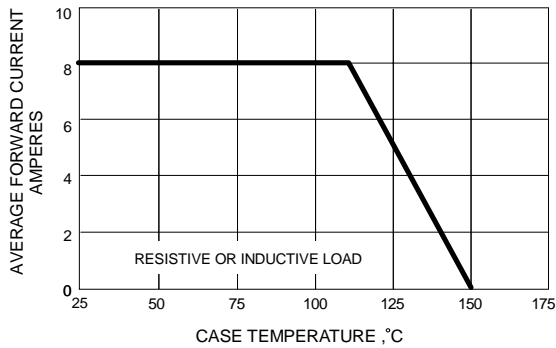


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

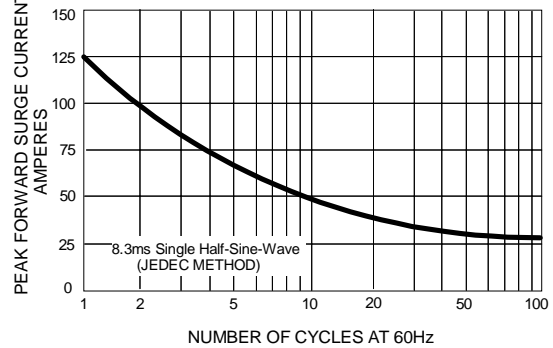


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

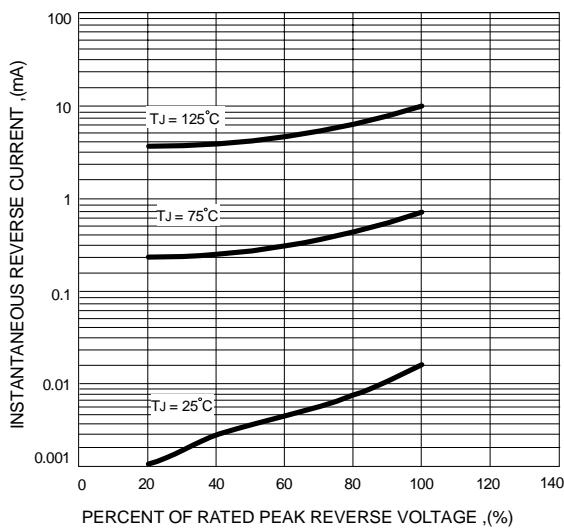


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

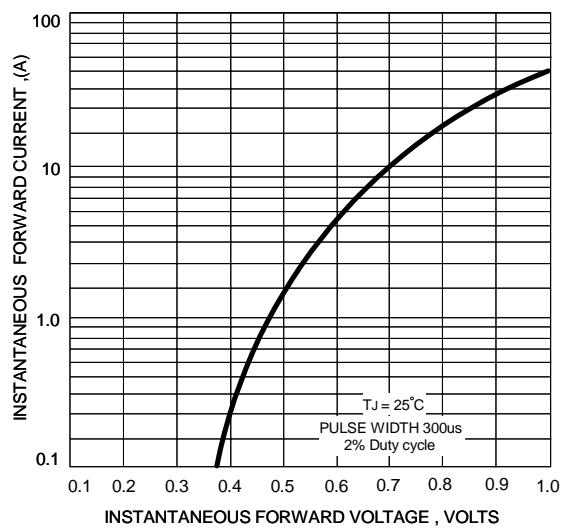
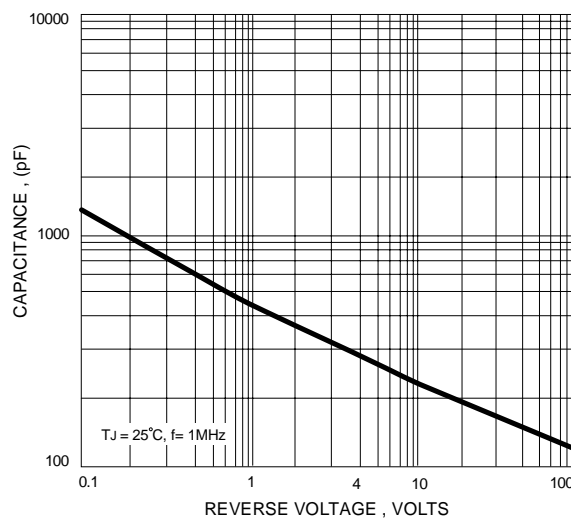


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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