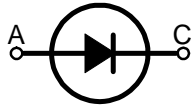
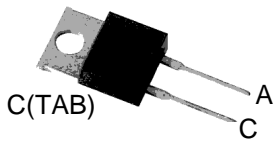
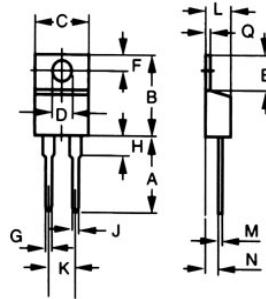


MBR580 thru MBR5100

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



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

A=Anode, C=Cathode, TAB=Cathode

	V_{RRM}	V_{RMS}	V_{DC}
	V	V	V
MBR580	80	56	80
MBR5100	100	70	100

Symbol	Characteristics	Maximum Ratings	Unit
I_{AV}	Maximum Average Forward Rectified Current @ $T_c=125^\circ C$	5	A
I_{FSM}	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	120	A
dv/dt	Voltage Rate Of Change (Rated V_R)	10000	V/us
V_F	Maximum Forward Voltage (Note 1) $I_F=5A @T_J=25^\circ C$ $I_F=5A @T_J=125^\circ C$	0.85 0.75	V
I_R	Maximum DC Reverse Current At Rated DC Blocking Voltage @ $T_J=25^\circ C$ @ $T_J=125^\circ C$	0.05 10	mA
$R_{\theta JC}$	Typical Thermal Resistance (Note 2)	-	$^\circ C/W$
C_J	Typical Junction Capacitance (Note 3)	400	pF
T_J	Operating Temperature Range	-50 to +150	$^\circ C$
T_{STG}	Storage Temperature Range	-50 to +150	$^\circ C$

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-220AC molded plastic
- * Polarity: As marked on the body
- * Weight: 0.08 ounces, 2.24 grams
- * Mounting position: Any

MBR580 thru MBR5100

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

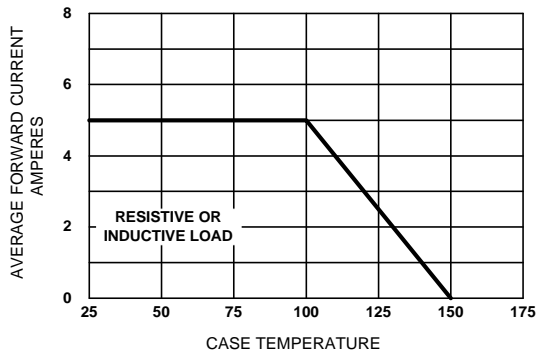


Figure 1. Forward Current Derating Curve

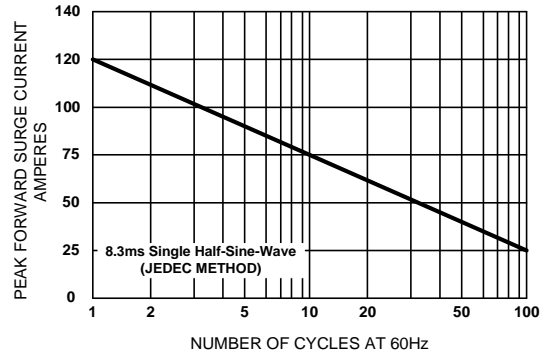


Figure 2. Maximum Non-repetitive Surge Current

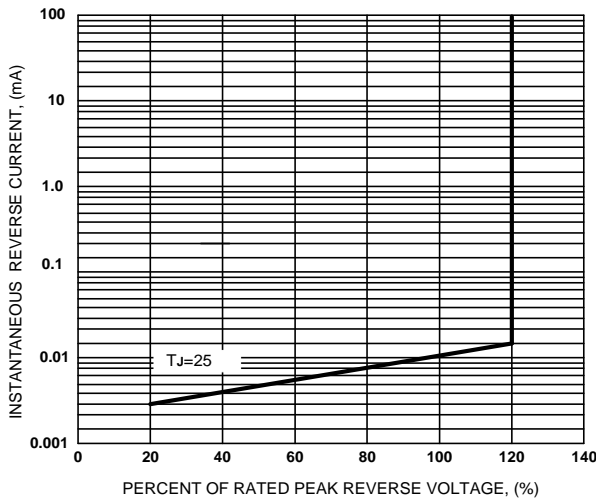


Figure 3. Typical Reverse Characteristics

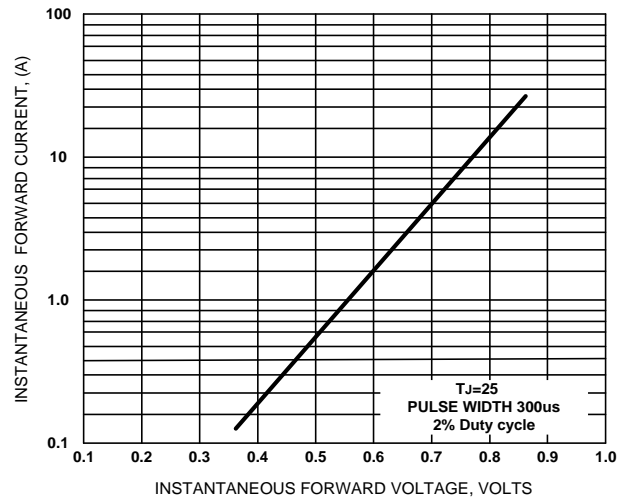


Figure 4. Typical Forward Characteristics

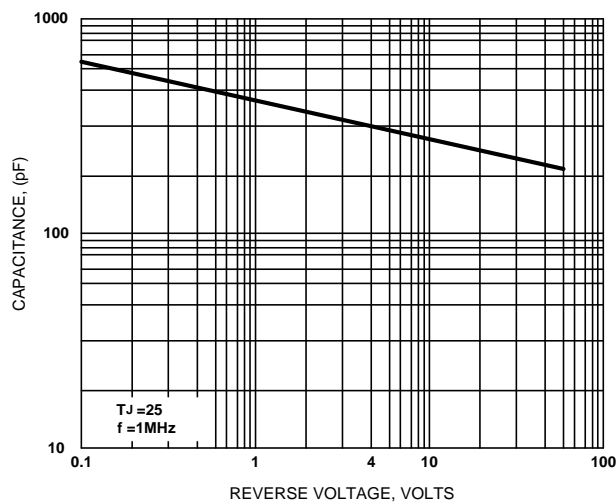


Figure 5. Typical Junction Capacitance