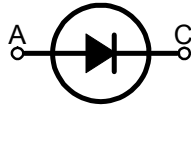
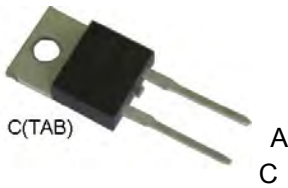


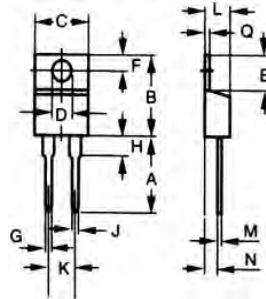
# MBR1030 thru MBR1045

## High T<sub>jm</sub> Low IRRM Schottky Barrier Diodes



A=Anode, C=Cathode, TAB=Cathode

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

	V <sub>RRM</sub>	V <sub>RMS</sub>	V <sub>DC</sub>
	V	V	V
<b>MBR1030</b>	30	21	30
<b>MBR1035</b>	35	24.5	35
<b>MBR1040</b>	40	28	40
<b>MBR1045</b>	45	31.5	45

Symbol	Characteristics	Maximum Ratings	Unit
I <sub>AV</sub>	Maximum Average Forward Rectified Current @T <sub>c</sub> =125°C	10	A
I <sub>FSM</sub>	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	150	A
dv/dt	Voltage Rate Of Change (Rated V <sub>R</sub> )	10000	V/us
V <sub>F</sub>	Maximum Forward Voltage I <sub>F</sub> =20A @T <sub>J</sub> =25°C I <sub>F</sub> =20A @T <sub>J</sub> =125°C	0.84 0.57	V
I <sub>R</sub>	Maximum DC Reverse Current At Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =125°C	0.1 15	mA
R <sub>θJC</sub>	Typical Thermal Resistance (Note 1)	2.5	°C/W
C <sub>J</sub>	Typical Junction Capacitance (Note 2)	400	pF
T <sub>J</sub>	Operating Temperature Range	-55 to +150	°C
T <sub>STG</sub>	Storage Temperature Range	-55 to +175	°C

NOTES: 1. Thermal Resistance Junction To Case.  
2. 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<sub>F</sub>
- \* High surge capacity
- \* For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- \* RoHS compliant

### MECHANICAL DATA

- \* Case: TO-220AC molded plastic
- \* Polarity: As marked on the body
- \* Weight: 2 grams
- \* Mounting position: Any



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