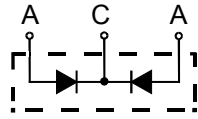


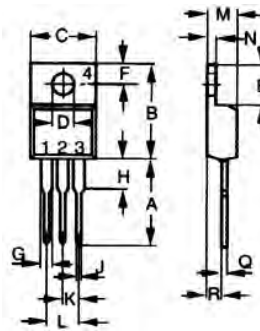
# MBR2030CT thru MBR2045CT

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



A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-220AB



Dim.	Inches		Millimeter	
	Min.	Max.	Min.	Max.
A	0.500	0.550	12.70	13.97
B	0.580	0.630	14.73	16.00
C	0.390	0.420	9.91	10.66
D	0.139	0.161	3.54	4.08
E	0.230	0.270	5.85	6.85
F	0.100	0.125	2.54	3.18
G	0.045	0.065	1.15	1.65
H	0.110	0.230	2.79	5.84
J	0.025	0.040	0.64	1.01
K	0.100	BSC	2.54	BSC
M	0.170	0.190	4.32	4.82
N	0.045	0.055	1.14	1.39
Q	0.014	0.022	0.35	0.56
R	0.090	0.110	2.29	2.79

	V <sub>RRM</sub>	V <sub>RMS</sub>	V <sub>DC</sub>
	V	V	V
<b>MBR2030CT</b>	30	21	30
<b>MBR2035CT</b>	35	24.5	35
<b>MBR2040CT</b>	40	28	40
<b>MBR2045CT</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	20	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 (Note 1) I <sub>F</sub> =10A @T <sub>J</sub> =25°C I <sub>F</sub> =10A @T <sub>J</sub> =125°C I <sub>F</sub> =20A @T <sub>J</sub> =25°C I <sub>F</sub> =20A @T <sub>J</sub> =125°C	- 0.57 0.84 0.72	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 2)	2.0	°C/W
C <sub>J</sub>	Typical Junction Capacitance Per Element (Note 3)	300	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. 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<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-220AB molded plastic
- \* Polarity: As marked on the body
- \* Weight: 2 grams
- \* Mounting position: Any



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