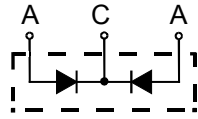


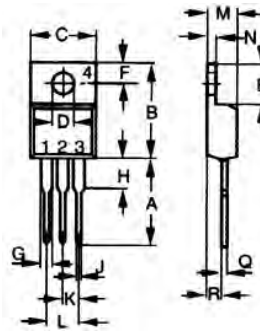
MBR1030CT thru MBR1045CT

High T_{jm} Low IRRM Schottky Barrier Diodes



A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-220AB



Dim.	Inches		Milimeter	
	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 _{RRM} V	V _{RMS} V	V _{DC} V
MBR1030CT	30	21	30
MBR1035CT	35	24.5	35
MBR1040CT	40	28	40
MBR1045CT	45	31.5	45

Symbol	Characteristics	Maximum Ratings	Unit
I _{AV}	Maximum Average Forward Rectified Current @T _c =105°C	10	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 =5A @T _J =25°C I _F =5A @T _J =125°C I _F =10A @T _J =125°C	0.57 0.70 0.84	V
I _R	Maximum DC Reverse Current At Rated DC Blocking Voltage @T _J =25°C @T _J =125°C	0.1 15	mA
R _{θJC}	Typical Thermal Resistance (Note 2)	3.0	°C/W
C _J	Typical Junction Capacitance Per Element (Note 3)	170	pF
T _J	Operating Temperature Range	-55 to +150	°C
T _{STG}	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 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
- * RoHS compliant

MECHANICAL DATA

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



MBR1030CT thru MBR1045CT

High T_{jm} Low IRRM Schottky Barrier Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

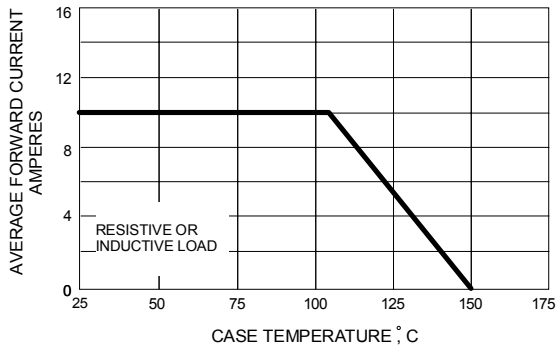


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

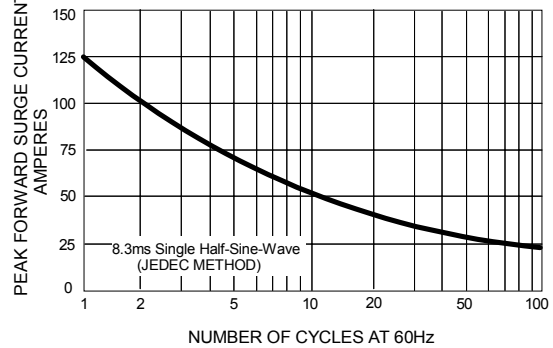


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

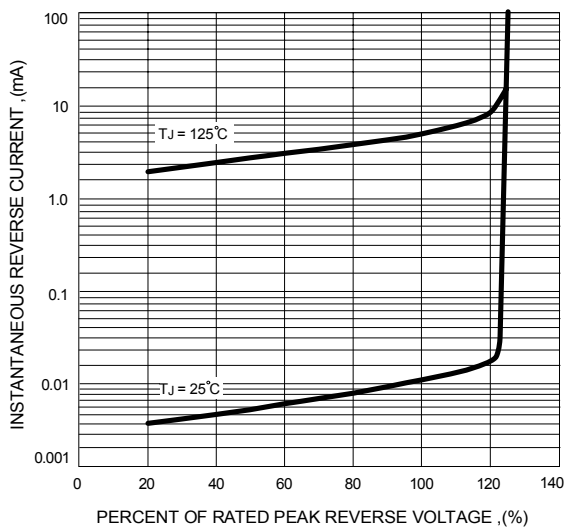


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

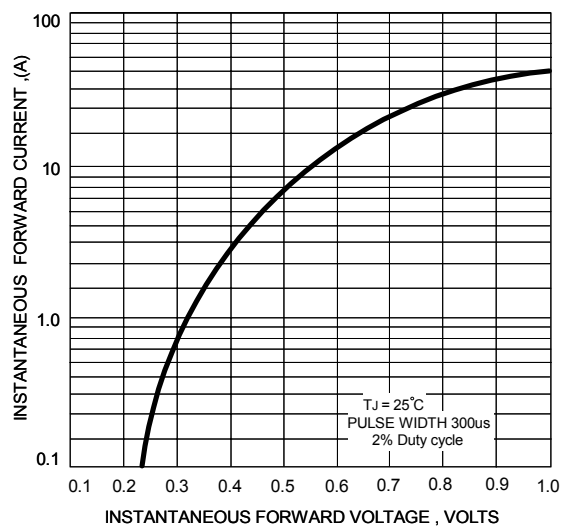


FIG.5 - TYPICAL JUNCTION CAPACITANCE

