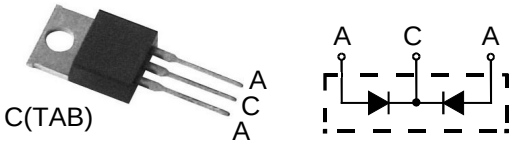
MBR3030CT thru MBR3045CT

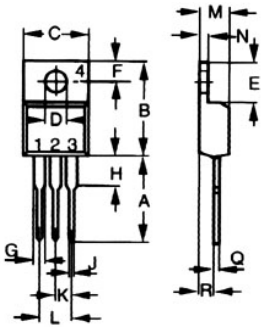
High T_{jm} (+175°C) Schottky Barrier Diodes



A=Anode, C=Cathode, TAB=Cathode

	V_{RRM} V	V_{RMS} V	V_{DC} V
MBR3030CT	30	21	30
MBR3035CT	35	24.5	35
MBR3040CT	40	28	40
MBR3045CT	45	31.5	45

Dimensions TO-220AB



Dim.	Inches Min.	Inches Max.	Milimeter Min.	Milimeter 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

Symbol	Characteristics	Maximum Ratings	Unit
$I_{(AV)}$	Maximum Average Forward Rectified Current @T_C=100°C	30	A
I_{FSM}	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	200	A
dv/dt	Voltage Rate Of Change (Rated V_R)	10000	V/us
V_F	Maximum Forward Voltage (Note 1) I_F=30A @T_J=125°C I_F=15A @T_J=25°C I_F=30A @T_J=25°C	0.72 0.70 0.84	V
I_R	Maximum DC Reverse Current @T_J=25°C At Rated DC Blocking Voltage @T_J=125°C	0.2 40	mA
$R_{\Theta JC}$	Typical Thermal Resistance (Note 2)	1.5	°C/W
C_J	Typical Junction Capacitance Per Element (Note 3)	450	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
* Plastic package has UL flammability classification 94V-0
* For use in low voltage, high frequency inverters, free whelling, and polarity protection applications

MECHANICAL DATA

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

D E E C o r p .

MBR3030CT thru MBR3045CT

High T_{jm} (+175°C) Schottky Barrier Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

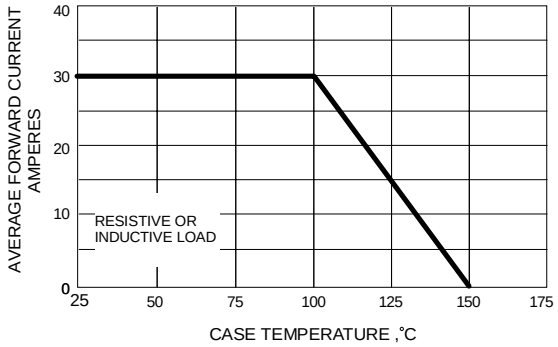


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

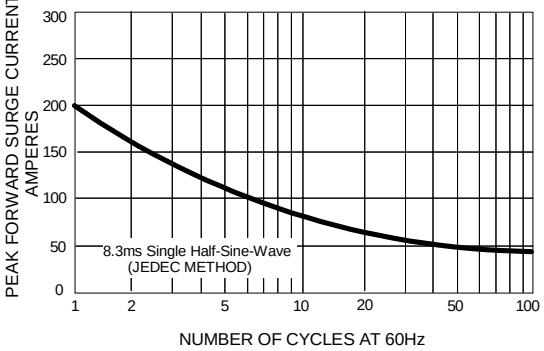


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

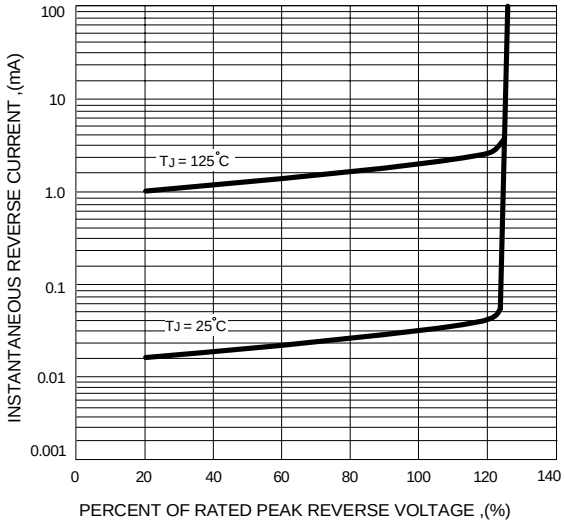


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

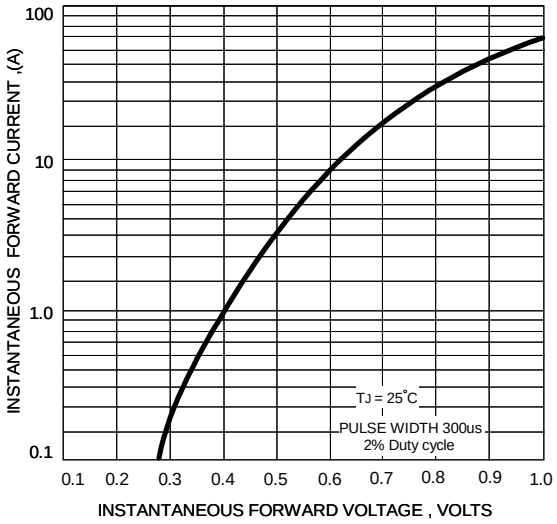
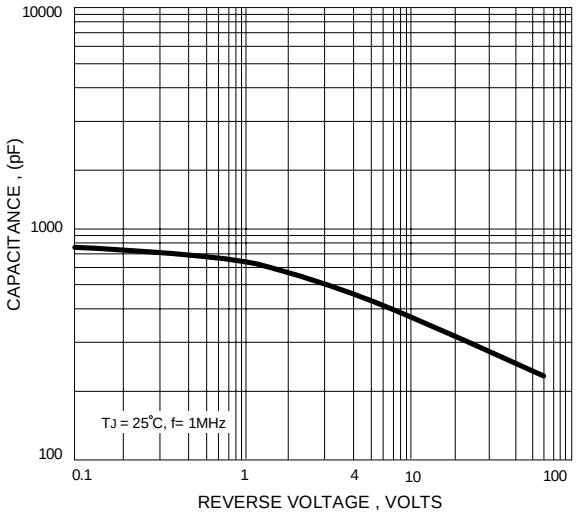


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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