

Schottky Barrier Rectifier

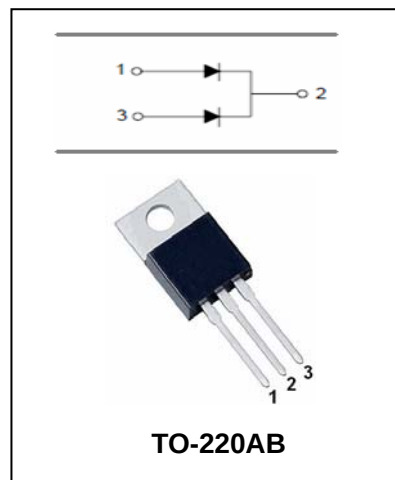
MBR1030CT...MBR1060CT

FEATURES

- High Surge Capacity.
- For Use In Low Voltage,High Frequency Inverters,Free Wheeling,And Polarity Protection Applications.
- Metal Silicon Junction,Majority Carrier Conduction.
- High Current Capacity,Low Forward Voltage Drop.
- Guard ring Die Construction for Transient Protection.



Lead-free



MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	MBR 1030 CT	MBR 1035 CT	MBR 1040 CT	MBR 1045 CT	MBR 1050 CT	MBR 1060 CT	Unit
V_{RRM}	Recurrent Peak Reverse Voltage	30	35	40	45	50	60	V
V_{RMS}	RMS Reverse Voltage	21	24.5	28	31.5	35	42	V
V_{DC}	DC Blocking Voltage	30	35	40	45	50	60	V
$I_{F(AV)}$	Average Forward Total Device Rectified Current @ $T_A=100^{\circ}C$	10						A
I_{FSM}	Forward Surge Current 8.3ms Single Half Sine-wave Superimosed on Rated Load	125						A
$R_{\theta JC}$	Thermal Resistance Per Leg	3.0						K/W
T_j T_{stg}	Operating and Storage Temperature Range	-55 to +150						$^{\circ}C$

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ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	MBR1030CT- MBR1045CT	MBR1050CT- MBR1060CT	UNIT
			MAX		
Reverse Current	I _R	V _R =V _{RRM} , T _A =25°C V _R =V _{RRM} , T _A =125°C	0.1 15	0.1 25	mA
Forward Voltage	V _F	I _F =5A , T _A =125°C I _F =5A , T _A =25°C	0.57 0.70	0.70 0.80	V

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

FIG.1 – FORWARD CURRENT DERATING CURVE

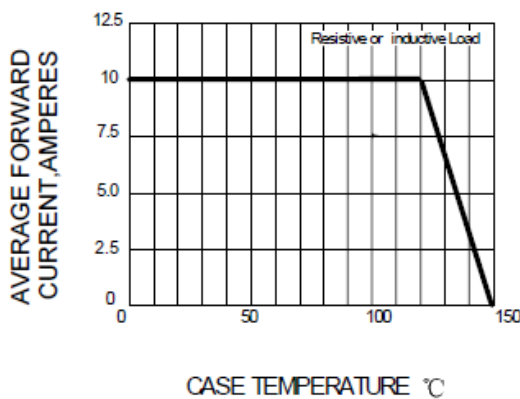


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

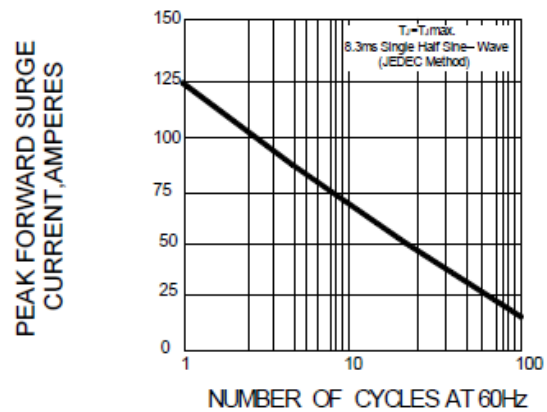


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PER LEG

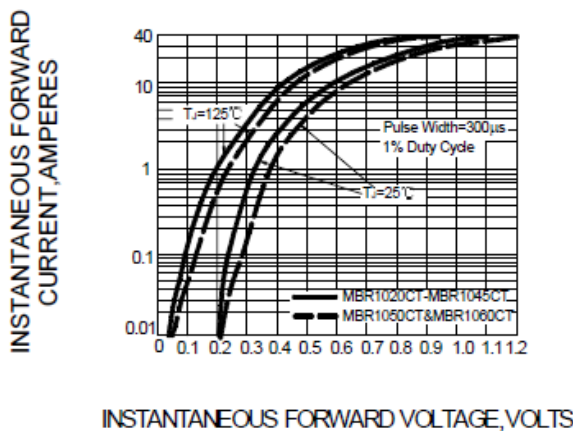
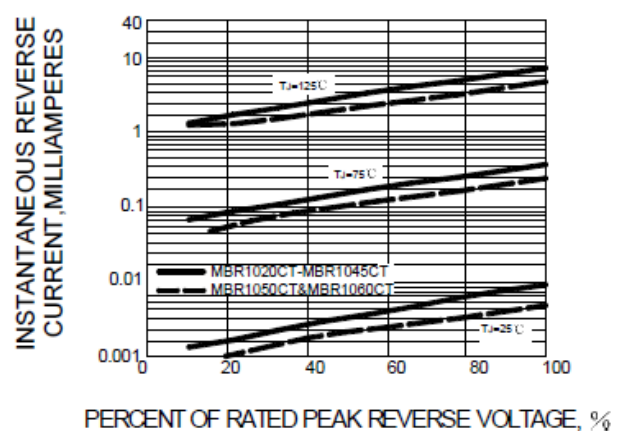


FIG.4 – TYPICAL REVERSE CHARACTERISTICS



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FIG.5-TYPICAL JUNCTION CAPACITANCE PERLEG

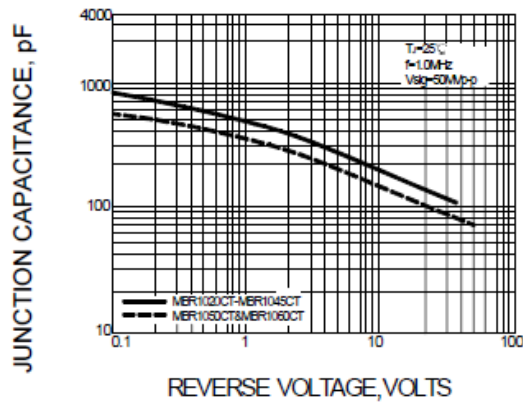
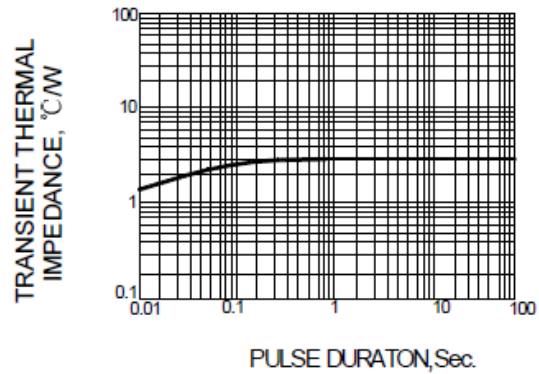


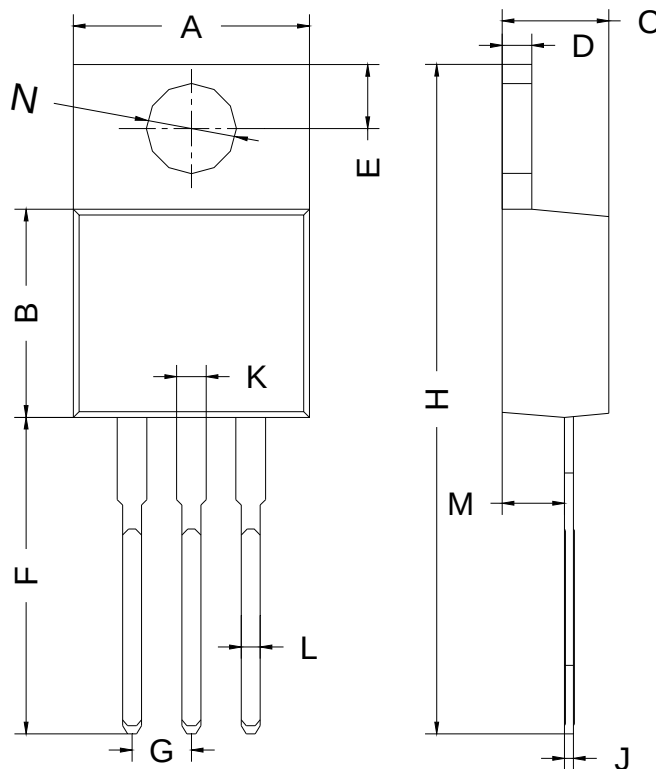
FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE PERLEG



PACKAGE OUTLINE

Plastic surface mounted package

TO-220AB



TO-220AB		
Dim	Min	Max
A	9.80	10.30
B	8.70	9.10
C	4.57 Typical	
D	1.27 Typical	
E	2.64	2.84
F	13.14	13.74
G	2.44	2.64
H	28.03	28.83
J	0.38 Typical	
K	1.22	1.32
L	0.71	0.91
M	2.50 Typical	
N	3.86 Typical	
All Dimensions in mm		