

Schottky Barrier Rectifier

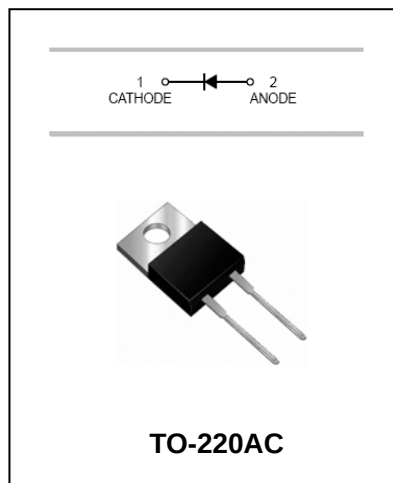
MBR1630...MBR16100

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 1630	MBR 1635	MBR 1640	MBR 1645	MBR 1650	MBR 1660	MBR 1680	MBR 16100	Unit
V_{RRM}	Recurrent Peak Reverse Voltage	30	35	40	45	50	60	80	100	V
V_{RMS}	RMS Reverse Voltage	21	25	28	32	35	42	56	70	V
V_{DC}	DC Blocking Voltage	30	35	40	45	50	60	80	100	V
$I_{F(AV)}$	Average Forward Total Device Rectified Current @ $T_A=100^{\circ}C$	16								A
I_{FSM}	Forward Surge Current 8.3ms Single Half Sine-wave Superimosed on Rated Load	150								A
$R_{\theta JC}(\text{Note1})$	Thermal Resistance Per Leg	1.5								$^{\circ}C/W$
T_j	Operating Junction Temperature Range	-55 to +150								$^{\circ}C$
T_{stg}	Storage Temperature Range	-55 to +175								$^{\circ}C$

Note:1.Thermal resistance from junction to case.

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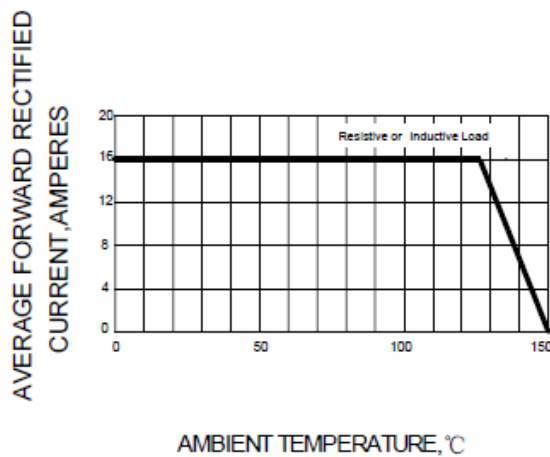
ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	MBR1630- MBR1645	MBR1650- MBR1660	MBR1680- MBR16100	UNIT
			MAX			
Reverse Current	I _R	V _R =V _{RRM} , T _A =25℃ V _R =V _{RRM} , T _A =125℃	0.1 15	0.1 25	0.1 50	mA
Forward Voltage	V _F (Note1)	I _F =16A ,T _A =25℃ I _F =16A ,T _A =125℃	0.70 0.57	0.80 0.65	0.85 -	V

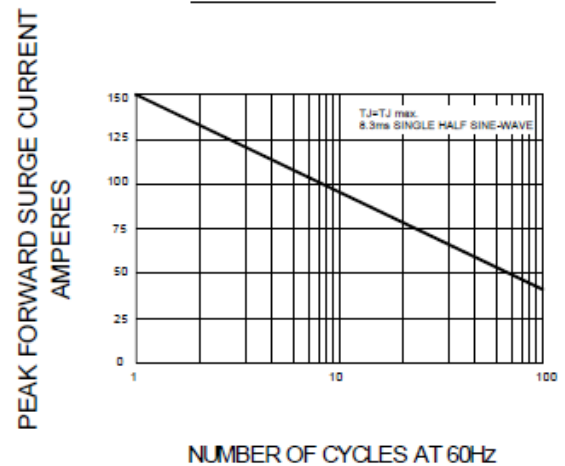
Note:1.Pulse test:300 μs pulse width,1% duty cycle.

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

FIG.1 – FORWARD CURRENT DERATING CURVE



**FIG.2 –MAXIMUM NON-REPETITIVE
FORWARD SURGE CURRENT**



**FIG.3 –TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS**

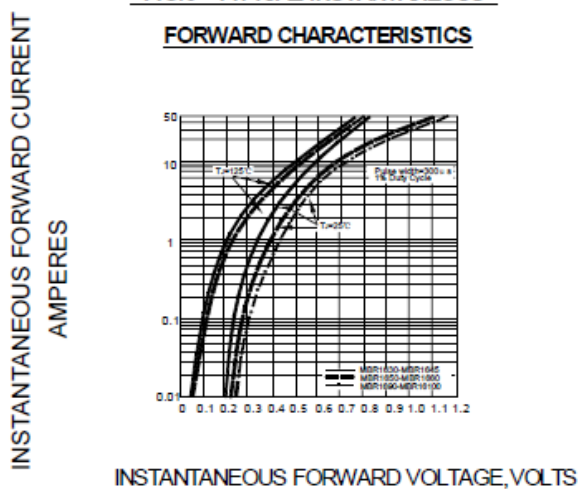
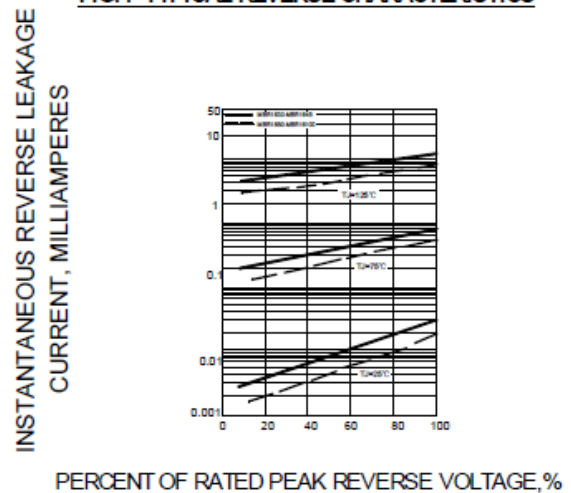


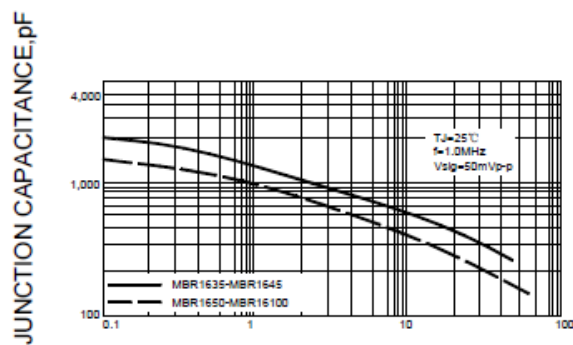
FIG.4-TYPICAL REVERSE CHARACTERISTICS



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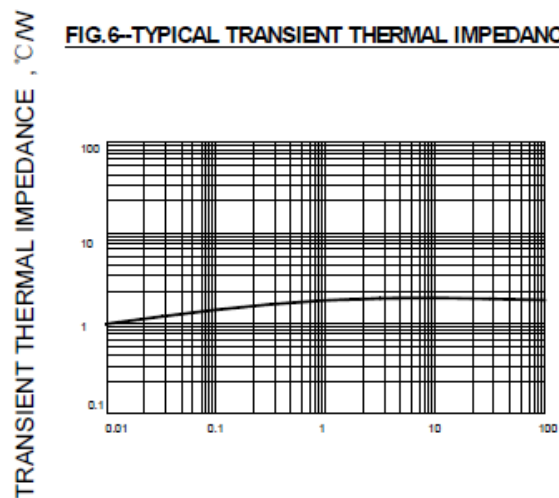
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FIG.5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

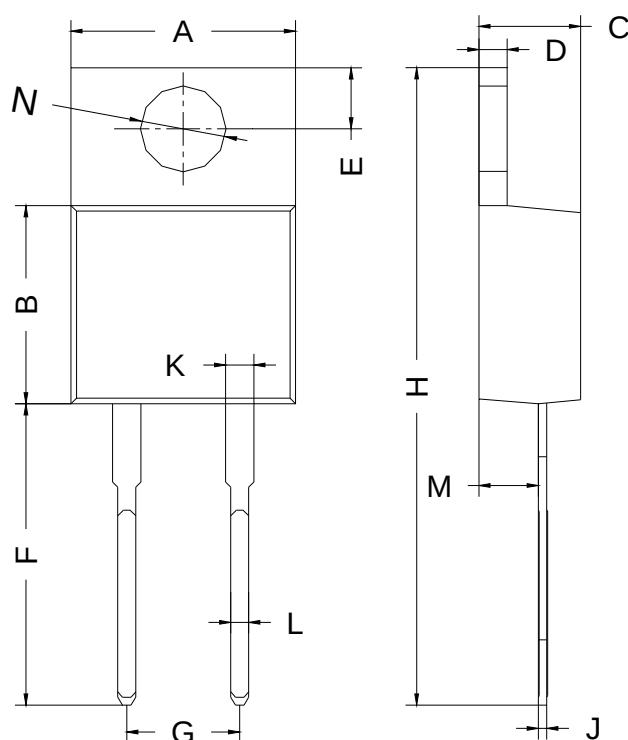


PULSE DURATION, Sec

PACKAGE OUTLINE

Plastic surface mounted package

TO-220AC



TO-220AC		
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	4.98	5.18
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		