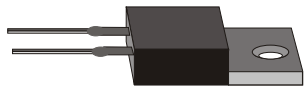
MBR830 - MBR8100

SCHOTTKY BARRIER RECTIFIER DIODE

VOLTAGE RANGE: 30 - 100 V
CURRENT: 8.0 A



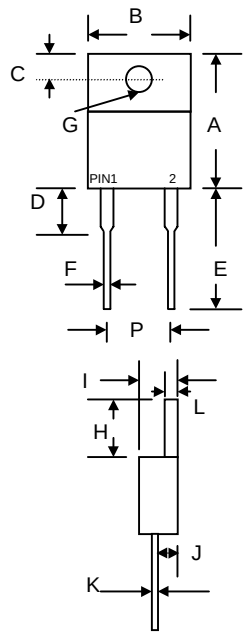
Features

- High surge capacity.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- Metal silicon junction, majority carrier conduction.
- High currentcapacity,low forwardvoltage drop.
- Guard ring forovervoltage protection.

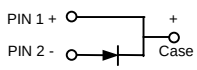
Mechanical Data

- Case:JEDECTO-220AC,molded plasticbody
- Terminals:Leads,solderable perMIL-STD-750,
- Method2026
- Polarity: Asmarked
- Position:Any
- Wight: 0.064 ounces,1.81 gram

RoHS COMPLIANT



TO-220		
Dim	**Min**	**Max**
A	14.9	15.1
B	—	10.5
C	2.62	2.87
D	3.56	4.06
E	13.46	14.22
F	0.68	0.94
G	3.74 Ø	3.91 Ø
H	5.84	6.86
I	4.44	4.70
J	2.54	2.79
K	0.35	0.64
L	1.14	1.40
P	4.95	5.20
All Dimensions in mm		



Maximum Ratings and Electrical Characteristics

T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	MBR 830	MBR 835	MBR 840	MBR 845	MBR 850	MBR 860	MBR 880	MBR 8100	Unit
Maximum recurrent peak reverse voltage	V_{RRM}	30	35	40	45	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	21	25	28	32	35	42	56	70	V
Maximum DC blocking voltage	V_{DC}	30	35	40	45	50	60	80	100	V
Maximum average forw ard total device rectified current @T_C = 125°C	$I_{F(AV)}$	8.0								A
Peak forw ard surge current 8.3ms single half sine-w ave superimposed on rated load	I_{FSM}	150								A
Maximum forw ard voltage (Note 1) (I_F=8.0A,T_C=125℃)	V_F		0.57			0.70		-		V
(I_F=8.0A,T_C=25 ℃)			0.70			0.80		0.85		
(I_F=16A,T_C=25 ℃)			0.84			0.95		-		
Maximum reverse current @T_C=25℃	I_R		0.1					0.5		m A
at rated DC blocking voltage @T_C=125℃			15					50		
Maximum thermal resistance (Note 2)	$R_{\theta JC}$	3.0								K/W
Operating junction temperature range	T_J	- 55 ---- + 150								℃
Storage temperature range	T_{STG}	- 55 ---- + 150								℃

NOTE: 1. Pulse test:300μs pulse width,1% duty cycle.
2. Thermal resistance from junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

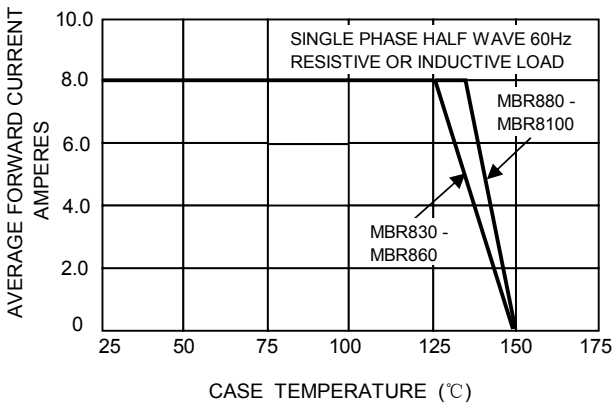


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

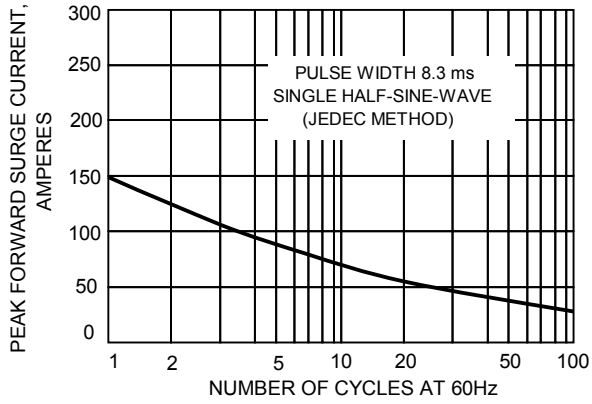


FIG.3-TYPICAL REVER CHARACTERISTICS

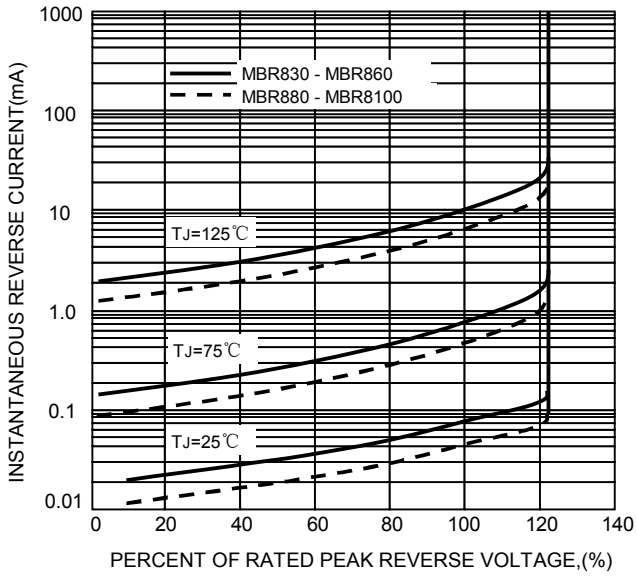


FIG.4-TYPICAL FORWARD CHARACTERISTICS

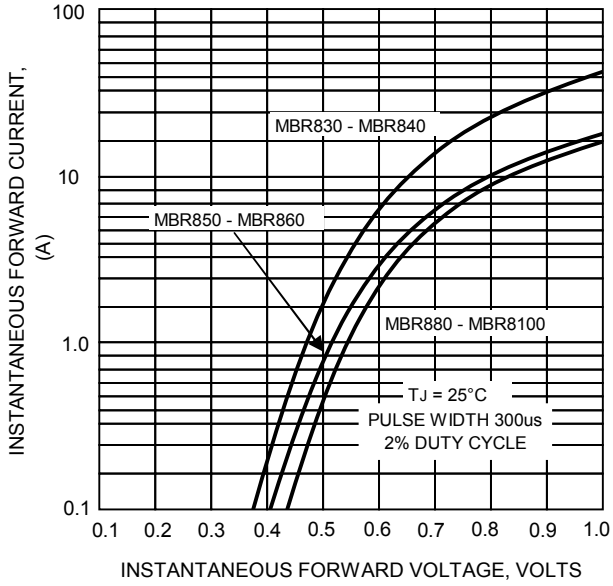


FIG.5 – TYPICAL JUNCTION CAPACITANCE