

# MBR830-MBR8200 Schottky Barrier Rectifiers



**VOLTAGE RANGE: 30 - 200 V**  
**CURRENT: 8.0 A**

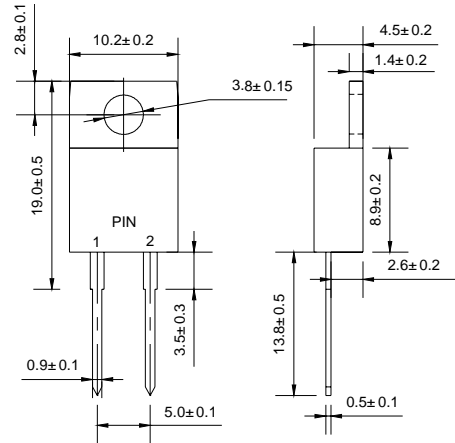
**TO-220AC**

## 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.
- ◇ The plastic material carries U/L recognition 94V-0

## Mechanical Data

- ◇ Case: JEDEC TO-220AC, molded plastic body
- ◇ Polarity: As marked
- ◇ Position: Any
- ◇ Weight: 0.064 ounces, 1.81 gram



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	Symbol	MBR 830	MBR 835	MBR 840	MBR 845	MBR 850	MBR 860	MBR 880	MBR 8100	MBR 8150	MBR 8200	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	30	35	40	45	50	60	80	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	21	25	28	32	35	42	56	70	105	140	V
Maximum DC blocking voltage	$V_{DC}$	30	35	40	45	50	60	80	100	150	200	V
Maximum average forward total device rectified current @ $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	8.0										A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150										A
Maximum forward voltage (Note 1) ( $I_F=8.0\text{A}, T_c=25^\circ\text{C}$ )	$V_F$	0.7		0.8			0.85		0.95			V
Maximum reverse current @ $T_c=25^\circ\text{C}$ at rated DC blocking voltage @ $T_c=125^\circ\text{C}$	$I_R$	0.1					15					mA
Maximum thermal resistance (Note 2)	$R_{\theta JC}$	3.0										K/W
Operating junction temperature range	$T_J$	- 55 ---- + 150										°C
Storage temperature range	$T_{STG}$	- 55 ---- + 150										°C

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

## Ratings AND Characteristic Curves

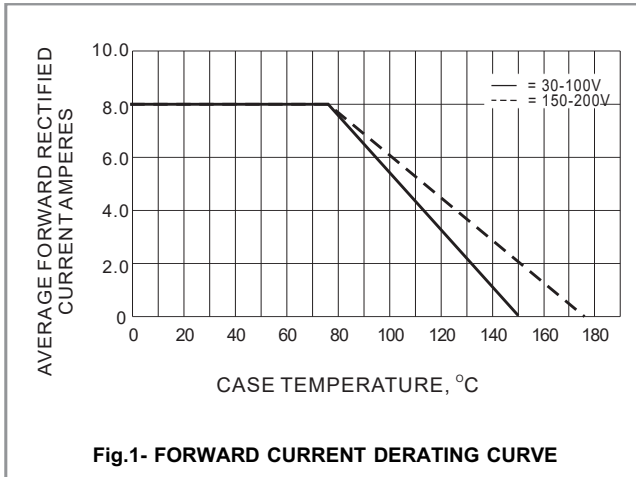


Fig.1- FORWARD CURRENT DERATING CURVE

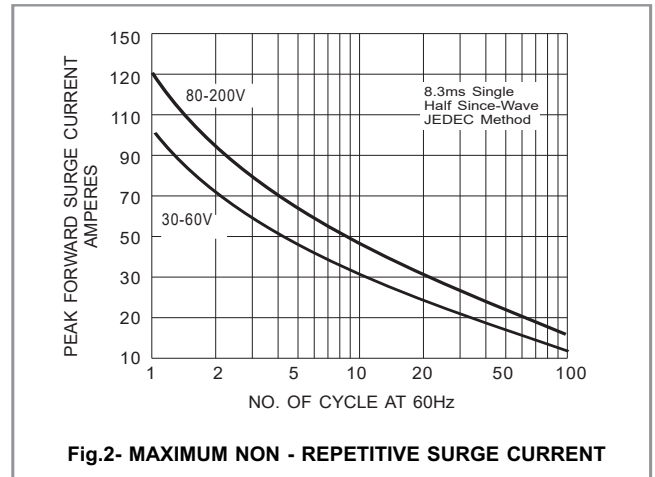


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

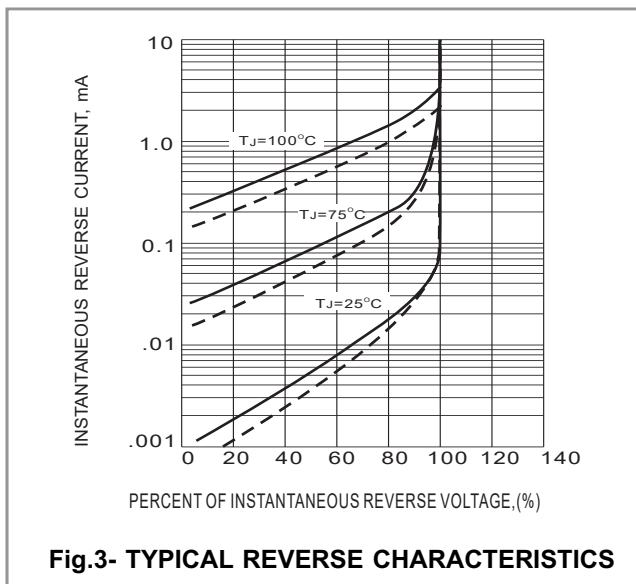


Fig.3- TYPICAL REVERSE CHARACTERISTICS

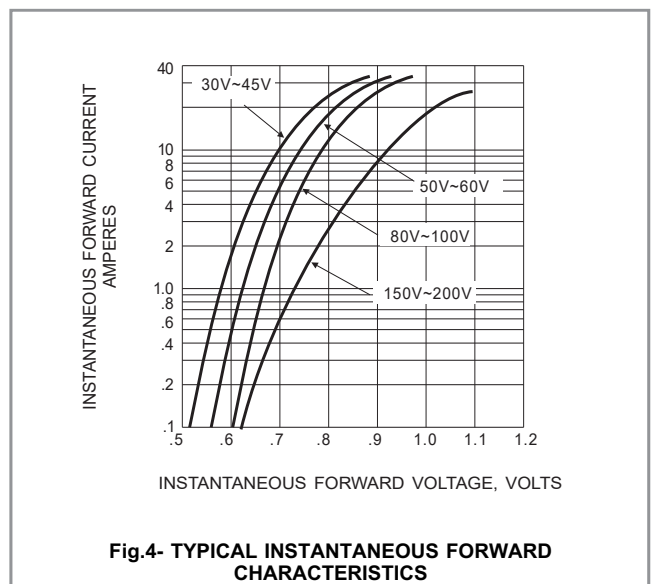


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

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