

MBR830-MBR8100

Schottky Barrier Rectifiers
VOLTAGE RANGE: 30 - 100 V
CURRENT: 8.0 A



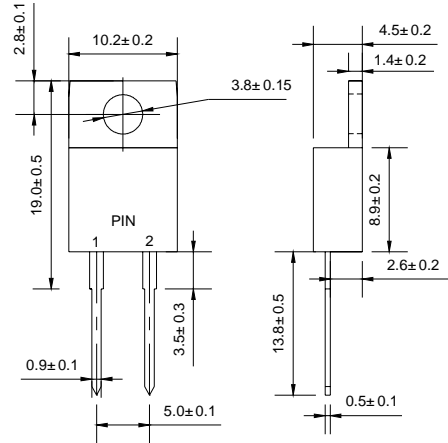
TO-220AC

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%.

		MBR 830	MBR 835	MBR 840	MBR 845	MBR 850	MBR 860	MBR 880	MBR 8100	UNITS
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 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 ($I_F=8.0\text{A}, T_c=125^\circ\text{C}$) ($I_F=8.0\text{A}, T_c=25^\circ\text{C}$) (Note 1) ($I_F=16\text{A}, T_c=25^\circ\text{C}$)	V_F	0.57			0.70		-		0.85	V
		0.70			0.80		-			
		0.84			0.95		-			
Maximum reverse current @ $T_c=25^\circ\text{C}$ at rated DC blocking voltage @ $T_c=125^\circ\text{C}$	I_R	0.1						0.5		m A
		15						50		
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

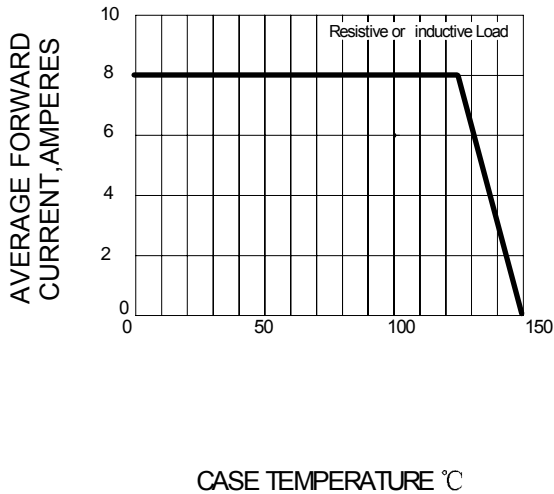


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

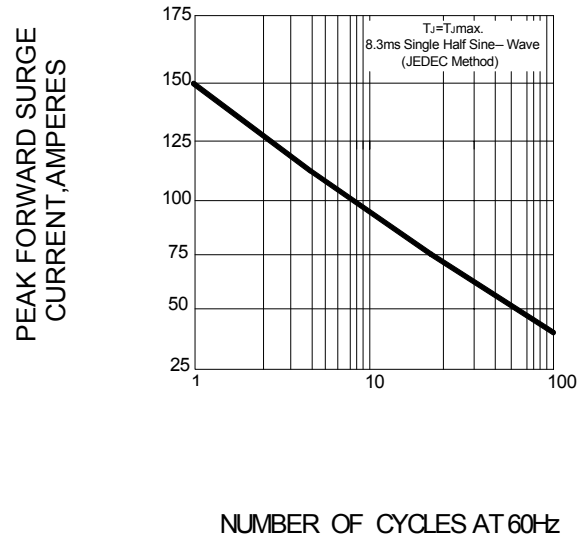


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PER LEG

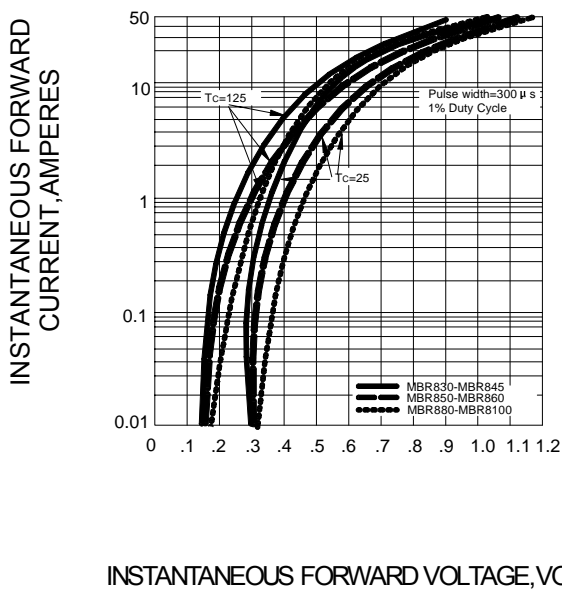


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

