

### SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 30 - 100 V  
CURRENT: 8.0 A

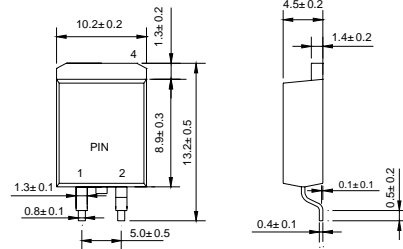
#### FEATURES

- ◇ High surge capacity.
- ◇ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ◇ Metal silicon junction, majority carrier conduction.
- ◇ High current capacity, low forward voltage drop.
- ◇ The plastic material carries U/L recognition 94V-0

#### MECHANICAL DATA

- ◇ Case: JEDEC D<sup>2</sup>PAK, molded plastic body
- ◇ Terminals: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Position: Any
- ◇ Weight: 0.087 ounces, 2.2 gram

#### D<sup>2</sup>PAK



Dimensions in millimeters

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

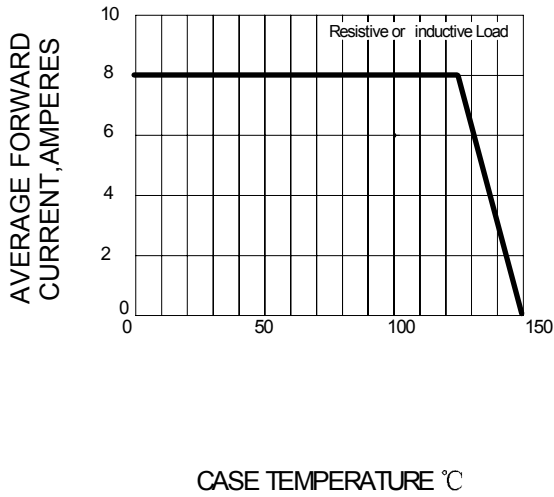
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

		MBRB 830	MBRB 835	MBRB 840	MBRB 845	MBRB 850	MBRB 860	MBRB 880	MBRB 8100	UNITS
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	30	35	40	45	50	60	80	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	21	25	28	32	35	42	56	70	V
Maximum DC blocking voltage	V <sub>DC</sub>	30	35	40	45	50	60	80	100	V
Maximum average forward total device rectified current @T <sub>c</sub> = 125°C	I <sub>F(AV)</sub>	8.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	150								A
Maximum forward voltage (I <sub>F</sub> =8.0A, T <sub>c</sub> =125°C) (I <sub>F</sub> =8.0A, T <sub>c</sub> =25 °C) (Note 1) (I <sub>F</sub> =16A, T <sub>c</sub> =25 °C)	V <sub>F</sub>	0.57			0.70		-			V
		0.70			0.80		0.85			
		0.84			0.95		-			
Maximum reverse current @T <sub>c</sub> =25°C at rated DC blocking voltage @T <sub>c</sub> =125°C	I <sub>R</sub>	0.1						0.5		m A
		15						50		
Maximum thermal resistance (Note 2)	R <sub>θJC</sub>	3.0								K/W
Operating junction temperature range	T <sub>J</sub>	- 55 ---- + 150								°C
Storage temperature range	T <sub>STG</sub>	- 55 ---- + 150								°C

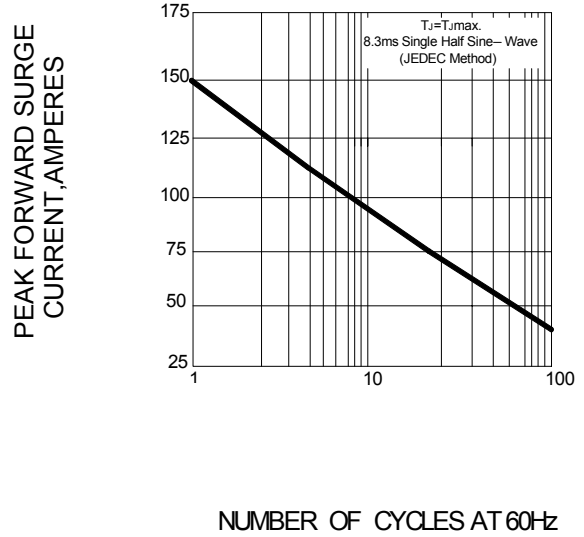
NOTE: 1. Pulse test: 300µs pulse width, 1% duty cycle.  
2. Thermal resistance from junction to case.

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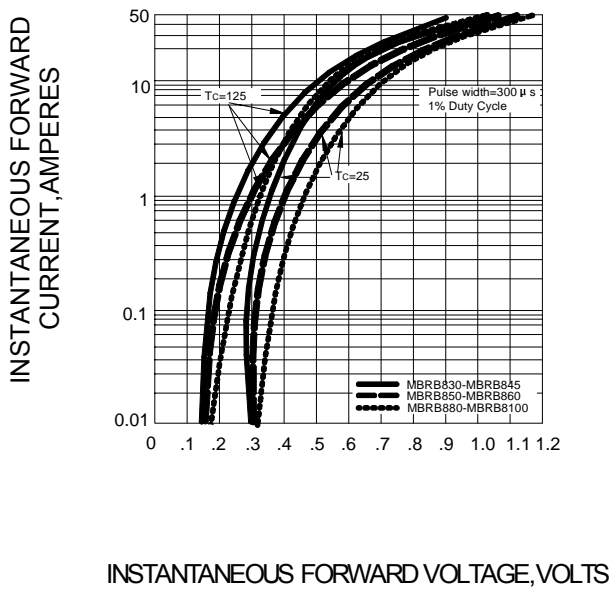
**FIG.1 – FORWARD CURRENT DERATING CURVE**



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



**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PER LEG**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**

