

## SCHOTTKY BARRIER RECTIFIER

**VOLTAGE RANGE: 20 --- 200 V**  
**CURRENT: 8.0A**

### FEATURES

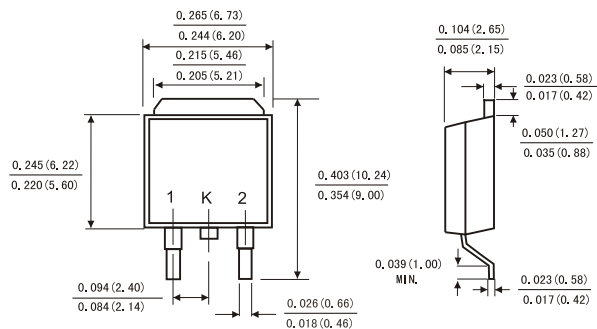
- ◇ Metal-semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0

### MECHANICAL DATA

- ◇ Case: JEDEC TO-252, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: As marked
- ◇ Weight: 0.014 ounces, 0.4 grams
- ◇ Mounting position: Any

### TO - 252

(DPAK)



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

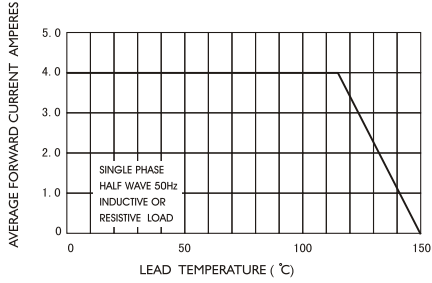
Ratings at 25°C ambient temperature unless otherwise specified.

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

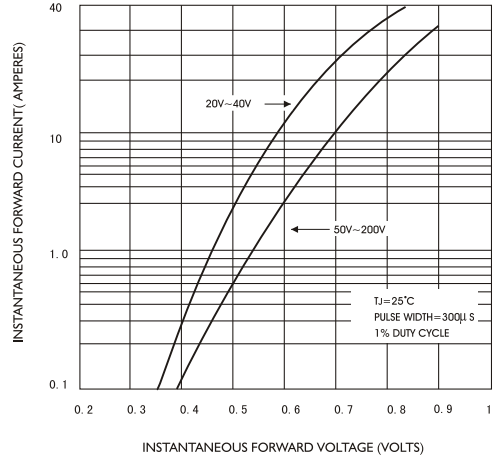
	Symbols	MBR 820	MBR 830	MBR 840	MBR 850	MBR 860	MBR 880	MBR 8100	MBR 8150	MBR 8200	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	105	140	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	150	200	Volts
Maximum average forward rectified current (see Fig. 1)	I <sub>(AV)</sub>	8.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150.0									Amps
Maximum instantaneous forward voltage at 8.0 A (Notes 1)	V <sub>F</sub>	0.60		0.75		0.85		0.90		0.95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Notes 1)	I <sub>R</sub>	0.2									mA
		15			50						
Typical thermal resistance (Notes 2)	R <sub>θJC</sub>	2.5									°C/W
Operating junction temperature range	T <sub>J</sub>	-65 to +150									°C
Storage temperature range	T <sub>STG</sub>	-65 to +150									°C

- NOTE: 1. Pulse test: 300us pulse width, 1% duty cycle.  
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
 3. Thermal resistance junction to ambient

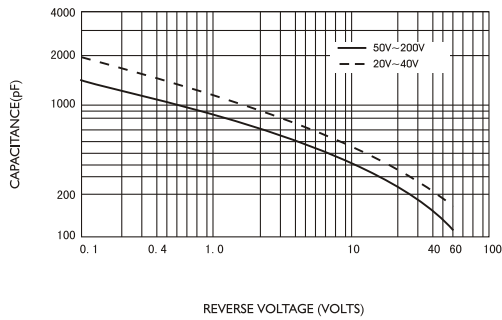
**FIG.1-FORWARD CURRENT DERATING CURVE**



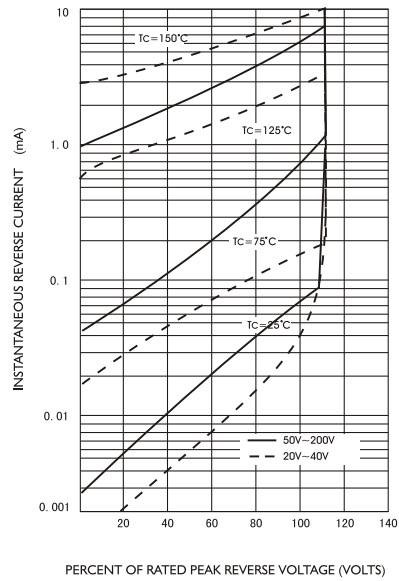
**FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4-TYPICAL JUNCTION CAPACITANCE**



**FIG.3-TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

