

## SCHOTTKY BARRIER RECTIFIER

**VOLTAGE RANGE: 20 --- 200 V**  
**CURRENT: 6.0A**

### FEATURES

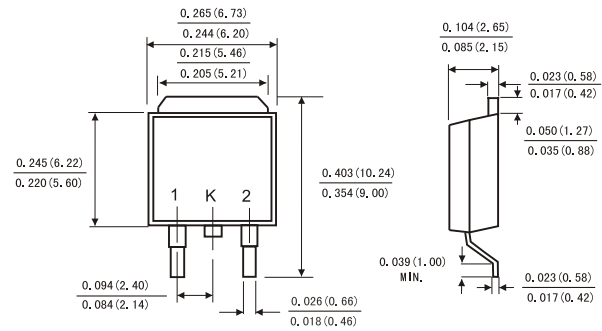
- ◇ Metal-semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition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

### MECHANICAL DATA

- ◇ Case: JEDEC TO-252AC, 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 - 252AC

(DPAK)



### 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 620	MBR 630	MBR 640	MBR 650	MBR 660	MBR 680	MBR 6100	MBR 6150	MBR 6200	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	57	71	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 0.375"(9.5mm) lead length(see fig.1)	I(AV)	6.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T <sub>J</sub> )	I <sub>FSM</sub>	150.0									Amps
Maximum instantaneous forward voltage at 6.0 A(Note 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(Note 1)	I <sub>R</sub>	0.2									mA
		50			25						
Typical junction capacitance(Note 3)	C <sub>J</sub>	500			400						pF
Typical thermal resistance (Note 2)	R <sub>θJA</sub>	25.0									°C/W
	R <sub>θJL</sub>	8.0									
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

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FIG.1-FORWARD CURRENT DERATING CURVE

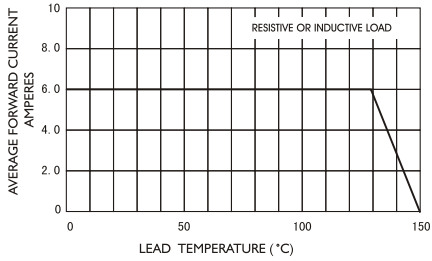


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

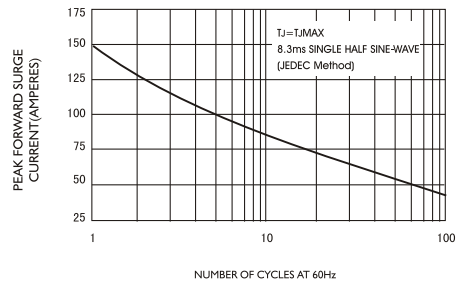


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

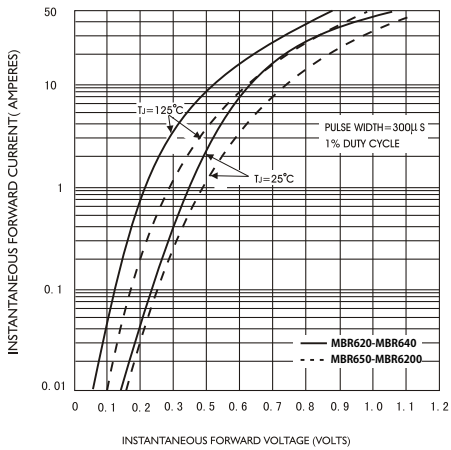


FIG.4-TYPICAL REVERSE CHARACTERISTICS

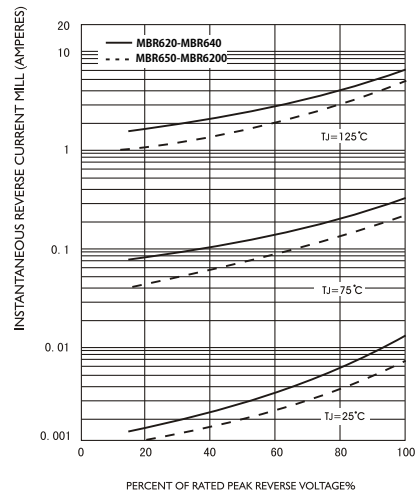


FIG.5-TYPICAL JUNCTION CAPACITANCE

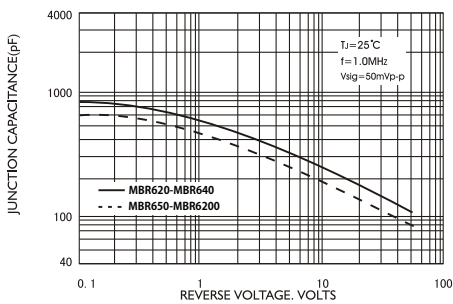


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

