

## SCHOTTKY BARRIER RECTIFIER

**VOLTAGE RANGE: 20 --- 200 V**  
**CURRENT: 10.0A**

### FEATURES

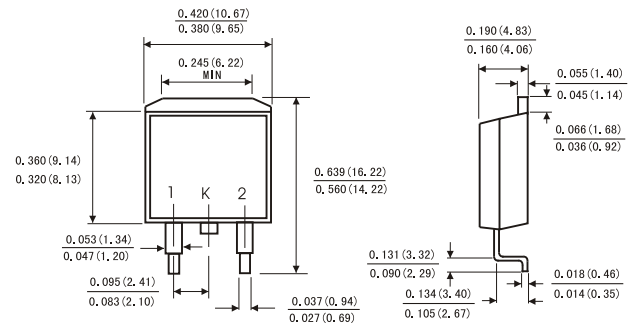
- ◇ Metal-semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition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

### MECHANICAL DATA

- ◇ Case: JEDEC TO-263, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: As marked
- ◇ Weight: 0.08 ounces, 2.24 grams
- ◇ Mounting position: Any

### TO - 263

### D2PAK



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 1020	MBR 1030	MBR 1040	MBR 1050	MBR 1060	MBR 1080	MBR 10100	MBR 10150	MBR 10200	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	Volts
Maximum average forward rectified current (see Fig. 1)	$I_{(AV)}$	10.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150.0									Amps
Maximum instantaneous forward voltage at 10.0 A (Note 1)	$V_F$	0.60		0.75		0.85		0.90		0.95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note 1)	$I_R$	0.2									mA
	$T_A = 25^\circ C$	15		50							
Typical thermal resistance (Note 2)	$R_{\theta JC}$	2.5									°C/W
Operating junction temperature range	$T_J$	-65 to +150									°C
Storage temperature range	$T_{STG}$	-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

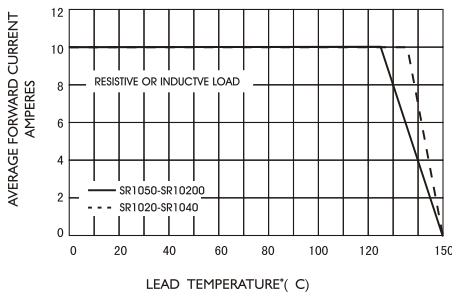


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

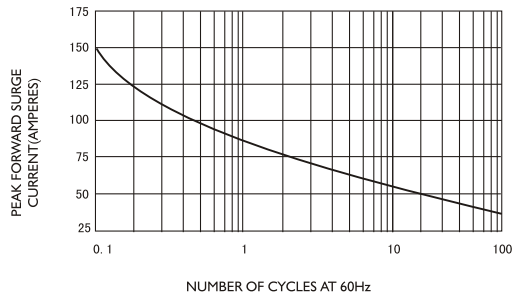


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

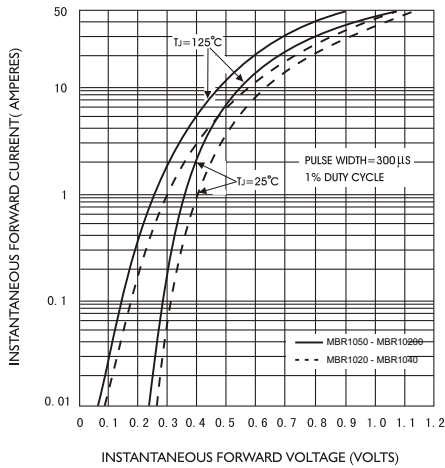


FIG.4-TYPICAL REVERSE CHARACTERISTICS

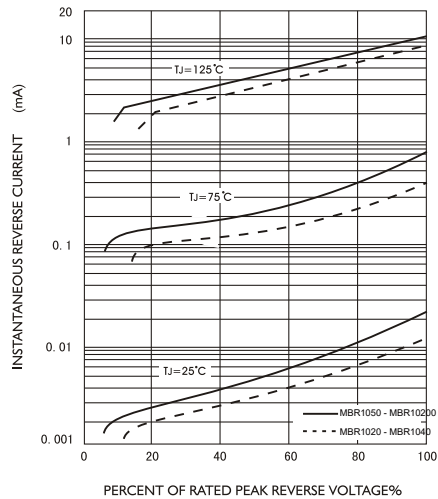


FIG.5-TYPICAL JUNCTION CAPACITANCE

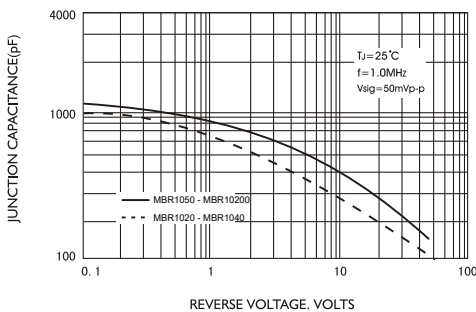


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

