



# MBR1020~MBR10100

## 10 AMPERES SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 100 Volts **CURRENT** 10 Amperes

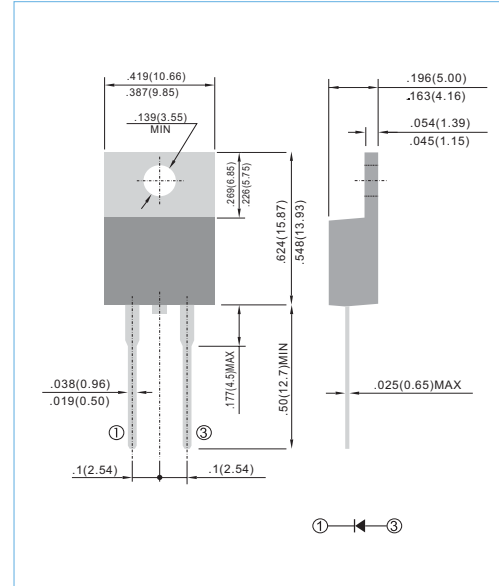
TO-220AC Unit : inch (mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency.
- High current capability
- Guardring for overvoltage protection
- For use in low voltage,high frequency inverters free wheeling , and polarity protection applications.
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

### MECHANICAL DATA

Case: TO-220AC molded plastic  
 Terminals: solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity: As marked.  
 Mounting Position: Any  
 Weight: 0.08 ounces, 2.24 grams.



### 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 current by 20%

PARAMETER	SYMBOL	MBR1020	MBR1030	MBR1040	MBR1045	MBR1050	MBR1060	MBR1080	MBR10100	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	45	50	60	80	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	31.5	35	42	56	70	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	45	50	60	80	100	V
Maximum Average Forward Current (See fig.1)	I <sub>AV</sub>	10								A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	150								A
Maximum Forward Voltage at 10A, per leg	V <sub>F</sub>	0.65				0.8				V
Maximum DC 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				15				mA
Typical Thermal Resistance	R <sub>θJC</sub>	2								°C / W
Operating Junction Temperature Range	T <sub>J</sub>	-50 TO + 150								°C
Storage Temperature Range	T <sub>STG</sub>	-50 TO + 175								°C

Notes :  
 Both Bonding and Chip structure are available.



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## RATING AND CHARACTERISTIC CURVES

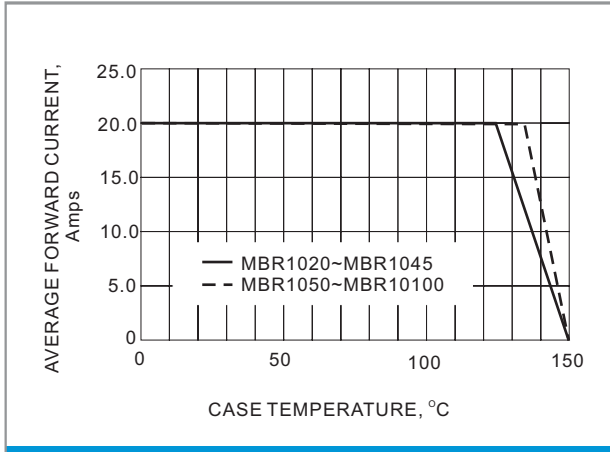


Fig. 1- FORWARD CURRENT DERATING CURVE

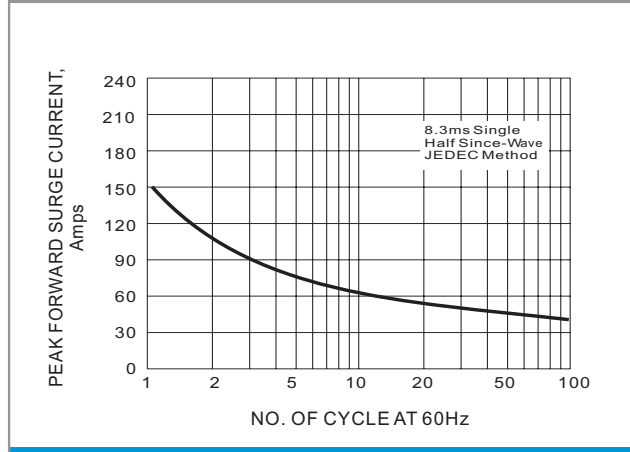


Fig. 2- MAXIMUM NON-REPETITIVE SURGE CURRENT

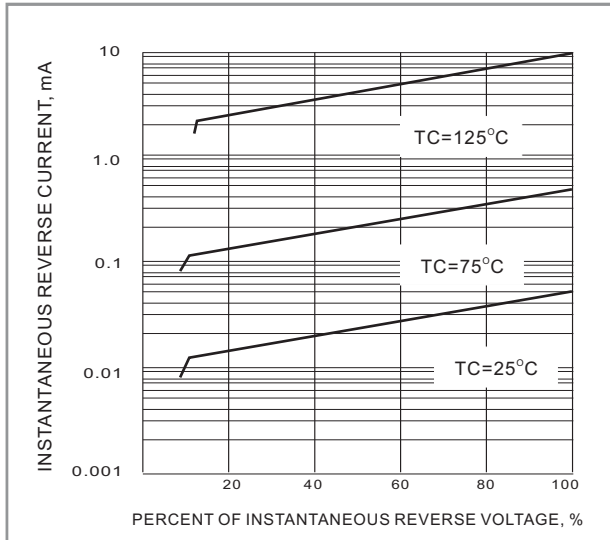


Fig. 3- TYPICAL REVERSE CHARACTERISTICS

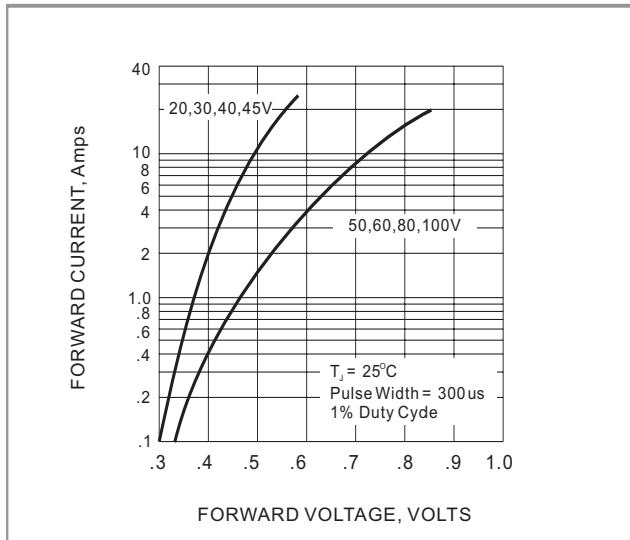


Fig. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS