



# MBR1040~MBR10200

## 10 AMPERES SCHOTTKY BARRIER RECTIFIERS

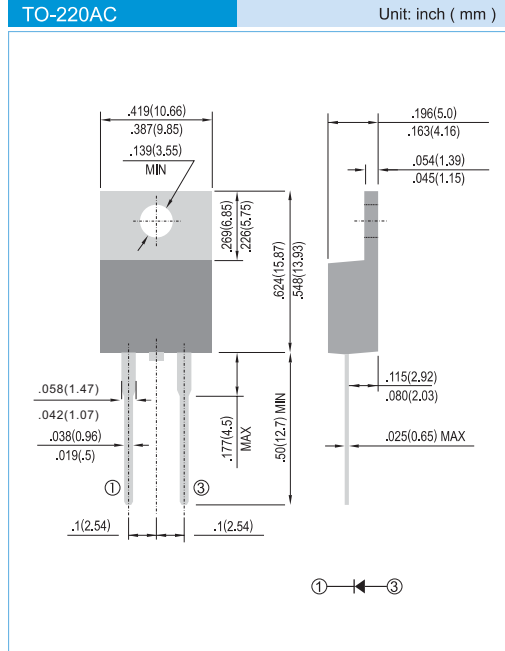
**VOLTAGE** 40 to 200 Volts **CURRENT** 10 Amperes

### 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.
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: TO-220AC molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any
- Weight: 0.055 ounces, 1.5615 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	MBR1040	MBR1045	MBR1050	MBR1060	MBR1080	MBR1090	MBR10100	MBR10150	MBR10200	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	40	45	50	60	80	90	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	28	31.5	35	42	56	63	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	40	45	50	60	80	90	100	150	200	V
Maximum Average Forward Current (See fig.1)	$I_{F(AV)}$	10									A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	150									A
Maximum Forward Voltage at 10A, per leg	$V_F$	0.7		0.75		0.8			0.9		V
Maximum DC Reverse Current $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=125^\circ\text{C}$	$I_R$					0.05					mA
Typical Thermal Resistance	$R_{\theta JC}$					3.0					$^\circ\text{C} / \text{W}$
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-55 to +150				-65 to +175					$^\circ\text{C}$

Notes :

Both Bonding and Chip structure are available.



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## RATING AND CHARACTERISTIC CURVES

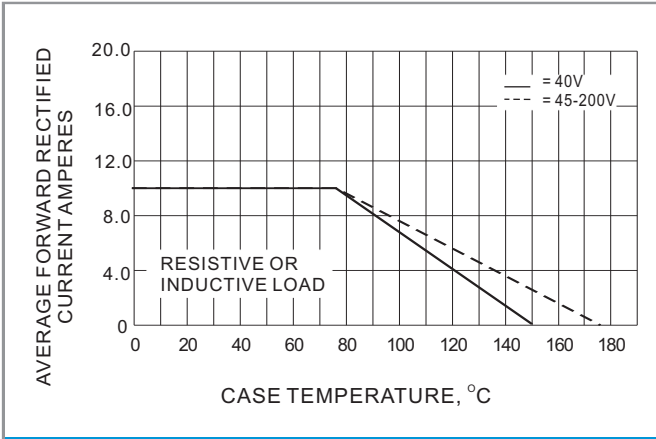


Fig.1- FORWARD CURRENT DERATING CURVE

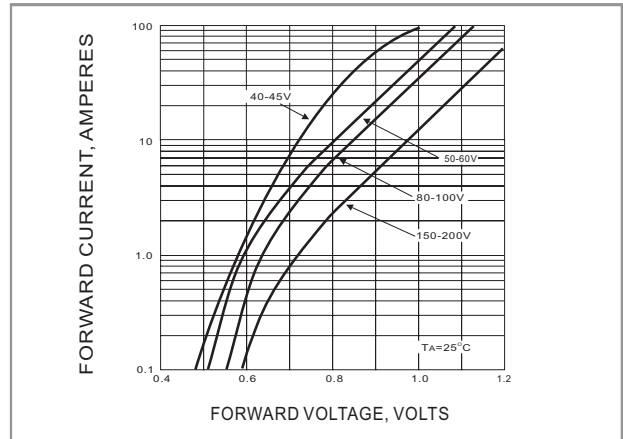


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

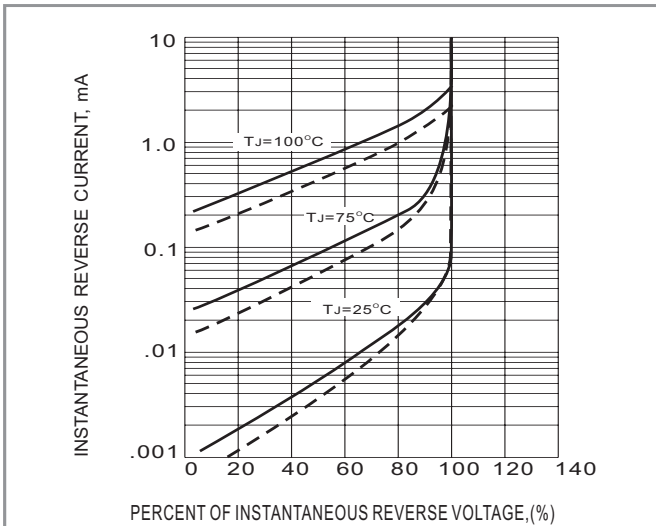


Fig.3- TYPICAL REVERSE CHARACTERISTICS

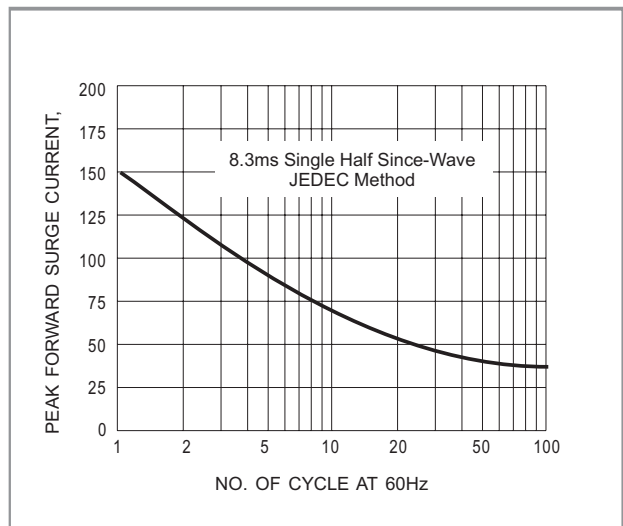


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS