



MBR1040CT~MBR10200CT

10 AMPERES SCHOTTKY BARRIER RECTIFIERS

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

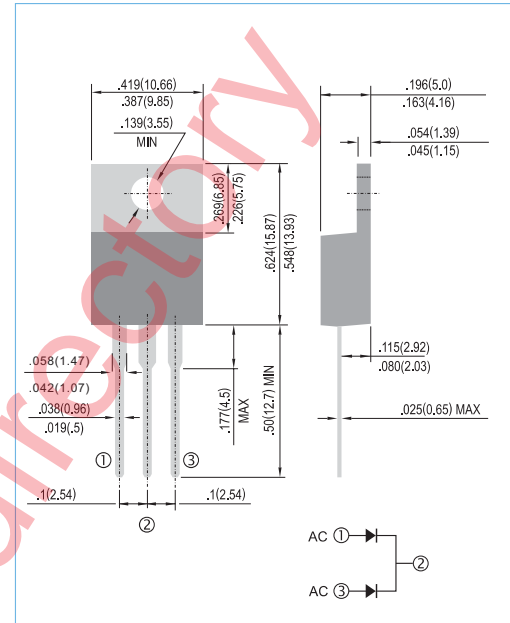
TO-220AB Unit: inch (mm)

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

MECHANICAL DATA

- Case: TO-220AB molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any
- Weight: 0.0655 ounces, 1.859 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 | MBR1040CT | MBR1045CT | MBR1050CT | MBR1060CT | MBR1080CT | MBR1090CT | MBR10100CT | MBR10150CT | MBR10200CT | 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 5A, 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 | $R_{\theta JC}$ | | | | | 2 | | | | | $^\circ\text{C} / \text{W}$ |
| 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

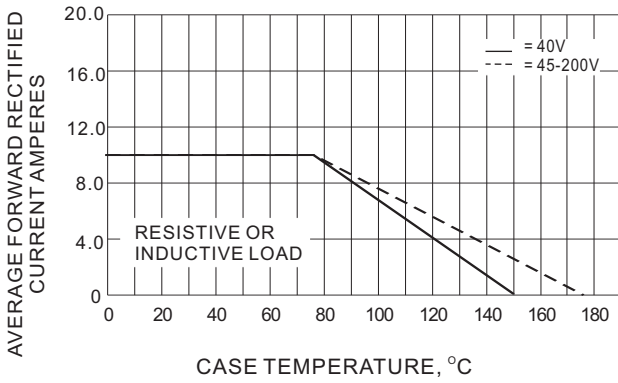


Fig.1- FORWARD CURRENT DERATING CURVE

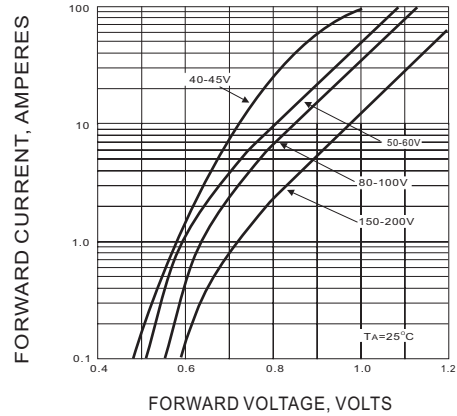


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

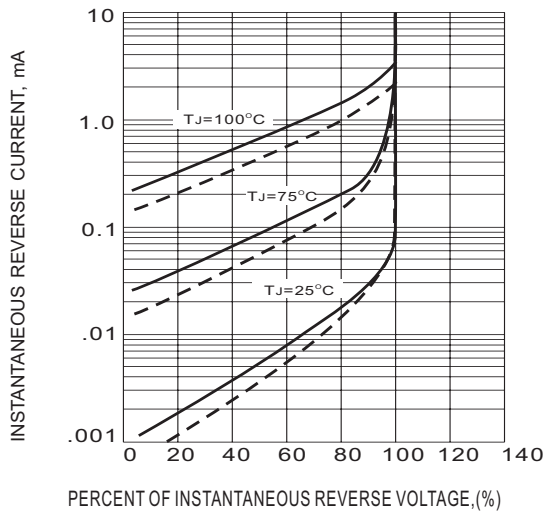


Fig.3- TYPICAL REVERSE CHARACTERISTICS

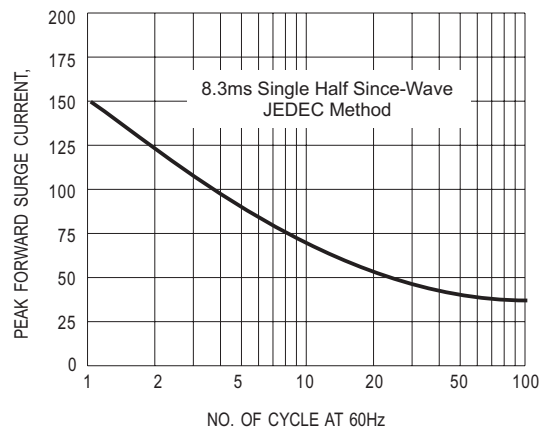


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS