



MBR3020CT~MBR30100CT

SCHOTTKY BARRIER RECTIFIERS

VOLTAGE 20 to 100 Volts **CURRENT** 30.0 Amperes

TO-220AB

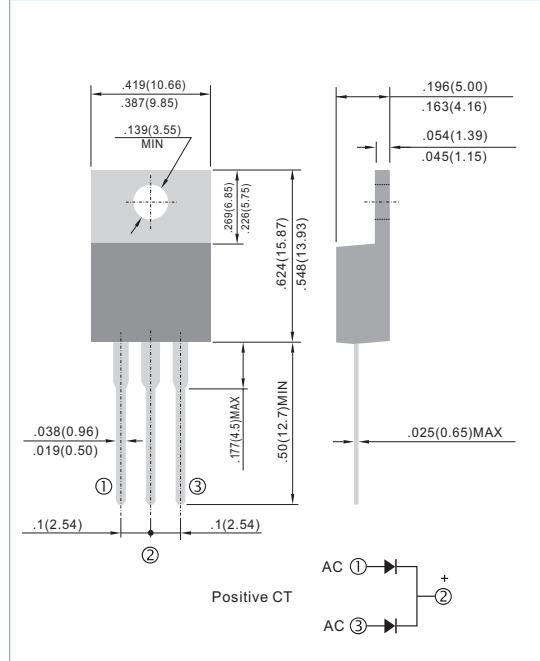
Unit : inch (mm)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- 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.
- Standard packaging: Any
- Weight: 0.083 ounces, 2.24grams.



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 | MBR3020CT | MBR3030CT | MBR3035CT | MBR3040CT | MBR3045CT | MBR3045CT | MBR3050CT | MBR3060CT | MBR3080CT | MBR30100CT | UNITS |
|--|-----------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 20 | 30 | 35 | 40 | 45 | 45 | 50 | 60 | 80 | 100 | V |
| Maximum RMS Voltage | V_{RMS} | 14 | 21 | 24.5 | 28 | 31.5 | 31.5 | 35 | 42 | 56 | 70 | V |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 35 | 40 | 45 | 45 | 50 | 60 | 80 | 100 | V |
| Maximum Average Forward Current lead length at $T_c=90^\circ\text{C}$ | $I_{F(AV)}$ | 30 | | | | | | | | | | A |
| Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I_{FSM} | 275 | | | | | | | | | | A |
| Maximum Forward Voltage at 15A, per leg | V_F | 0.55 | | | | | 0.70 | | | 0.80 | | V |
| Maximum DC Reverse Current $T_j=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_j=100^\circ\text{C}$ | I_R | 0.1 | | | | | 20 | | | | | mA |
| Typical Thermal Resistance | $R_{\theta JC}$ | 1.5 | | | | | | | | | | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range | T_j, T_{STG} | -50 TO + 150 | | | | | | | | | | $^\circ\text{C}$ |

NOTES:

Both Bonding and Chip structure are available.



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RATING AND CHARACTERISTIC CURVES

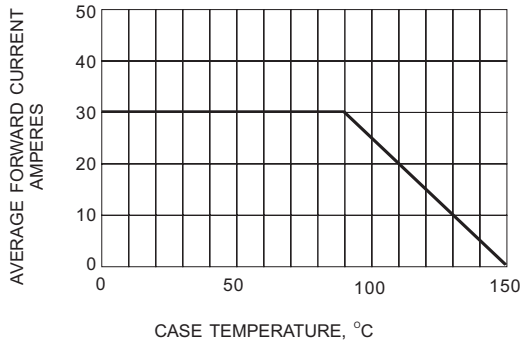


Fig.1- FORWARD CURRENT DERATING CURVE

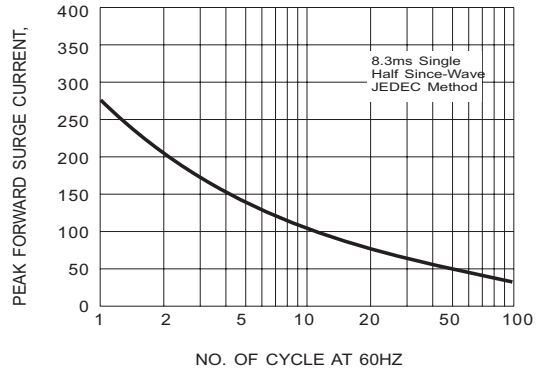


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

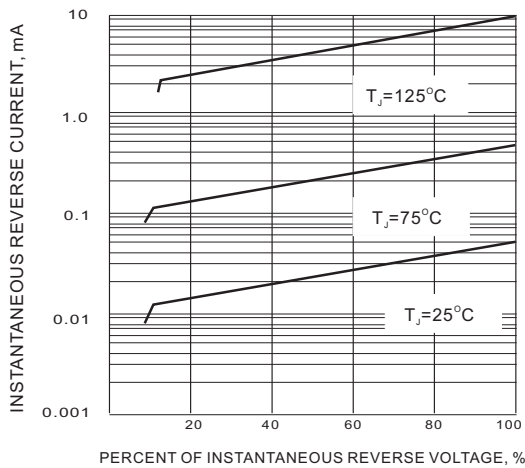


Fig.3- TYPICAL REVERSE CHARACTERISTICS

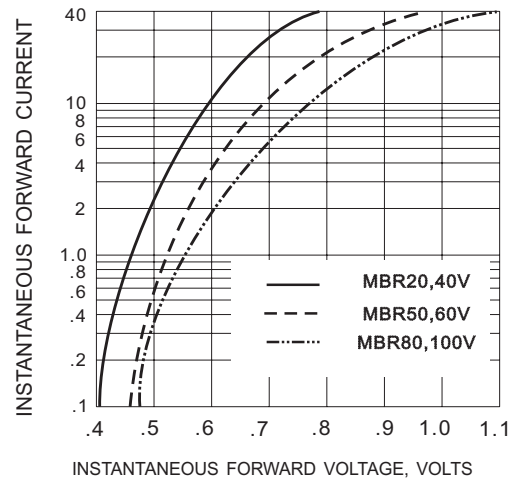


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

LEGAL STATEMENT

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