

MBRF2040CT THRU MBRF20200CT

20 AMPERES SCHOTTKY BARRIER RECTIFIERS

FEATURES

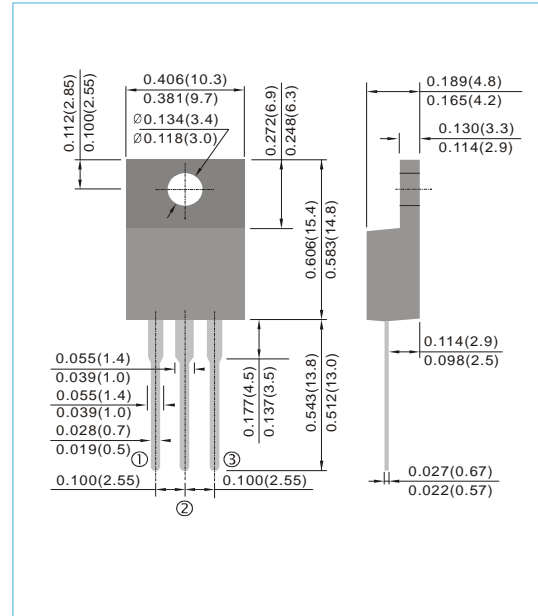
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency.
- High current capability
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.
- Lead free in comply with EU RoHS 2011/65/EU 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, 1.86 grams.

TO-220AB

Unit : inch(mm)



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 | MBRF 2040CT | MBRF 2045CT | MBRF 2050CT | MBRF 2060CT | MBRF 2080CT | MBRF 2090CT | MBRF 20100CT | MBRF 20150CT | MBRF 20200CT | 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) | $I_{F(AV)}$ | 20 | | | | | | | | | A |
| Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I_{FSM} | 200 | | | | | | | | | 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 | 0.001 20 | | | | | | | | | mA |
| Typical Thermal Resistance | $R_{\theta JC}$ | 2 | | | | | | | | | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | -50 to +150 | | | | -65 to +175 | | | | | $^\circ\text{C}$ |

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RATING AND CHARACTERISTIC CURVES

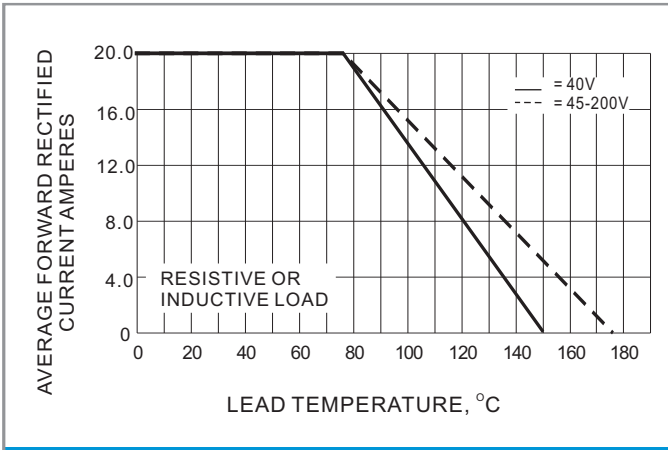


Fig.1- FORWARD CURRENT DERATING CURVE

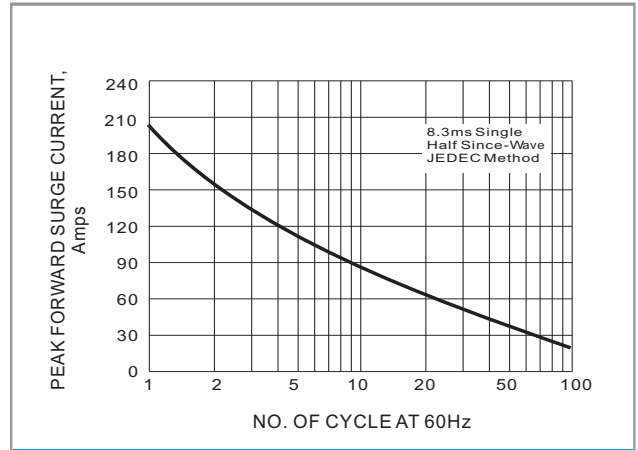


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

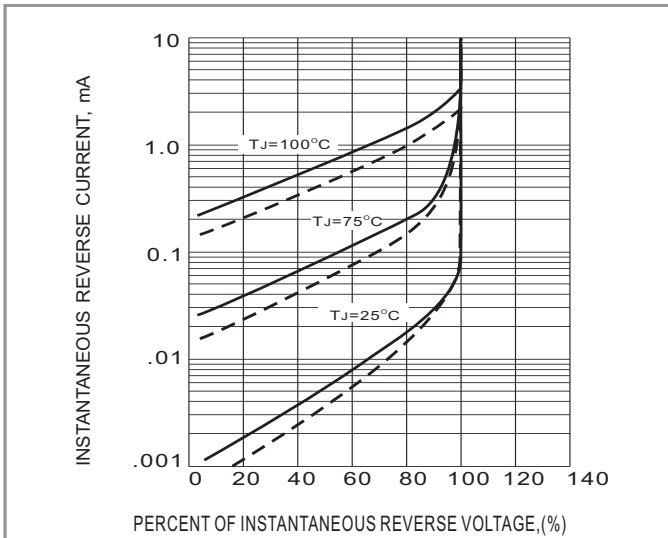


Fig.3- TYPICAL REVERSE CHARACTERISTICS

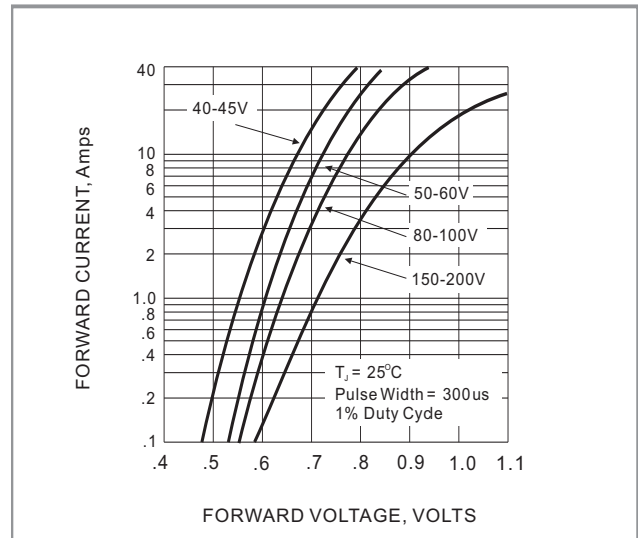


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS