# MBR2040CT~MBR20200CT

## 20 AMPERES SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 40 to 200 Volts **CURRENT** 20 Amperes

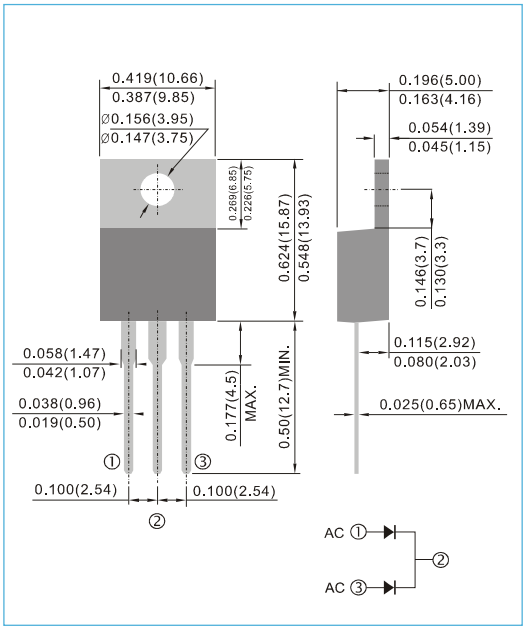
### FEATURES

- 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
- For use in low voltage, high frequency inverters free wheeling, and polarlity 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, 1.859 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 | MBR2040CT | MBR2045CT | MBR2050CT | MBR2060CT | MBR2080CT | MBR2090CT | MBR20100CT | MBR20150CT | MBR20200CT | 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 °C<br>at Rated DC Blocking Voltage $T_J$=125°C | $I_R$ | 0.05<br>20 | | | | | | | | | mA |
| Typical Thermal Resistance | $R_{\theta JC}$ | 2 | | | | | | | | | °C / W |
| Operating Junction and Storage Temperature Range | $T_J$,$T_{STG}$ | -50 to + 150 | | -65 to +175 | | | | | | | °C |

Notes :

Both Bonding and Chip structure are available.



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## RATING AND CHARACTERISTIC CURVES

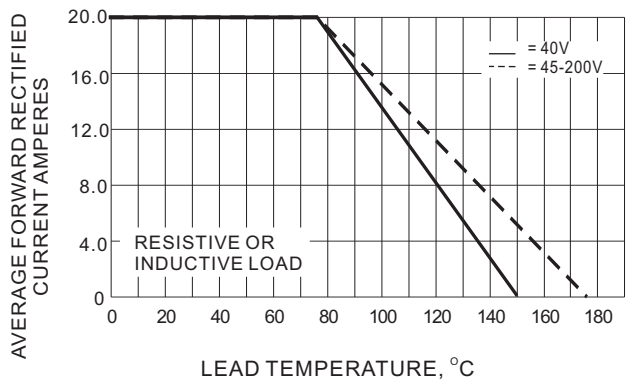



Fig.1- FORWARD CURRENT DERATING CURVE

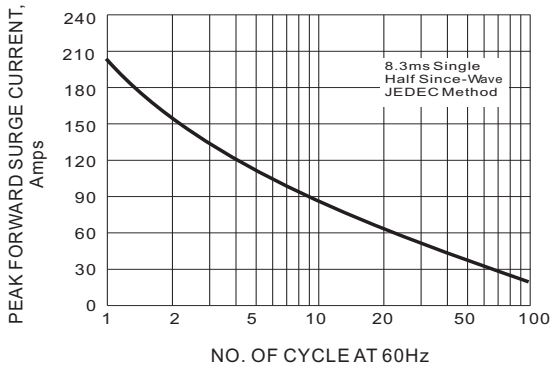



Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

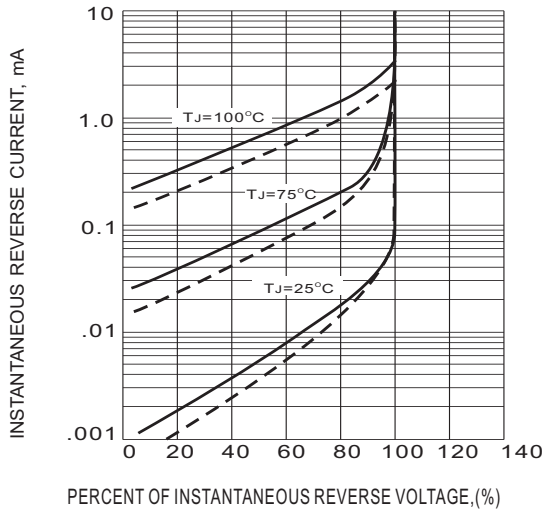



Fig.3- TYPICAL REVERSE CHARACTERISTICS

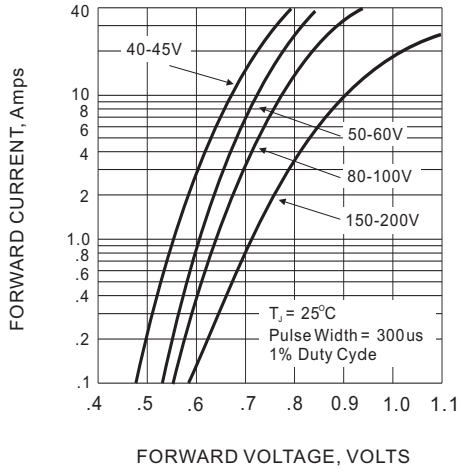



Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



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