



# MBR1640CT~MBR16200CT

## SCHOTTKY BARRIER RECTIFIERS

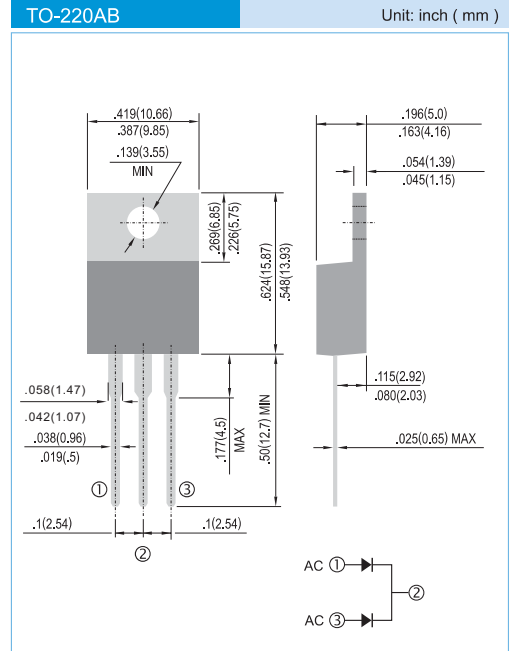
**VOLTAGE** 40 to 200 Volts **CURRENT** 16 Amperes

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing 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 package
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any
- Weight: 0.0655 ounces, 1.859 grams.



### MAXIMUM RATINGS

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          | MBR1640CT   | MBR1645CT | MBR1650CT | MBR1660CT | MBR1680CT | MBR1690CT | MBR16100CT | MBR16150CT | MBR16200CT | 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 (See Figure 1)  | $I_{F(AV)}$     | 16          |           |           |           |           |           |            |            |            | 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 8.0A per leg   | $V_F$           | 0.70        |           | 0.75      |           | 0.80      |           | 0.90       |            |            | V               |             |
| Maximum DC Reverse Current at $T_j=25^{\circ}C$<br>Rated DC Blocking Voltage $T_j=100^{\circ}C$   | $I_R$           | 0.05<br>20  |           |           |           |           |           |            |            |            | mA              |             |
| Typical Thermal Resistance  | $R_{\theta JC}$ | 2.0         |           |           |           |           |           |            |            |            | $^{\circ}C / W$ |             |
| Operating Junction and Storage Temperature Range  | $T_j, T_{STG}$  | -55 to +150 |           |           |           |           |           |            |            |            | -65 to +175     | $^{\circ}C$ |

NOTES: Both Bonding and Chip structure are available.



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## RATING AND CHARACTERISTIC CURVES

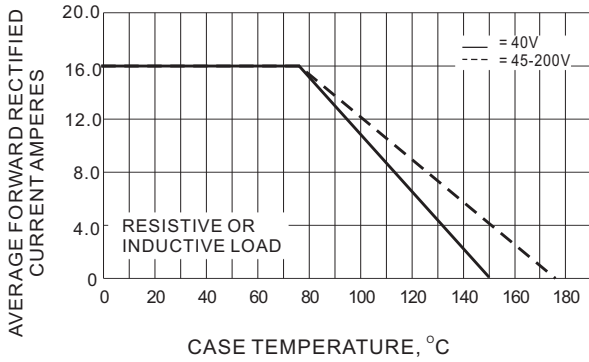


Fig.1- FORWARD CURRENT DERATING CURVE

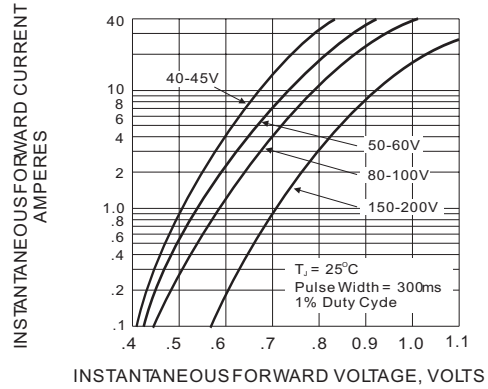


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

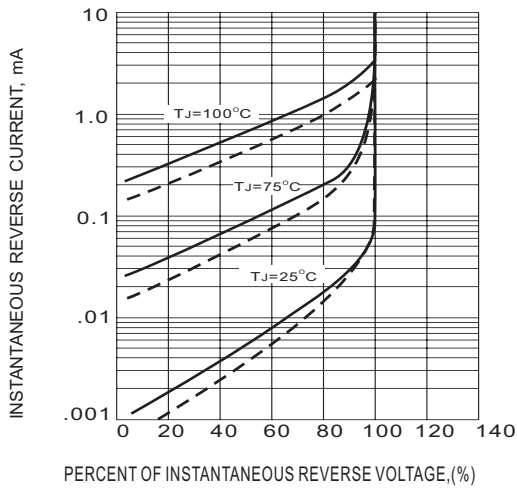


Fig.3- TYPICAL REVERSE CHARACTERISTICS

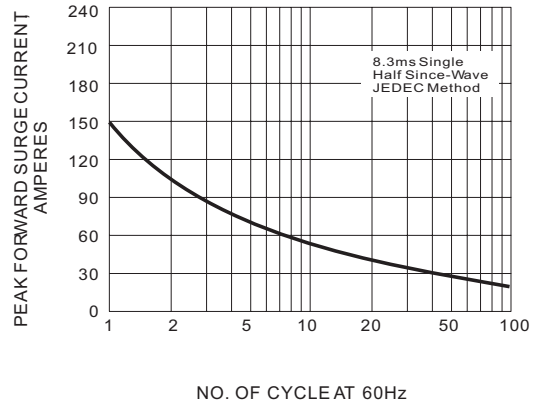


Fig.4- MAXIMUM NON-REPETITIVE SURGE CURRENT