



#### 10 AMPERES SCHOTTKY BARRIER RECTIFIERS

VOLTAGE 40 to 200 Volt CURRENT 10 Ampere

#### **FEATURES**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O.
   Flame Retardant Epoxy Molding Compound.
- 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 compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std. . (Halogen Free)

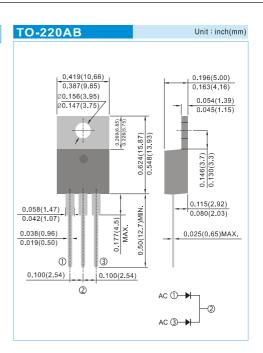


• Case: TO-220AB molded plastic

• Terminals: solder plated, solderable per MIL-STD-750, Method 2026

• Polarity: As marked.

• Weight: 0.067 ounces, 1.89 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  | MBR1040<br>CT | MBR1045<br>CT | MBR1050<br>CT | MBR1060<br>CT | MBR1080<br>CT | MBR1090<br>CT | MBR10100<br>CT | MBR10150<br>CT | MBR10200<br>CT | UNITS |
|--|---------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|-------|
| Maximum Recurrent Peak Reverse Voltage   |         | 40            | 45            | 50            | 60            | 80            | 90            | 100            | 150            | 200            | V     |
| Maximum RMS Voltage  | VRMS    | 28            | 31.5          | 35            | 42            | 56            | 63            | 70             | 105            | 140            | V     |
| Maximum DC Blocking Voltage  | VDC     | 40            | 45            | 50            | 60            | 80            | 90            | 100            | 150            | 200            | V     |
| Maximum Average Forward Current (See fig.1)  | lf(AV)  | 10            |               |               |               |               | А             |                |                |                |       |
| Peak Forward Surge Current : 8.3ms single half sine-<br>wave superimposed on rated load      | lfsm    | 150           |               |               |               | А             |               |                |                |                |       |
| Maximum Forward Voltage at 5A, per leg   | VF      | 0.7 0.75      |               | 75            | 0.8           |               | 0.9           |                | ٧              |                |       |
| Maximum DC Reverse Current at Rated DC $T_j=25^{\circ}C$ Blocking Voltage $T_j=125^{\circ}C$ | IR      | 0.05<br>20    |               |               |               |               |               | mA             |                |                |       |
| Typical Thermal Resistance   | Rөjc    | 2             |               |               |               | °C / W        |               |                |                |                |       |
| Operating and Storage Junction Temperature Range   | TJ,TSTG | -55 to + 175  |               |               |               | °C            |               |                |                |                |       |

#### Notes :

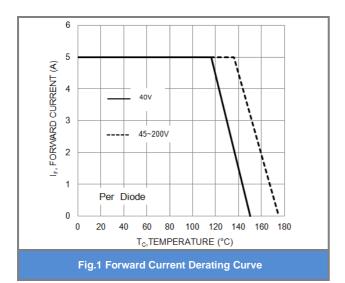
Both Bonding and Chip structure are available.

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#### TYPICAL CHARACTERISTIC CURVES



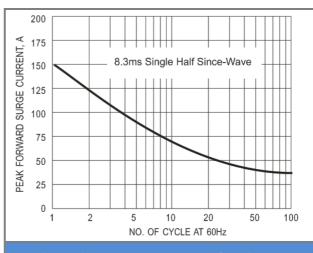


Fig.2 Typical Instantaneous Forward Capacitance

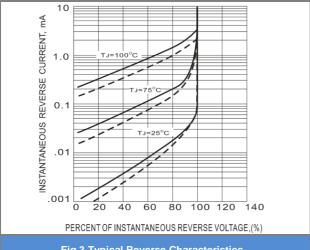
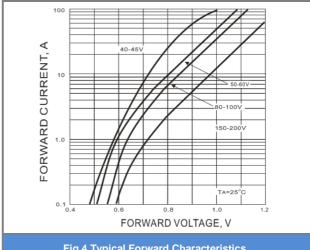
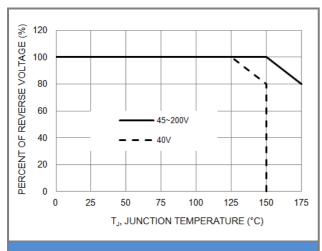


Fig.3 Typical Reverse Characteristics



**Fig.4 Typical Forward Characteristics** 



**Fig.5 Operating Temperature Derating Curve** 

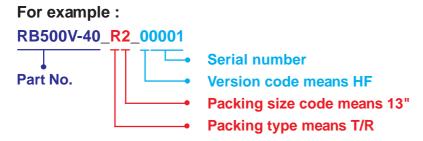
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Part No\_packing code\_Version

MBR1040CT\_T0\_00001



| Packing Code XX                      |                      |                                   |                      |            | Version Code XXXXX   |                                       |  |  |  |
|--------------------------------------|----------------------|-----------------------------------|----------------------|------------|----------------------|---------------------------------------|--|--|--|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                 | 2 <sup>nd</sup> Code | HF or RoHS | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |  |  |  |
| Tape and Ammunition Box (T/B)        | Α                    | N/A                               | 0                    | HF 0 ser   |                      | serial number                         |  |  |  |
| Tape and Reel<br>(T/R)               | R                    | 7"                                | 1                    | RoHS       | 1                    | serial number                         |  |  |  |
| Bulk Packing<br>(B/P)                | В                    | 13"                               | 2                    |            |                      |                                       |  |  |  |
| Tube Packing<br>(T/P)                | Т                    | 26mm                              | X                    |            |                      |                                       |  |  |  |
| Tape and Reel (Right Oriented) (TRR) | S                    | 52mm                              | Y                    |            |                      |                                       |  |  |  |
| Tape and Reel (Left Oriented) (TRL)  | L                    | PANASERT T/B CATHODE UP<br>(PBCU) | U                    |            |                      |                                       |  |  |  |
| FORMING                              | F                    | PANASERT T/B CATHODE DOWN (PBCD)  | D                    |            |                      |                                       |  |  |  |

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