



### **SCHOTTKY BARRIER RECTIFIERS**

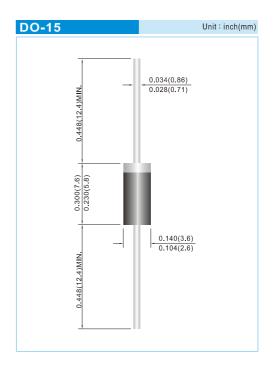
VOLTAGE 40 to 200 Volt CURRENT 2 Ampere

#### **FEATURES**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- Lead free in compliance with EU RoHS 2.0

#### **MECHANICAL DATA**

- · Case: DO-15 Molded plastic
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathodeWeight: 0.014 ounces, 0.397 grams



### **MAXIMUM RATINGS**

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

| PARAMETER  | SYMBOL                           | MBR240                  | MBR245 | MBR250 | MBR260 | MBR280 | MBR290 | MBR2100 | MBR2150 | MBR2200 | UNITS |
|--|----------------------------------|-------------------------|--------|--------|--------|--------|--------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage   |                                  | 40                      | 45     | 50     | 60     | 80     | 90     | 100     | 150     | 200     | V     |
| Maximum RMS Voltage  |                                  | 28                      | 31.5   | 35     | 42     | 56     | 63     | 70      | 105     | 140     | V     |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                  | 40                      | 45     | 50     | 60     | 80     | 90     | 100     | 150     | 200     | V     |
| Maximum Average Forward Rectified Current 0.375" (9.5mm) lead length (see fig1)        |                                  | 2.0                     |        |        |        |        |        | А       |         |         |       |
| Peak Forward Surge Current: 8.3ms single half sine-<br>wave superimposed on rated load |                                  | 50                      |        |        |        |        |        |         | А       |         |       |
| Typical Thermal Resistance (Note 2)  | R <sub>eJA</sub>                 | 35                      |        |        |        | °C / W |        |         |         |         |       |
| Maximum Forward Voltage at 2.0A (Note 1)   | V <sub>F</sub>                   | 0.7                     |        | 0.74   |        | 0.8    |        | 0.9     |         | V       |       |
|  | I <sub>R</sub>                   | 0.05<br>20              |        |        |        | mΑ     |        |         |         |         |       |
| Operating Junctionand Storage Temperature Rang   | T <sub>J</sub> ,T <sub>STG</sub> | -55 to +150 -65 to +175 |        |        | °C     |        |        |         |         |         |       |

#### NOTES:

- 1.Pulse Test: 300µs pulse with 1% Duty Cycle.
- $2. Thermal\ resistance\ junction\ to\ lead\ P.C.B\ mounted\ 0.375" (9.5mm)\ lead\ length.$

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### **RATING AND CHARACTERISTIC CURVES**

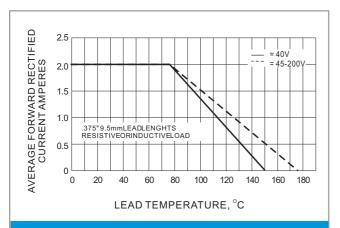


Fig.1 FORWARD CURRENT DERATING CURVE

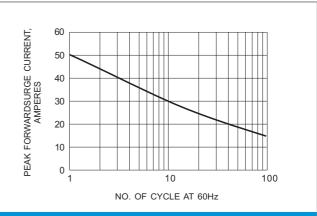


Fig.2 MAXIMUM NON-REPETITIVEPEAKFORWARD SURGE CURRENT

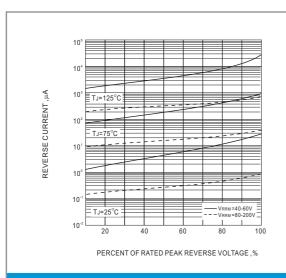


Fig.3 TYPICAL REVERSE CHARACTERISTIC

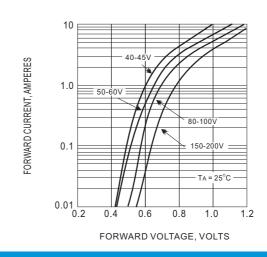
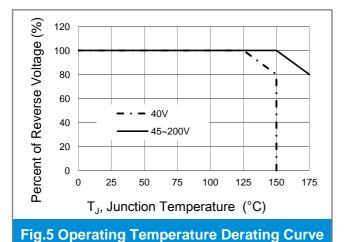


Fig.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC



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### Part No\_packing code\_Version

MBR240\_AY\_00001

MBR240\_AY\_10001

MBR240\_B0\_00001

MBR240\_B0\_10001

MBR240\_R2\_00001

MBR240\_R2\_10001

## For example:



| 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                    | 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                              | Υ                    |            |                      |                                       |  |  |  |
| 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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