



MBR3040 THRU MBR30200

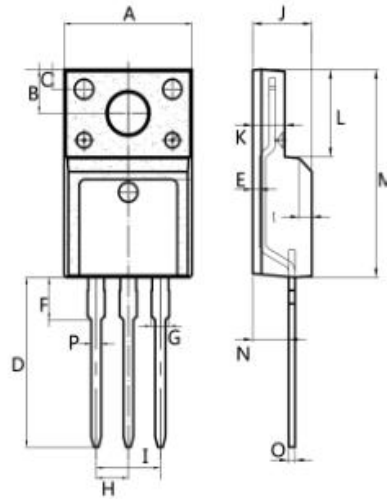
Schottky Barrier Rectifiers

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0. 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: ITO-220AB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any



ITO- 220AB

| Dim. | Min. | Max. |
|------|----------|-------|
| A | 9.95 | 10.25 |
| B | 2.95 | 3.25 |
| C | 1.25 | 1.45 |
| D | 12.95 | 13.25 |
| E | 0.50 | 0.65 |
| F | 3.1 | 3.3 |
| G | 1.30 | 1.45 |
| H | Typ 2.54 | |
| I | Typ 5.08 | |
| J | 4.60 | 4.75 |
| K | 2.50 | 2.65 |
| L | 6.35 | 6.55 |
| M | 15.4 | 16.0 |
| N | 2.75 | 3.05 |
| O | 0.48 | 0.52 |
| P | 0.76 | 0.84 |

All Dimensions in millimeter

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 | MBR 3040 | MBR 3045 | MBR 3050 | MBR 3060 | MBR 3080 | MBR 3090 | MBR 30100 | MBR 30150 | MBR 30200 | 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 | $I_{F(AV)}$ | 30 | | | | | | | | | A |
| Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 200 | | | | | | | | | A |
| Maximum Forward Voltage at 15A per leg | V_F | 0.65 | | 0.75 | | 0.85 | | 0.95 | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$ | I_R | | | | | | 0.05 20 | | | | mA |
| Typical Thermal Resistance | $R_{\theta JC}$ | | | | | | 1.4 | | | | °C / W |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | -55 to + 150 | | | | | | | -55 to + 175 | | °C |



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Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1- FORWARD CURRENT DERATING CURVE

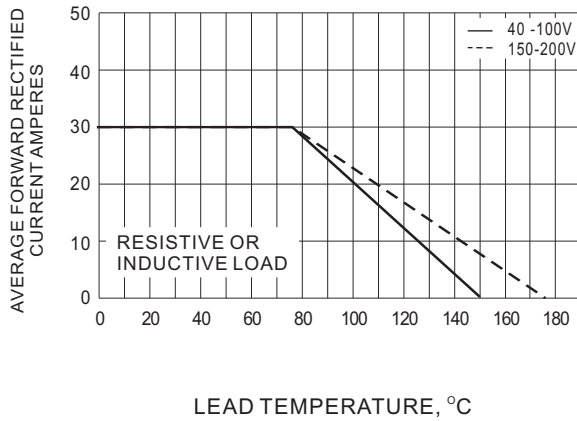


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

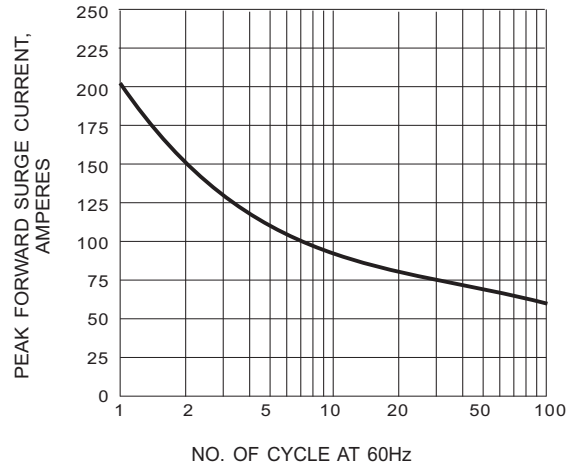


Fig.3- TYPICAL REVERSE CHARACTERISTIC

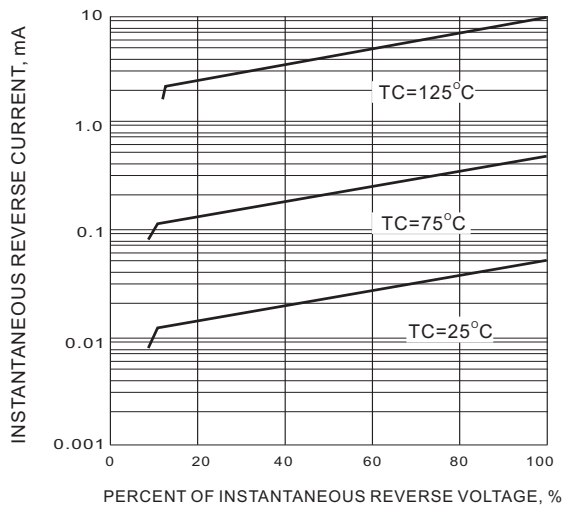


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

