

MBR20100 THRU MBR20200

Schottky Rectifier

Features

- High efficiency operation
- Guard ring for enhanced ruggedness and long term reliability
- High purity,high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Solder dip maximum peak of 275 °C /7s, per JESD 22-B106

Typical Application

For use in switching power supplies,converters, freewheeling diodes and reverse battery protection.

Mechanical Data

- Package: TO-220AC
Molding compound meets UL 94 V-0 flammability rating,RoHS-compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Color Band denotes cathode end



■ Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | Symbol | Unit | Conditions | MBR20 | | |
|-------------------------------------|-----------|------|---|------------|-----|-----|
| | | | | 100 | 150 | 200 |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | 100 | 150 | 200 |
| Average Rectified Output Current | I_o | A | 60HZ Half-sine wave, Resistance load, Tc(Fig.1) | 20 | | |
| Surge(Nonrepetitive)Forward Current | I_{FSM} | A | 60HZ sine wave, 1 cycle, Ta=25°C | 150 | | |
| Storage Temperature | T_{stg} | °C | | -55 ~ +150 | | |
| Junction Temperature | T_j | °C | | -55 ~ +150 | | |

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | Symbol | Unit | Conditions | MBR20 | | |
|----------------------|------------------|------|---------------------------|-------------------|-----|-----|
| | | | | 100 | 150 | 200 |
| Peak Forward Voltage | V_{FM} | V | $I_{FM}=20A$ | 100 | 150 | 200 |
| Peak Reverse Current | I_{RRM1} | mA | $V_{RM}=V_{RRM}$ | Ta=25°C | | |
| | I_{RRM2} | | | Ta=125°C | | |
| Thermal Resistance | $R_{\theta J-C}$ | °C/W | Between junction and case | 2.0 ¹⁾ | | |

NOTES:

Thermal resistance from junction to case per leg



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■ Characteristics (Typical)

FIG1: Forward Current Derating Curve

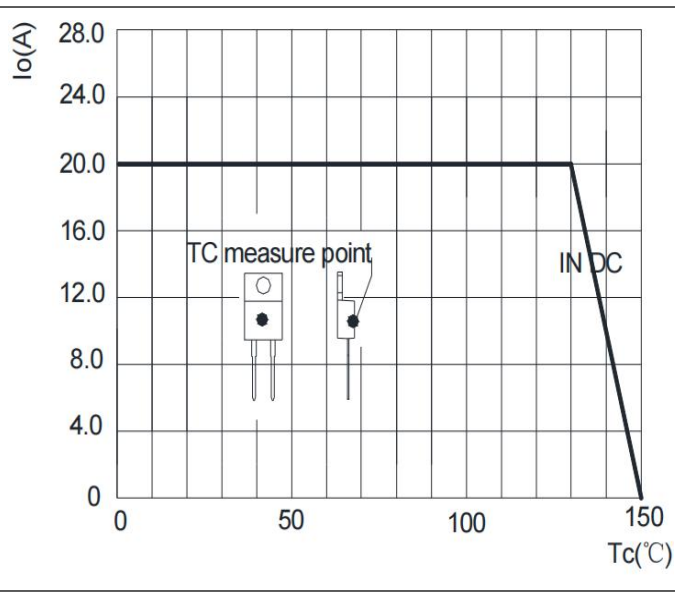


FIG2: Maximum Non-Repetitive Forward Surge Current

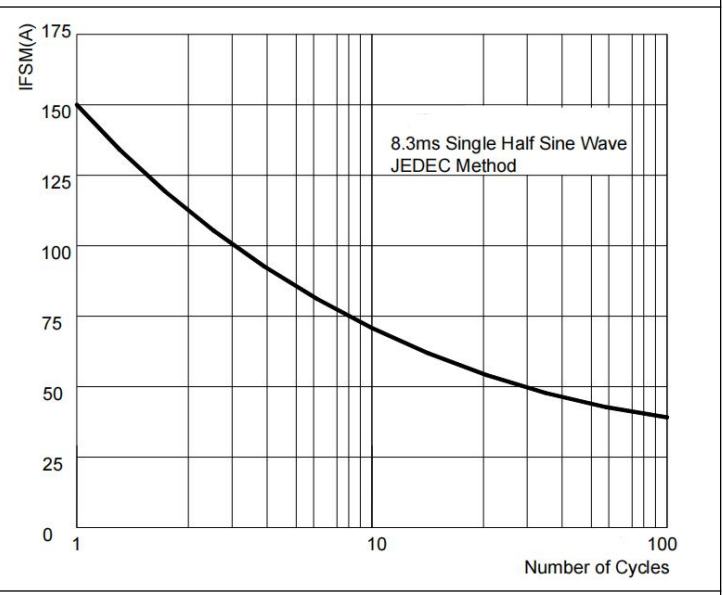


FIG3: Typical Forward Characteristics

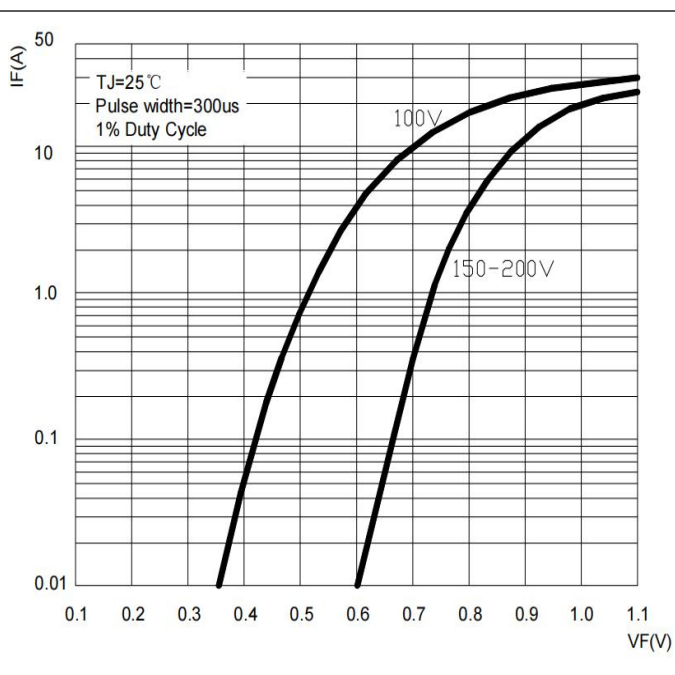
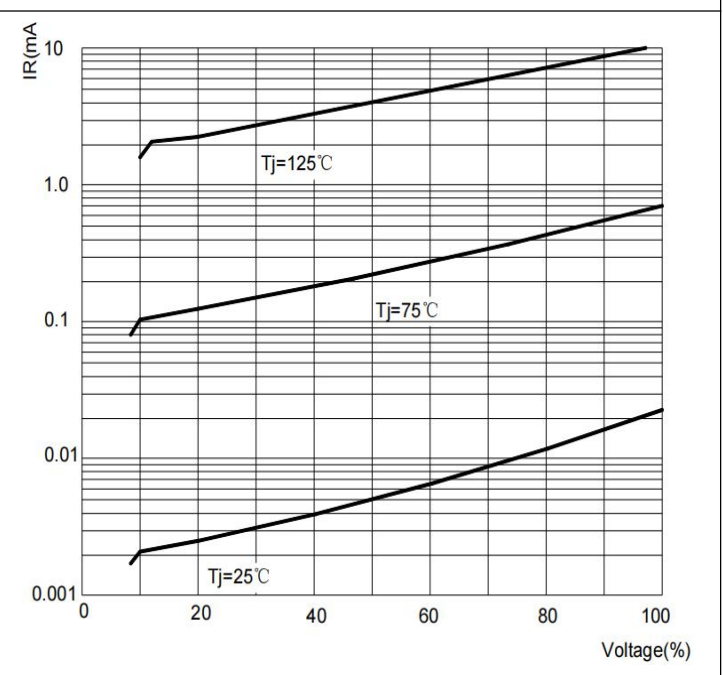


FIG4: Typical Reverse Characteristics



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Ordering Information (Example)

| PREFERED | PACKAGE CODE | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------------|--------------|----------------------|-------------------------|----------------------------|---------------|
| MBR20100 ~ MBR20200 | TO-220AC | 50 | 1000 | 5000 | Tube |

Outline Dimensions

