# MBR16100 THRU MBR16200

## Schottky Diodes

### Features

- High efficiency operation
- Guard ring for enhanced ruggedness and long term reliablity
- 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℃ Unless otherwise specified)

| PARAMETER | Symbol | Unit | Conditions | MBR | | |
|---|---|---|---|---|---|---|
| | | | | 16100 | 16150 | 16200 |
| 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) | 16 | | |
| Surge(Nonrepetitive)Forward Current | $I_{FSM}$ | A | 60HZ sine wave, 1 cycle, Ta=25℃ | 250 | | |
| Current Squared Time | $I^2T$ | $A^2S$ | 1ms≤t ＜ 8.3ms Tj =25℃,Rating of per diode | 261 | | |
| Storage Temperature | $T_{stg}$ | ℃ | | -55 ~ +150 | | |
| Junction Temperature | $T_j$ | ℃ | IN DC Forward Mode-Forward Operations，without reverse bias, t ≤1 h (Fig. 1)① | -55 ~ +150 | | |

### ■ Electrical Characteristics（Ta=25℃ Unless otherwise specified）

| PARAMETER | Symbol | Unit | Conditions | | MBR | | |
|---|---|---|---|---|---|---|---|
| | | | | | 16100 | 16150 | 16200 |
| Peak Forward Voltage | $V_{FM}$ | V | $I_{FM}$=16A | | 0.85 | 0.9 | 0.95 |
| Peak Reverse Current | $I_{RRM1}$ | mA | $V_{RM}=V_{RRM}$ | Ta=25℃ | 0.05 | | |
| | $I_{RRM2}$ | | | Ta=100℃ | 1 | | |
| Thermal Resistance | $R_{\theta J-C}$ | ℃/W | Between junction and case | | 2.0 | | |

**NOTES:**

Meets the requirement of IEC 61215 Ed.2 byqass diode thermal test

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■ Characteristics (Typical)

**FIG1: Forward Current Derating Curve**

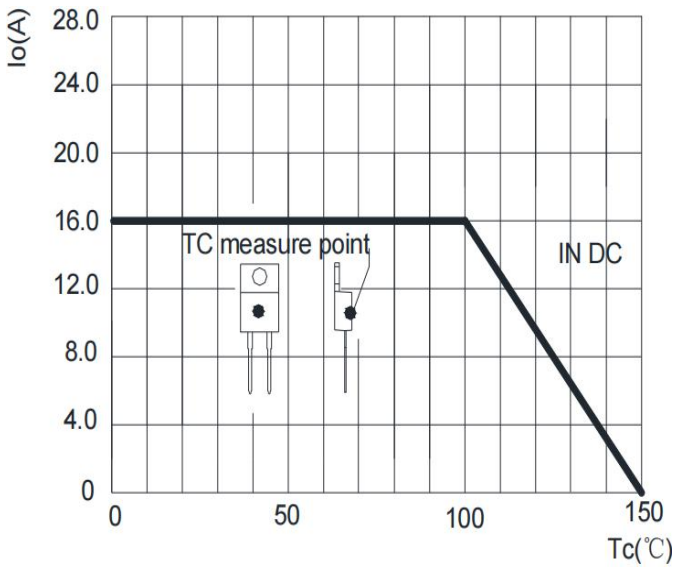



**FIG2:Surge Forward Current Capability**

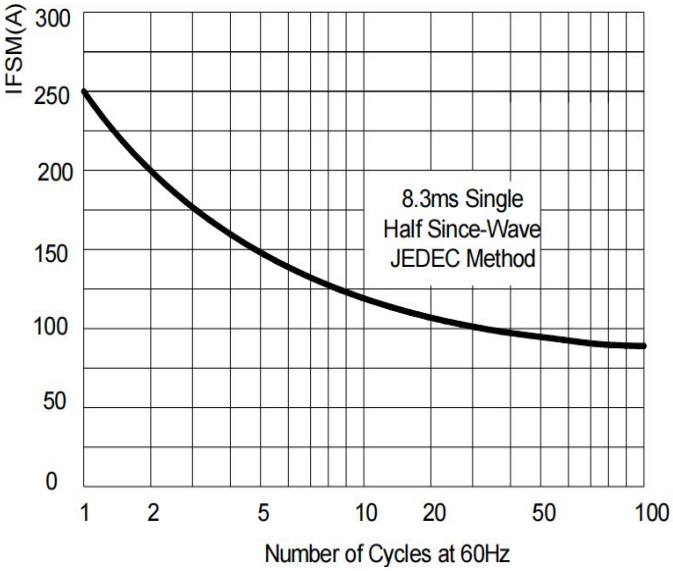



**FIG3:Instantaneous Forward Voltage**

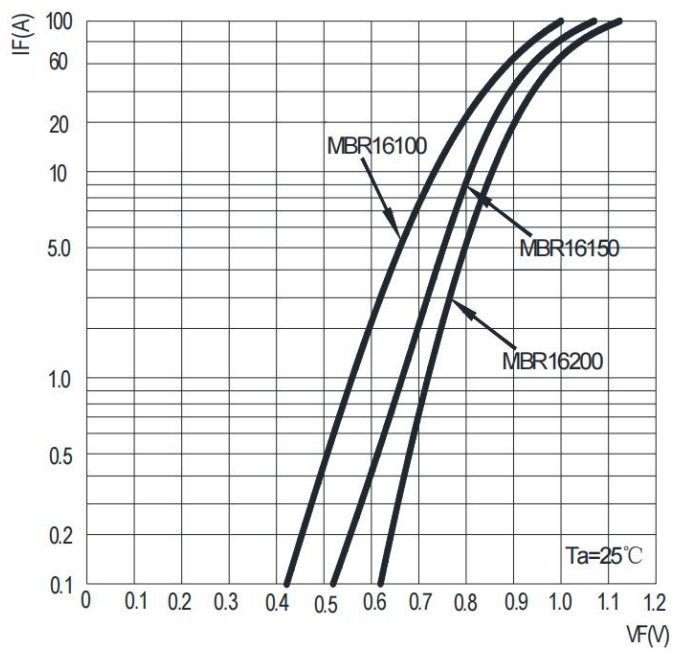
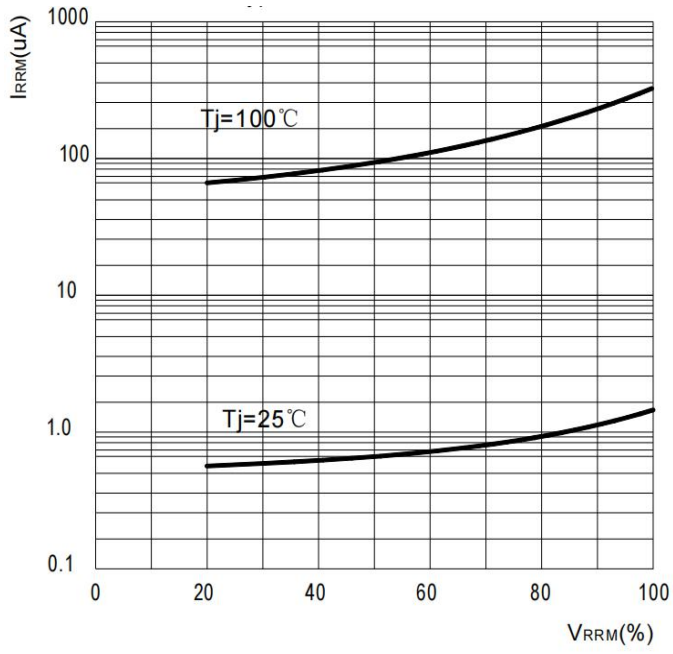



**FIG4:Typical Reverse Characteristics**



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■ Ordering Information (Example)

| PREFERED | PACKAGE CODE | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|
| MBR16100 ~ MBR16200 | TO-220AC | 50 | 1000 | 5000 | Tube |

■ Outline Dimensions