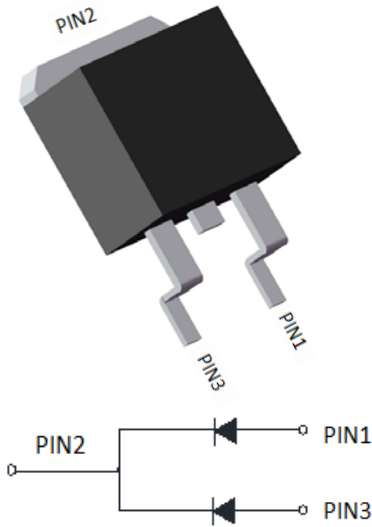


Schottky Diodes



Features

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

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** TO-263
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

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

| PARAMETER | SYMBOL | UNIT | MBRB30100CT | MBRB30150CT | MBRB30200CT |
|--|------------------|------------------|-------------|-------------|-------------|
| Device marking code | | | MBRB30100CT | MBRB30150CT | MBRB30200CT |
| Repetitive Peak Reverse Voltage | VRRM | V | 100 | 150 | 200 |
| Average Rectified Output Current @60Hz sine wave, R-load, T _a =25°C | I _O | A | 30 | | |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C | I _{FSM} | A | 250 | | |
| Current Squared Time @1ms≤t<8.3ms T _j =25°C, | i ² t | A ² s | 262 | | |
| Storage Temperature | T _{stg} | °C | -55 ~ +175 | | |
| Junction Temperature | T _j | °C | -55 ~ +175 | | |

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

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | MBRB30100CT | MBRB30150CT | MBRB30200CT |
|---|-------------------|------|--|-------------|-------------|-------------|
| Maximum instantaneous forward voltage drop per diode | V _{FM} | V | I _{FM} =15.0A | 0.8 | 0.85 | 0.9 |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _{RRM1} | mA | V _{RM} =V _{RRM} T _a =25°C | 0.1 | | |
| | I _{RRM2} | | V _{RM} =V _{RRM} T _a =125°C | 20 | | |



MBRB30100CT THRU MBRB30200CT

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | | SYMBOL | UNIT | MBRB30100CT | MBRB30150CT | MBRB30200CT |
|--------------------|---------------------------|-------------------|------|-------------|-------------|-------------|
| Thermal Resistance | Between junction and case | R _{θJ-C} | °C/W | 2.0 | | |

■ Ordering Information (Example)

| PREFERED P/N | UNIT WEIGHT(g) | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|------------------------------|------------------|-----------------------|-------------------------|----------------------------|---------------|
| MBRB30100CT THRU MBRB30200CT | Approximate 1.43 | 50 | 2000 | 8000 | Tube |
| MBRB30100CT THRU MBRB30200CT | Approximate 1.43 | 1000 | 2000 | 10000 | Reel |

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

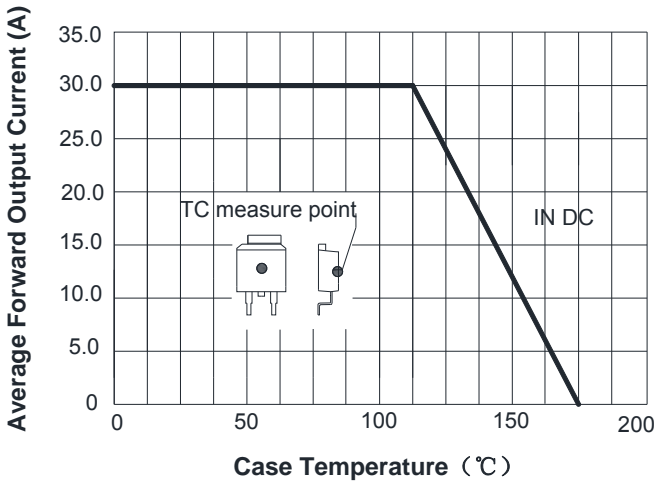


FIG2: Surge Forward Current Capability

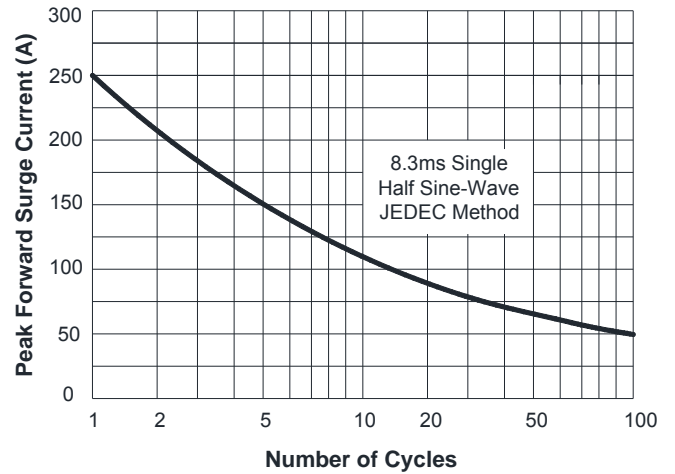


FIG3: Forward Voltage

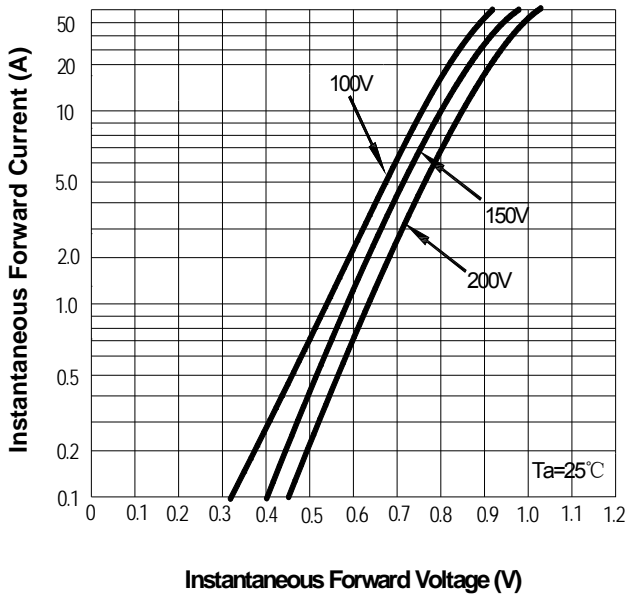
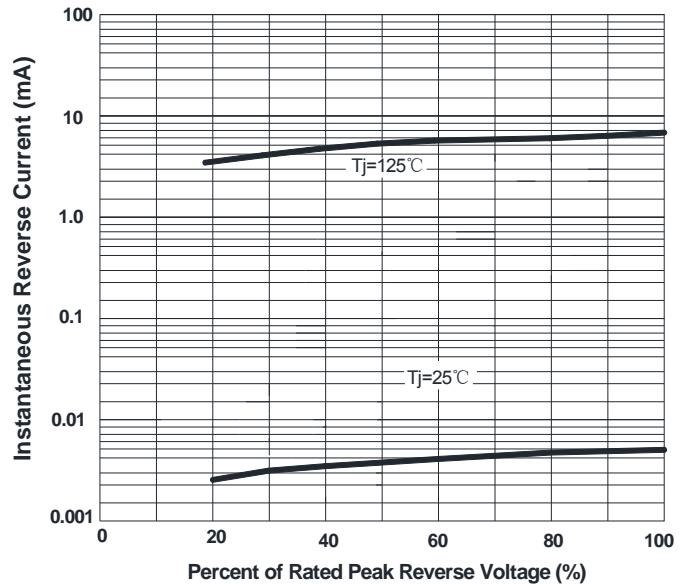


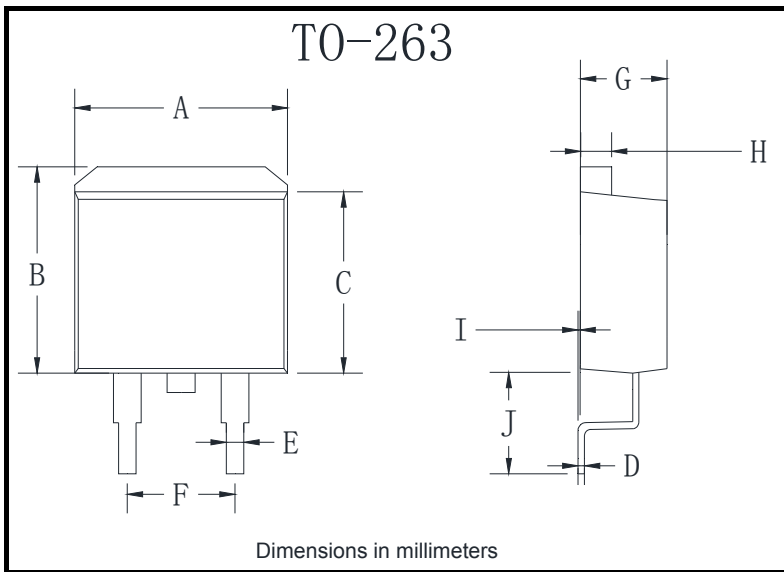
FIG4: Instantaneous Reverse Characteristics





MBRB30100CT THRU MBRB30200CT

■Outline Dimensions



| TO-263 | | |
|--------|------|------|
| Dim | Min | Max |
| A | 9.5 | 11.5 |
| B | 9.7 | 10.5 |
| C | 8.4 | 9.0 |
| D | 0.28 | 0.64 |
| E | 0.68 | 0.94 |
| F | 4.55 | 5.6 |
| G | 4.04 | 5.10 |
| H | 1.14 | 1.4 |
| I | 0 | 0.2 |
| J | 4.9 | 6.05 |



MBRB30100CT THRU MBRB30200CT

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