

MBR3035CT THRU MBR30200CT

Schottky Diodes

Features

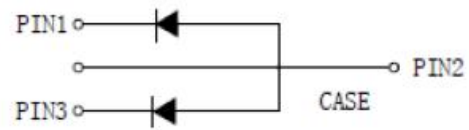
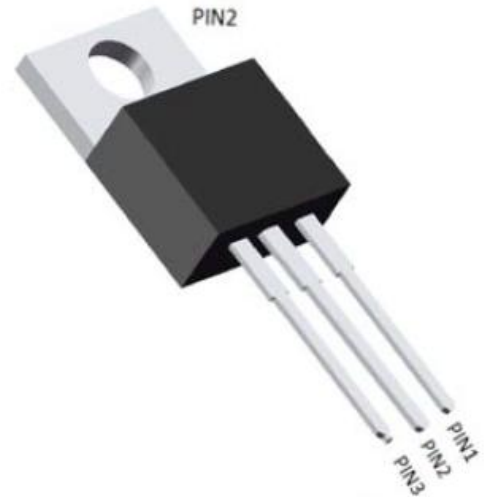
- High efficiency operation
- Guard ring for enhanced ruggedness and long term reliability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Solder dip maximum peak of 275 °C /7s, per JESD 22-B106

Typical Application

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

Mechanical Data

- Package: TO-220AB
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 | MBR30-CT | | | | | | | | | |
|-------------------------------------|-----------|------------------|--|------------|----|----|----|----|----|----|-----|-----|-----|
| | | | | 35 | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | 35 | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 |
| Average Rectified Output Current | I_O | A | 60HZ Half-sine wave, Resistance load, Tc(Fig.1) | 30 | | | | | | | | | |
| Surge(Nonrepetitive)Forward Current | I_{FSM} | A | 60HZ sine wave, 1 cycle, Ta=25°C | 200 | | | | | | | | | |
| Current Squared Time | I^2T | A ² S | 1ms≤t<8.3ms Tj =25°C, Rating of per diode | 167 | | | | | | | | | |
| Storage Temperature | T_{stg} | °C | | -55 ~ +150 | | | | | | | | | |
| Junction Temperature | T_j | °C | IN DC Forward Mode-Forward Operations , without reverse bias, t ≤1 h (Fig. 1)① | -55 ~ +155 | | | | | | | | | |

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

| PARAMETER | Symbol | Unit | Conditions | MBR30-CT | | | | | | | | | |
|----------------------|------------------|------|---------------------------|----------|----|-----|----|------|----|-----|-----|------|-----|
| | | | | 35 | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 |
| Peak Forward Voltage | V_{FM} | V | $I_{FM}=15A$ | 0.7 | | 0.8 | | 0.85 | | 0.9 | | 0.95 | |
| Peak Reverse Current | I_{RRM1} | mA | $V_{RM}=V_{RRM}$ | Ta=25°C | | | | | | | | | |
| | I_{RRM2} | | | 25 | | 15 | | 10 | | | | | |
| Thermal Resistance | $R_{\theta J-C}$ | °C/W | Between junction and case | 2.0 | | | | | | | | | |

NOTES:

Thermal resistance from junction to case per leg with heat-sink size of 2"x3"x0.25"A-L plate



■ Characteristics (Typical)

FIG1: Forward Current Derating Curve

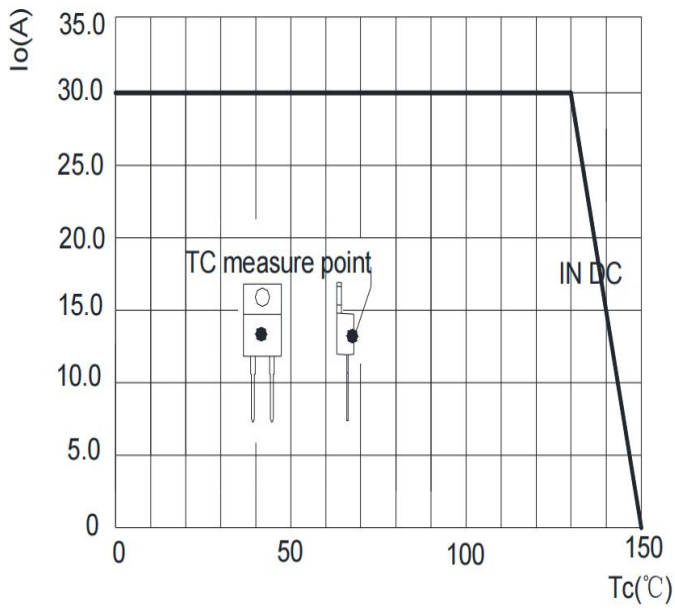


FIG2: Surge Forward Current Capability

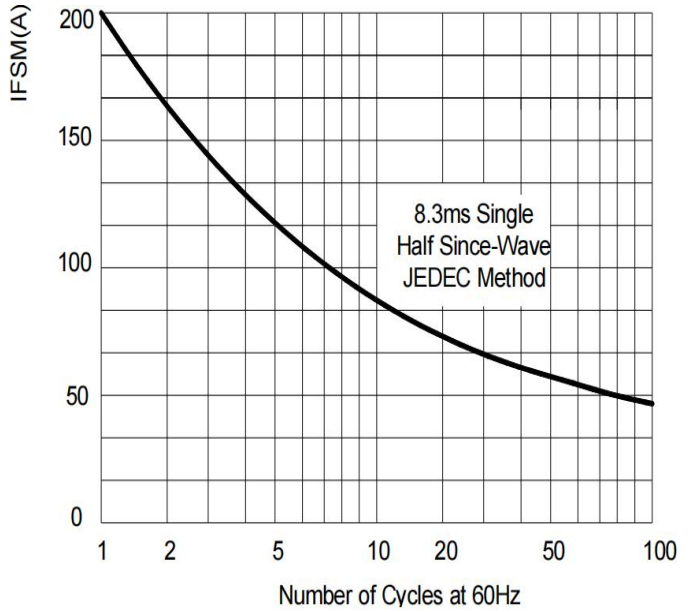


FIG3: Instantaneous Forward Voltage

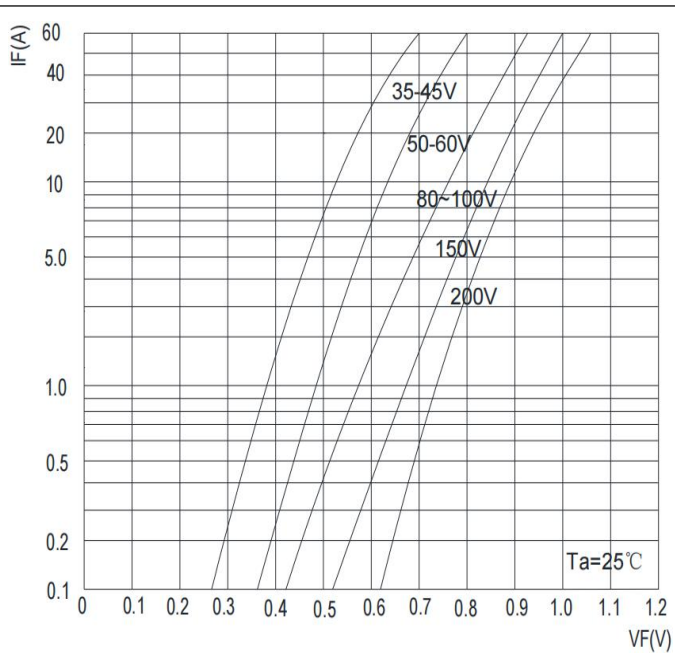
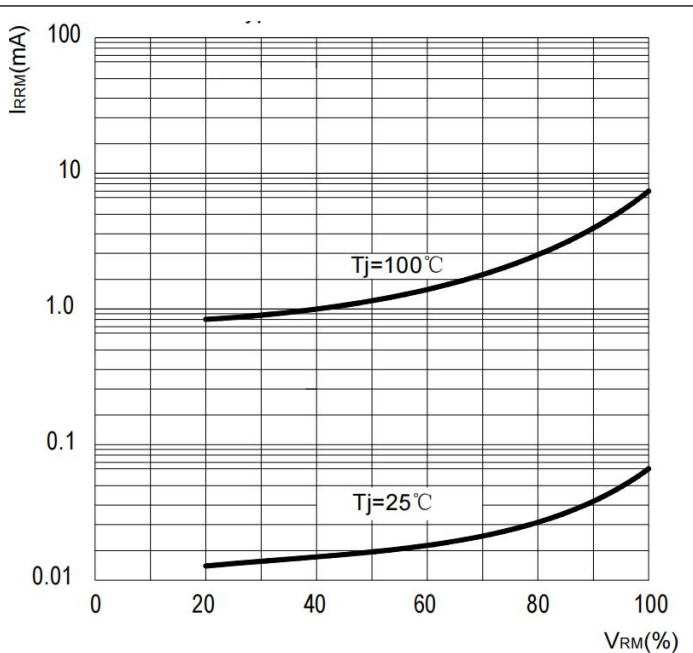


FIG4: Typical Reverse Characteristics



Ordering Information (Example)

| PREFERED | PACKAGE CODE | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|----------------------|--------------|----------------------|-------------------------|----------------------------|---------------|
| MBR3035CT~MBR30200CT | TO-220AB | 50 | 1000 | 5000 | Tube |

Outline Dimensions

