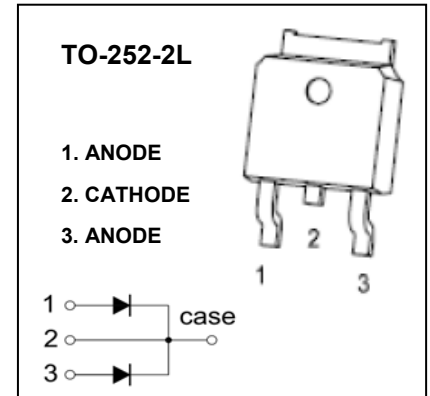


## **TO-252-2L Plastic-Encapsulate Diodes**

### **MBRD20100CT** SCHOTTKY BARRIER RECTIFIER

#### **FEATURES**

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications



#### **MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted )**

| Symbol          | Parameter                                                         | Value    | Unit                        |
|-----------------|-------------------------------------------------------------------|----------|-----------------------------|
| $V_{RRM}$       | Peak repetitive reverse voltage                                   | 100      | V                           |
| $V_{RWM}$       | Working peak reverse voltage                                      |          |                             |
| $V_R$           | DC blocking voltage                                               |          |                             |
| $V_{R(RMS)}$    | RMS reverse voltage                                               | 70       | V                           |
| $I_o$           | Average rectified output current @ $T_c=125^{\circ}\text{C}$      | 20       | A                           |
| $I_{FSM}$       | Non-Repetitive peak forward surge current<br>8.3ms half sine wave | 120      | A                           |
| $P_D$           | Power dissipation                                                 | 1.25     | W                           |
| $R_{\theta JA}$ | Thermal resistance from junction to ambient                       | 80       | $^{\circ}\text{C}/\text{W}$ |
| $T_j$           | Junction temperature                                              | 125      | $^{\circ}\text{C}$          |
| $T_{stg}$       | Storage temperature                                               | -55~+150 | $^{\circ}\text{C}$          |

#### **ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ unless otherwise specified)**

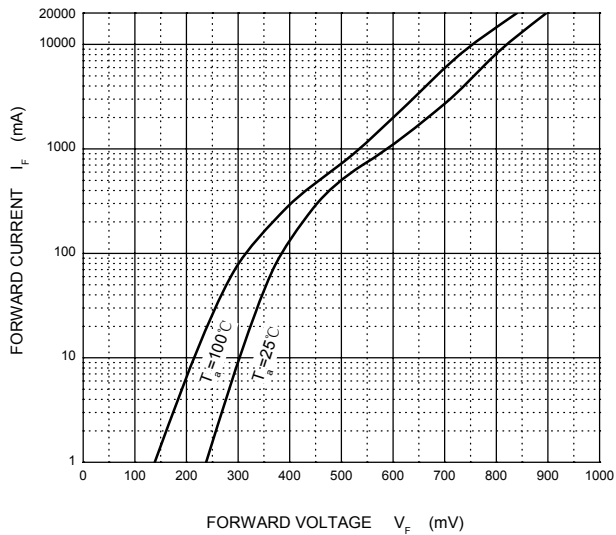
| Parameter       | Symbol     | Test conditions     | Min | Typ | Max | Unit |
|-----------------|------------|---------------------|-----|-----|-----|------|
| Reverse voltage | $V_{(BR)}$ | $I_R=1\text{mA}$    | 100 |     |     | V    |
| Reverse current | $I_R$      | $V_R=100\text{V}$   |     |     | 0.1 | mA   |
| Forward voltage | $V_{F1}$   | $I_{F1}=10\text{A}$ |     |     | 1   | V    |
| Forward voltage | $V_{F2*}$  | $I_{F2}=20\text{A}$ |     |     | 1.2 | V    |

\*Pulse test

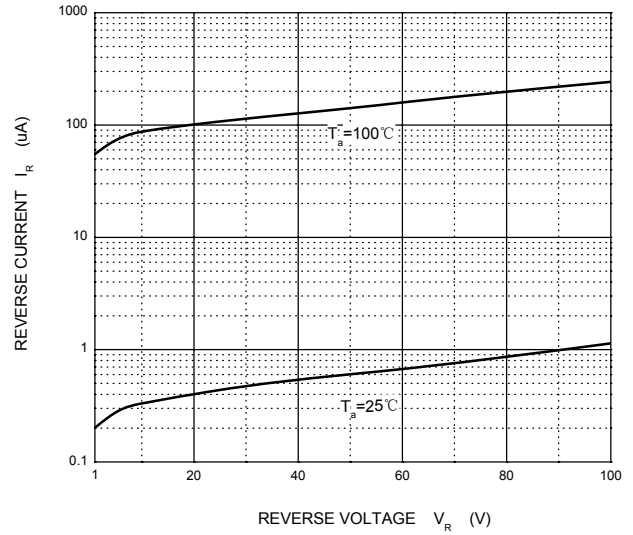
# Typical Characteristics

# MBRD20100CT

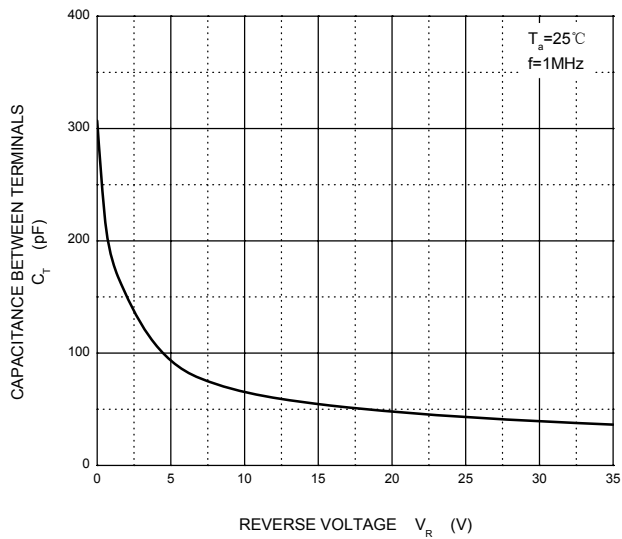
Forward Characteristics



Reverse Characteristics



Capacitance Characteristics



Power Derating Curve

