



MBR20100FCT, 150FCT, 200FCT

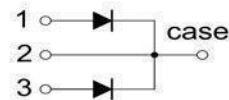
SCHOTTKY BARRIER RECTIFIER

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

TO-220F

1. ANODE
2. CATHODE
3. ANODE



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

| Symbol | Parameter | Value | | | Unit |
|-----------------|---|-------------|-------------|-------------|-----------------------------|
| | | MBR20100FCT | MBR20150FCT | MBR20200FCT | |
| V_{RRM} | Peak repetitive reverse voltage | 100 | 150 | 200 | V |
| V_{RWM} | Working peak reverse voltage | | | | |
| V_R | DC blocking voltage | | | | |
| $V_{R(RMS)}$ | RMS reverse voltage | 70 | 105 | 140 | V |
| I_O | Average rectified output current | 20 | | | A |
| I_{FSM} | Non-Repetitive peak forward surge current 8.3ms half sine wave | 150 | | | A |
| P_D | Power dissipation | 2 | | | W |
| $R_{\theta JA}$ | Thermal resistance from junction to ambient | 50 | | | $^{\circ}\text{C}/\text{W}$ |
| T_j | Junction temperature | 125 | | | $^{\circ}\text{C}$ |
| T_{stg} | Storage temperature | -55~+150 | | | $^{\circ}\text{C}$ |

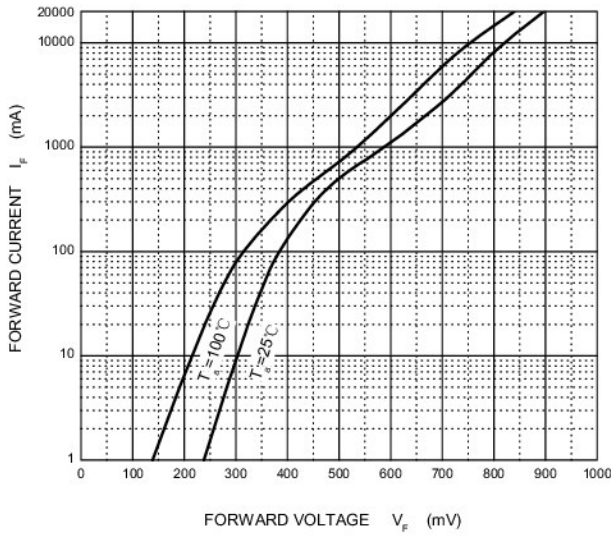
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter | Symbol | Device | Test conditions | Min | Typ | Max | Unit |
|-----------------|------------|-------------|-------------------|-----|------|-----|------|
| Reverse voltage | $V_{(BR)}$ | MBR20100FCT | $I_R=1\text{mA}$ | 100 | | | V |
| | | MBR20150FCT | | 150 | | | |
| | | MBR20200FCT | | 200 | | | |
| Reverse current | I_R | MBR20100FCT | $V_R=100\text{V}$ | | | 0.1 | mA |
| | | MBR20150FCT | $V_R=150\text{V}$ | | | 0.1 | |
| | | MBR20200FCT | $V_R=200\text{V}$ | | | 0.1 | |
| Forward voltage | V_{F1} | MBR20100FCT | $I_F=10\text{A}$ | | 0.82 | 1 | V |
| | | MBR20150FCT | | | 0.85 | 1 | |
| | | MBR20200FCT | | | 0.88 | 1 | |
| | V_{F2}^* | MBR20100FCT | $I_F=20\text{A}$ | | | 1.2 | V |
| | | MBR20150FCT | | | | 1.2 | |
| | | MBR20200FCT | | | | 1.2 | |

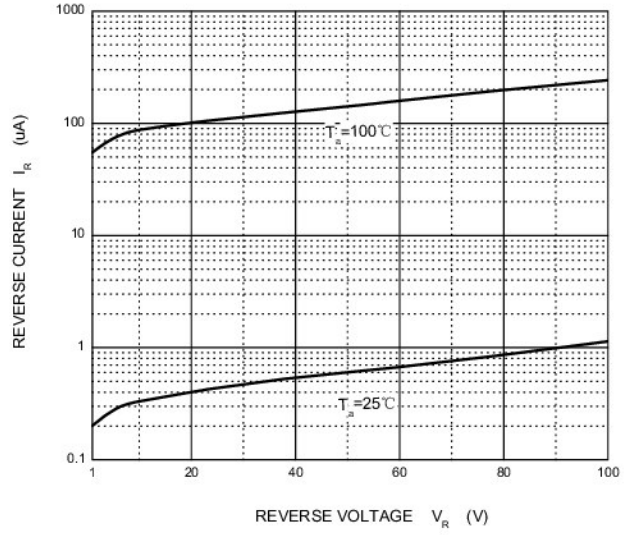
*Pulst test

Typical Characteristics

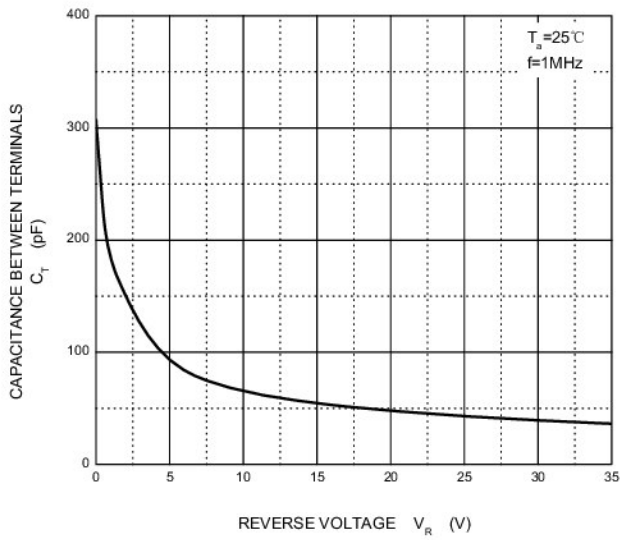
Forward Characteristics



Reverse Characteristics



Capacitance Characteristics



Power Derating Curve

