

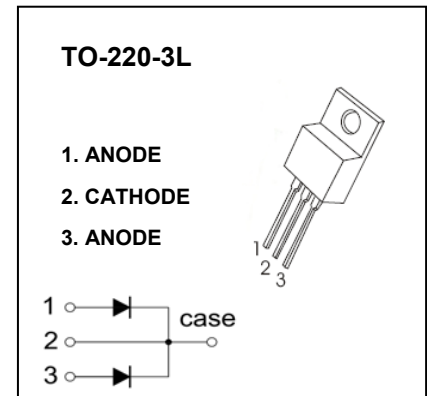


## TO-220-3L Plastic-Encapsulate Diodes

### MBR10200CT 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                                   | 200      | V                    |
| $V_{RWM}$       | Working peak reverse voltage                                      |          |                      |
| $V_R$           | DC blocking voltage   |          |                      |
| $V_{R(RMS)}$    | RMS reverse voltage   | 140      | V                    |
| $I_o$           | Average rectified output current                                  | 10       | A                    |
| $I_{FSM}$       | Non-Repetitive peak forward surge current<br>8.3ms half sine wave | 120      | A                    |
| $P_D$           | Power dissipation   | 2        | W                    |
| $R_{\theta JA}$ | Thermal resistance from junction to ambient                       | 50       | $^{\circ}\text{C/W}$ |
| $T_j$           | Junction temperature  | 125      | $^{\circ}\text{C}$   |
| $T_{stg}$       | Storage temperature   | -55~+150 | $^{\circ}\text{C}$   |

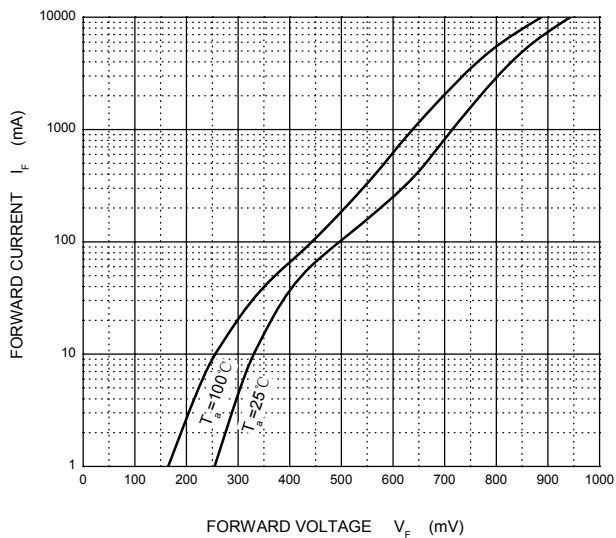
#### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ unless otherwise specified )

| Parameter                 | Symbol       | Test conditions                | Min | Typ | Max  | Unit          |
|---------------------------|--------------|--------------------------------|-----|-----|------|---------------|
| Reverse voltage           | $V_{(BR)}$   | $I_R=100\mu\text{A}$           | 200 |     |      | V             |
| Reverse current           | $I_R$        | $V_R=200\text{V}$              |     |     | 5    | $\mu\text{A}$ |
| Forward voltage           | $V_{F(1)}$   | $I_F=5\text{A}$                |     |     | 0.84 | V             |
|                           | $V_{F(2)^*}$ | $I_F=10\text{A}$               |     |     | 0.95 | V             |
| Typical total capacitance | $C_{tot}$    | $V_R=4\text{V}, f=1\text{MHz}$ |     | 300 |      | pF            |

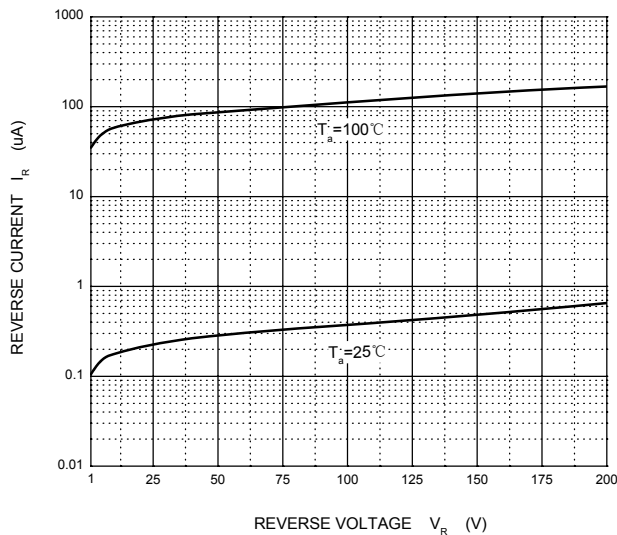
\*Pulse test

# MBR10200CT

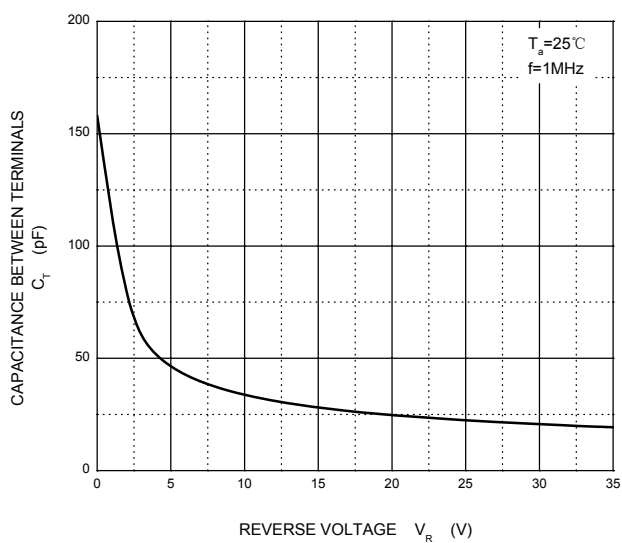
Forward Characteristics



Reverse Characteristics



Capacitance Characteristics



Power Derating Curve

