

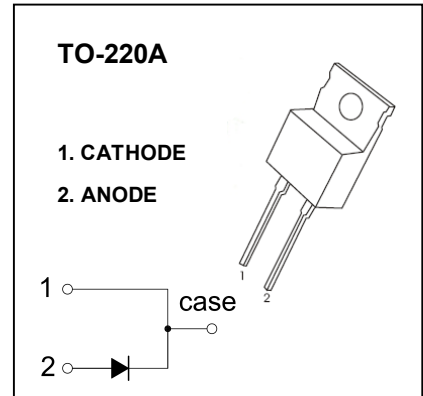
TO-220A Plastic-Encapsulate Diodes

MBR10150,200

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



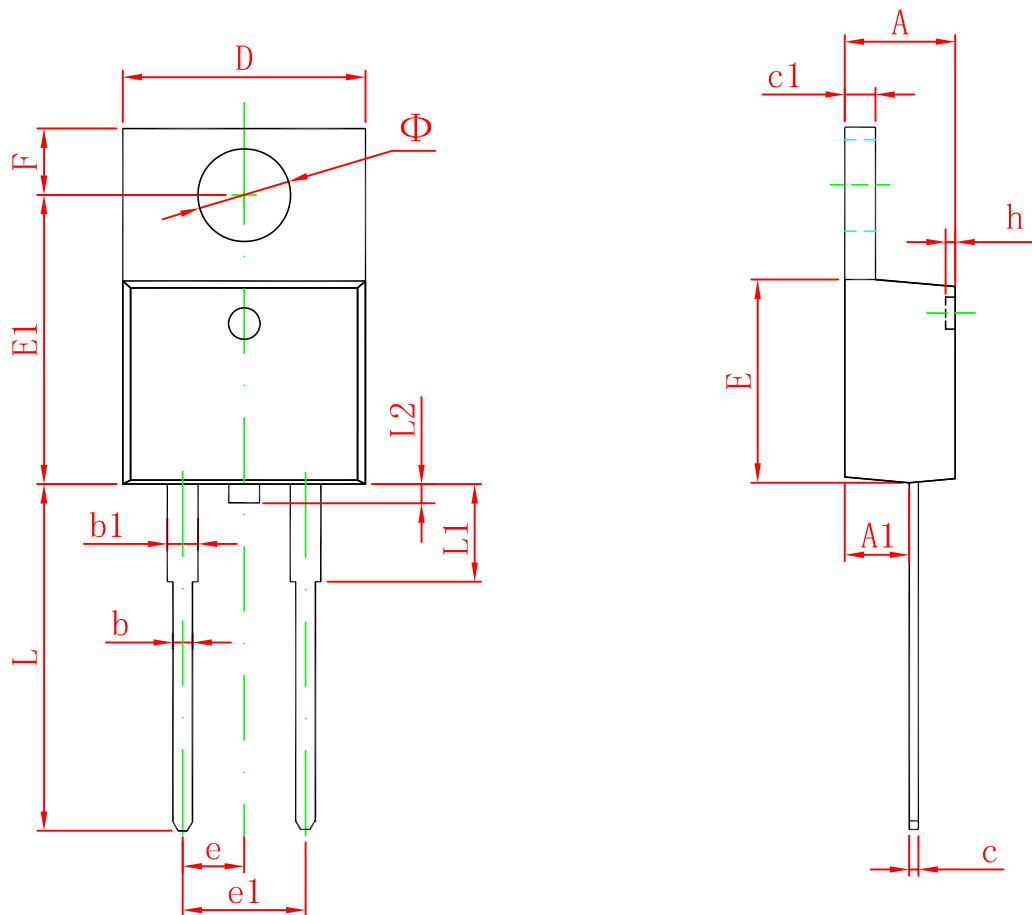
MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

| Symbol | Parameter | Value | | Unit |
|-----------------|---|----------|----------|--------------------|
| | | MBR10150 | MBR10200 | |
| V_{RRM} | Peak repetitive reverse voltage | 150 | 200 | V |
| V_{RWM} | Working peak reverse voltage | | | |
| V_R | DC blocking voltage | | | |
| $V_{R(RMS)}$ | RMS reverse voltage | 105 | 140 | V |
| I_O | Average rectified output current | 10 | | 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 | | $^\circ\text{C/W}$ |
| 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 | $V_{(BR)}$ | MBR10150 | $I_R=0.1\text{mA}$ | 150 | | | V |
| | | MBR10200 | | 200 | | | |
| Reverse current | I_R | MBR10150 | $V_R=150\text{V}$ | | | 9 | μA |
| | | MBR10200 | $V_R=200\text{V}$ | | | | |
| Forward voltage | V_F | MBR10150 | $I_F=10\text{A}$ | | | 1 | V |
| | | MBR10200 | | | | 1.05 | |
| Typical junction capacitance | C_j | MBR10150 | $V_R=4\text{V}, f=1\text{MHz}$ | | 500 | | pF |
| | | MBR10200 | | | 200 | | |

TO-220A Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|--------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 4.470 | 4.670 | 0.176 | 0.184 |
| A1 | 2.520 | 2.820 | 0.099 | 0.111 |
| b | 0.710 | 0.910 | 0.028 | 0.036 |
| b1 | 1.170 | 1.370 | 0.046 | 0.054 |
| c | 0.310 | 0.530 | 0.012 | 0.021 |
| c1 | 1.170 | 1.370 | 0.046 | 0.054 |
| D | 10.010 | 10.310 | 0.394 | 0.406 |
| E | 8.500 | 8.900 | 0.335 | 0.350 |
| E1 | 12.060 | 12.460 | 0.475 | 0.491 |
| e | 2.540 TYP | | 0.100 TYP | |
| e1 | 4.980 | 5.180 | 0.196 | 0.204 |
| F | 2.590 | 2.890 | 0.102 | 0.114 |
| h | 0.000 | 0.300 | 0.000 | 0.012 |
| L | 13.400 | 13.800 | 0.528 | 0.543 |
| L1 | 3.560 | 3.960 | 0.140 | 0.156 |
| L2 | | 1.000 | | 0.039 |
| Φ | 3.735 | 3.935 | 0.147 | 0.155 |