

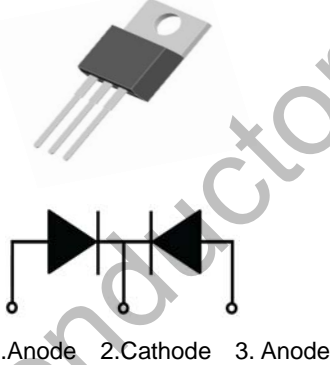


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|--|---|
|  <p>MBR10150SCT</p> <p>Features:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Low power loss, high efficiency. High surge capacity <input type="checkbox"/> For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications. <input type="checkbox"/> Metal silicon junction, majority carrier conduction. <input type="checkbox"/> High current Capability, low forward voltage drop. <input type="checkbox"/> Guard ring for over voltage protection. |  <p style="text-align: center;">TO-220</p>  <p style="text-align: center;">1. Anode 2. Cathode 3. Anode</p> |
|--|---|

Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|--------------------|----------|------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 150 | V |
| Maximum RMS Voltage | V_{RMS} | 105 | V |
| Maximum DC Blocking Voltage | $V_{R(DC)}$ | 150 | V |
| Maximum Average Forward Current | $I_{F(AV)}$ | 10 | A |
| Peak Forward Surge Current:8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 120 | A |
| Maximum Forward Voltage @5A | V_F | 0.90 | V |
| Maximum DC Reverse Current | $T_j=25^{\circ}C$ | 0.1 | mA |
| | $T_j=125^{\circ}C$ | 20 | mA |
| Maximum Operating Junction Temperature | T_j | 150 | °C |
| Storage Temperature | T_{stg} | -40~+150 | °C |

Typical Characteristics

RATING AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

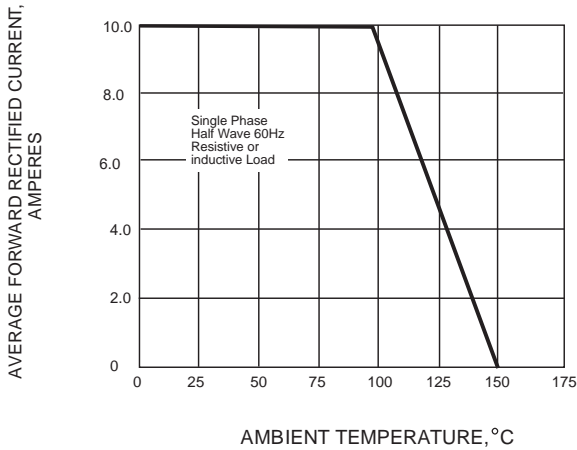


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

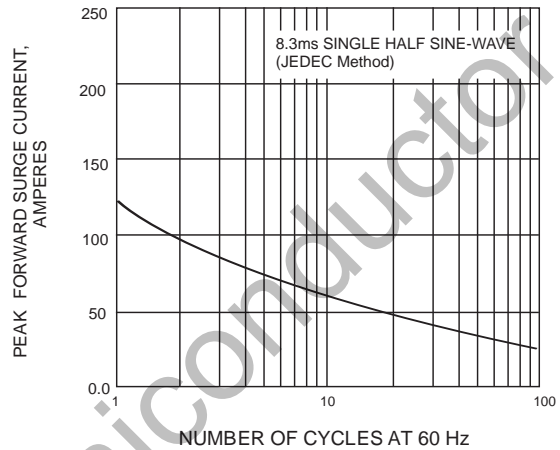


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

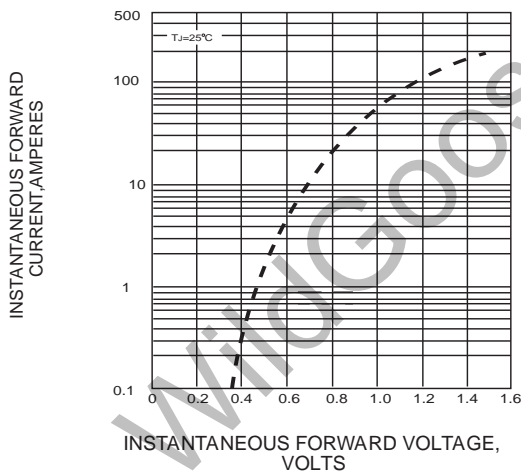
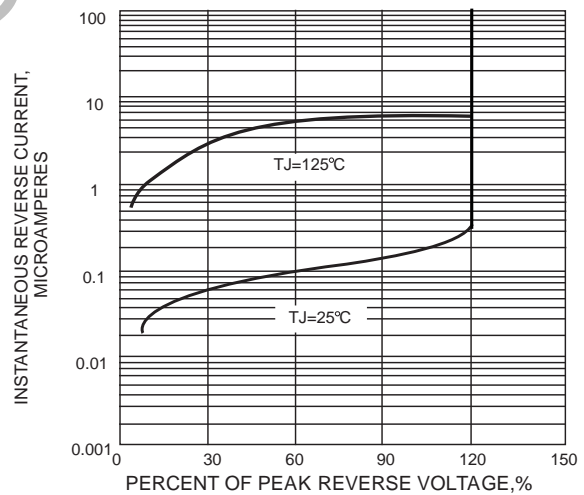


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



Package Dimension

TO-220

UNIT: mm

| SYMBOL | min | nom | max | SYMBOL | min | nom | max |
|--------|-------|-----|-------|----------|-------|------|-------|
| A | 4.00 | | 4.80 | E | 9.70 | | 10.70 |
| B | 1.15 | | 1.45 | e | | 2.54 | |
| B1 | 0.90 | | 1.40 | F | 1.10 | | 1.40 |
| b1 | 0.65 | | 0.95 | L | 12.50 | | 14.50 |
| c | 0.30 | | 0.50 | L1 | 2.90 | 3.40 | 3.90 |
| D | 14.40 | | 16.40 | Q | 2.50 | | 3.10 |
| D1 | 5.90 | | 6.90 | Q1 | 2.00 | | 3.00 |
| | | | | ϕP | 3.60 | | 4.00 |

