

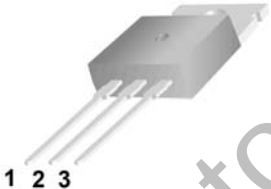
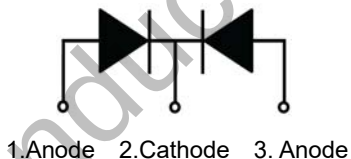


## MBR20150SCT

**Features:**

- ☐ Low power loss, high efficiency.  
High surge capacity
- ☐ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ☐ Metal silicon junction, majority carrier conduction.
- ☐ High current Capability, low forward voltage drop.
- ☐ Guard ring for over voltage protection.

TO-220 

1. Anode 2. Cathode 3. Anode

**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                                                                   |          | $I_{F(AV)}$ | 20       | A    |
| Peak Forward Surge Current: 8.3ms single half sine-wave superimposed on rated load (JEDEC method) |          | $I_{FSM}$   | 150      | A    |
| Maximum Forward Voltage                                                                           |          | $V_F$       | 0.89     | V    |
| Maximum DC Reverse Current                                                                        | Tj=25°C  | $I_R$       | 0.1      | mA   |
|                                                                                                   | Tj=125°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

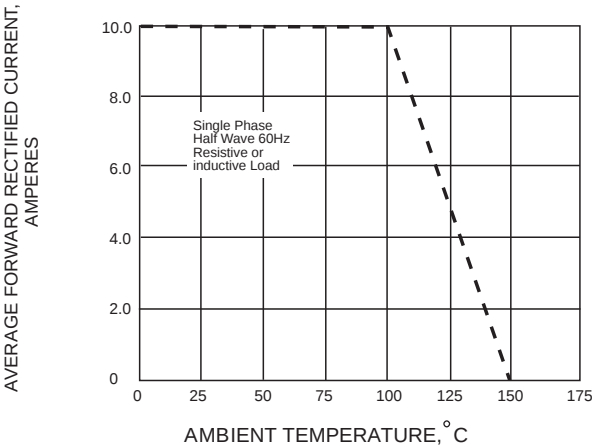


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

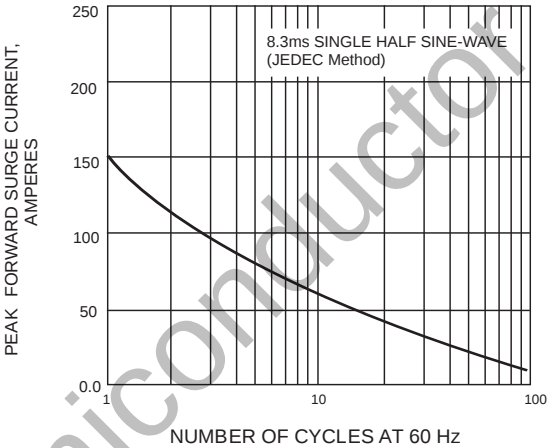


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

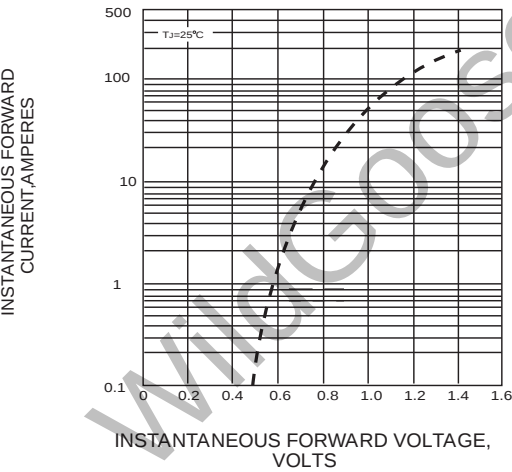
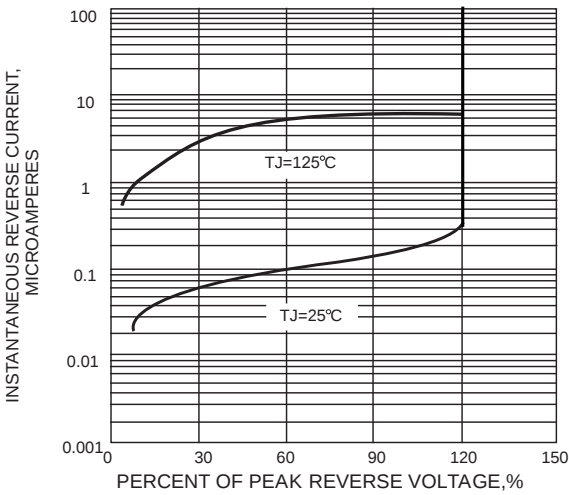
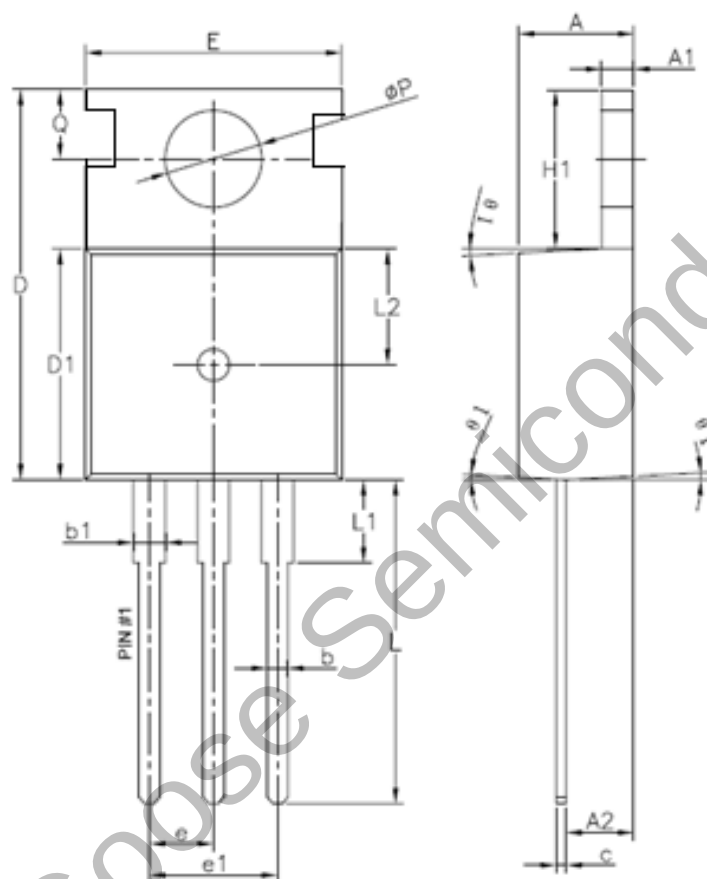


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



**Package Dimension**

TO-220



Unit: mm

| Symbol | Min  | Normal | Max  | Symbol         | Min  | Normal | Max  |
|--------|------|--------|------|----------------|------|--------|------|
| A      | 4.4  | 4.5    | 4.6  | e              |      | 2.54   |      |
| A1     | 1.27 | 1.3    | 1.33 | e1             |      | 5.08   |      |
| A2     | 2.3  | 2.4    | 2.5  | H1             | 6.3  | 6.5    | 6.7  |
| b      | 0.7  | /      | 0.9  | L              | 13.0 | 13.38  | 13.5 |
| b1     | 1.25 | /      | 1.42 | L1             | /    | /      | 3.5  |
| c      | 0.45 | 0.5    | 0.6  | L2             |      | 4.6    |      |
| D      | 15.3 | 15.7   | 16.1 | $\Phi P$       | 3.55 | 3.6    | 3.65 |
| D1     | 9.1  | 9.2    | 9.3  | Q              | 2.73 | /      | 2.87 |
| E      | 9.7  | 9.9    | 10.2 | $\theta_1$ (°) | 1    | 3      | 5    |