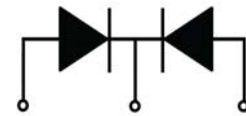
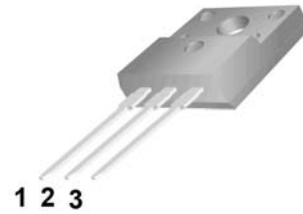


MBRF4040CT-MBRF40200CT
Features:

- 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-220F


1.Anode 2.Cathode 3. Anode

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

| Parameter | Symbol | MBRF 4040 CT | MBRF 4045 CT | MBRF 4050 CT | MBRF 4060 CT | MBRF 4080 CT | MBRF 4090 CT | MBRF 40100 CT | MBRF 40150 CT | MBRF 40200 CT | Unit |
|--|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 | V |
| Maximum RMS Voltage | V_{RMS} | 28 | 31.5 | 35 | 42 | 56 | 63 | 70 | 105 | 140 | |
| Maximum DC Blocking Voltage | $V_{R(DC)}$ | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 | |
| Maximum Average Forward Current | $I_{F(AV)}$ | 40 | | | | | | | | | A |
| Peak Forward Surge Current:8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 350 | | | | | | | | | |
| Maximum Forward Voltage at 20A per leg | V_F | 0.65 | | 0.72 | | | 0.82 | | 0.92 | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $T_j=25^\circ\text{C}$ | 0.1 | | | | | | | 0.05 | | mA |
| | $T_j=125^\circ\text{C}$ | 20 | | | | | | | | | |
| Maximum Operating Junction Temperature | T_j | 150 | | | | 175 | | | | | °C |
| Storage Temperature | T_{stg} | -55~+150 | | | | -65~+175 | | | | | |
| Typical Thermal Resistance | $R_{\theta JC}$ | 1.3 | | | | | | | | | °C/W |

Typical Characteristics

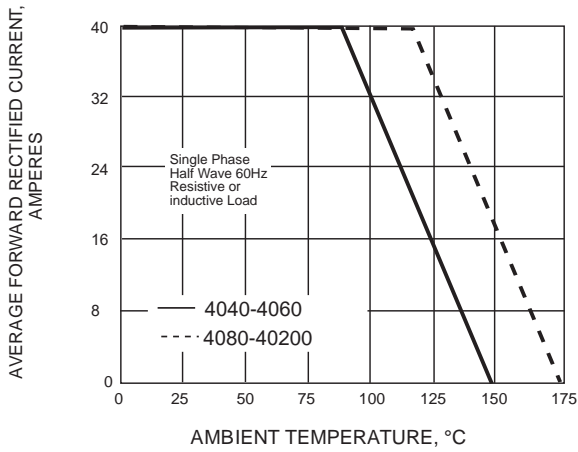


Fig.1 FORWARD CURRENT DERATING CURVE

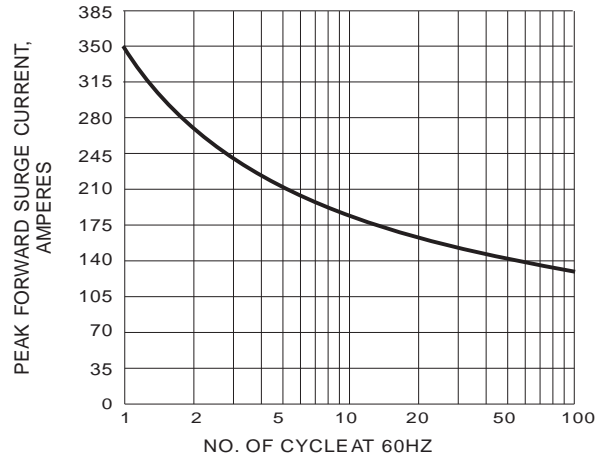


Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

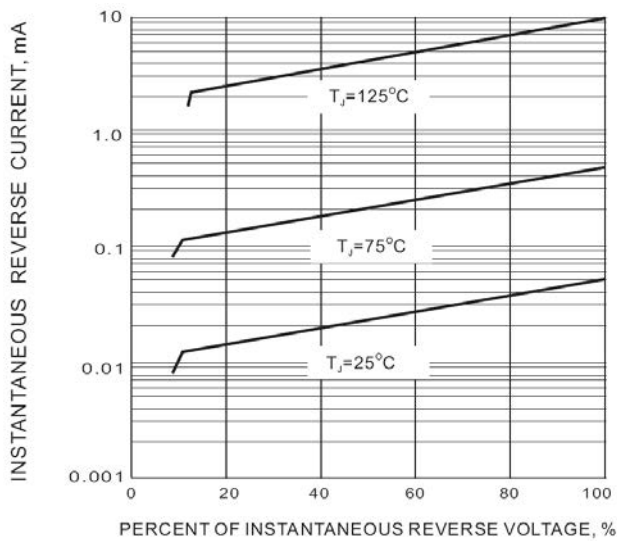


Fig 3. TYPICAL REVERSE CHARACTERISTIC

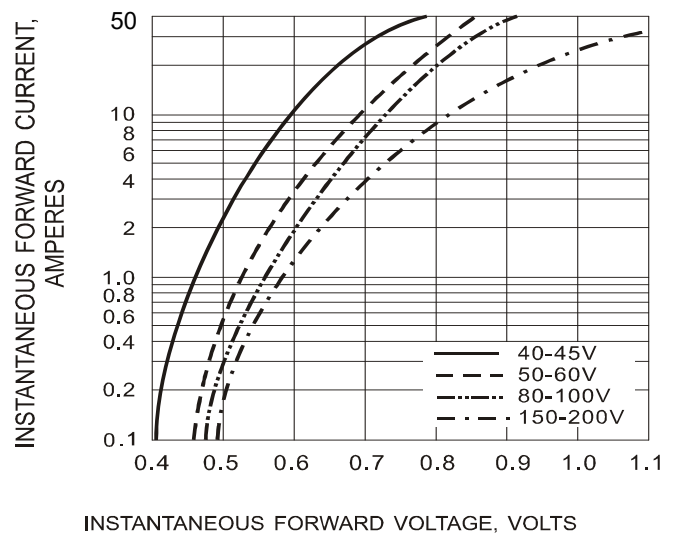
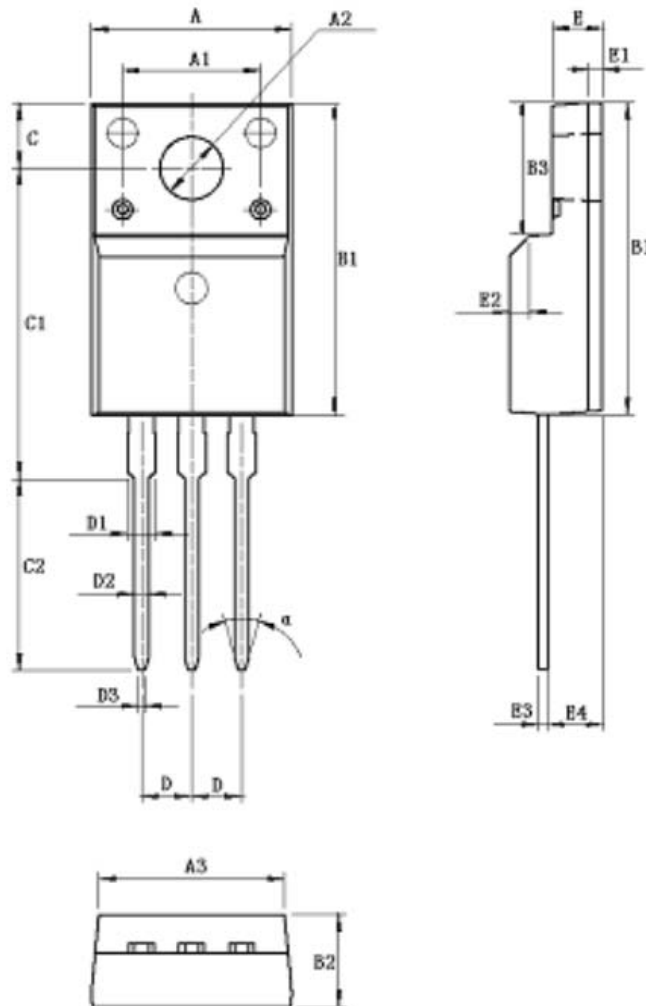


Fig 4. TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

Package Dimension
TO-220F

Units: mm



| Symbol | Min | Max | Symbol | Min | Max |
|--------|-------|-------|--------|---------|------|
| A | 9.96 | 10.36 | D | 2.54 | |
| A1 | 7.00 | | D1 | 1.15 | 1.35 |
| A2 | 3.08 | 3.28 | D2 | 0.70 | 0.90 |
| A3 | 9.25 | 9.65 | D3 | 0.28 | 0.48 |
| B1 | 15.70 | 16.10 | E | 2.34 | 2.74 |
| B2 | 4.50 | 4.90 | E1 | 0.70 | |
| B3 | 6.20 | 6.80 | E2 | 1.0×45° | |
| C | 3.20 | 3.40 | E3 | 0.36 | 0.65 |
| C1 | 15.20 | 16.00 | E4 | 2.55 | 2.95 |
| C2 | 9.75 | 10.15 | a(度) | 30° | |