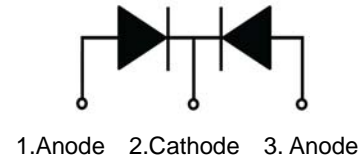
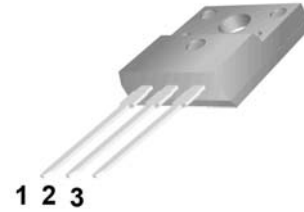


MBRF1040CT-MBRF10200CT

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



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

| Parameter | Symbol | MBRF 1040 CT | MBRF 1045 CT | MBRF 1050 CT | MBRF 1060 CT | MBRF 1080 CT | MBRF 1090 CT | MBRF 10100 CT | MBRF 10150 CT | MBRF 10200 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)} | 10 | | | | | | | | | A |
| Peak Forward Surge Current:8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 150 | | | | | | | | | |
| Maximum Forward Voltage at 5A per leg | V _F | 0.65 | 0.72 | | 0.85 | | | 0.92 | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | T _j =25°C | 0.1 | | | | | | | | | mA |
| | T _j =125°C | 20 | | | | | | | | | |
| Maximum Operating Junction Temperature | T _j | 150 | | | | 175 | | | | | °C |
| Storage Temperature | T _{stg} | -55~+150 | | | | -65~+175 | | | | | |
| Typical Thermal Resistance | R _{θJC} | 1.4 | | | | | | | | | °C/W |

Typical Characteristics

RATING AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

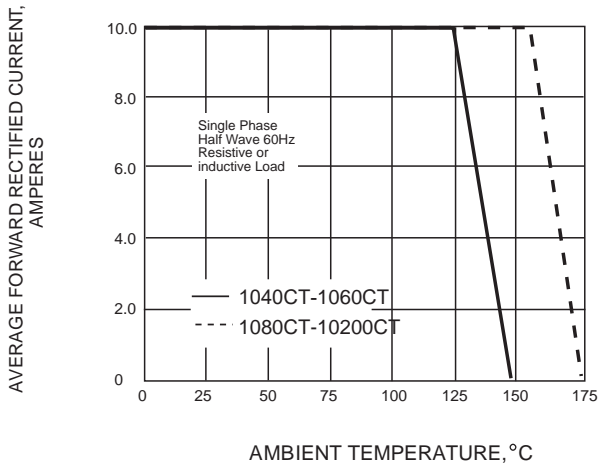


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

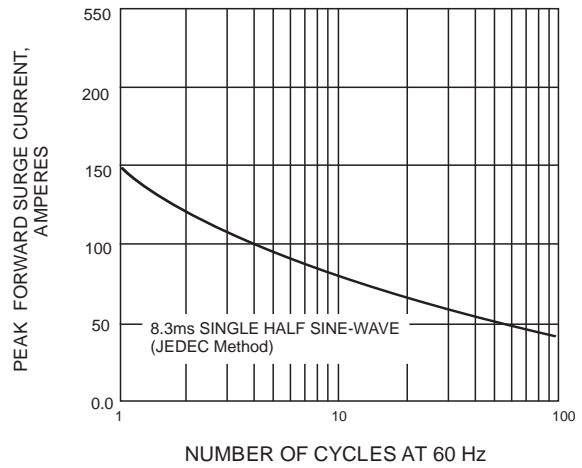


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

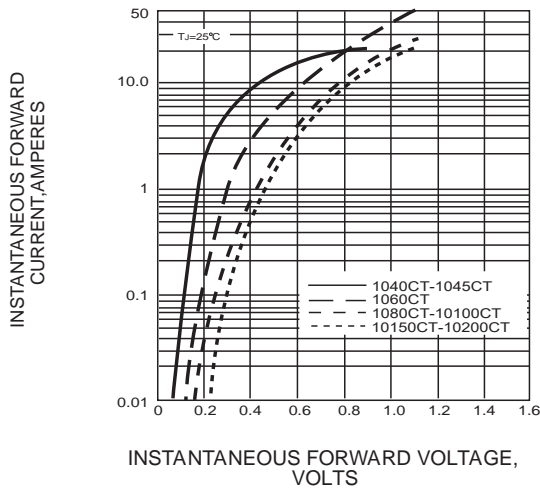
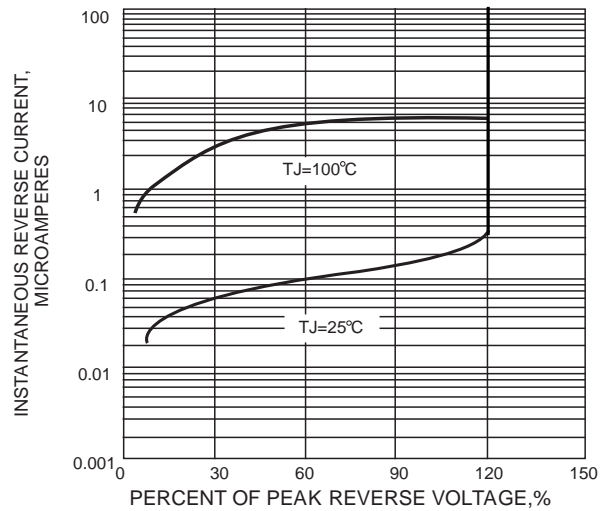
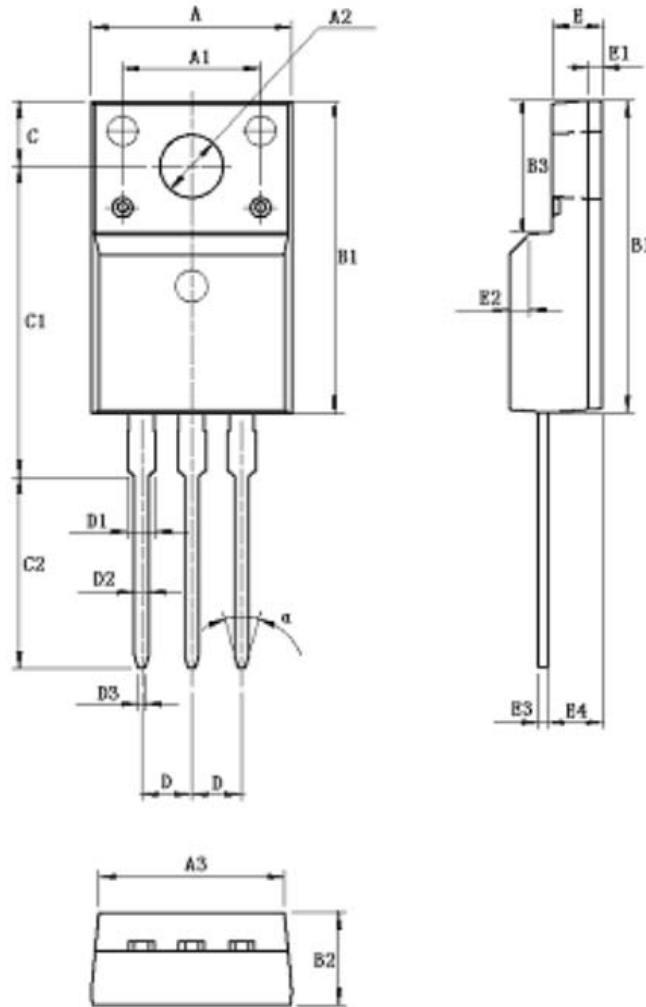


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



Package Dimension
TO-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° | |