

Features

- High Surge Forward Current Capacity
- Low Power Loss and High Efficiency
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance:2.0°C/W Junction to Case

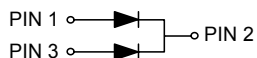
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBRL2045FCT | MBRL2045FCT | 45V | 31.5V | 45V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---------------------------------------|-------------|--------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 20A | $T_C=90^\circ C$ |
| Peak Forward Surge Current | I_{FSM} | 150A | 8.3ms, Half Sine |
| Current Squared Time | I^2t | 94A ² S | 1ms ≤ t < 8.3ms $T_j=25^\circ C$, Rating of Per Diode |
| Maximum Instantaneous Forward Voltage | V_F | 0.52V | $I_{FM}=10A$ $T_A=25^\circ C$ |
| Peak Reverse Current | I_R | 0.2mA 20mA | $T_A=25^\circ C$ $T_A=100^\circ C$ |

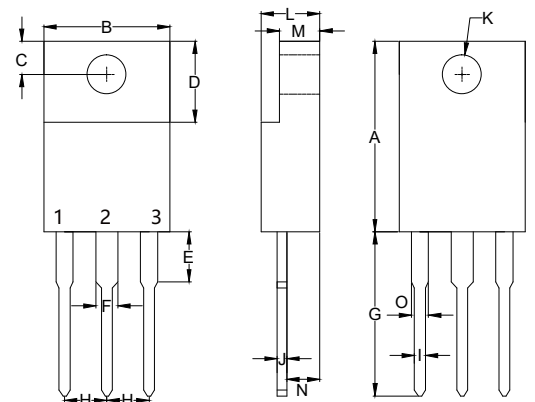
Note :1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

Internal Structure



20 Amp Low VF Schottky Barrier Rectifier 45Volts

ITO-220AB



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.567 | 0.642 | 14.40 | 16.30 | |
| B | ----- | 0.421 | ----- | 10.70 | |
| C | 0.085 | 0.128 | 2.15 | 3.25 | |
| D | 0.248 | 0.272 | 6.30 | 6.90 | |
| E | ----- | 0.177 | ----- | 4.50 | |
| F | ----- | 0.071 | ----- | 1.80 | |
| G | 0.500 | 0.539 | 12.70 | 14.20 | |
| H | 0.100 | | 2.55 | | |
| I | ----- | 0.035 | ----- | 0.90 | |
| J | ----- | 0.032 | ----- | 0.80 | |
| K | 0.102 | 0.150 | 2.60 | 3.80 | Φ |
| L | ----- | 0.201 | ----- | 5.10 | |
| M | ----- | 0.140 | ----- | 3.56 | |
| N | 0.083 | 0.126 | 2.10 | 3.20 | |
| O | ----- | 0.071 | ----- | 1.80 | |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

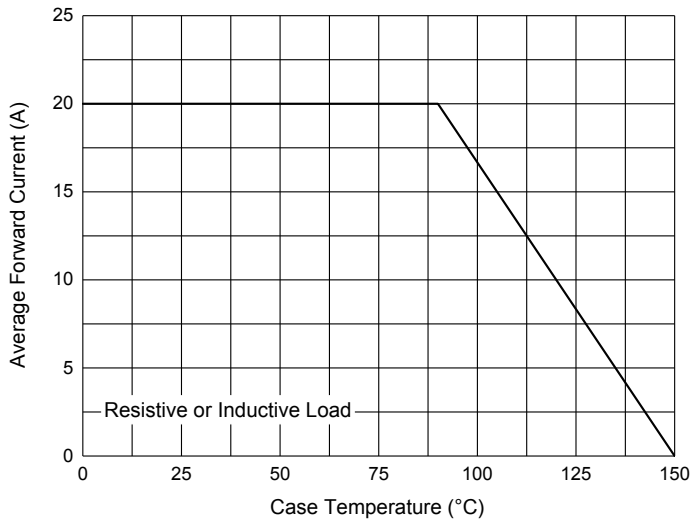


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

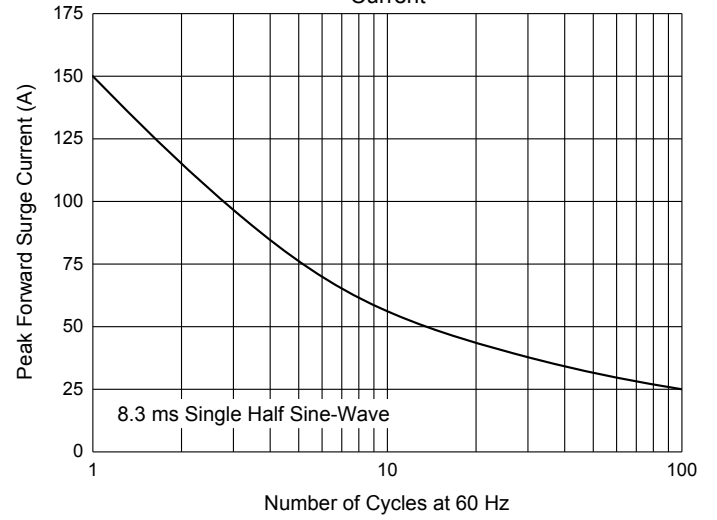


Fig. 3 - Typical Instantaneous Forward Characteristics

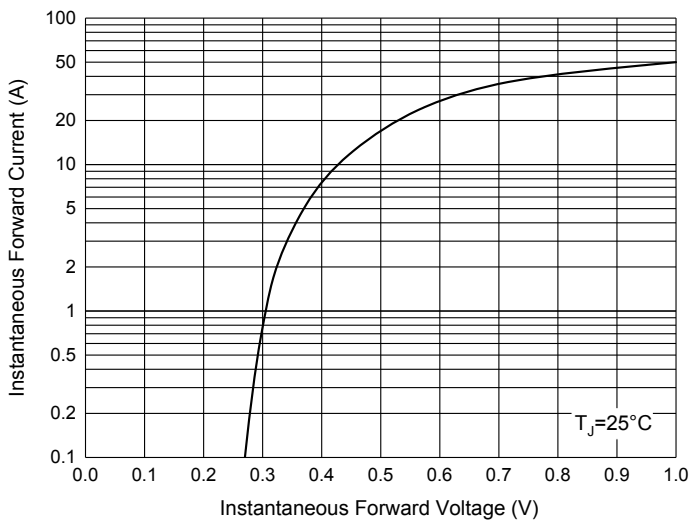


Fig. 4 - Typical Reverse Leakage Characteristics

