

Features

- Low Power Loss, High Efficiency
- Guardring For Overvoltage Protection
- Low Forward Voltage Drop And High Frequency Operation
- For Use in High Frequency Inverters,Free Wheeling And Polarity Protection Applications
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance Per Leg: 4.0°C/W Junction to Case

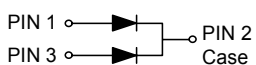
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBR30150FCT | MBR30150FCT | 150V | 105V | 150V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|--|-------------|------------|----------------------------|
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 30A | (See Fig.1) |
| Peak Forward Surge Current | I_{FSM} | 260A | 8.3ms,Half Sine |
| Peak Repetitive Reverse Current Per Leg | I_{RRM} | 1.0A | $t_p = 2.0\mu s, 1KHz$ |
| Voltage Rate of Change (Rated V_R) | dv/dt | 10,000V/us | |
| Maximum Instantaneous Forward Voltage Per Leg (Note 5) | V_F | 0.90V | $I_F=15A, T_C=25^\circ C$ |
| | | 0.75V | $I_F=15A, T_C=125^\circ C$ |
| | | 0.99V | $I_F=30A, T_C=25^\circ C$ |
| | | 0.86V | $I_F=30A, T_C=125^\circ C$ |
| Maximum Reverse Current Per Leg at Working Peak Reverse Voltage | I_R | 5.0μA | $T_J=25^\circ C$ |
| | | 1.0mA | $T_J=125^\circ C$ |
| RMS Isolation Voltage (MBRF type only) From Terminals to Heatsink With $t = 1.0$ Second, RH ≤30% | V_{ISOL} | 4500V | (Note 2) |
| | | 3500V | (Note 3) |
| | | 1500V | (Note 4) |

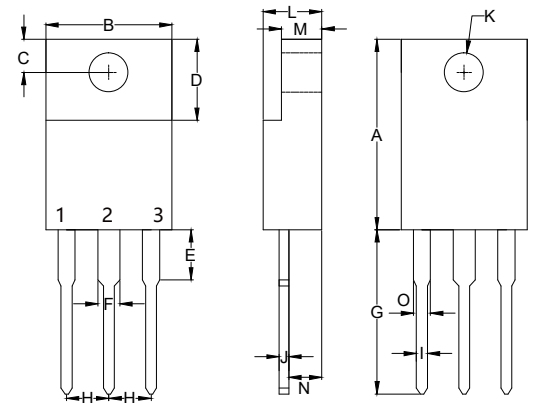
- Note : 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
 2. Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
 3. Clip mounting (on case), where leads do overlap heatsink
 4. Screw mounting with 4-40 screw, where washer diameter is < 4.9 mm (0.19")
 5. Pulse test: 300us pulse width, 1% duty cycle

Internal Structure



**30 Amp
Schottky Barrier
Rectifier
150 Volts**

ITO-220AB



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|-------|-------|------|
| | INCHES | | MM | | |
| | 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

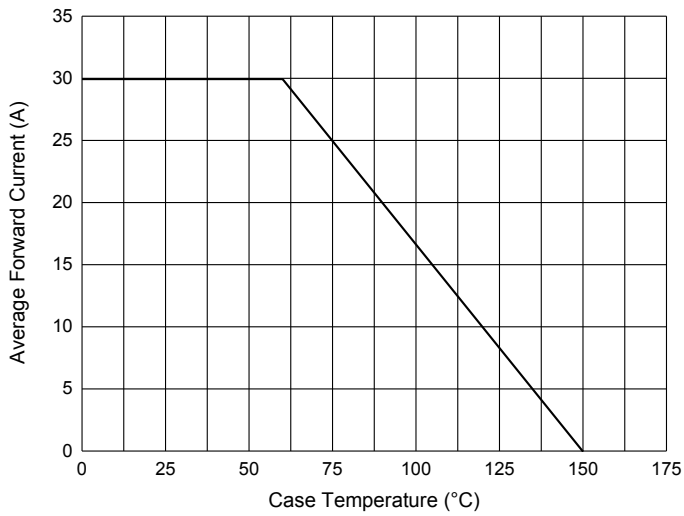


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

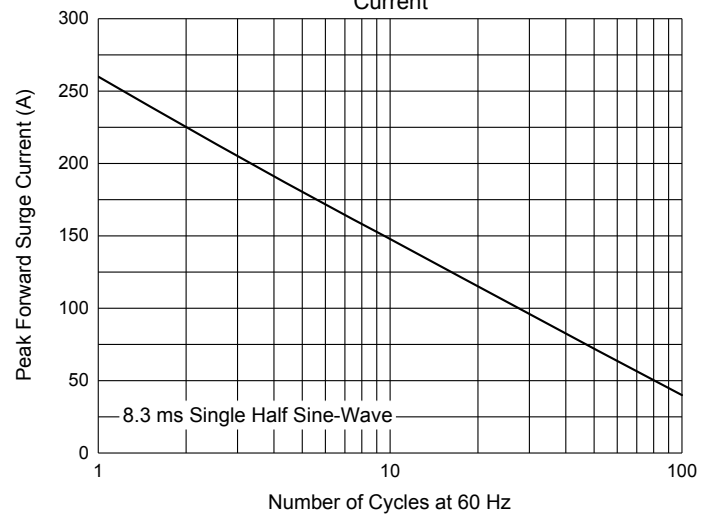


Fig. 3 - Typical Instantaneous Forward Characteristics

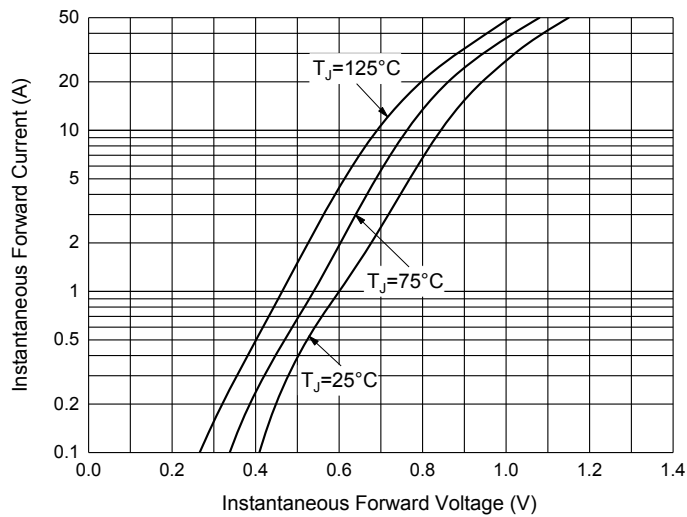
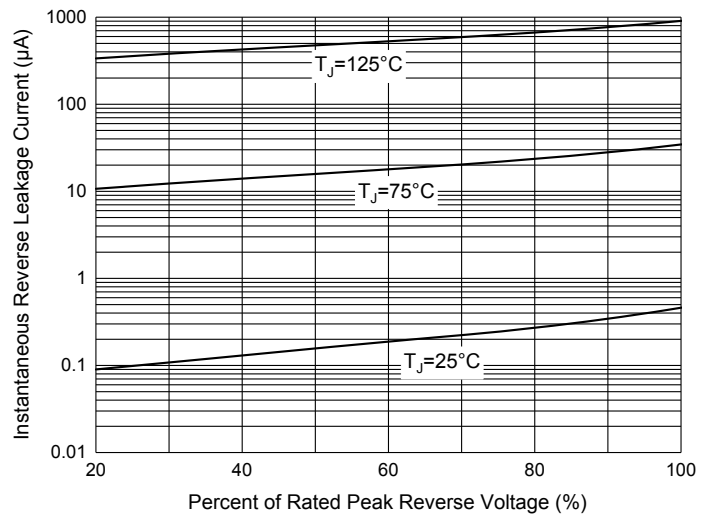


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

| Device | Packing |
|----------------|---|
| Part Number-BP | Bulk:50pcs/Tube, 1Kpcs/Box,5Kpcs/Carton |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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