

Features

- Low Forward Voltage Drop
- High Frequency Properties And Switching Speed
- High Current Capability
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Guard Ring For Over-Voltage Protection
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Maximum Thermal Resistance: 4.5°C/W Junction to Case

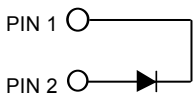
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBR545F | MBR545F | 45V | 31.5V | 45V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|----------------|---|
| Average Forward Current | $I_{F(AV)}$ | 5A | $T_C=120^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 80A | 8.3ms, Half Sine |
| Maximum Instantaneous Forward Voltage | V_F | 0.55V 0.49V | $I_F=5A ; T_J=25^\circ\text{C}$ $I_F=5A ; T_J=125^\circ\text{C}$ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 0.1mA 20mA | $T_J=25^\circ\text{C};$ $T_J=125^\circ\text{C}$ |

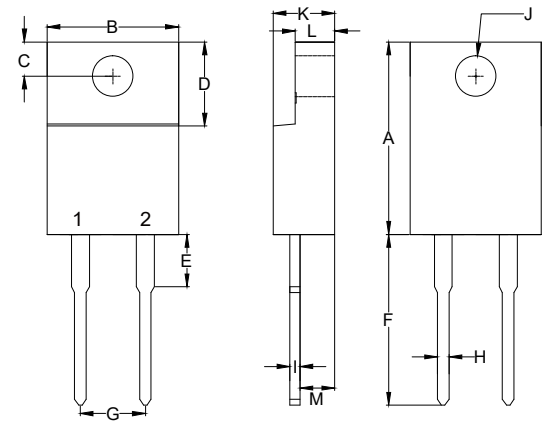
Note :1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

Internal Structure



**5 Amp
Schottky
Barrier Rectifier
45 Volts**

ITO-220AC



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|-------|-------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.567 | 0.606 | 14.40 | 15.40 | |
| B | ---- | 0.406 | ---- | 10.30 | |
| C | 0.100 | 0.112 | 2.55 | 2.85 | |
| D | 0.248 | 0.272 | 6.30 | 6.90 | |
| E | ---- | 0.161 | ---- | 4.10 | |
| F | 0.500 | 0.543 | 12.70 | 13.80 | |
| G | 0.200 | | 5.10 | | |
| H | ---- | 0.035 | ---- | 0.90 | |
| I | ---- | 0.032 | ---- | 0.80 | |
| J | 0.102 | 0.134 | 2.60 | 3.40 | Φ |
| K | ---- | 0.189 | ---- | 4.80 | |
| L | ---- | 0.123 | ---- | 3.10 | |
| M | 0.098 | 0.114 | 2.50 | 2.90 | |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

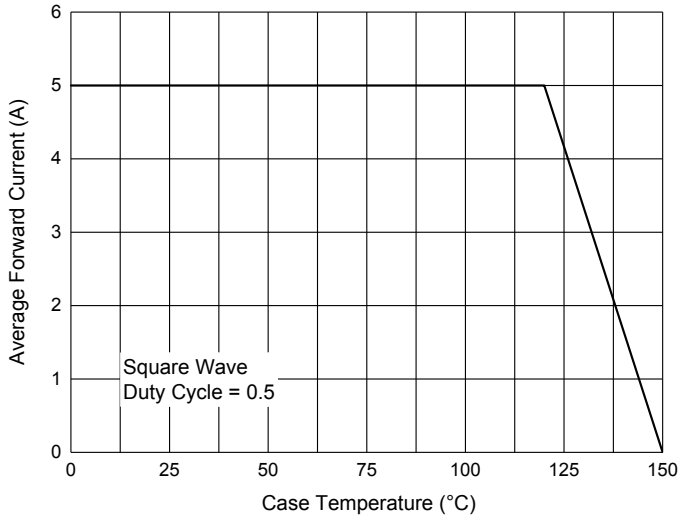


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

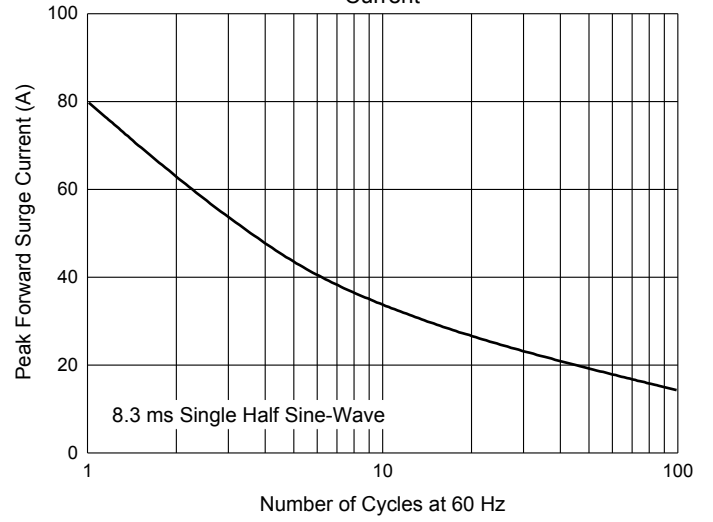


Fig. 3 - Typical Forward Characteristics

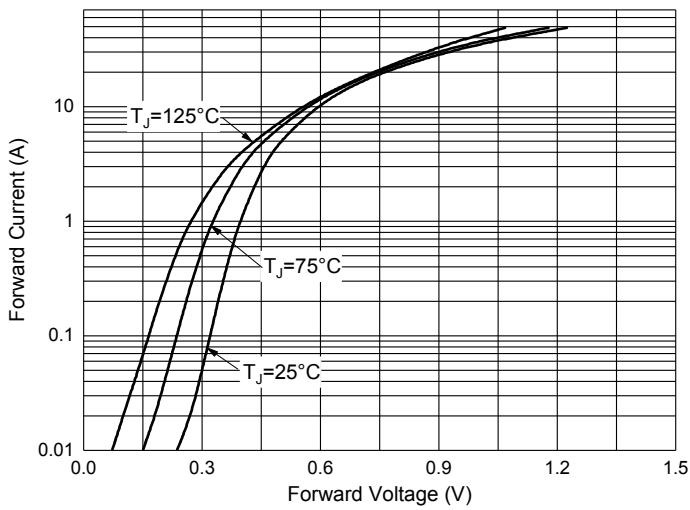
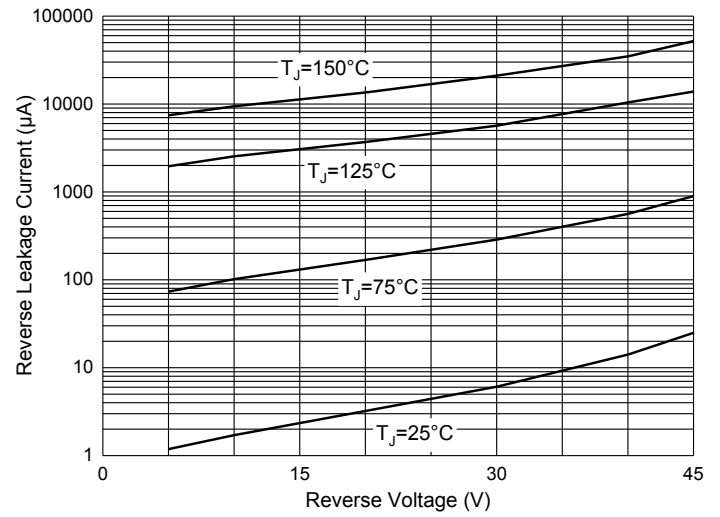


Fig. 4 - Typical Reverse Leakage Characteristics



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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