

### Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- High Current Capability and High Efficiency
- Epoxy Meets UL 94 V-0 Flammability Ratings Isolated Package: ITO-220AC

### Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 4°C/W Junction to Case

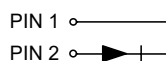
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBR1545FA       | MBR1545FA      | 45V                                    | 31.5V               | 45V                         |

### Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |  |  |
|---|-------------|--|--|
| Average Rectified Forward Current               | $I_{F(AV)}$ | 15A  | $T_C=115^\circ\text{C}$  |
| Peak Forward Surge Current                      | $I_{FSM}$   | 250A   | 8.3ms, Half Sine Wave  |
| Maximum Instantaneous Forward Voltage           | $V_F$       | 0.55V(Typ)<br>0.60V(Max)<br>0.52V(Typ)<br>0.57V(Max) | $I_F=15A \ T_J=25^\circ\text{C}$<br>$I_F=15A \ T_J=25^\circ\text{C}$<br>$I_F=15A \ T_J=125^\circ\text{C}$<br>$I_F=15A \ T_J=125^\circ\text{C}$ |
| DC Reverse Current at Rated DC Blocking Voltage | $I_R$       | 25 $\mu$ A(Typ)<br>0.2mA(Max)<br>40mA(Max)           | $T_J=25^\circ\text{C}$<br>$T_J=25^\circ\text{C}$<br>$T_J=125^\circ\text{C}$  |
| Typical Junction Capacitance                    | $C_J$       | 635pF  | Measured at 1.0MHz, $V_R=4.0V$   |
| Isolation Voltage                               | $V_{AC}$    | 2000V  |  |

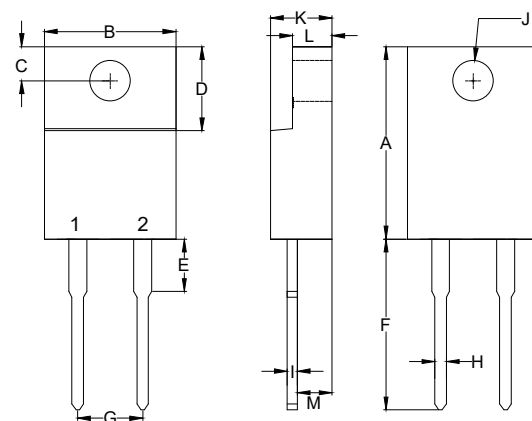
Note :1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7a.

### Internal Structure



# 15 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  | $\Phi$ |
| 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

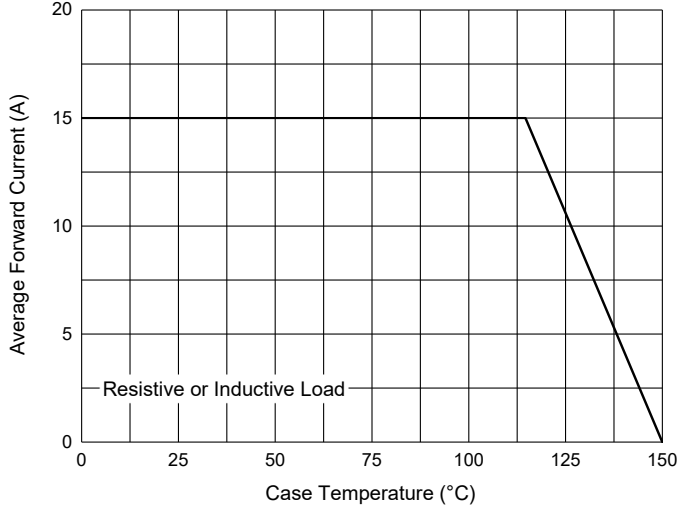


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

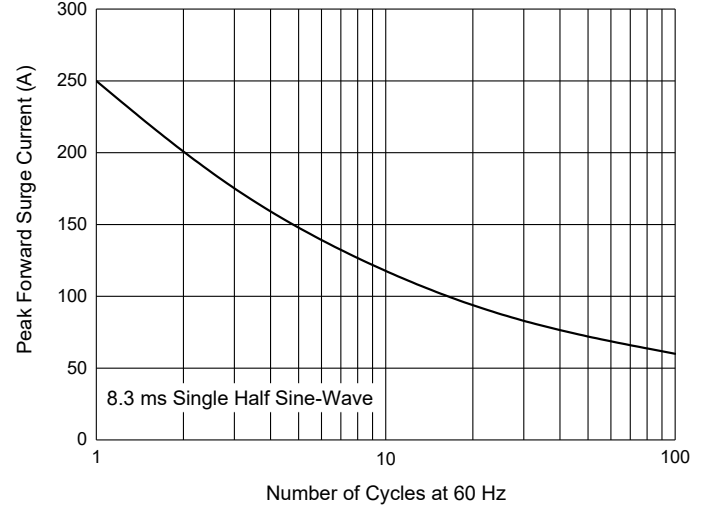


Fig. 3 - Typical Instantaneous Forward Characteristics

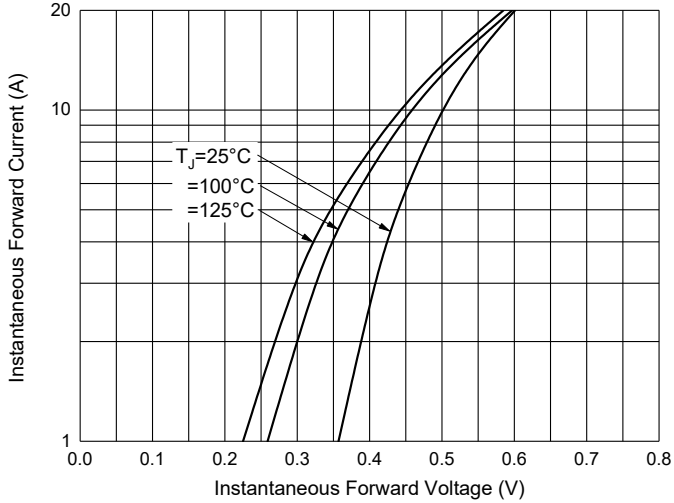
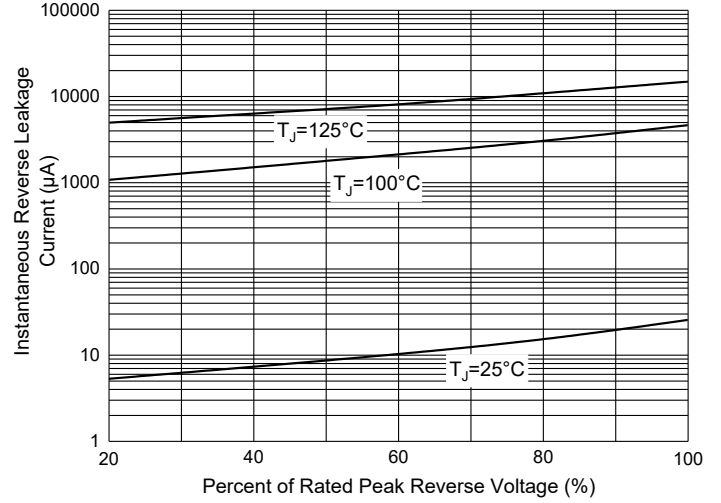


Fig. 2 - Typical Reverse Leakage Characteristics



## 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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