

## Features

- Guard Ring For Transient Protection
- High Current Capability, 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

## Maximum Ratings

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

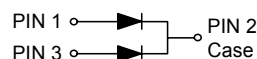
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| MBR2045FCTS     | MBR2045FCTS    | 45V                                    | 31.5V               | 45V                         |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                         |             |               |                                                   |
|---------------------------------------------------------|-------------|---------------|---------------------------------------------------|
| Average Forward Current                                 | $I_{F(AV)}$ | 20A           | $T_C=100^\circ\text{C}$                           |
| Peak Forward Surge Current                              | $I_{FSM}$   | 150A          | 8.3ms, Half Sine                                  |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 0.65V         | $I_{FM}=10A; T_J=25^\circ\text{C}$                |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$       | 0.2mA<br>50mA | $T_J=25^\circ\text{C}$<br>$T_J=125^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$       | 200pF         | Measured at 1.0MHz, $V_R=4.0V$                    |

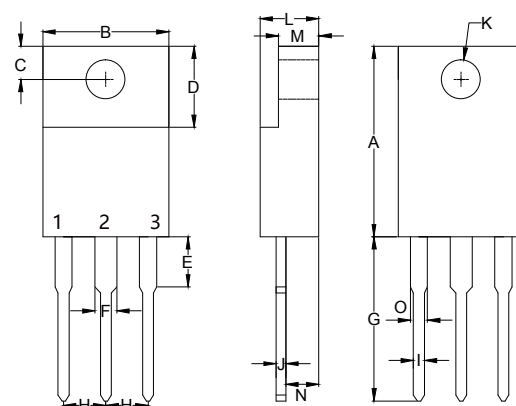
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

## Internal Structure



# 20 Amp Schottky Barrier Rectifier 45 Volts

## 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

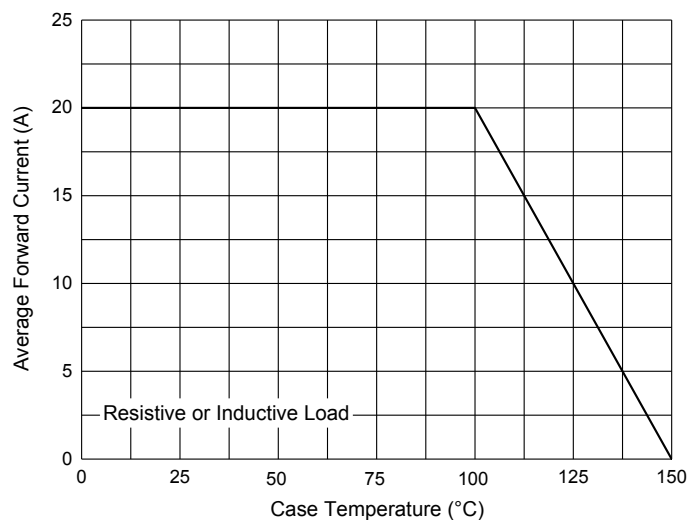


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

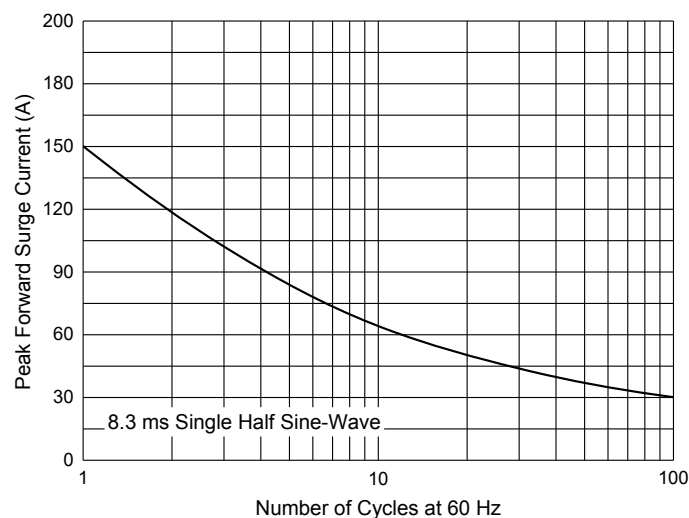


Fig. 3 - Typical Instantaneous Forward Characteristics

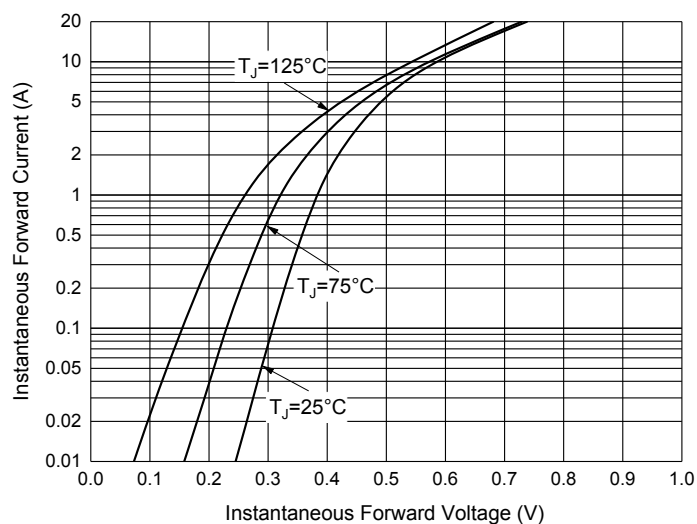
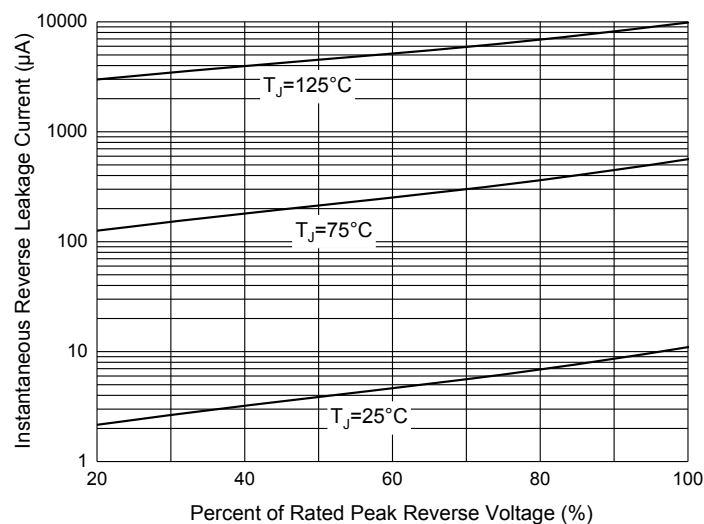


Fig. 4 - Typical Reverse Leakage Characteristics



## 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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