



# MBRF1045CT thru MBRF10100CT

## 10.0A Schottky Barrier Rectifiers

Rectifier Reverse Voltage 45 to 100V

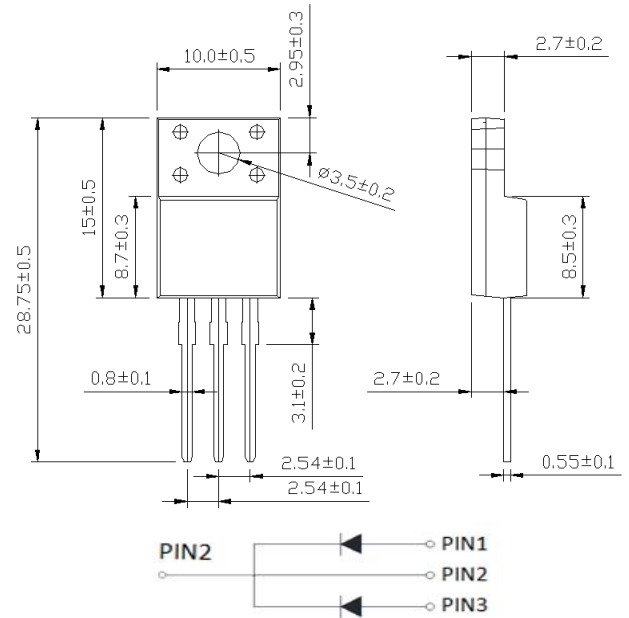
### ITO-220AB

#### Features

- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 260 °C max. 8 s, per JESD 22-B106

#### Mechanical Data

- **Package:** ITO-220AB  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked



Dimensions in millimeters ( 1mm =0.0394" )

#### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                                                                                | SYMBOL           | UNIT             | MBRF1045CT | MBRF1060CT | MBRF10100CT |
|------------------------------------------------------------------------------------------|------------------|------------------|------------|------------|-------------|
| Device marking code                                                                      |                  |                  | MBRF1045CT | MBRF1060CT | MBRF10100CT |
| Repetitive Peak Reverse Voltage                                                          | V <sub>RRM</sub> | V                | 45         | 60         | 100         |
| Average Rectified Output Current @60Hz sine wave, R-load, T <sub>a</sub> =25°C           | I <sub>O</sub>   | A                | 10         |            |             |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T <sub>a</sub> =25°C | I <sub>FSM</sub> | A                | 90         |            |             |
| Current Squared Time @1ms≤t<8.3ms T <sub>j</sub> =25°C ,                                 | I <sup>2</sup> t | A <sup>2</sup> s | 33.6       |            |             |
| Storage Temperature                                                                      | T <sub>stg</sub> | °C               | -55 ~ +150 |            |             |
| Junction Temperature                                                                     | T <sub>j</sub>   | °C               | -55 ~ +150 |            |             |

#### ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                                                         | SYMBOL                    | UNIT              | TEST CONDITIONS                                            | MBRF1045CT | MBRF1060CT | MBRF10100CT |
|-------------------------------------------------------------------|---------------------------|-------------------|------------------------------------------------------------|------------|------------|-------------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>FM</sub>           | V                 | I <sub>FM</sub> =5.0A                                      | 0.65       | 0.75       | 0.85        |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>RRM1</sub>         | mA                | V <sub>RM</sub> =V <sub>RRM</sub><br>T <sub>a</sub> =25°C  | 0.2        | 0.15       | 0.1         |
|                                                                   | I <sub>RRM2</sub>         |                   | V <sub>RM</sub> =V <sub>RRM</sub><br>T <sub>a</sub> =125°C | 20         |            |             |
| Thermal Resistance                                                | Between junction and case | R <sub>θJ-C</sub> | °C/W                                                       | 2.0        |            |             |

## Rating and Characteristic Curves ( $T_A=25^{\circ}\text{C}$ Unless otherwise noted )

### MBRF1045CT thru MBRF10100CT

FIG1:  $I_o$  -  $T_c$  Curve

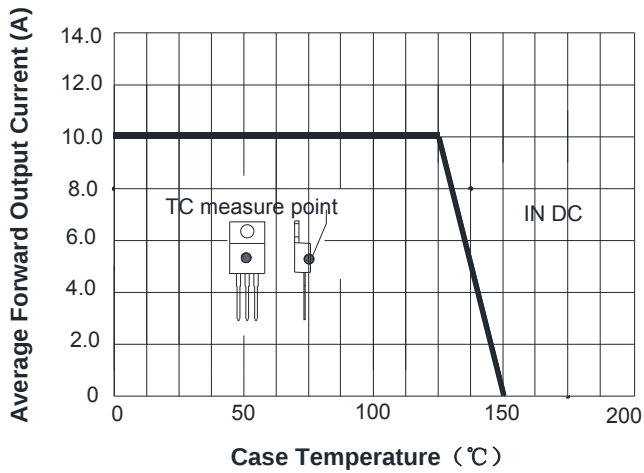


FIG2: Surge Forward Current Capability

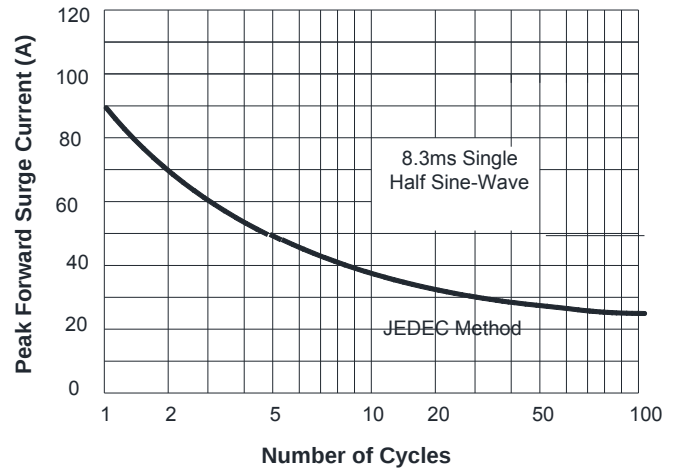


FIG3: Forward Voltage

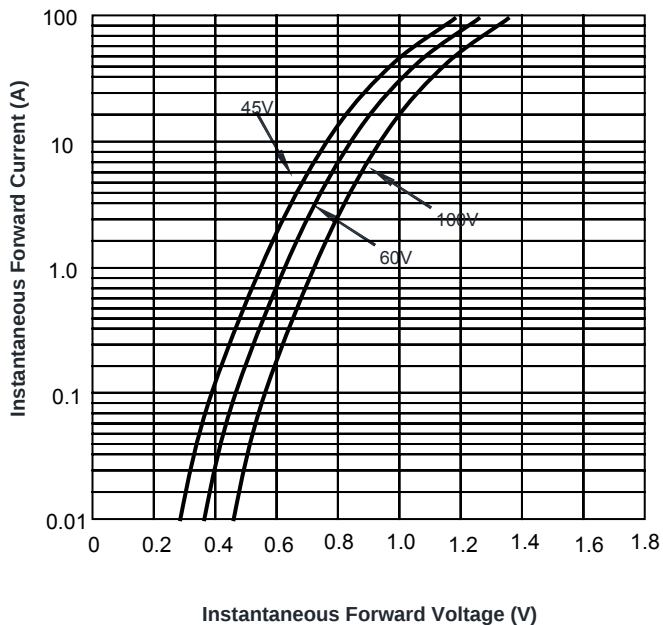


FIG4: Instantaneous Reverse Characteristics

