



# MBRF1045CT thru MBRF1060CT

## 10.0A Schottky Barrier Rectifiers

Rectifier Reverse Voltage 100 to 200V

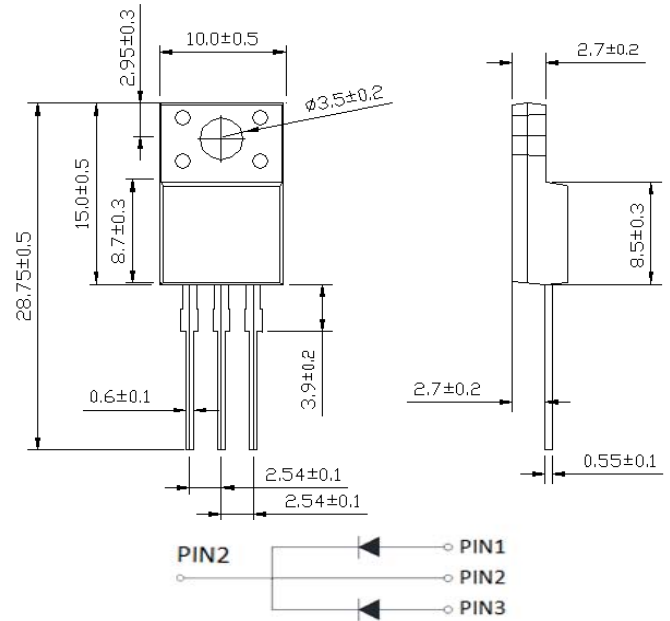
### ITO-220

#### 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:** TO-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 (Ta=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL           | UNIT             | MBRF1045CT | MBRF1060CT |
|---|------------------|------------------|------------|------------|
| Device marking code   |                  |                  | MBRF1045CT | MBRF1060CT |
| Repetitive Peak Reverse Voltage   | VRRM             | V                | 45         | 60         |
| Average Rectified Output Current @60Hz sine wave, R-load, Ta=25°C           | IO               | A                | 10         |            |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Ta=25°C | IFSM             | A                | 90         |            |
| Current Squared Time @1ms≤t<8.3ms Tj=25°C,                                  | I <sup>2</sup> t | A <sup>2</sup> s | 33.6       |            |
| Storage Temperature   | Tstg             | °C               | -55 ~ +175 |            |
| Junction Temperature  | Tj               | °C               | -55 ~ +150 |            |

#### ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

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

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

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FIG1:  $I_o$  -  $T_c$  Curve

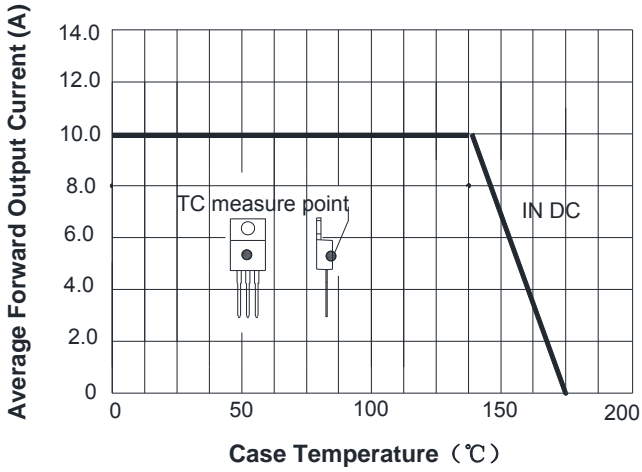


FIG2: Surge Forward Current Capability

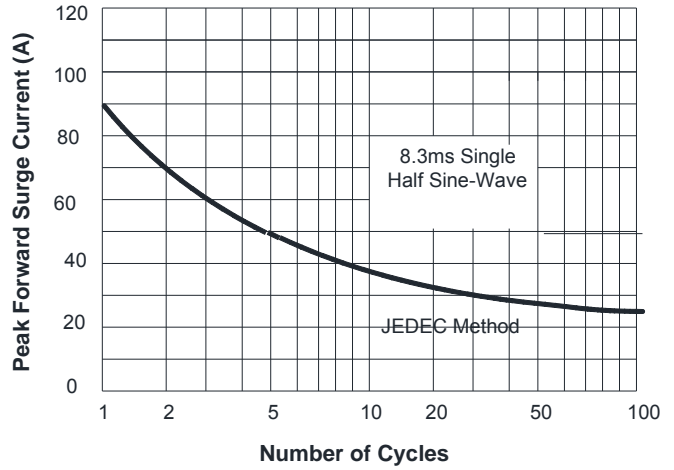


FIG3: Forward Voltage

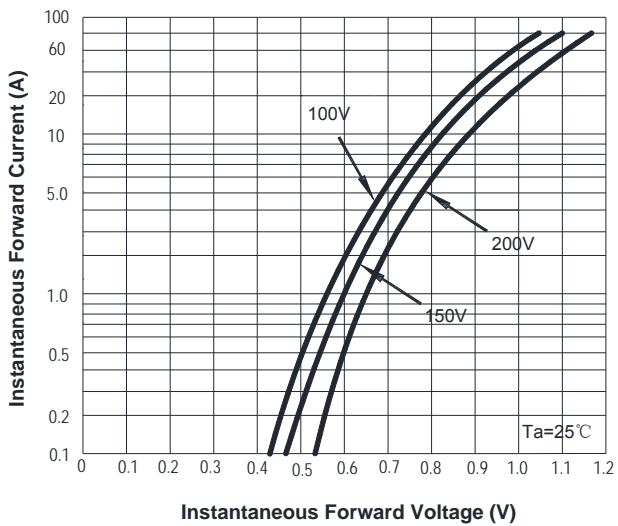


FIG4: Instantaneous Reverse Characteristics

