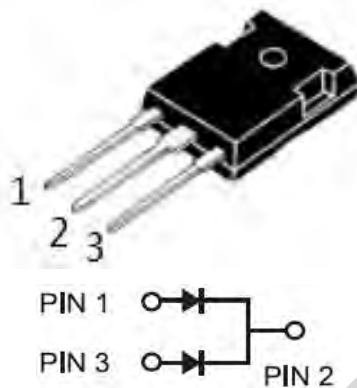


## SCHOTTKY BARRIER RECTIFIER

**TO-247**  
**MBR80100PT**



### Features

- Low forward voltage drop
- Low power losses
- High efficiency operation
- Lead Free Finish, RoHS Compliant

### Applications

- DC/DC Converters
- AC/DC Adaptors
- Switching Power Supplies
- Freewheeling Diodes

### Maximum ratings and electrical characteristics (T<sub>J</sub> = 25°C unless otherwise noted)

| Parameter                                                                                     |           |          | Symbol   | Limit       |      | Unit |
|-----------------------------------------------------------------------------------------------|-----------|----------|----------|-------------|------|------|
| Maximum repetitive peak reverse voltage                                                       |           |          | VRRM     | 100         |      | V    |
| Maximum average forward rectified current                                                     | device    | IF(AV)   | 80       |             | A    |      |
|                                                                                               | per diode |          | 40       |             |      |      |
| Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode |           |          | IFSM     | 500         |      | A    |
| Operating junction and storage temperature range                                              |           |          | TJ, TSTG | -50 to +150 |      | °C   |
| Typical thermal resistance per leg TO-247                                                     |           |          | RθJA     | 2           |      | °C/W |
| Instantaneous forward voltage per diode                                                       |           |          | VF(1)    | TYP.        | MAX. | V    |
|                                                                                               | IF=5A     | TJ=25°C  |          | 0.61        | 0.66 |      |
|                                                                                               | IF=5A     | TJ=125°C |          | 0.52        | -    |      |
|                                                                                               | IF=40A    | TJ=25°C  |          | 0.83        | 0.90 |      |
|                                                                                               | IF=40A    | TJ=125°C |          | 0.73        | -    |      |
| Instantaneous reverse current per diode at rated reverse voltage                              |           | TJ=25°C  | IR(2)    | 5           | 20   | uA   |
|                                                                                               |           | TJ=125°C |          | 4           | -    | mA   |

Notes:

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

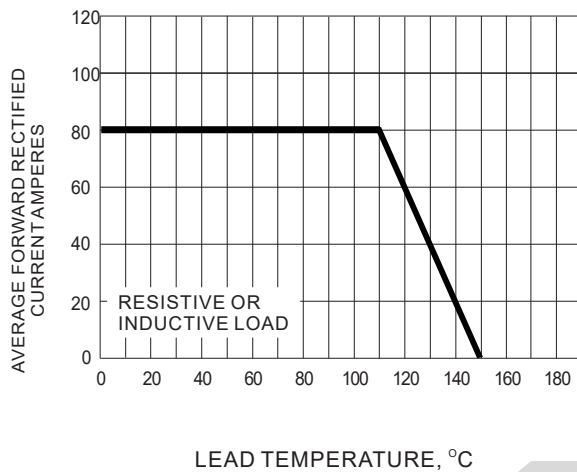


Fig.1- FORWARD CURRENT DERATING CURVE

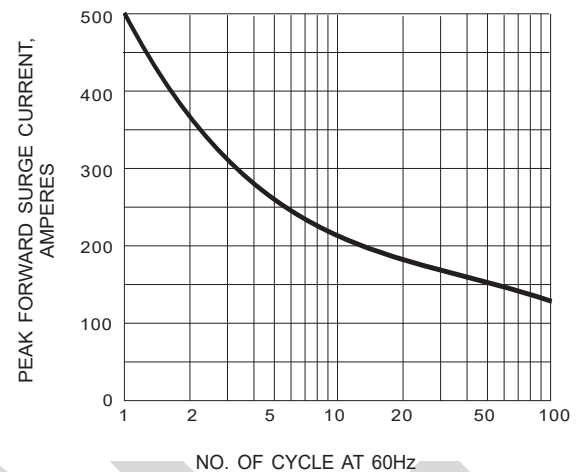


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

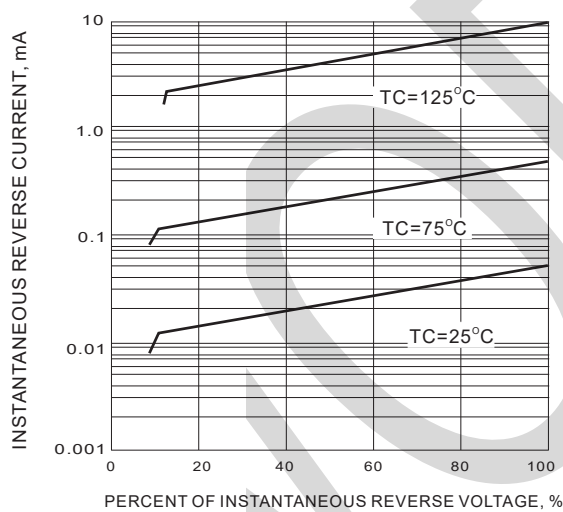


Fig.3- TYPICAL REVERSE CHARACTERISTIC

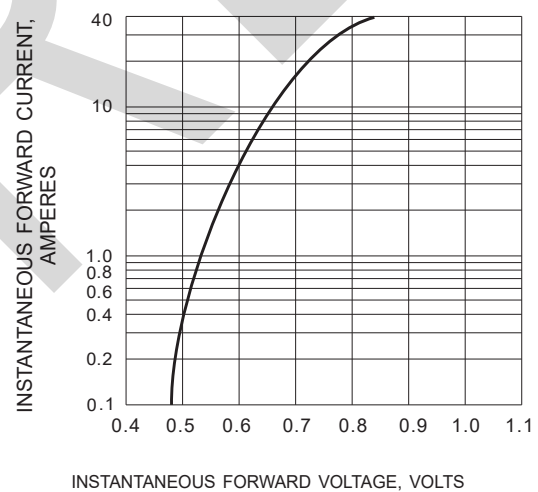
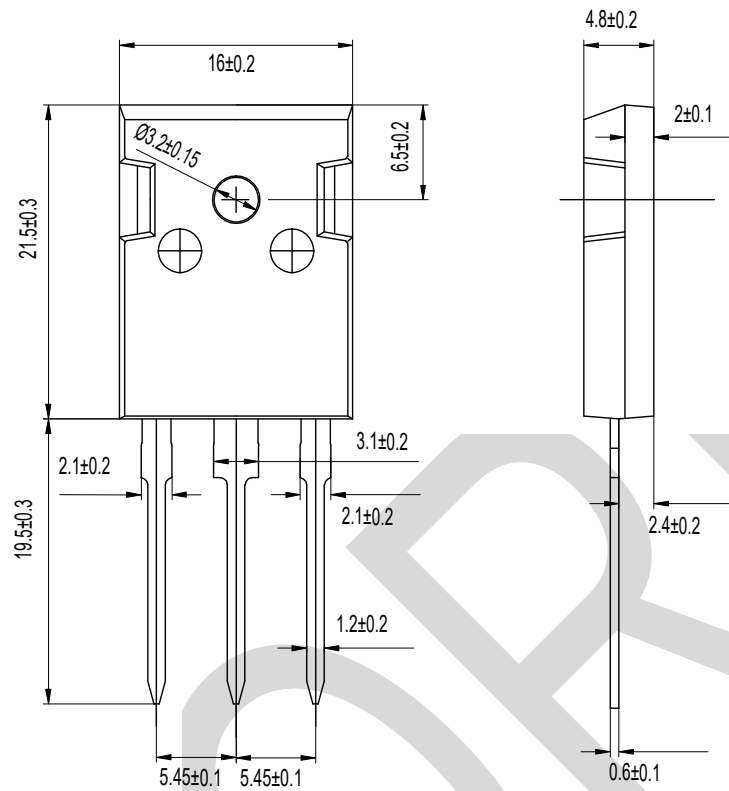


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

## PACKAGE OUTLINE DIMENSIONS

### TO-247



Dimensions in millimeters