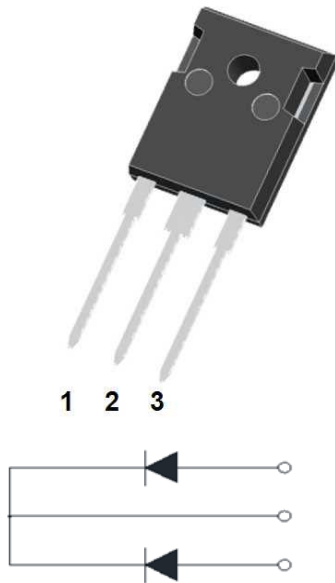


## Schottky Diodes



### 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 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

### Mechanical Data

- **Package:** TO-247AB  
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

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

| PARAMETER                                                                                   | SYMBOL           | UNIT             | MBR3060PT  |
|---------------------------------------------------------------------------------------------|------------------|------------------|------------|
| Device marking code                                                                         |                  |                  | MBR3060PT  |
| Repetitive Peak Reverse Voltage                                                             | V <sub>RRM</sub> | V                | 60         |
| Average Rectified Output Current<br>@60Hz sine wave, R-load, T <sub>c</sub> =106°C          | I <sub>O</sub>   | A                | 30         |
| Surge(Non-repetitive)Forward Current<br>@60Hz half sine-wave, 1 cycle, T <sub>a</sub> =25°C | I <sub>FSM</sub> | A                | 250        |
| Current Squared Time @1ms≤t≤8.3ms T <sub>j</sub> =25°C,                                     | I <sup>2</sup> t | A <sup>2</sup> s | 260        |
| Storage Temperature                                                                         | T <sub>stg</sub> | °C               | -55 ~ +150 |
| Junction Temperature                                                                        | T <sub>j</sub>   | °C               | -55 ~ +150 |

### ■Electrical Characteristics

| PARAMETER                                                    | SYMBOL            | UNIT | TEST CONDITIONS                                            | Min | Typ   | Max  |
|--------------------------------------------------------------|-------------------|------|------------------------------------------------------------|-----|-------|------|
| Peak Forward Voltage                                         | V <sub>FM</sub>   | V    | I <sub>FM</sub> =15.0A<br>T <sub>j</sub> =25°C             | 0.5 | 0.695 | 0.72 |
|                                                              |                   |      | I <sub>FM</sub> =15.0A<br>T <sub>j</sub> =125°C            | -   | 0.63  | 0.66 |
| DC reverse current<br>at rated DC blocking voltage per diode | I <sub>RRM1</sub> | mA   | V <sub>RM</sub> =V <sub>RRM</sub><br>T <sub>j</sub> =25°C  | -   | -     | 0.2  |
|                                                              | I <sub>RRM2</sub> |      | V <sub>RM</sub> =V <sub>RRM</sub><br>T <sub>j</sub> =125°C | -   | -     | 50   |
| Junction capacitance                                         | C <sub>j</sub>    | pF   | 1MHz and<br>Applied Reverse<br>Voltage of 4.0<br>V.D.C     | 200 | 530   | 750  |



# MBR3060PT

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

| PARAMETER          |                              | SYMBOL           | UNIT | MBR3060PT |
|--------------------|------------------------------|------------------|------|-----------|
| Thermal Resistance | Between junction and ambient | R <sub>θJA</sub> | °C/W | 50.0      |
|                    | Between junction and case    | R <sub>θJC</sub> | °C/W | 1.0       |

## ■ Characteristics (Typical)

FIG1: I<sub>o</sub> -T<sub>c</sub> Curve

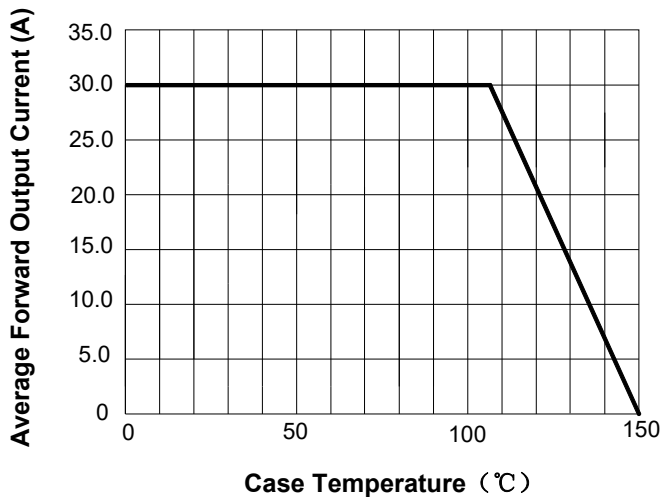


FIG2: Surge Forward Current Capability

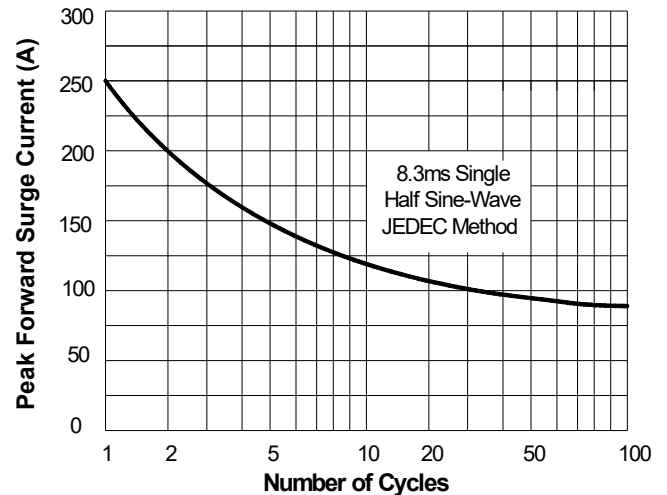


FIG3: Forward Voltage

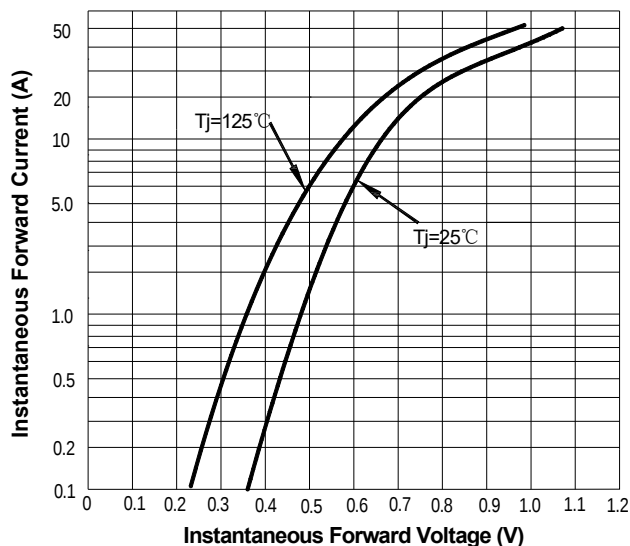
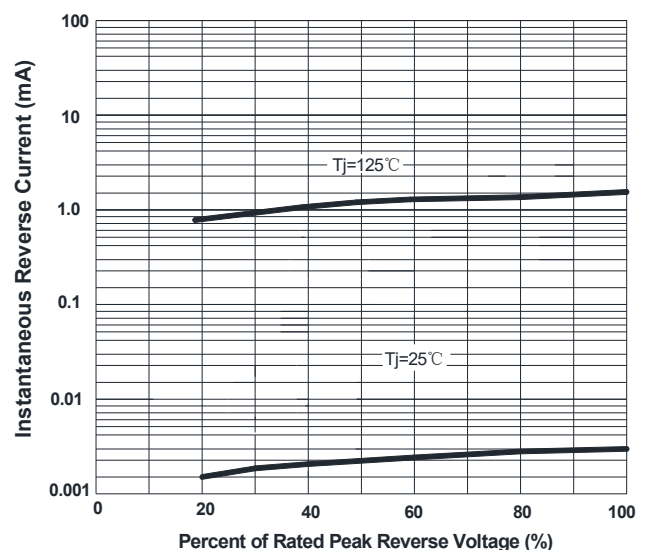


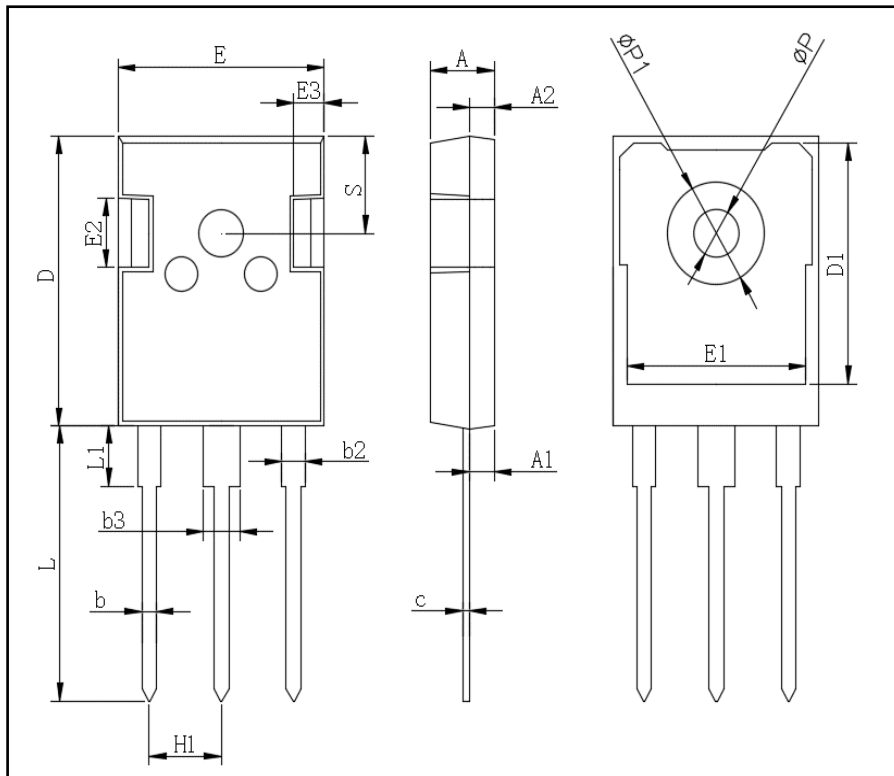
FIG4: Instantaneous Reverse Characteristics





## MBR3060PT

### ■Outline Dimensions



| TO-247AB |         |       |
|----------|---------|-------|
| Dim      | Min     | Max   |
| A        | 4.80    | 5.20  |
| A1       | 2.21    | 2.61  |
| A2       | 1.85    | 2.15  |
| b        | 1.0     | 1.4   |
| b2       | 1.91    | 2.21  |
| C        | 0.5     | 0.7   |
| D        | 20.70   | 21.30 |
| D1       | 16.25   | 16.85 |
| E        | 15.50   | 16.10 |
| E1       | 13.0    | 13.6  |
| E2       | 4.80    | 5.20  |
| E3       | 2.30    | 2.70  |
| L        | 19.62   | 20.22 |
| L1       | -       | 4.30  |
| ΦP       | 3.40    | 3.80  |
| ΦP1      | -       | 7.30  |
| S        | 6.15TYP |       |
| H1       | 5.44TYP |       |
| b3       | 2.80    | 3.20  |



### Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.