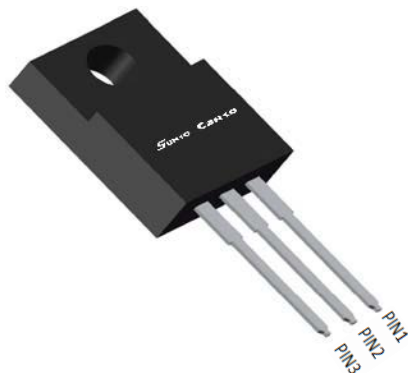


## Schottky Diodes



### Features

- High frequency operation
- Low forward voltage drop
- 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:** ITO-220AB  
Molding compound meets UL 94 V-0 flammability rating, -
- **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             | MBR10100FCT | MBR10150FCT | MBR10200FCT |
|---------------------------------------------------------------------------------------------|------------------|------------------|-------------|-------------|-------------|
| Device marking code                                                                         |                  |                  | MBR10100FCT | MBR10150FCT | MBR10200FCT |
| Repetitive Peak Reverse Voltage                                                             | V <sub>RRM</sub> | V                | 100         | 150         | 200         |
| Average Rectified Output Current<br>@60Hz sine wave, R-load, T <sub>c</sub> (FIG.1)         | I <sub>O</sub>   | A                | 10          |             |             |
| Surge(Non-repetitive)Forward Current<br>@60Hz half sine-wave, 1 cycle, T <sub>a</sub> =25°C | I <sub>FSM</sub> | A                | 120         |             |             |
| Current Squared Time<br>@1ms≤t<8.3ms T <sub>j</sub> =25°C,                                  | I <sup>2</sup> t | A <sup>2</sup> s | 60          |             |             |
| Storage Temperature                                                                         | T <sub>stg</sub> | °C               | -55 ~ +175  |             |             |
| Junction Temperature                                                                        | T <sub>j</sub>   | °C               | -55 ~ +175  |             |             |

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

| PARAMETER                                                         | SYMBOL            | UNIT | TEST CONDITIONS                                            | MBR10100FCT | MBR10150FCT | MBR10200FCT |
|-------------------------------------------------------------------|-------------------|------|------------------------------------------------------------|-------------|-------------|-------------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>FM</sub>   | V    | I <sub>FM</sub> =5.0A                                      | 0.8         | 0.85        | 0.9         |
| 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  | 0.1         |             |             |
|                                                                   | I <sub>RRM2</sub> |      | V <sub>RM</sub> =V <sub>RRM</sub><br>T <sub>a</sub> =125°C | 20          |             |             |

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS

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

| PARAMETER                                    | SYMBOL            | UNIT | MBR10100FCT | MBR10150FCT | MBR10200FCT |
|----------------------------------------------|-------------------|------|-------------|-------------|-------------|
| Thermal Resistance Between junction and case | R <sub>θJ-C</sub> | °C/W | 4.0         |             |             |

# MBR10100FCT THRU MBR10200FCT-B1-W5094HF

## ■Ordering Information (Example)

| PREFERED P/N                | UNIT WEIGHT(g)  | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|-----------------------------|-----------------|-----------------------|-------------------------|----------------------------|---------------|
| MBR1080FCT THRU MBR10200FCT | Approximate 1.6 | 50                    | 1000                    | 5000                       | Tube          |

## ■Characteristics (Typical)

FIG1:Io -Tc Curve

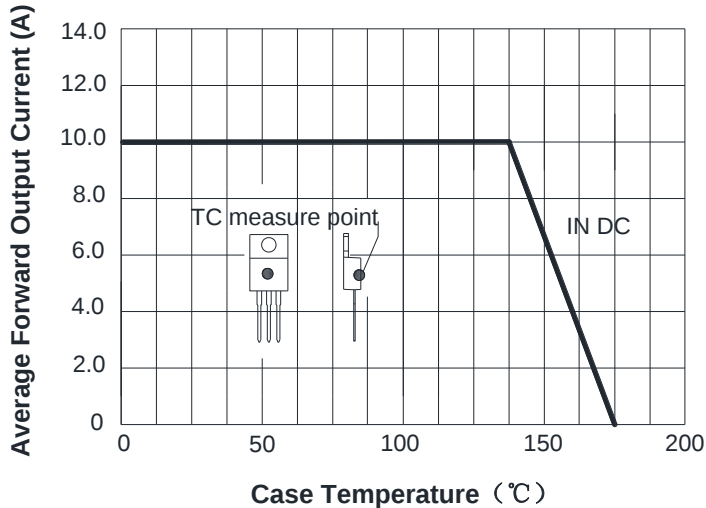


FIG2:Surge Forward Current Capability

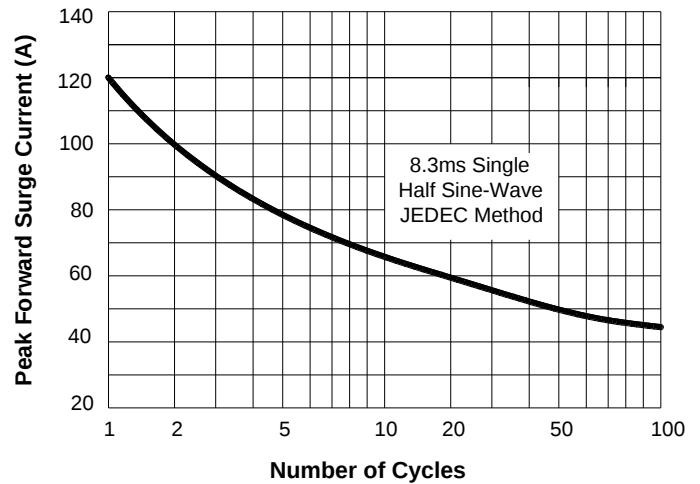


FIG3: Forward Voltage

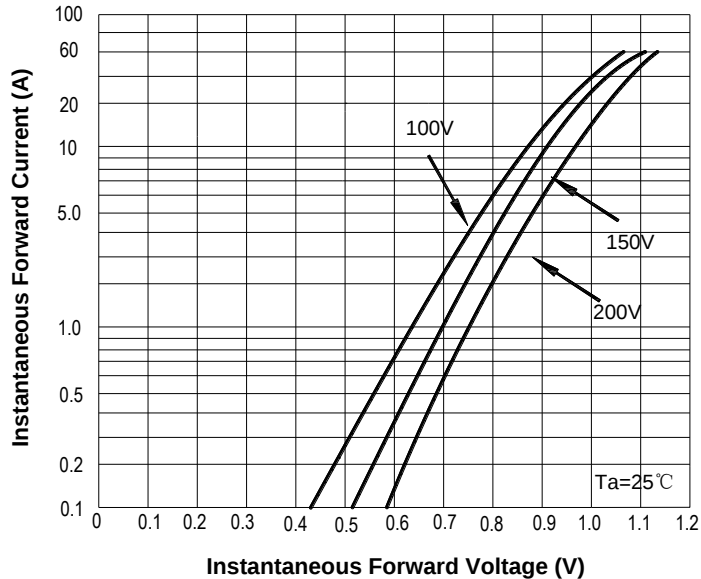
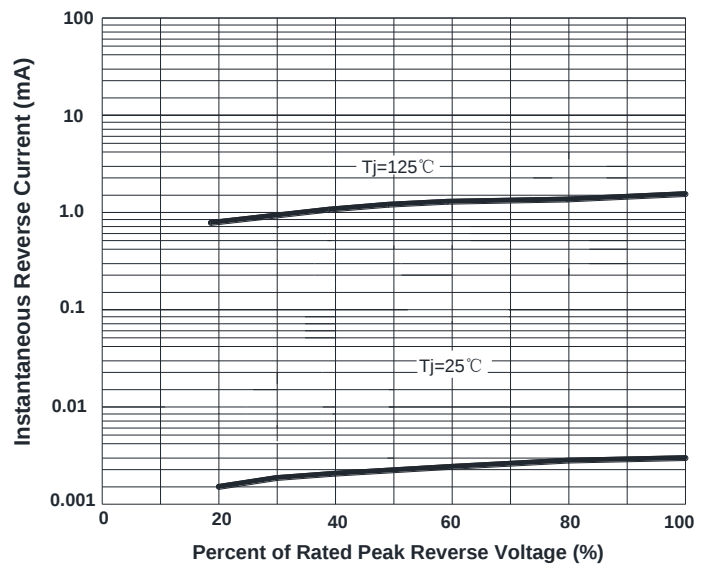
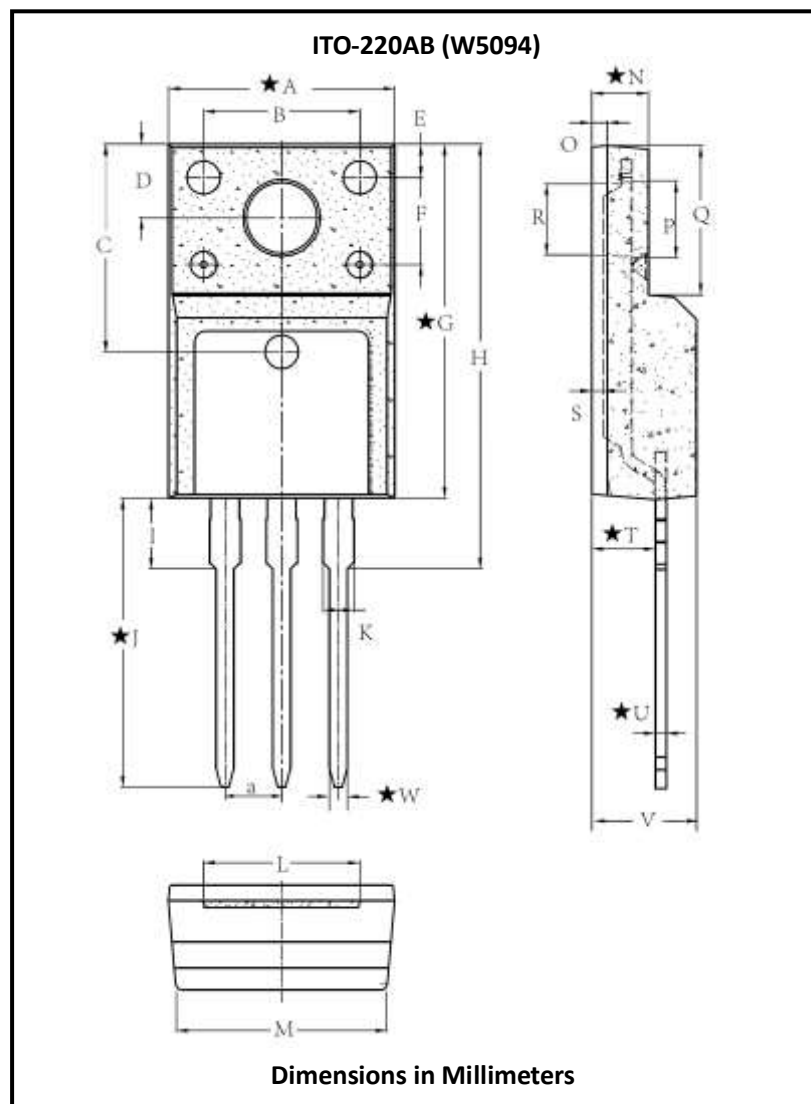


FIG4: Instantaneous Reverse Characteristics



■ Outline Dimensions



| ITO-220AB (W5094) |           |       |
|-------------------|-----------|-------|
| Dim               | Min       | Max   |
| A                 | 10.03     | 10.23 |
| B                 | 6.90      | 7.10  |
| C                 | 9.21      | 9.41  |
| D                 | 3.20      | 3.40  |
| E                 | 1.40      | 4.00  |
| F                 | 3.8       | 0.75  |
| G                 | 15.72     | 16.02 |
| H                 | TYP 19.05 |       |
| I                 | TYP 3.18  |       |
| J                 | 12.65     | 13.25 |
| K                 | 1.30      | 1.50  |
| L                 | 6.50      | 7.50  |
| M                 | 9.23      | 9.63  |
| N                 | 2.44      | 2.64  |
| O                 | TYP 0.7   |       |
| P                 | 3.35      | 3.55  |
| Q                 | 6.58      | 6.78  |
| R                 | 3.08      | 3.28  |
| S                 | TYP 0.52  |       |
| T                 | 2.75      | 2.95  |
| U                 | 0.40      | 0.60  |
| V                 | 4.50      | 4.90  |
| W                 | 0.71      | 0.91  |
| a                 | TYP 2.54  |       |

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