

## SCHOTTKY BARRIER RECTIFIER

### Features

### TO-247-3L

- ◆ High current capability
  - ◆ Low forward voltage drop
  - ◆ Low power loss, high efficiency
  - ◆ High surge capability
  - ◆ High temperature soldering guaranteed
- Mounting position: any

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### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter                                                                                        | SYMBOLS           | MBRW<br>3045CT | MBRW<br>3060CT | MBRW<br>30100CT | MBRW<br>30150CT | MBRW<br>30200CT | UNITS |
|--------------------------------------------------------------------------------------------------|-------------------|----------------|----------------|-----------------|-----------------|-----------------|-------|
| Marking Code                                                                                     |                   |                |                |                 |                 |                 |       |
| Maximum repetitive peak reverse voltage                                                          | V <sub>RRM</sub>  | 45             | 60             | 100             | 150             | 200             | V     |
| Maximum RMS voltage                                                                              | V <sub>RMS</sub>  | 32             | 42             | 70              | 135             | 140             | V     |
| Maximum DC blocking voltage                                                                      | V <sub>DC</sub>   | 45             | 60             | 100             | 150             | 200             | V     |
| Maximum average forward rectified current (see fig.1)                                            | I <sub>(AV)</sub> | 30.0           |                |                 |                 |                 | A     |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>  | 250            |                |                 | 200             |                 | A     |
| Maximum instantaneous forward voltage at 15.0A                                                   | V <sub>F</sub>    | 0.60           | 0.75           | 0.85            | 0.95            |                 | V     |
| Maximum DC reverse current<br>at rated DC blocking voltage                                       | I <sub>R</sub>    | 0.1            |                |                 |                 |                 | mA    |
|                                                                                                  |                   | 20.0           | 30.0           | 10.0            |                 |                 |       |
| Typical thermal resistance (NOTE 2)                                                              | R <sub>θJC</sub>  | 2.0            |                |                 |                 |                 | °C/W  |
| Operating junction temperature range                                                             | T <sub>J</sub>    | -55 to +150    |                |                 |                 |                 | °C    |
| storage temperature range                                                                        | T <sub>STG</sub>  | -55 to +150    |                |                 |                 |                 | °C    |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to case.

## Ratings And Characteristic Curves

Fig.1 Typical Forward Current Derating Curve

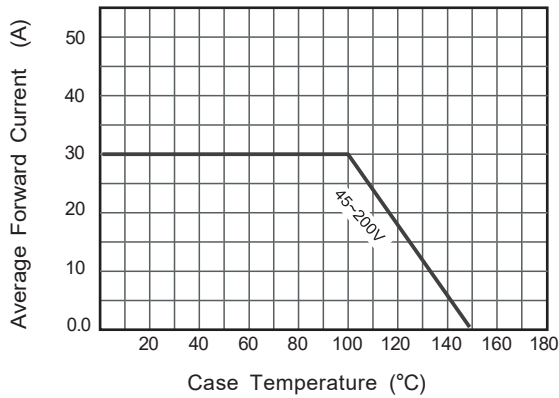


Fig.2 Typical Reverse Characteristics

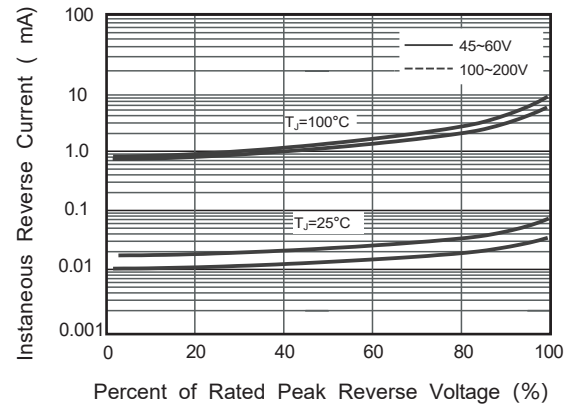


Fig.3 Typical Forward Characteristic(per leg)

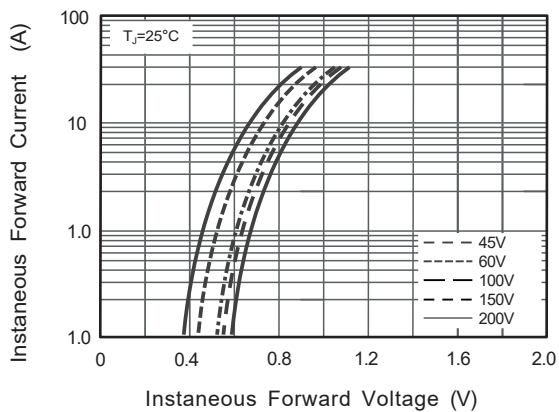
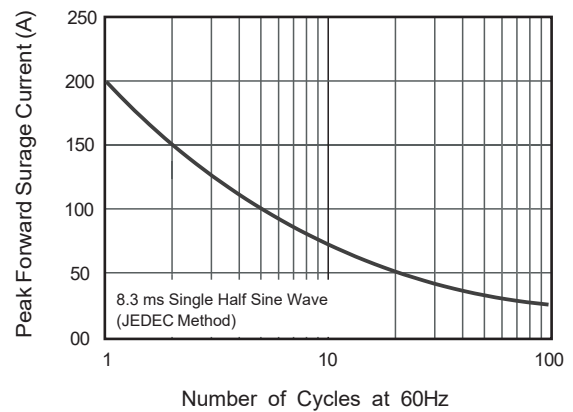


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.