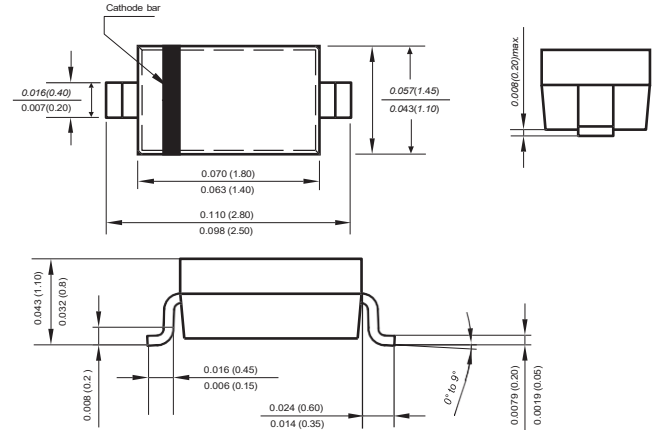


## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- ◆ Metal silicon junction, majority carrier conduction
- ◆ For surface mounted applications
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### SOD-323



Dimensions in inches and (millimeters)

### 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           | B12WS       | B14WS | B16WS | B18WS | B110WS   | B112WS | B115WS   | B120WS | UNITS |
|-----------------------------------------------------------------------------------------------------------|-------------------|-------------|-------|-------|-------|----------|--------|----------|--------|-------|
| Marking code                                                                                              |                   | B12S        | B14S  | B16S  | B18S  | 110S     | 112S   | 115S     | 120S   |       |
| Maximum repetitive peak reverse voltage                                                                   | V <sub>RMM</sub>  | 20          | 40    | 60    | 80    | 100      | 120    | 150      | 200    | V     |
| Maximum RMS voltage                                                                                       | V <sub>RMS</sub>  | 14          | 28    | 42    | 56    | 70       | 84     | 105      | 140    | V     |
| Maximum DC blocking voltage                                                                               | V <sub>DC</sub>   | 20          | 40    | 60    | 80    | 100      | 120    | 150      | 200    | V     |
| Maximum average forward rectified current                                                                 | I <sub>(AV)</sub> | 1.0         |       |       |       |          |        |          |        | A     |
| Peak forward surge current<br>8.3ms single half sine-wave<br>superimposed on rated load (JEDEC Method)    | I <sub>FSM</sub>  | 25          |       |       |       |          |        |          |        | A     |
| Maximum instantaneous forward voltage at 1.0A                                                             | V <sub>F</sub>    | 0.55        |       | 0.70  |       | 0.85     |        | 0.90     |        | V     |
| Maximum DC reverse current    T <sub>A</sub> =25℃<br>at rated DC blocking voltage    T <sub>A</sub> =100℃ | I <sub>R</sub>    | 0.3<br>10   |       |       |       | 0.2<br>5 |        | 0.1<br>2 |        | mA    |
| Typical junction capacitance (NOTE 1)                                                                     | C <sub>J</sub>    | 110         |       | 80    |       |          |        |          |        | pF    |
| Operating junction temperature range                                                                      | T <sub>J</sub>    | -55 to +125 |       |       |       |          |        |          |        | ℃     |
| Storage temperature range                                                                                 | T <sub>STG</sub>  | -55 to +150 |       |       |       |          |        |          |        | ℃     |

**Note:** 1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.

## Typical Characterisitics

Fig.1 Forward Current Derating Curve

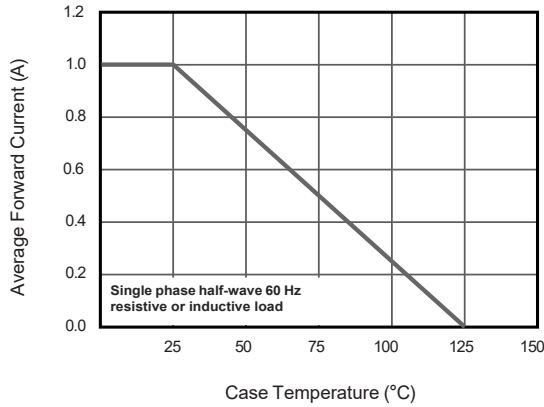


Fig.2 Typical Reverse Characteristics

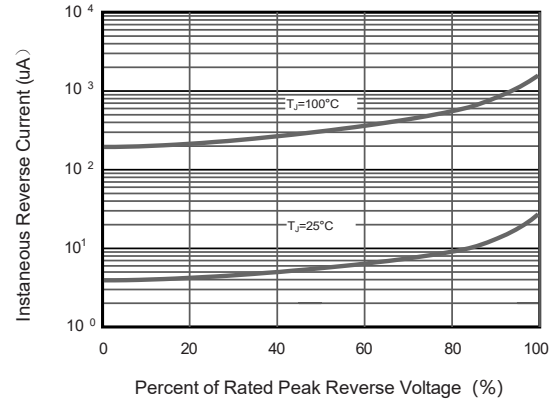


Fig.3 Typical Forward Characteristic

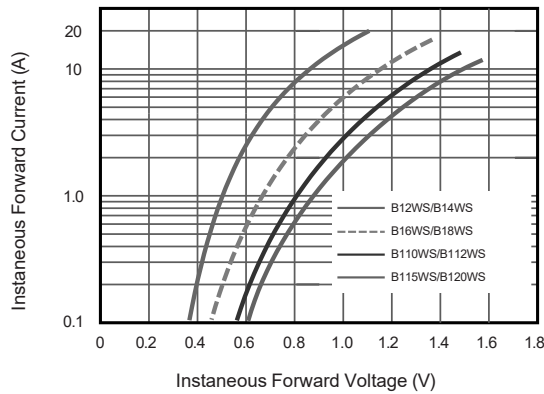


Fig.4 Typical Junction Capacitance

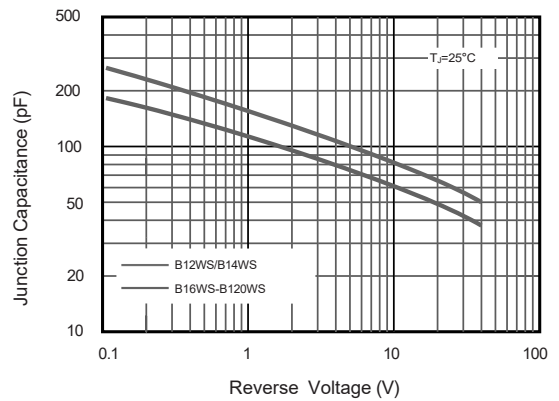
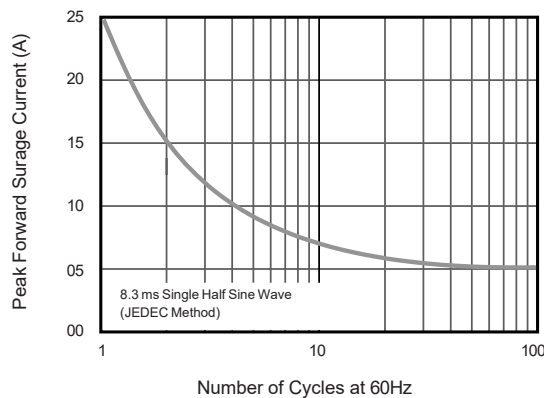


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.