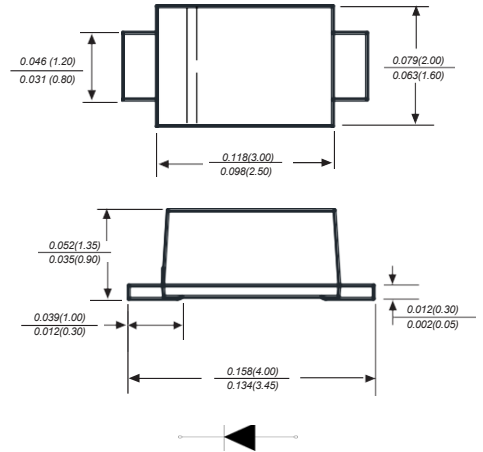


## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250 °C/10 seconds at terminals

### SOD-123FL



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           | DSK12       | DSK14 | DSK15 | DSK16 | DSK18 | DSK110 | DSK115 | DSK120 | UNITS |
|---------------------------------------------------------------------------------------------------------|-------------------|-------------|-------|-------|-------|-------|--------|--------|--------|-------|
| Marking Code                                                                                            |                   | K12         | K14   | K15   | K16   | K18   | K110   | K115   | K120   |       |
| Maximum repetitive peak reverse voltage                                                                 | V <sub>RRM</sub>  | 20          | 40    | 50    | 60    | 80    | 100    | 150    | 200    | V     |
| Maximum RMS voltage                                                                                     | V <sub>RMS</sub>  | 14          | 28    | 35    | 42    | 56    | 70     | 105    | 140    | V     |
| Maximum DC blocking voltage                                                                             | V <sub>DC</sub>   | 20          | 40    | 50    | 60    | 80    | 100    | 150    | 200    | V     |
| Maximum average forward rectified current at TL(see fig.1)                                              | 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 DCreverse current    T <sub>A</sub> =25℃<br>at rated DCblocking voltage    T <sub>A</sub> =100℃ | I <sub>R</sub>    | 0.3         |       |       |       |       | 0.2    | 0.1    |        | mA    |
|                                                                                                         |                   | 10.0        |       |       |       |       | 5.0    | 2.0    |        |       |
| Typical junction capacitance (NOTE 1)                                                                   | C <sub>J</sub>    | 110         |       | 80    |       |       |        |        |        | pF    |
| Typical thermal resistance (NOTE 2)                                                                     | R <sub>θJA</sub>  | 100.0       |       |       |       |       |        |        |        | ℃/W   |
| Operating junction temperature range                                                                    | T <sub>J</sub>    | -55 to +150 |       |       |       |       |        |        |        | ℃     |
| Storage temperature range                                                                               | T <sub>STG</sub>  | -55 to +150 |       |       |       |       |        |        |        | ℃     |

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

## Typical Characteristics

Fig.1 Forward Current Derating Curve

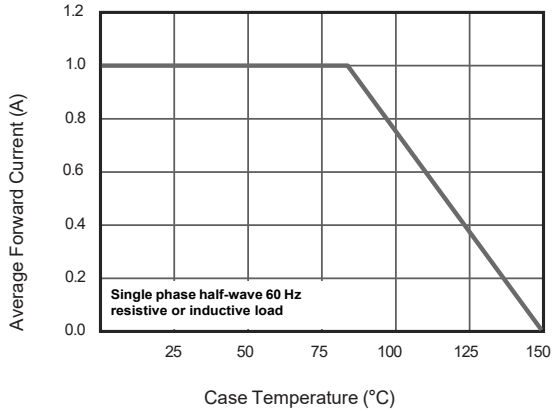


Fig.2 Typical Reverse Characteristics

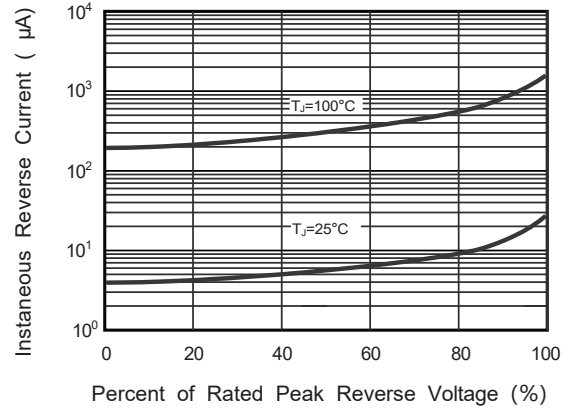


Fig.3 Typical Forward Characteristic

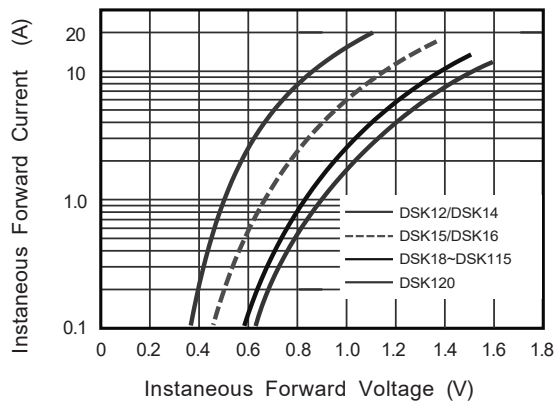


Fig.4 Typical Junction Capacitance

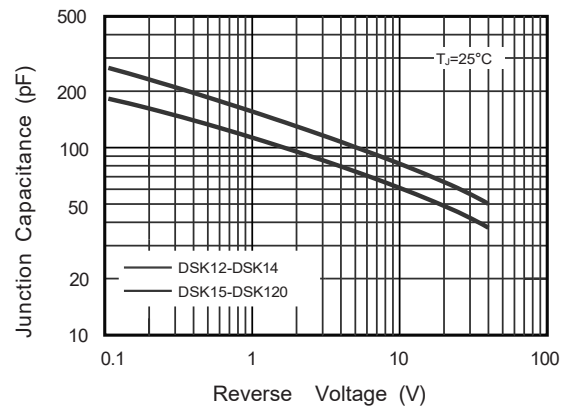


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

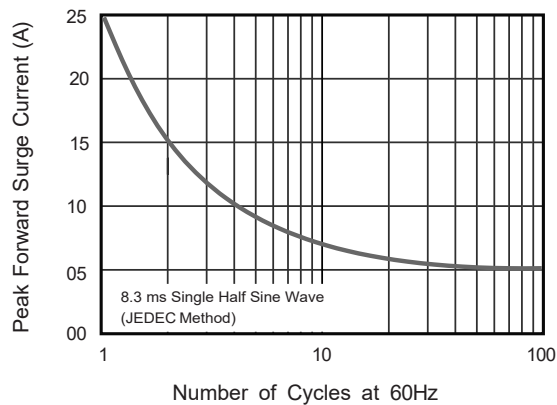
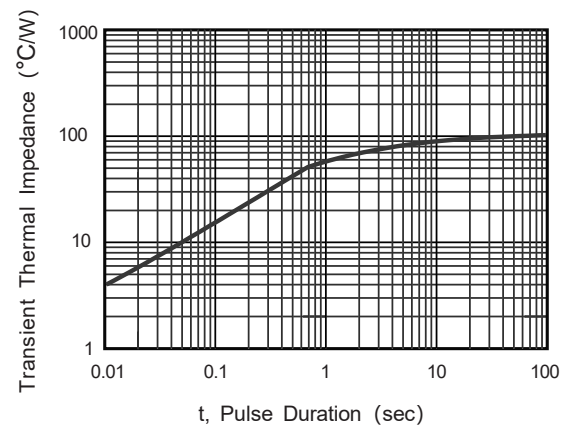


Fig.6- Typical Transient Thermal Impedance



The curve above is for reference only.