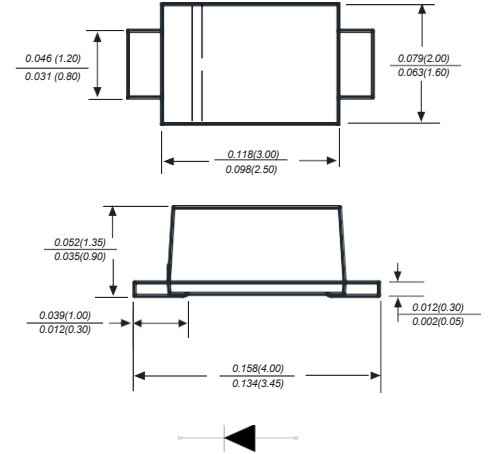


## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### 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           | DSL22       | DSL23 | DSL24 | DSL25 | DSL26 | DSL27       | DSL28 | DSL29 | DSL210 | UNITS |
|--------------------------------------------------------------------------------------------------------|-------------------|-------------|-------|-------|-------|-------|-------------|-------|-------|--------|-------|
| Marking Code                                                                                           |                   |             |       |       |       |       |             |       |       |        |       |
| Maximum repetitive peak reverse voltage                                                                | V <sub>RRM</sub>  | 20          | 30    | 40    | 50    | 60    | 70          | 80    | 90    | 100    | V     |
| Maximum RMS voltage                                                                                    | V <sub>RMS</sub>  | 14          | 21    | 28    | 35    | 42    | 49          | 56    | 63    | 70     | V     |
| Maximum DC blocking voltage                                                                            | V <sub>DC</sub>   | 20          | 30    | 40    | 50    | 60    | 70          | 80    | 90    | 100    | V     |
| Maximum average forward rectified current at TL(see fig.1)                                             | I <sub>(AV)</sub> | 2.0         |       |       |       |       |             |       |       |        | A     |
| Peak forward surge current<br>8.3ms single half sine-wave<br>superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>  | 40          |       |       |       |       |             |       |       |        | A     |
| Maximum instantaneous forward voltage at 2.0A                                                          | V <sub>F</sub>    | 0.45        |       |       | 0.50  |       | 0.70        |       |       | V      |       |
| Maximum DC reverse current<br>at rated DC blocking voltage                                             | I <sub>R</sub>    | 0.5         |       |       |       |       | 0.2         |       |       | mA     |       |
|                                                                                                        |                   | 10.0        |       |       |       |       | 5.0         |       |       |        |       |
| Typical junction capacitance (NOTE 1)                                                                  | C <sub>J</sub>    | 110         |       |       | 80    |       |             |       |       |        | pF    |
| Typical thermal resistance (NOTE 2)                                                                    | R <sub>θJA</sub>  | 95.0        |       |       |       |       |             |       |       |        | °C/W  |
| Operating junction temperature range                                                                   | T <sub>J</sub>    | -55 to +125 |       |       |       |       | -55 to +150 |       |       |        | °C    |
| Storage temperature range                                                                              | T <sub>STG</sub>  | -55 to +150 |       |       |       |       |             |       |       |        | °C    |

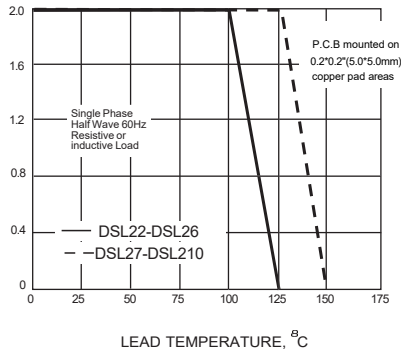
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. PCB mounted on 0.2\*0.2" (5.0\*5.0mm) copper pad area.

## Typical Characteristics

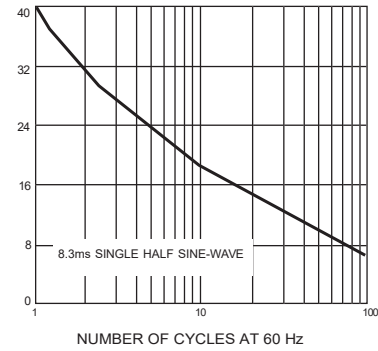
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



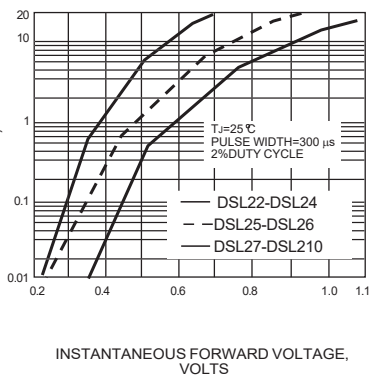
PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



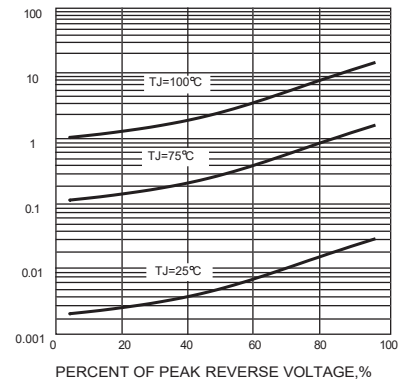
INSTANTANEOUS FORWARD  
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



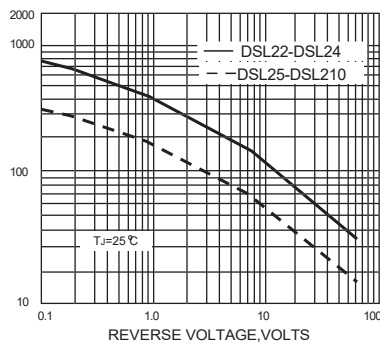
INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



The curve above is for reference only.