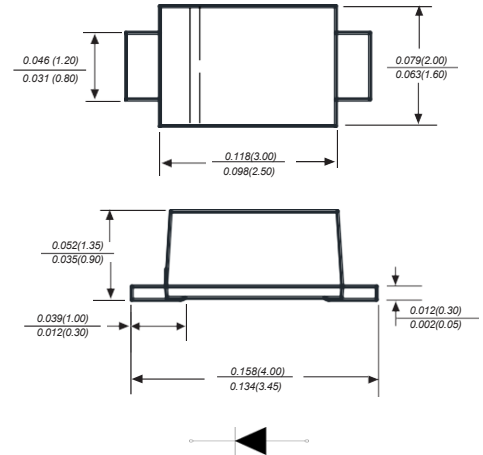


## SURFACE MOUNT HIGH EFFICIENCY RECTIFIER

### Features

- ◆ Glass passivated device
- ◆ Ideal for surface mouted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds,0.375"(9.5mm) lead length,  
5 lbs. (2.3kg) tension

### 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                          | SOD1H1            | SOD1H2 | SOD1H3 | SOD1H4 | SOD1H5 | SOD1H6 | SOD1H7 | SOD1H8 | UNITS |
|--------------------------------------------------------------------------------------------------|----------------------------------|-------------------|--------|--------|--------|--------|--------|--------|--------|-------|
| Marking Code                                                                                     |                                  | U1                | U2     | U3     | U4     | U5     | U6     | U7     | U8     |       |
| Maximum repetitive peak reverse voltage                                                          | V <sub>RRM</sub>                 | 50                | 100    | 200    | 300    | 400    | 600    | 800    | 1000   | V     |
| Maximum RMS voltage                                                                              | V <sub>RMS</sub>                 | 35                | 70     | 140    | 210    | 280    | 420    | 560    | 700    | V     |
| Maximum DC blocking voltage                                                                      | V <sub>DC</sub>                  | 50                | 100    | 200    | 300    | 400    | 600    | 800    | 1000   | V     |
| Maximum average forward rectified current at TL=65°C                                             | I <sub>(AV)</sub>                | 1.0               |        |        |        |        |        |        |        | A     |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                 | 25                |        |        |        |        |        |        |        | A     |
| Maximum instantaneous forward voltage at 1.0A                                                    | V <sub>F</sub>                   | 1.0               |        |        | 1.30   |        | 1.70   |        |        | V     |
| Maximum DC reverse current<br>TA=25°C<br>at rated DC blocking voltage<br>TA=125°C                | I <sub>R</sub>                   | 5.0<br>100.0      |        |        |        |        |        |        |        | μA    |
| Maximum reverse recovery time (NOTE 1)                                                           | t <sub>rr</sub>                  | 50                |        |        |        |        | 75     |        |        | ns    |
| Typical junction capacitance (NOTE 2)                                                            | C <sub>J</sub>                   | 15.0              |        |        |        |        |        |        |        | pF    |
| Typical thermal resistance                                                                       | RθJA                             | 85                |        |        |        |        |        |        |        | °C/W  |
| Operating junction and storage temperature range                                                 | T <sub>J</sub> ,T <sub>STG</sub> | - 5 5 t o + 1 5 0 |        |        |        |        |        |        |        | °C    |

**Note:** 1.Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .

## Ratings And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

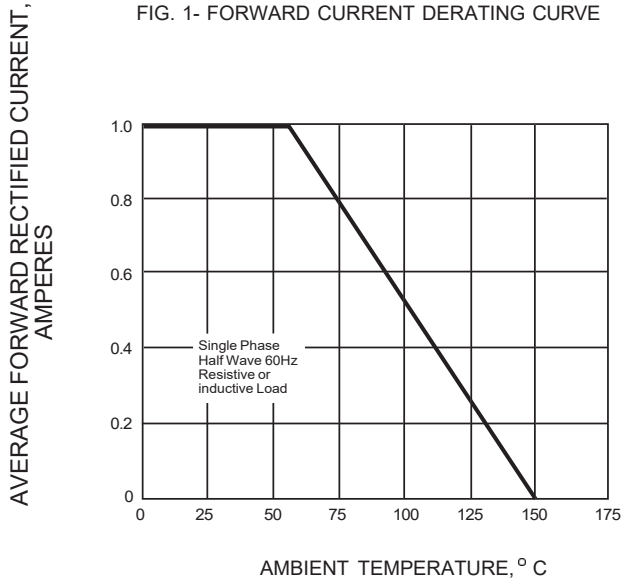


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

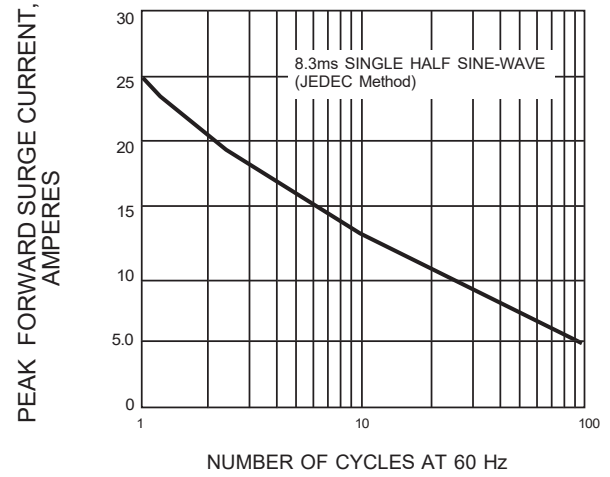


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

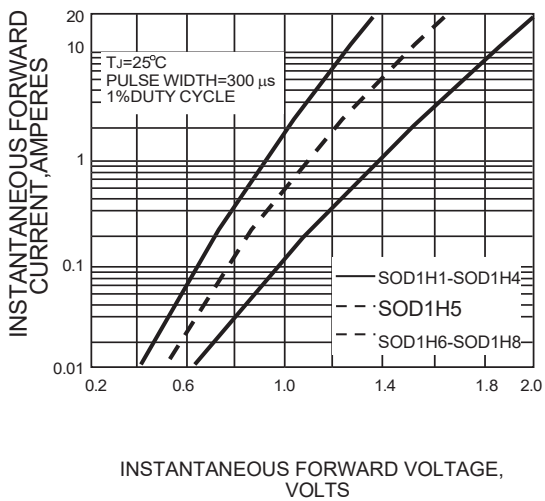
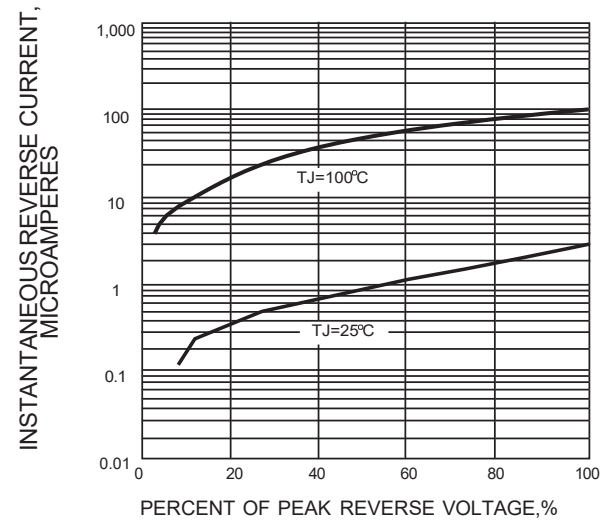


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



The curve above is for reference only.