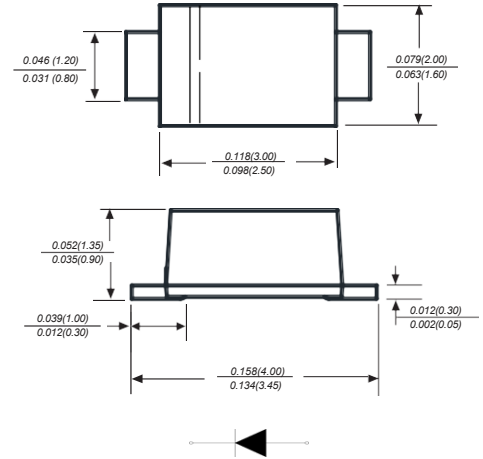


## SURFACE MOUNT HIGH EFFICIENCY RECTIFIER

### 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.

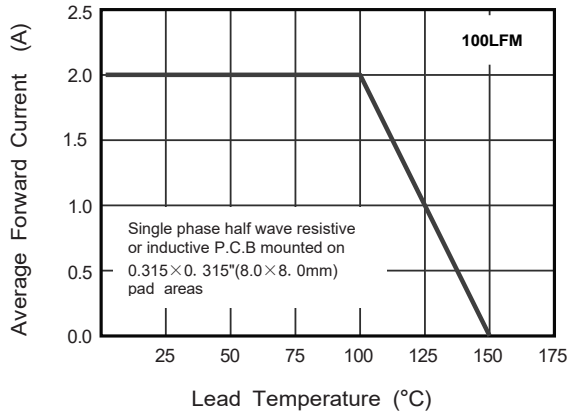
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

| Parameter                                                                                              | SYMBOLS                          | US2AW        | US2BW | US2DW | US2EW | US2GW | US2JW | US2KW | US2MW | UNITS |
|--------------------------------------------------------------------------------------------------------|----------------------------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Marking Code                                                                                           |                                  | 2U1          | 2U2   | 2U3   | 2U4   | 2U5   | 2U6   | 2U7   | 2U8   |       |
| 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℃                                                    | I <sub>(AV)</sub>                | 2.0          |       |       |       |       |       |       |       | A     |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)       | I <sub>FSM</sub>                 | 50           |       |       |       |       |       |       |       | A     |
| Maximum instantaneous forward voltage at 2.0A                                                          | V <sub>F</sub>                   | 1.0          |       |       | 1.30  |       | 1.70  |       |       | V     |
| Maximum DC reverse current at rated DC blocking voltage<br>T <sub>A</sub> =25℃<br>T <sub>A</sub> =125℃ | 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                                                                             | R <sub>θJA</sub>                 | 90.0         |       |       |       |       |       |       |       | ℃/W   |
| Operating junction and storage temperature range                                                       | T <sub>J</sub> ,T <sub>STG</sub> | -55 to +150  |       |       |       |       |       |       |       | ℃     |

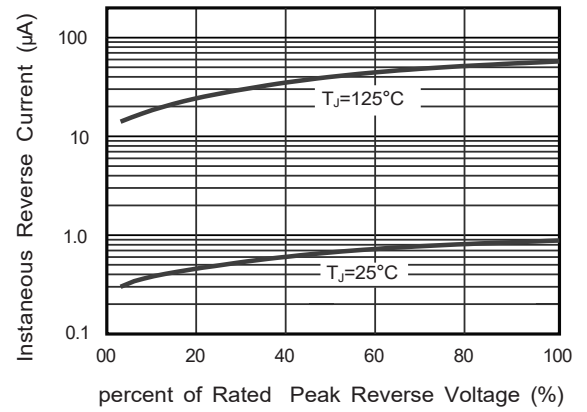
**Note:** 1.Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $t_{rr}=0.25\text{A}$ .

## Ratings And Characteristic Curves

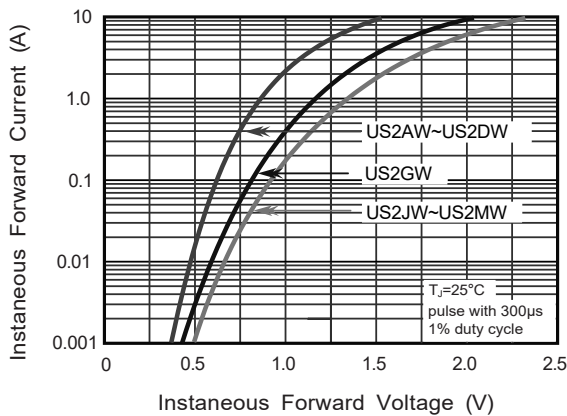
**Fig.1 Maximum Average Forward Current Rating**



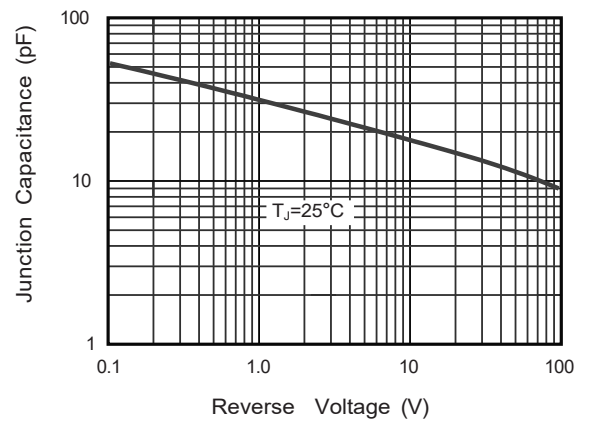
**Fig.2 Typical Reverse Characteristics**



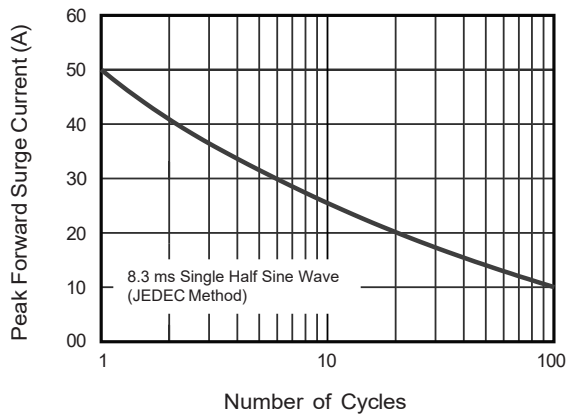
**Fig.3 Typical Forward Characteristics**



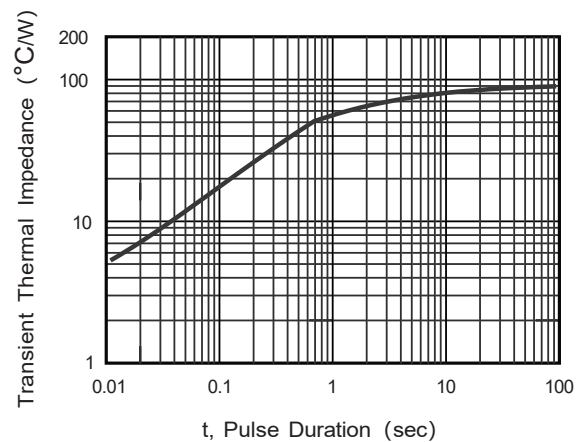
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.6- Typical Transient Thermal Impedance**



The curve above is for reference only.