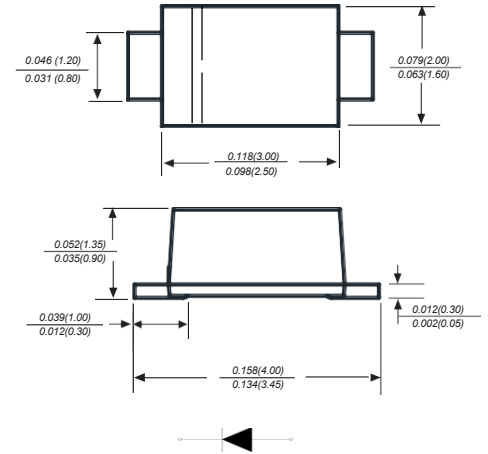


## SURFACE MOUNT FAST RECOVERY RECTIFIER

### 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                              | RS2AW       | RS2BW | RS2DW | RS2GW | RS2JW | RS2KW | RS2MW | UNITS |
|--------------------------------------------------------------------------------------------------|--------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Marking Code                                                                                     |                                      | 2F1         | 2F2   | 2F3   | 2F4   | 2F5   | 2F6   | 2F7   |       |
| Maximum repetitive peak reverse voltage                                                          | V <sub>RRM</sub>                     | 50          | 100   | 200   | 400   | 600   | 800   | 1000  | V     |
| Maximum RMS voltage                                                                              | V <sub>RMS</sub>                     | 35          | 70    | 140   | 280   | 420   | 560   | 700   | V     |
| Maximum DC blocking voltage                                                                      | V <sub>DC</sub>                      | 50          | 100   | 200   | 400   | 600   | 800   | 1000  | V     |
| Maximum average forward rectified current at TL(see fig.1)                                       | 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>                       | 1.3         |       |       |       |       |       |       | V     |
| Maximum DC reverse current<br>TA=25℃ at rated DC blocking voltage<br>TA=125℃                     | I <sub>R</sub>                       | 5<br>100    |       |       |       |       |       |       | mA    |
| Typical junction capacitance (NOTE 1)                                                            | C <sub>J</sub>                       | 40          |       |       |       |       |       |       | pF    |
| Maximum Reverse Recovery Time                                                                    | t <sub>rr</sub>                      | 150         |       |       |       | 250   | 500   |       | ns    |
| Typical thermal resistance (NOTE 2)                                                              | R <sub>θJA</sub><br>R <sub>θJC</sub> | 75<br>22    |       |       |       |       |       |       | ℃/W   |
| Operating junction temperature range                                                             | T <sub>J</sub>                       | -55 to +150 |       |       |       |       |       |       | ℃     |
| Storage temperature range                                                                        | T <sub>STG</sub>                     | -55 to +150 |       |       |       |       |       |       | ℃     |

**Note:**

2. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .
3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
4. P.C.B. mounted with 2.0x2.0"(5.0x5.0cm) copper pad areas

## Typical Characteristics

Fig.1 Forward Current Derating Curve

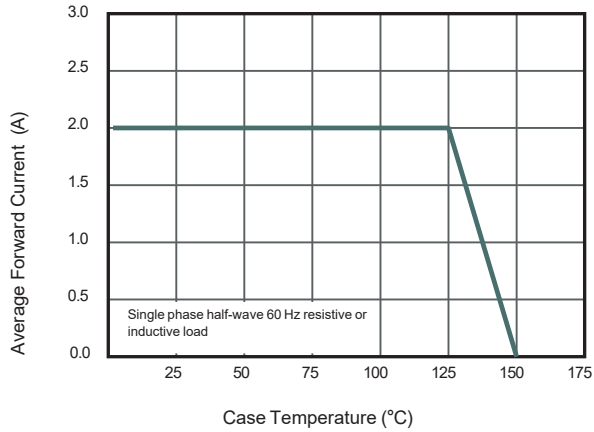


Fig.2 Typical Reverse Characteristics

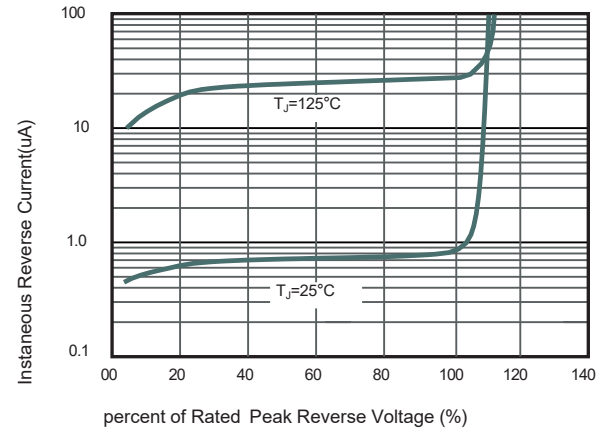


Fig.3 Typical Instantaneous Forward Characteristics

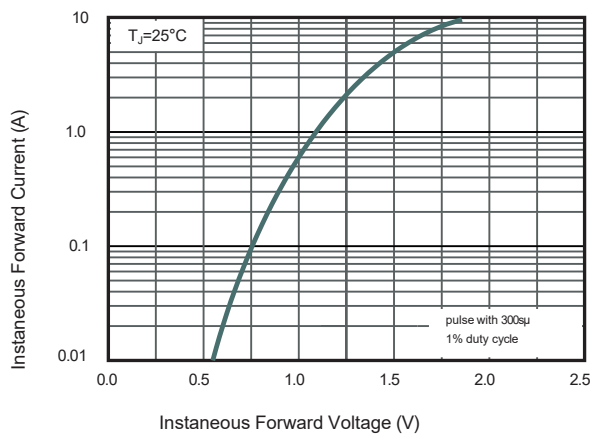


Fig.4 Typical Junction Capacitance

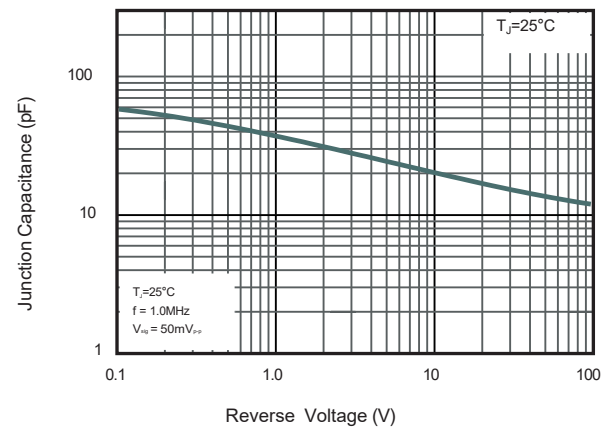
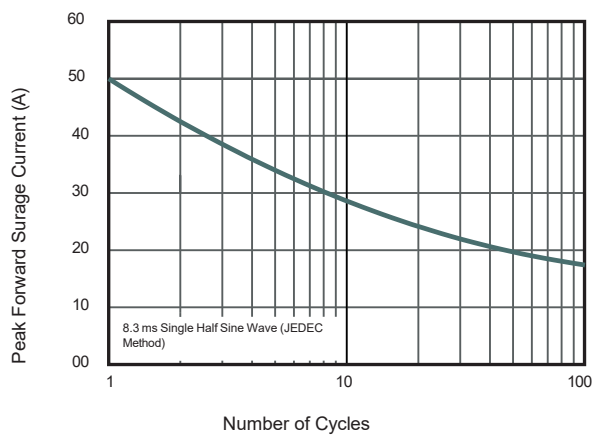


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.