



### FEATURES

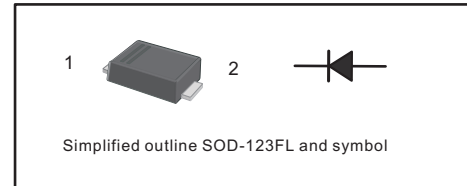
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00053oz

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



### Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Parameter                                                                                                   | Symbols                           | F1         | F2  | F3  | F4  | F5  | F6  | F7   | Units |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------|------------|-----|-----|-----|-----|-----|------|-------|
| 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 T <sub>c</sub> = 125 °C                                        | I <sub>F(AV)</sub>                | 1          |     |     |     |     |     |      | A     |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                          | I <sub>FSM</sub>                  | 30         |     |     |     |     |     |      | A     |
| Maximum Forward Voltage at 1 A                                                                              | V <sub>F</sub>                    | 1.3        |     |     |     |     |     |      | V     |
| Maximum DC Reverse Current    T <sub>a</sub> = 25 °C<br>Rated DC Blocking Voltage    T <sub>a</sub> =125 °C | I <sub>R</sub>                    | 5<br>100   |     |     |     |     |     |      | μA    |
| Typical Junction Capacitance at V <sub>R</sub> =4V, f=1MHz                                                  | C <sub>j</sub>                    | 15         |     |     |     |     |     |      | pF    |
| Maximum Reverse Recovery Time <sup>(1)</sup>                                                                | t <sub>rr</sub>                   | 150        |     |     |     | 250 | 500 |      | ns    |
| Typical Thermal Resistance <sup>(2)</sup>                                                                   | R <sub>θJA</sub>                  | 85         |     |     |     |     |     |      | °C/W  |
| Operating and Storage Temperature Range                                                                     | T <sub>j</sub> , T <sub>stg</sub> | -55 ~ +150 |     |     |     |     |     |      | °C    |

(1) Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{rr} = 0.25\text{A}$ .

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



Fig.1 Forward Current Derating Curve

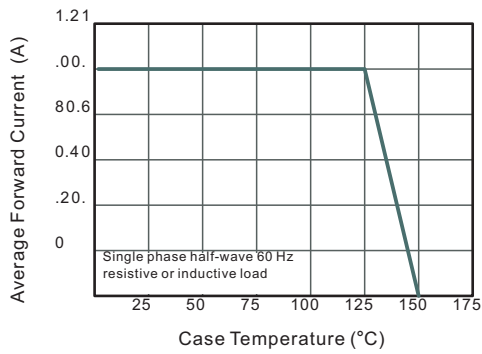


Fig.2 Typical Reverse Characteristics

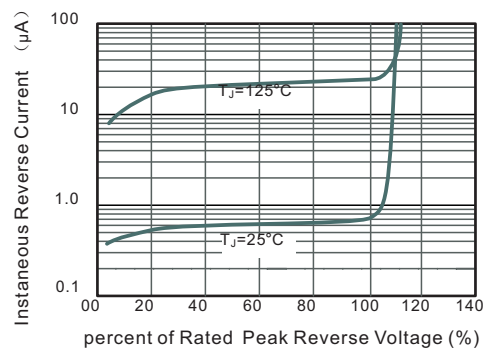


Fig.3 Typical Instantaneous Forward Characteristics

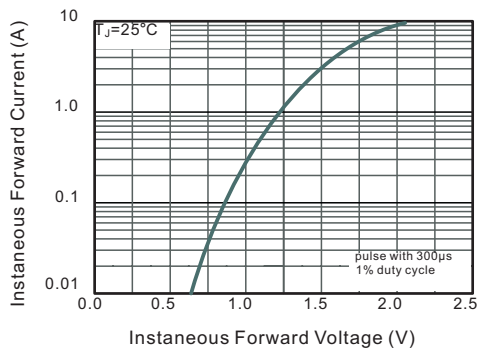


Fig.4 Typical Junction Capacitance

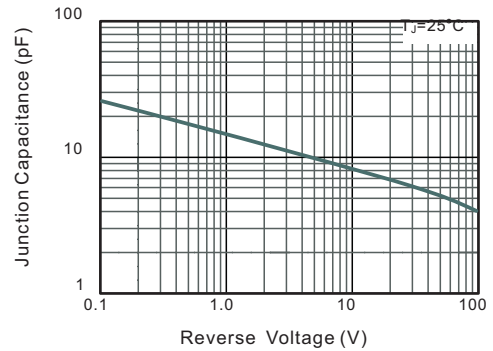
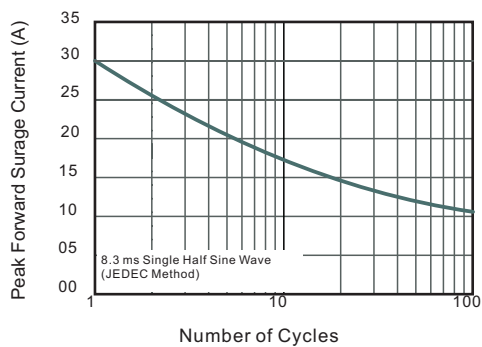


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

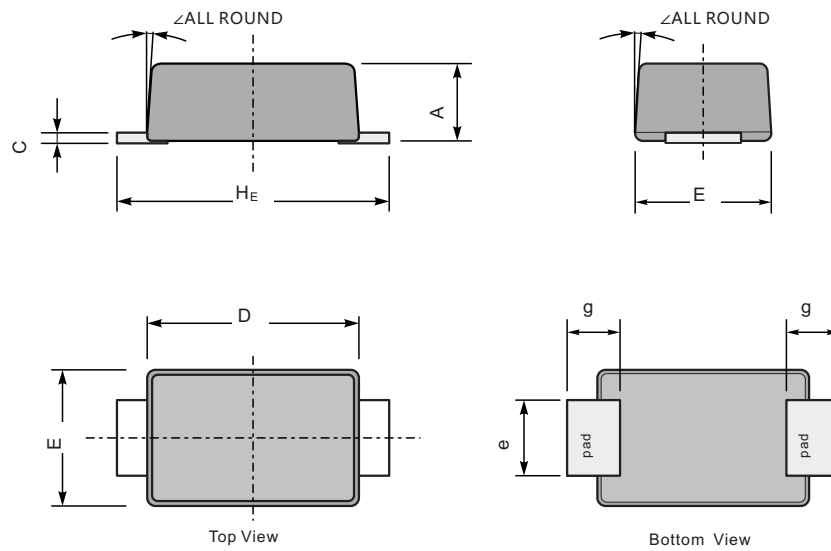




## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



| UNIT |     | A    | C    | D   | E    | e   | g   | H <sub>E</sub> | ∠  |
|------|-----|------|------|-----|------|-----|-----|----------------|----|
| mm   | max | 1.15 | 0.20 | 2.8 | 2.0  | 1.2 | 0.9 | 3.8            | 5° |
|      | min | 0.95 | 0.12 | 2.5 | 1.7  | 0.9 | 0.7 | 3.5            |    |
| mil  | max | 45   | 7.9  | 110 | 78.7 | 47  | 35  | 150            |    |
|      | min | 37   | 4.7  | 98  | 67   | 35  | 28  | 138            |    |

The recommended mounting pad size

