

### Features

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Reverse Voltage - 50 to 1000 V
- Forward Current - 1 A

### Applications

- power supply
- LED driver
- Battery protector
- adapter
- Voltage protector



### Absolute Maximum Ratings and Electrical characteristics

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

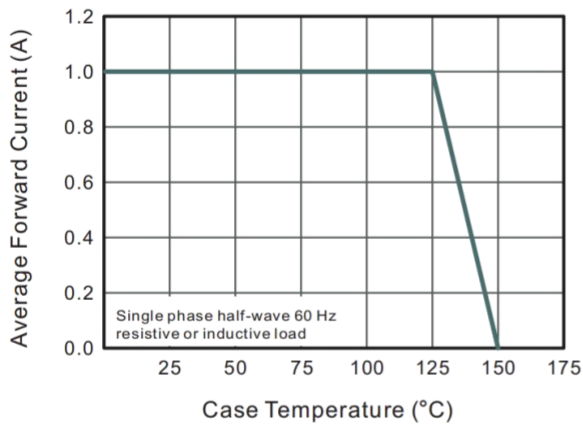
| Parameter                                                                          | Symbols                                   | SOD4007    | Units         |
|------------------------------------------------------------------------------------|-------------------------------------------|------------|---------------|
| Maximum Repetitive Peak Reverse Voltage                                            | $V_{RRM}$                                 | 1000       | V             |
| Maximum RMS voltage                                                                | $V_{RMS}$                                 | 700        | V             |
| Maximum DC Blocking Voltage                                                        | $V_{DC}$                                  | 1000       | V             |
| Maximum Average Forward Rectified Current                                          | $I_{F(AV)}$                               | 1.0        | A             |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load | $I_{FSM}$                                 | 30         | A             |
| Max Instantaneous Forward Voltage at 1 A                                           | $V_F$                                     | 1.1        | V             |
| Maximum DC Reverse Current<br>at Rated DC Reverse Voltage                          | $I_R$                                     | 5.0<br>50  | uA            |
|                                                                                    | $T_a = 25^{\circ}C$<br>$T = 100^{\circ}C$ |            |               |
| Typical Junction Capacitance (1)                                                   | $C_j$                                     | 220(TYP.)  | PF            |
| Typical Thermal Resistance (2)                                                     | $R_{\theta JA}$                           | 90         | $^{\circ}C/W$ |
| Operating Junction Temperature Range                                               | $T_j$                                     | -55 ~ +150 | $^{\circ}C$   |
| Storage Temperature Range                                                          | $T_{stg}$                                 | -55 ~ +150 | $^{\circ}C$   |

(1). Measured at 1 MHz and applied reverse voltage of 4 V D.C

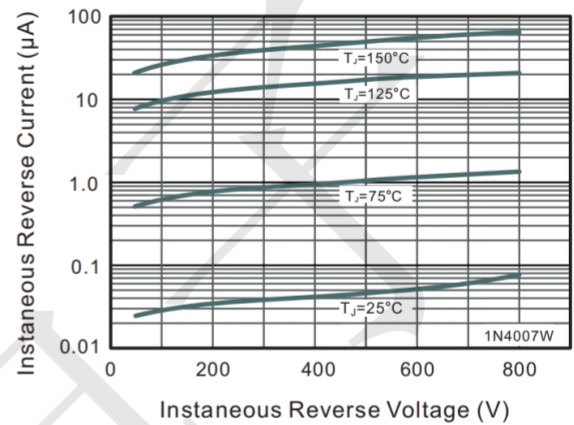
(2). P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

### Typical Electrical Characteristic Curves

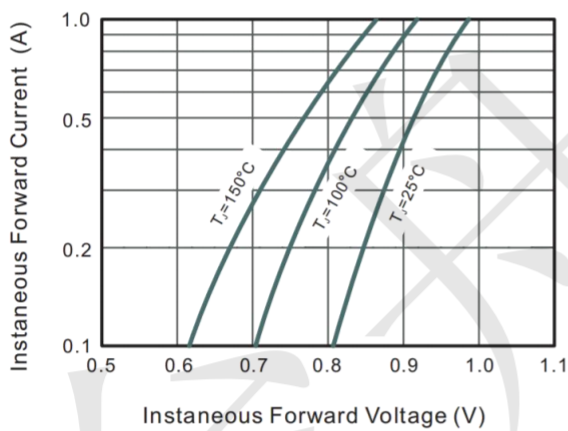
Forward Current Derating Curve



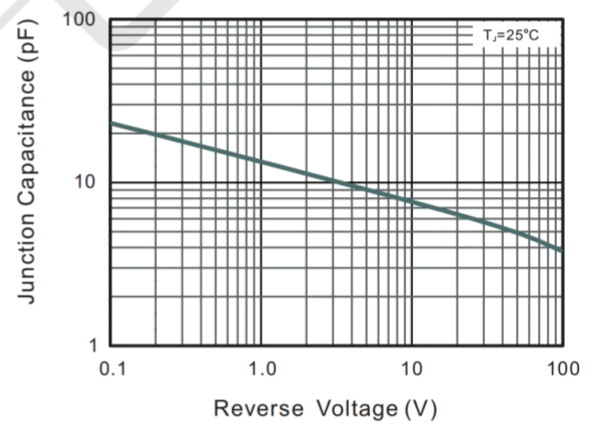
Typical Instaneous Reverse Characteristics



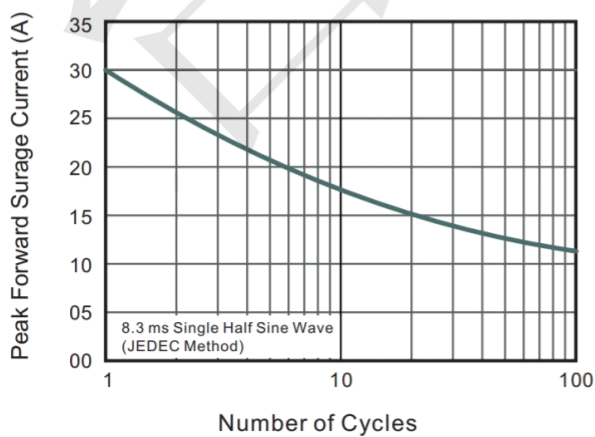
Typical Forward Characteristic



Typical Junction Capacitance

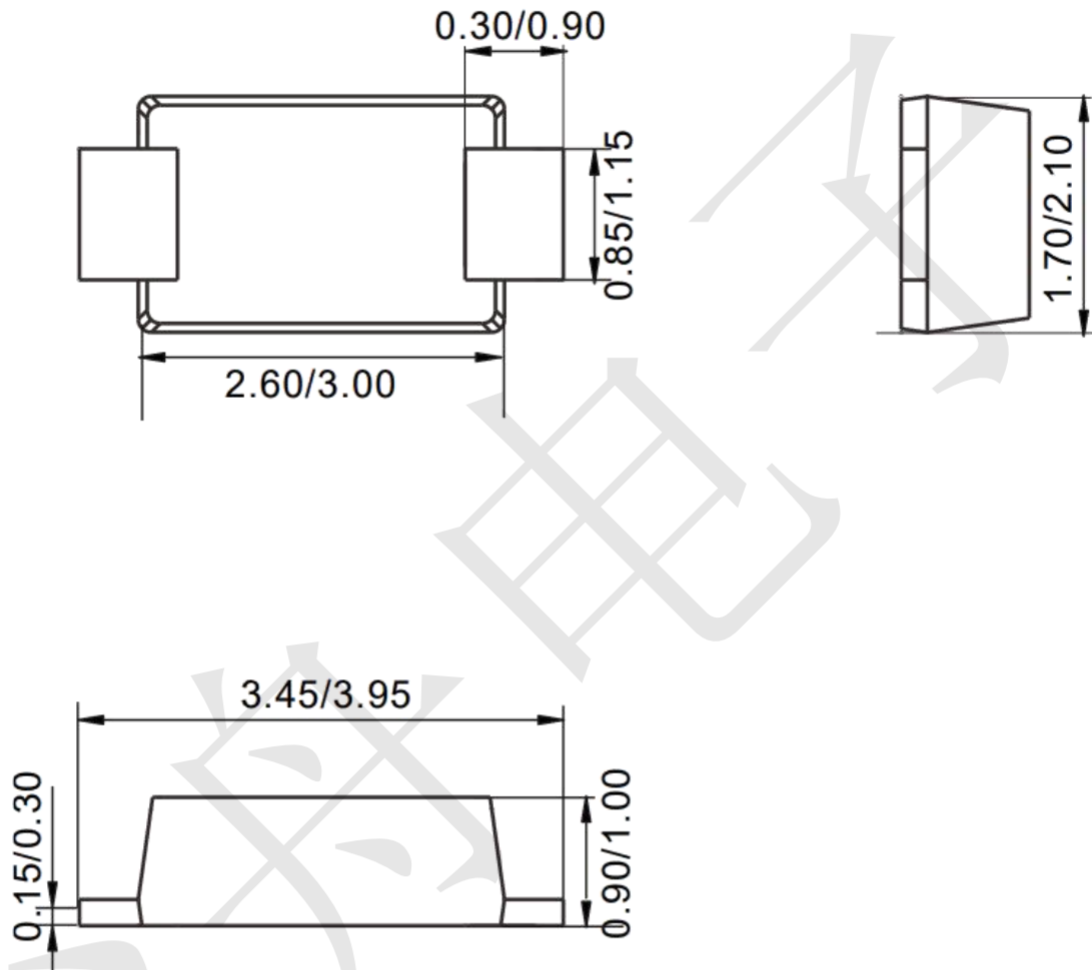


Maximum Non-Repetitive Peak Forward Surge Current



**Package Outline Dimensions (unit: mm)**

SOD-123FL



**Mounting Pad Layout (unit: mm)**

