

1N4001FL THRU 1N4007FL

SURFACE MOUNT GENERAL PURPOSE SILICON RECTIFIERS

Forward current-1.0A

Reverse voltage-50V to1000V

FEATURES

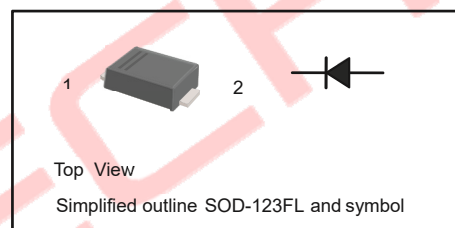
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Low profile package
- ◆ Ideal for automated placement
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

PINNING

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

MECHANICAL DATA

- ◆ Case:SOD-123FL molded plastic body
- ◆ Terminals:Solderable per MIL-STD-750,Method 2026
- ◆ Weight: : Approximated 0.015 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

| PARAMETER | SYMBOL | 1N4001FL | 1N4002FL | 1N4003FL | 1N4004FL | 1N4005FL | 1N4006FL | 1N4007FL | UNIT |
|---|-----------------|-------------|----------|----------|----------|----------|----------|----------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current at $T_C=125^\circ\text{C}$ | $I_{F(AV)}$ | 1 | | | | | | | A |
| Peak Forward Surge Current (Note1) | I_{FSM} | 30 | | | | | | | A |
| Maximum Forward Voltage at 1.0A | V_F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$ | I_R | 5 50 | | | | | | | μA |
| Junction Capacitance (Note2) | C_J | 11 | | | | | | | pF |
| Thermal Resistance (Note3) | $R_{\theta JA}$ | 90 | | | | | | | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Notes: 1. Measured at 8.3 ms single half sine wave superimposed on rated load (JEDEC Method) .

2. Measured at 1MHz and applied reverse voltage of 4.0 D.C.

3. P.C.B.mounted with 2.0 " \times 2.0 " (5 \times 5 cm) copper pad areas.

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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

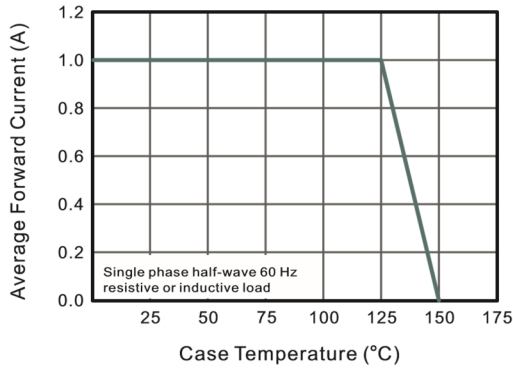


Fig.2 Typical Instantaneous Reverse Characteristics

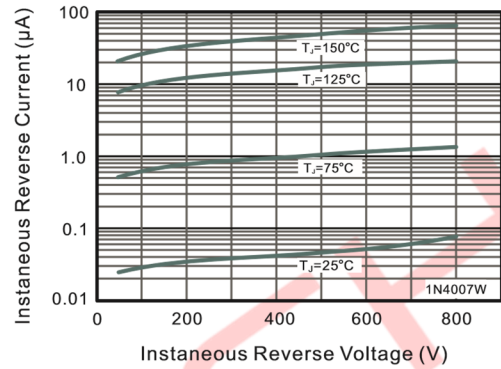


Fig.3 Typical Forward Characteristic

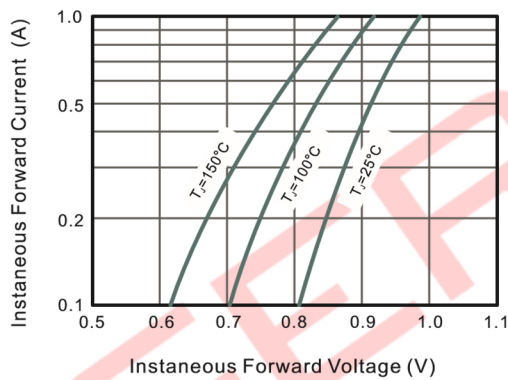


Fig.4 Typical Junction Capacitance

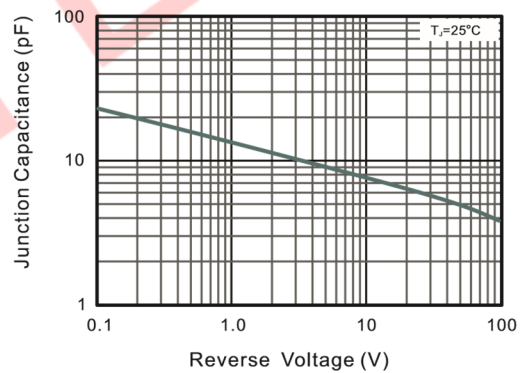
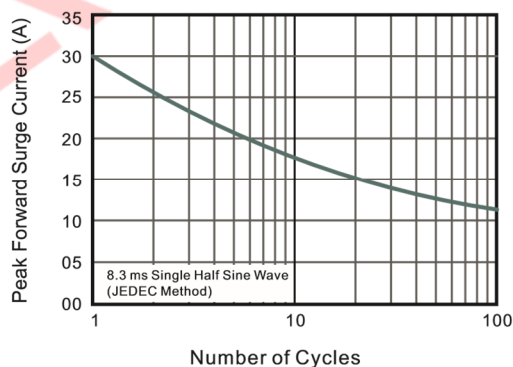


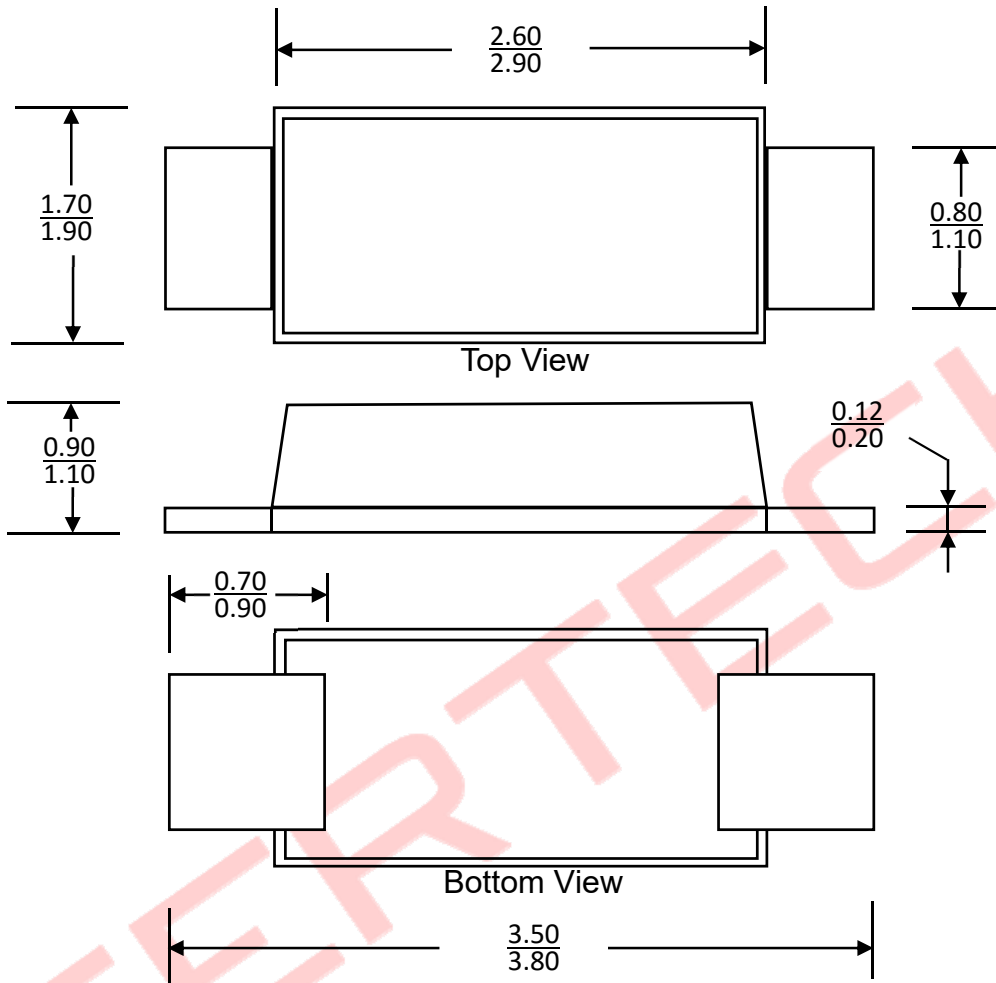
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



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PACKAGE OUTLINE

SOD-123FL



Dimensions in millimeters

ORDERING INFORMATION

| Device | Package | Shipping |
|------------------------|-----------|------------------------------|
| 1N4001FL thru 1N4007FL | SOD-123FL | 3,000/Tape & Reel (7 inches) |