# 1N4001W THRU 1N4007W

## SURFACE MOUNT GENERAL PURPOSE SILICON RECTIFIERS

### FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Ideal for automated placement
- 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 |


Top View
Marking Code : A1-A7
Simplified outline SOD-123FL and symbol

### 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 derate by 20 %.

| Parameter | Symbols | 1N4001W | 1N4002W | 1N4003W | 1N4004W | 1N4005W | 1N4006W | 1N4007W | Units |
|---|---|---|---|---|---|---|---|---|---|
| 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 °C | $I_{F(AV)}$ | 1 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | $I_{FSM}$ | 30 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 1 A | $V_F$ | 1.1 | | | | | | | V |
| Maximum DC Reverse Current $T_a$ = 25 °C<br>at Rated DC Blocking Voltage $T_a$ =125 °C | $I_R$ | 5<br>50 | | | | | | | μA |
| Typical Junction Capacitance (1) | $C_j$ | 8(TYP.) | | | | | | | pF |
| Typical Thermal Resistance (2) | $R_{\theta JA}$ | 90 | | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{stg}$ | -55 ~ +150 | | | | | | | °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.

**Fig.1 Forward Current Derating Curve**

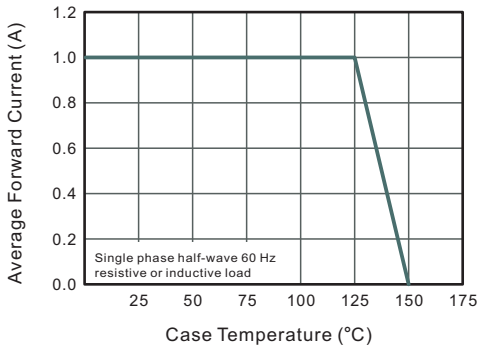



**Fig.2 Typical Instaneous Reverse Characteristics**

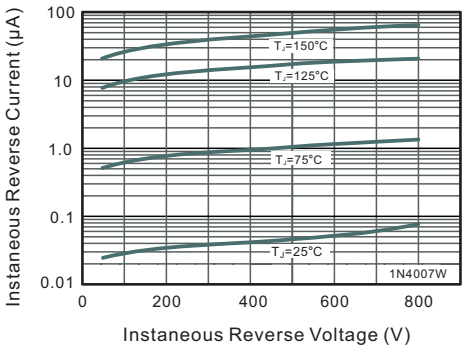



**Fig.3 Typical Forward Characteristic**

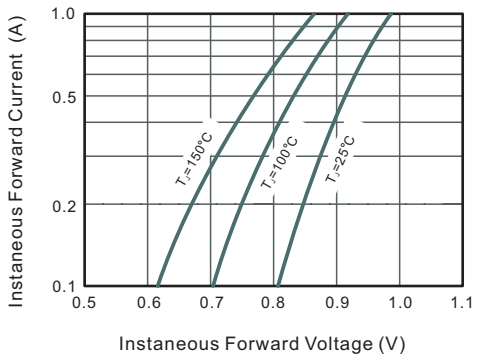



**Fig.4 Typical Junction Capacitance**

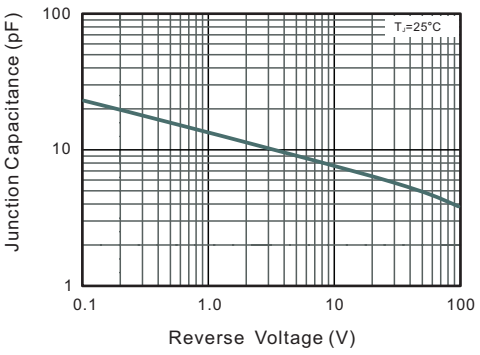
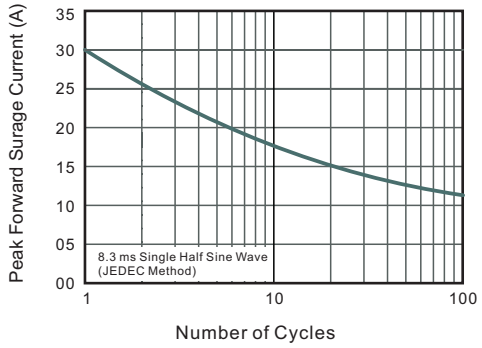
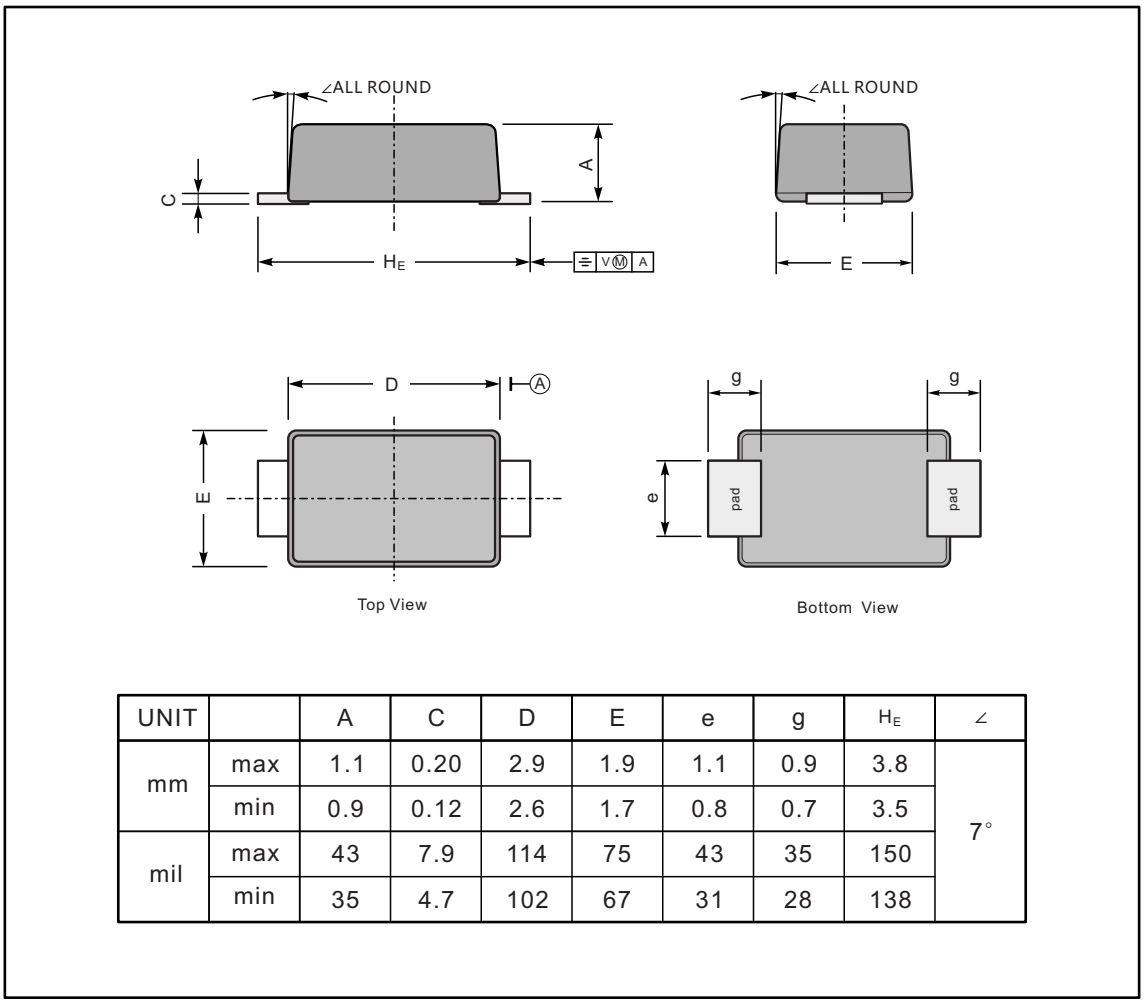



**Fig.5 Maximum Non-Repetitive Peak Forward Surage Current**



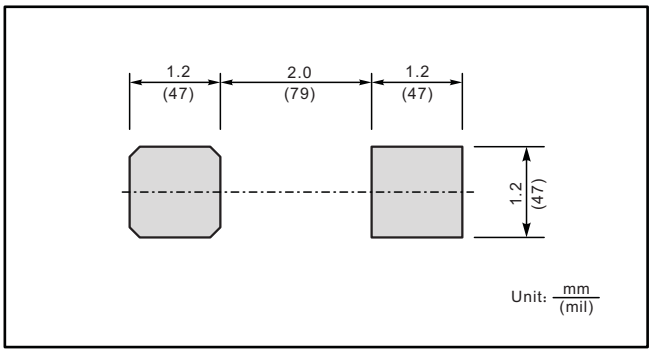
## PACKAGE OUTLINE

**Plastic surface mounted package; 2 leads** SOD-123FL




| UNIT | | A | C | D | E | e | g | $H_E$ | ∠ |
|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.1 | 0.20 | 2.9 | 1.9 | 1.1 | 0.9 | 3.8 | 7° |
| | min | 0.9 | 0.12 | 2.6 | 1.7 | 0.8 | 0.7 | 3.5 | |
| mil | max | 43 | 7.9 | 114 | 75 | 43 | 35 | 150 | |
| | min | 35 | 4.7 | 102 | 67 | 31 | 28 | 138 | |

**The recommended mounting pad size**




**Marking**

| Type number | Marking code |
|---|---|
| 1N4001W | A1 |
| 1N4002W | A2 |
| 1N4003W | A3 |
| 1N4004W | A4 |
| 1N4005W | A5 |
| 1N4006W | A6 |
| 1N4007W | A7 |