

## FEATURES

- Plastic package has Underwriters Laboratory
- Flammability classification 94V-0 Utilizing Flame
- Retardant Epoxy Molding Compound
- For surface mount applications
- Low leakage current.

## Mechanical Data

Case: JEDEC SOD-123FL, molded plastic over passivated chip

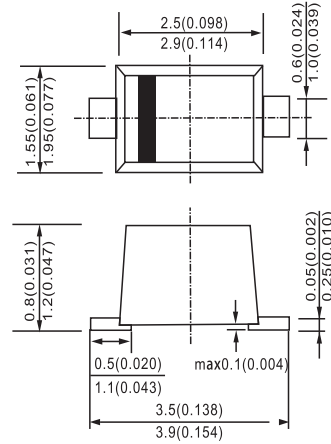
Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Weight: 0.006 ounces, 0.02 gram

Mounting position: Any

## SOD-123FL



Dimensions in 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, derate current by 20%.

|   |                 | SOD 4001       | SOD 4002 | SOD 4003 | SOD 4004 | SOD 4005 | SOD 4006 | SOD 4007 | UNITS   |
|---|-----------------|----------------|----------|----------|----------|----------|----------|----------|---------|
| Device marking code   |                 | D1             | D2       | D3       | D4       | D5       | D6       | D7       |         |
| Maximum recurrent 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 @ $T_A=75$                              | $I_{(AV)}$      | 1.0            |          |          |          |          |          |          | A       |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load | $I_{FSM}$       | 25             |          |          |          |          |          |          | A       |
| Maximum instantaneous forward voltage @ $I_{FM}=1.0A$ (Note 1)                    | $V_F$           | 1.1            |          |          |          |          |          |          | V       |
| Maximum DC reverse current @ $T_A=25$ at rated DC blocking voltage @ $T_A=125$    | $I_R$           | 50             |          |          |          |          |          |          | $\mu A$ |
| Typical junction capacitance measured at $f=1MHz, V_R=4.0V$                       | $C_J$           | 15             |          |          |          |          |          |          | p F     |
| Typical thermal resistance junction to lead                                       | $R_{\theta JL}$ | 20             |          |          |          |          |          |          | /W      |
| Operating temperature range   | $T_j$           | - 55 --- + 150 |          |          |          |          |          |          |         |
| Storage temperature range   | $T_{STG}$       | - 55 --- + 150 |          |          |          |          |          |          |         |

NOTE1. Pulse test: pulse width 300 $\mu$ sec, duty cycle 2%.

## RATINGS AND CHARACTERISTIC CURVES SOD4001 THRU SOD4007

FIG.1-TYPICAL FORWARD CHARACTERISTICS

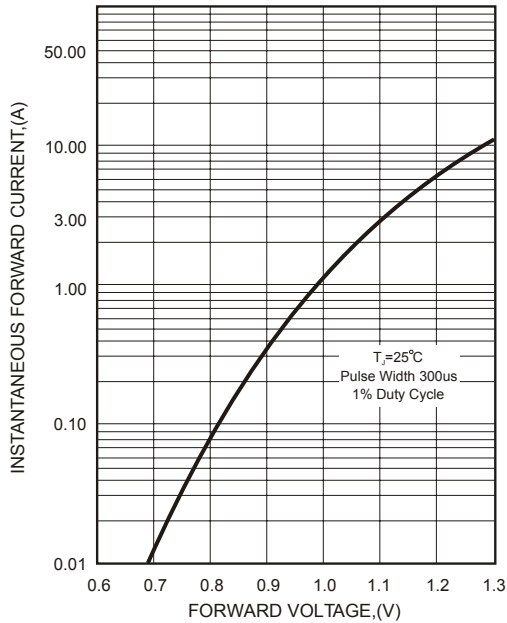


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

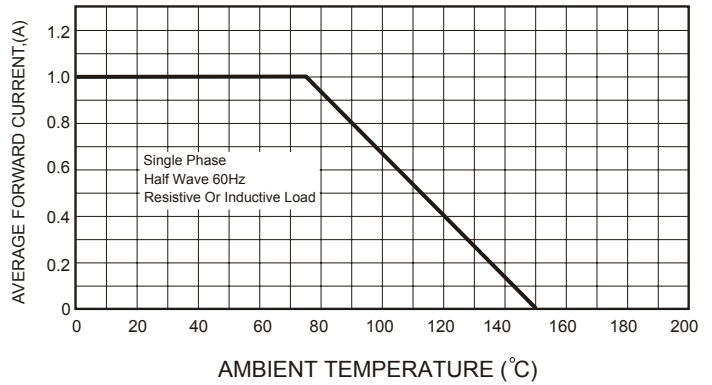


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

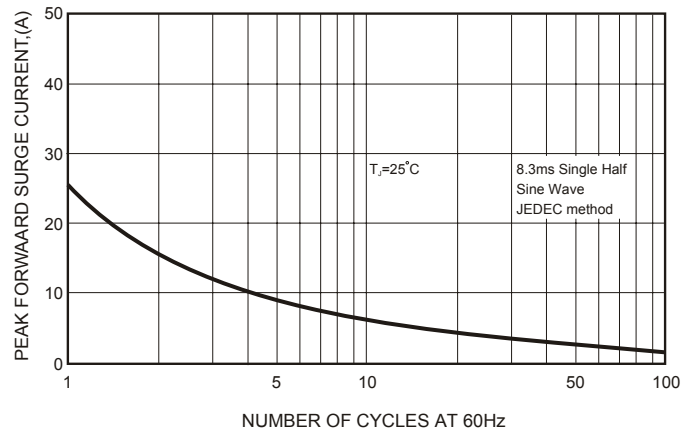


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

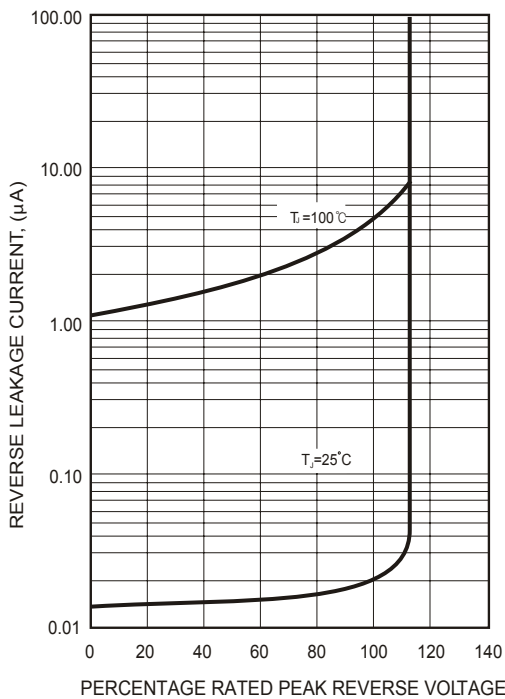


FIG.5-TYPICAL JUNCTION CAPACITANCE

