

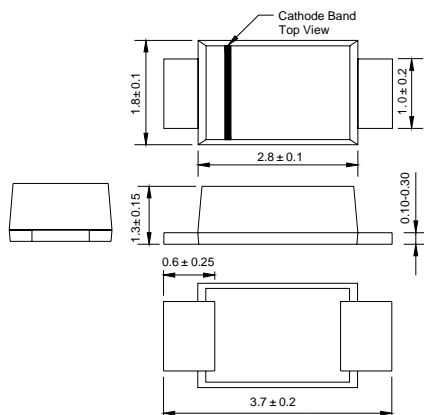


SOD4001 THRU SOD4007

SURFACE MOUNT GENERAL PURPOSE SILICON RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

SOD-123FL



Dimensions in millimeters

FEATURES

- ◆ Glass passivated device
- ◆ Ideal for surface mounted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC SOD-123FL molded plastic body over passivated chip
Terminals: Solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.0007 ounce, 0.02 grams

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 current derate by 20%.

| MDD Catalog Number | SYMBOLS | 4001 D1 | 4002 D2 | 4003 D3 | 4004 D4 | 4005 D5 | 4006 D6 | 4007 D7 | UNITS |
|--|-----------------|--------------|------------|------------|------------|------------|------------|------------|------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | VOLTS |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum average forward rectified current at $T_A=65^\circ\text{C}$ (NOTE 1) | $I_{(AV)}$ | 1.0 | | | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=25^\circ\text{C}$ | I_{FSM} | 25.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0A | V_F | 1.1 | | | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$ | I_R | 10.0 50.0 | | | | | | | μA |
| Typical junction capacitance (NOTE 2) | C_J | 4 | | | | | | | pF |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ | 180 | | | | | | | K/W |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

- Note:** 1. Averaged over any 20ms period.
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

MDD ELECTRONIC

RATINGS AND CHARACTERISTIC CURVES SOD4001 THRU SOD4007

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

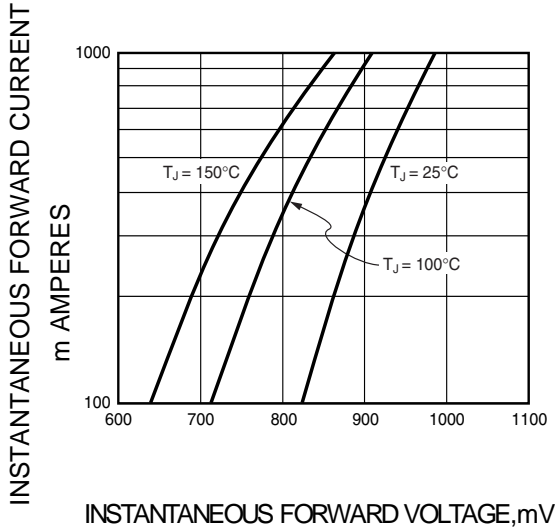


FIG.2 – TYPICAL JUNCTION CAPACITANCE

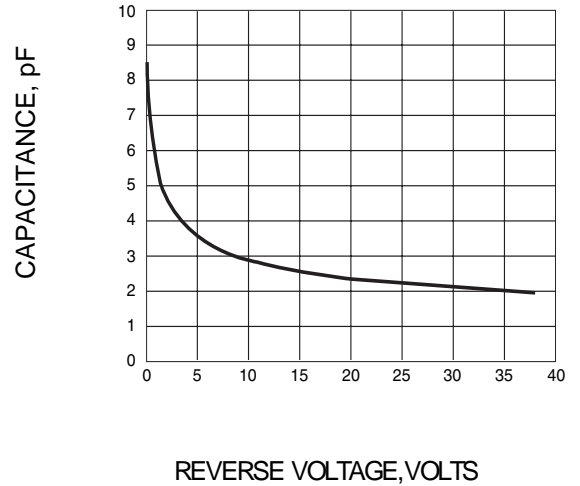


FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

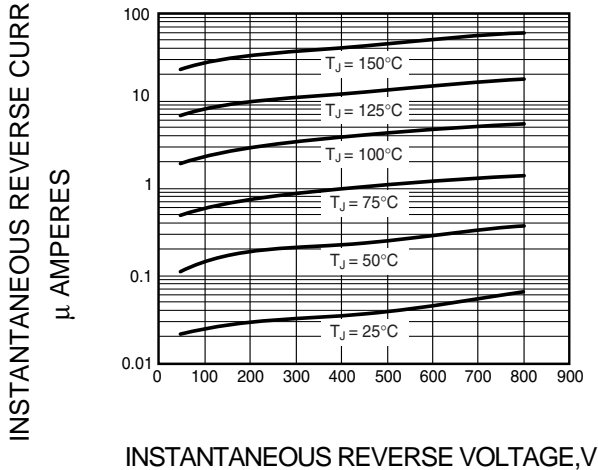


FIG.4 – FORWARD DERATING CURVE

