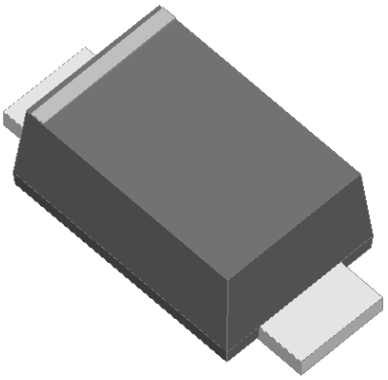
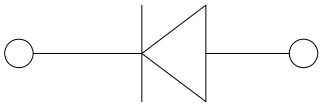
SOD4001 THRU SOD4007

RoHS
COMPLIANT

Surface Mount General Purpose Rectifier





Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Switching for general purpose
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in general purpose switching rectification of power supply, inverters, converters, and freewheeling diodes for consumer and telecommunication.

Mechanical Date

- **Package**: SOD-123FL
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

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	SOD4001 A1	SOD4002 A2	SOD4003 A3	SOD4004 A4	SOD4005 A5	SOD4006 A6	SOD4007 A7	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 at Rated DC Blocking Voltage T_a =125 °C	I_R	5 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.

■Characteristics(Typical)

Fig.1 Forward Current Derating Curve

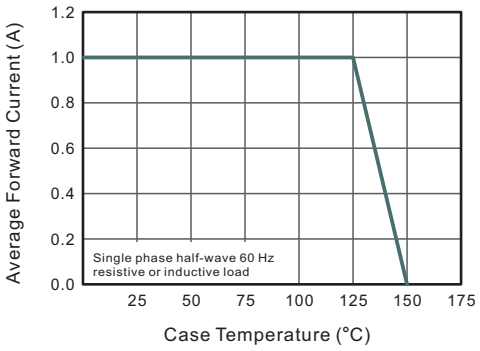


Fig.2 Typical Instaneous Reverse Characteristics

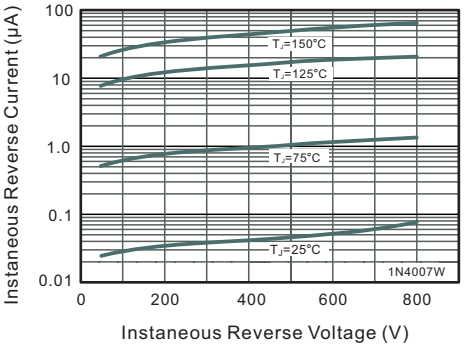


Fig.3 Typical Forward Characteristic

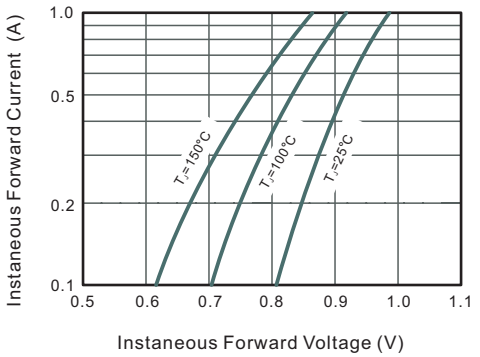


Fig.4 Typical Junction Capacitance

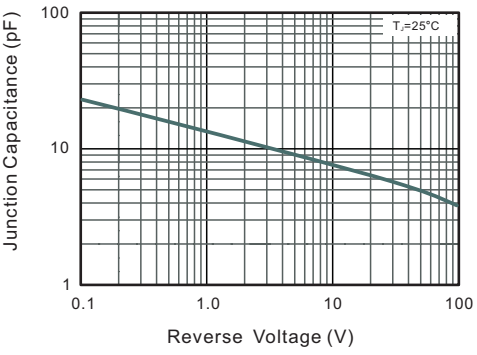
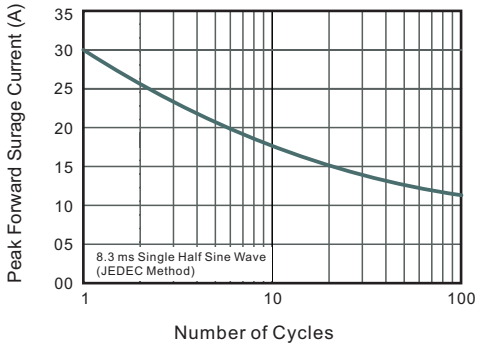


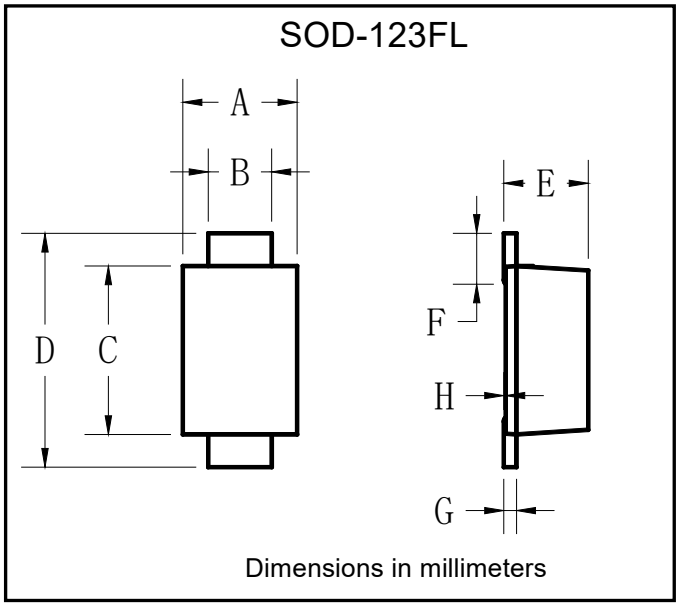
Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



■Ordering Information (Example)

P/N	PKG	QTY
SOD4001-SOD4007	SOD123FL	3000

■ Outline Dimensions



SOD-123FL		
Dim	Min	Max
A	1.60	1.90
B	0.90	1.10
C	2.55	2.85
D	3.60	3.90
E	1.00	1.20
F	0.40	0.90
G	0.10	0.25
H	0.02	0.05