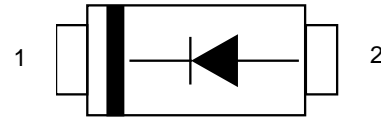


Description

Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage 50 to 1000 V

Forward Current 1 A



SOD123-FL

Maximum Ratings and Electrical characteristics per line@25°C (unless otherwise specified)
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %

Parameter	Symbols	P1N4001W	P1N4002W	P1N4003W	P1N4004W	P1N4005W	P1N4006W	P1N4007W	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 $T_a = 65\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	25							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$	I_R	5 100							μA
Typical Junction Capacitance ¹⁾	C_j	4							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	180							$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55~+150							$^{\circ}\text{C}$

1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

2) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

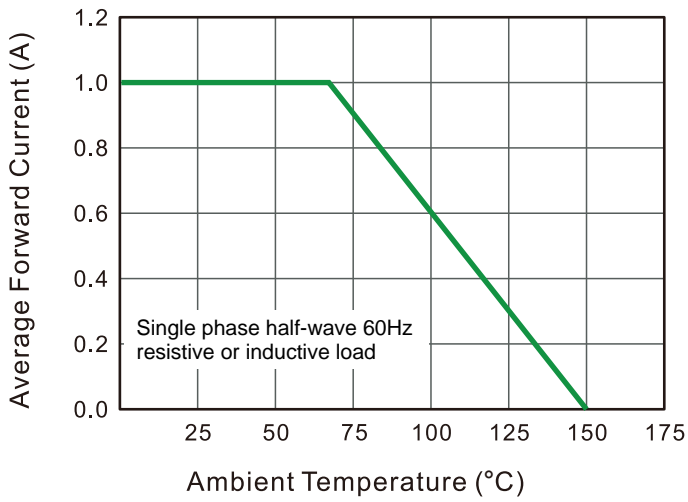


Fig.1 Forward Current Derating Curve

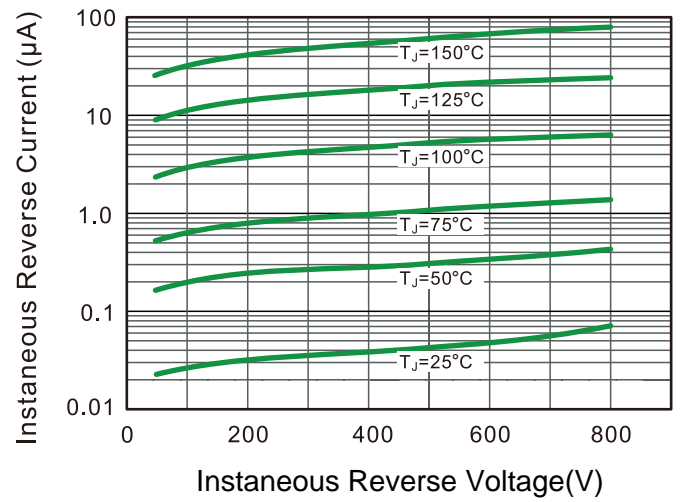


Fig.2 Typical Instantaneous Reverse Characteristics

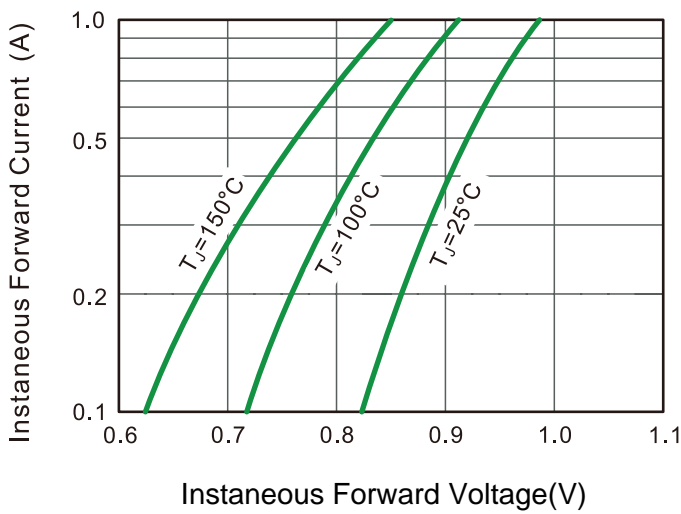


Fig.3 Typical Forward Characteristic

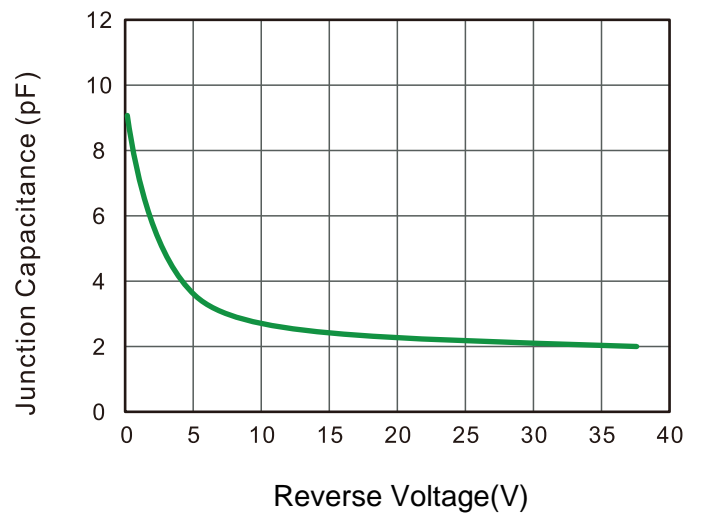
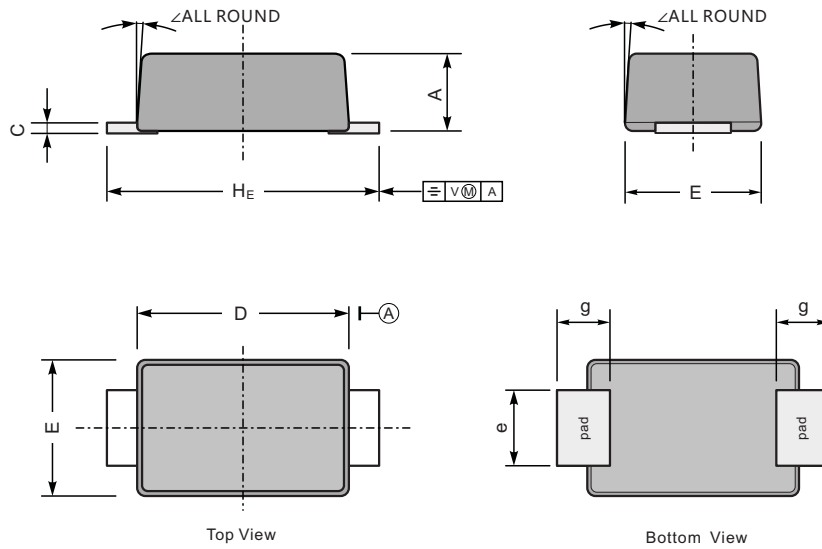


Fig.4 Typical Junction Capacitance

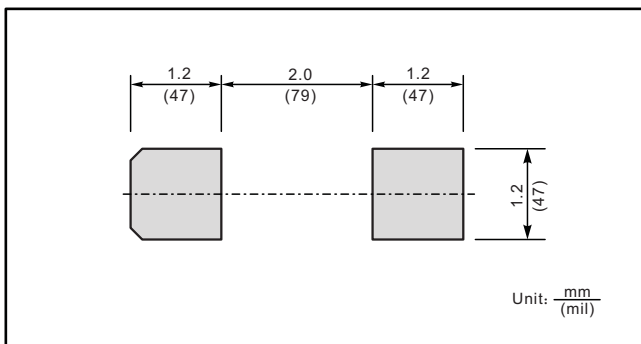
Product dimension(SOD-123FL)

Plastic surface mounted package; 2 leads

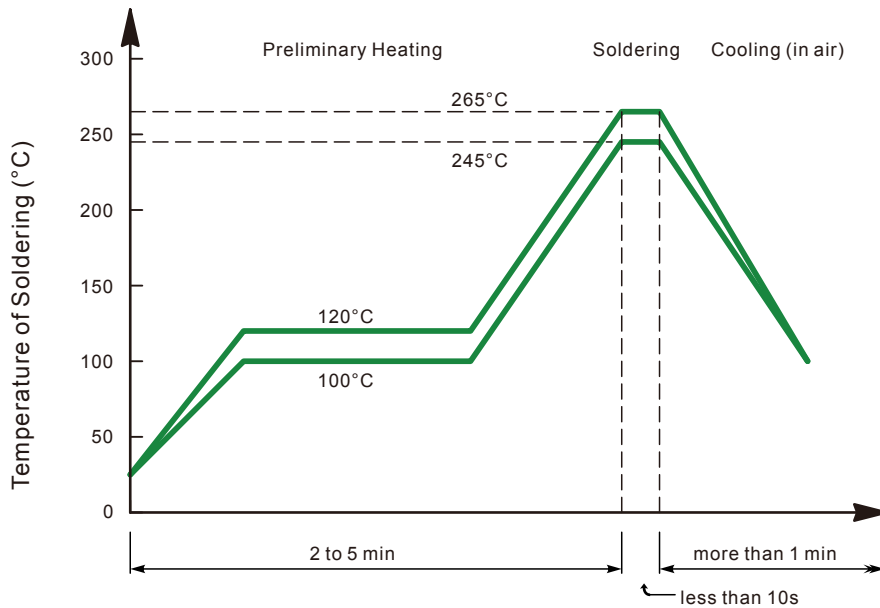


UNIT		A	C	D	E	e	g	H_E	\angle
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

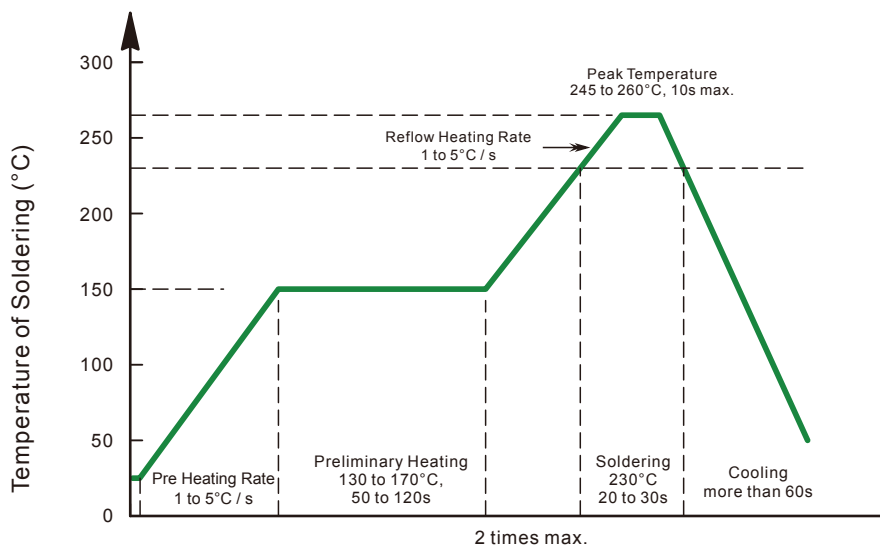
The recommended mounting pad size



• Recommended condition of flow soldering



• Recommended condition of reflow soldering




Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters; time length of peak temperature (longer), time length of soldering (longer), thickness of solder paste (thicker)

• Condition of hand soldering

Temperature: 370°C
 Time: 3s max.
 Times: one time

• Remark:


Lead free solder paste (96.5Sn/3.0Ag/0.5Cu)

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