P1N4001W THRU P1N4007W

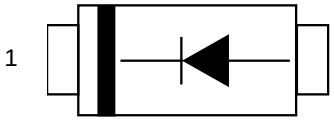
Switching Diode

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℃(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 Ta = 65 ℃	$I_{F(AV)}$	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 Ta = 25 ℃ at Rated DC Blocking Voltage Ta =125 ℃	I_R	5 100							μA
Typical Junction Capacitance [1)]	C_j	4							pF
Typical Thermal Resistance [2)]	$R_{\theta JA}$	180							℃/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55~+150							℃

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

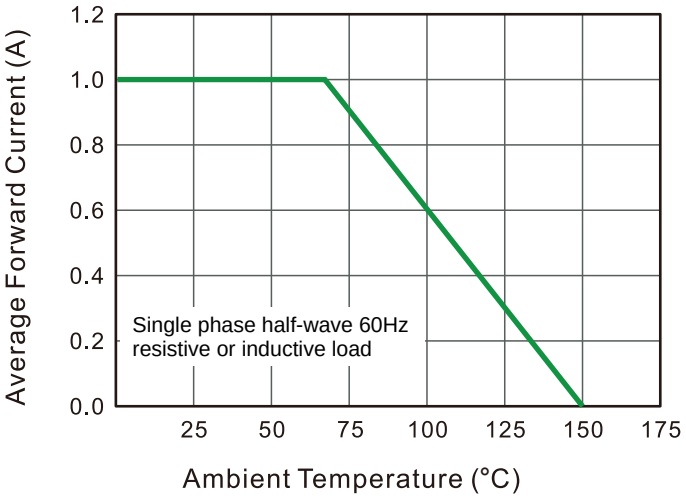


Fig.1 Forward Current Derating Curve

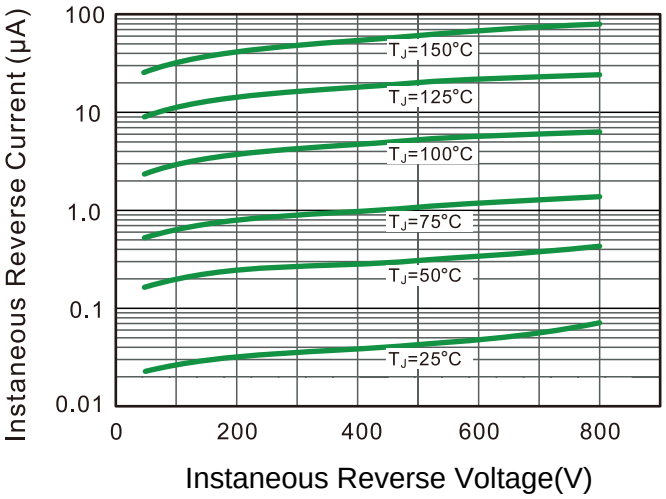


Fig.2 Typical Instaneous Reverse Characteristics

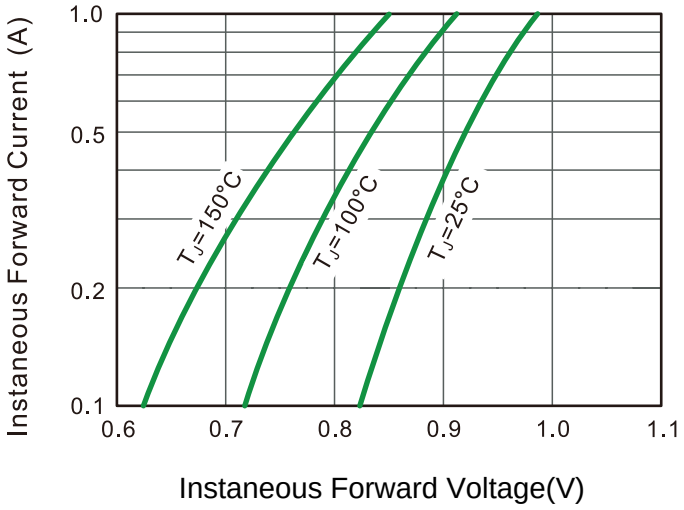


Fig.3 Typical Forward Characteristic

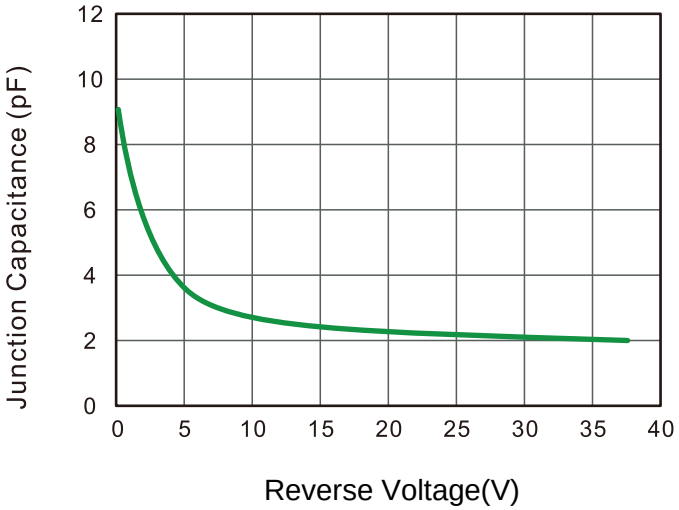
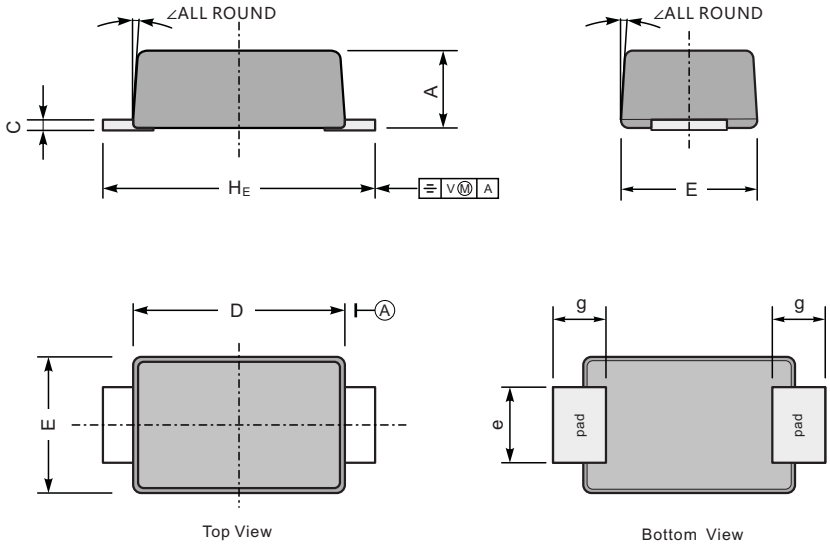


Fig.4 Typical Junction Capacitance

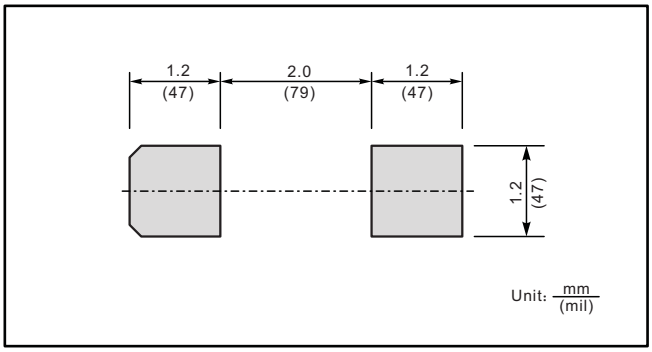
Product dimension (SOD-123FL)

Plastic surface mounted package; 2 leads

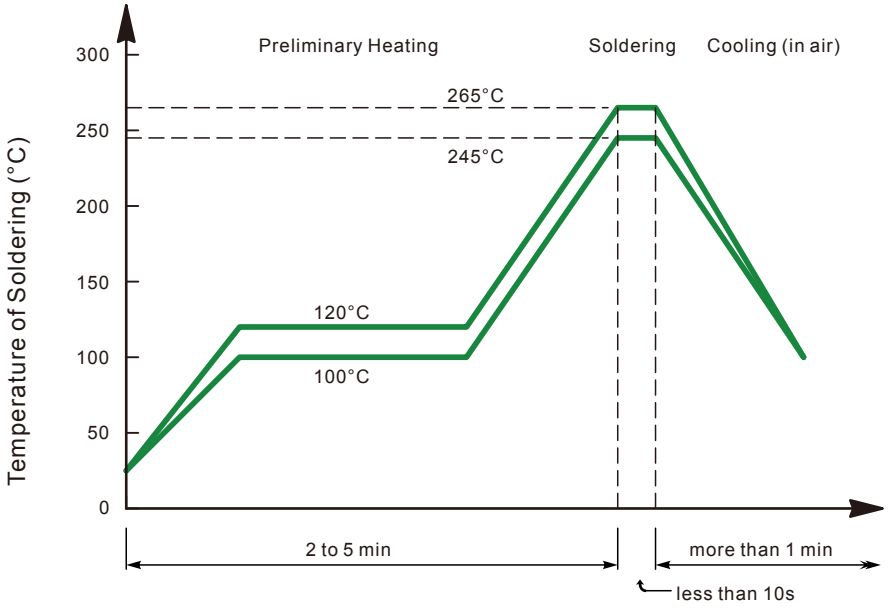


UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

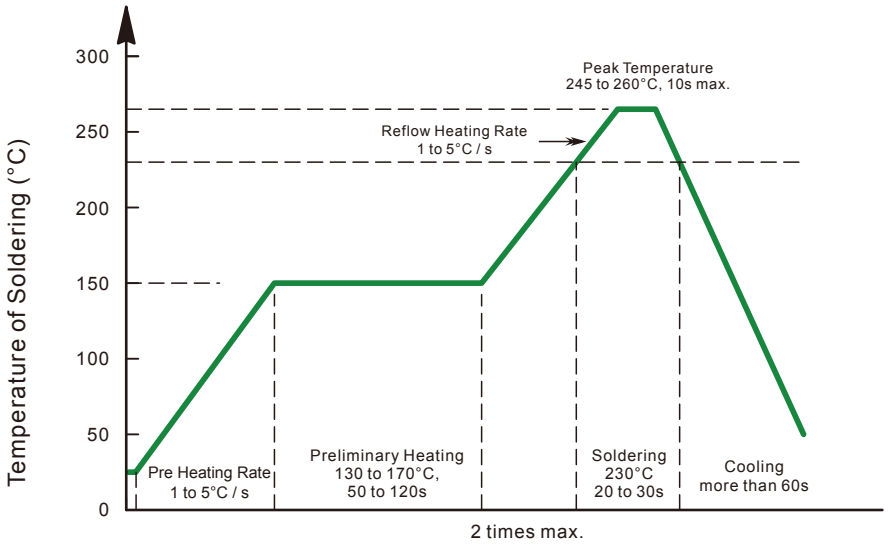
The recommended mounting pad size



• **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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PTVSHC3N4V5B PSBD2FD40V1H PTVSHC3D5VB PTVSHC3D12VU PESDNC2FD3V3B PSBD3D40V1H PTVSHC3D4V5B PZ3D4V2H PESDALC10N5VU PESDHC2FD4V5BH PPM6N12V10 PTVSHC3N7VU PESDXC2FD5VU PNM523T201E0 PNM723T201E0 PSBD1DF40V3H PSBD2FD30V01 PTVSHC1DF7VB PTVSLC3D3V3B PESDMC2FD5VB PESDNC2FD8VB PESDUC2FD5VB PTVSHC3D4V5BH PESDHC3D3V3U PESDNC2FD3V3BS PTVSHC1DF7VBH PTVSHC3D7VU PTVSLC3D24VB PSBD1DF40V2L PSM712