PUS1AW THRU PUS1MW

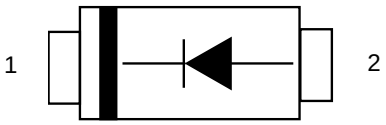
Switching Diode

Description

Surface Mount Ultrafast Recovery Rectifiers

Reverse Voltage 50 to 1000 V

Forward Current 1.0 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	PUS1AW	PUS1BW	PUS1DW	PUS1GW	PUS1JW	PUS1KW	PUS1MW	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	$I_{F(AV)}$	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	V_F	1.0			1.4	1.7			V
Maximum DC Reverse Current Ta = 25 ℃ at Rated DC Blocking Voltage Ta =125 ℃	I_R	5 100							μA
Maximum Reverse Recovery Time at I_F=0.5A, I_R=1A, I_{rr}=0.25A	T_{rr}	50				75			ns
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

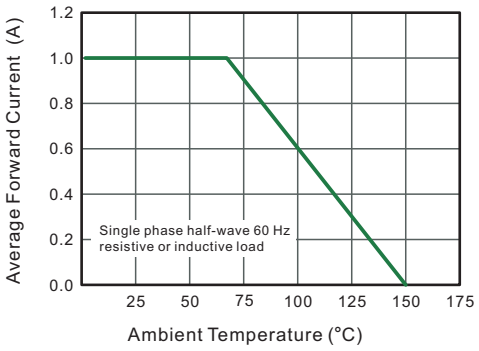


Fig.1 Forward Current Derating Curve

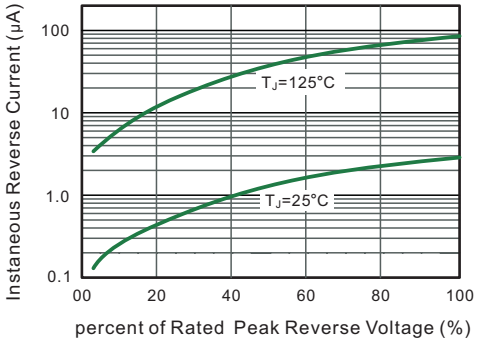


Fig.2 Typical Reverse Characteristics

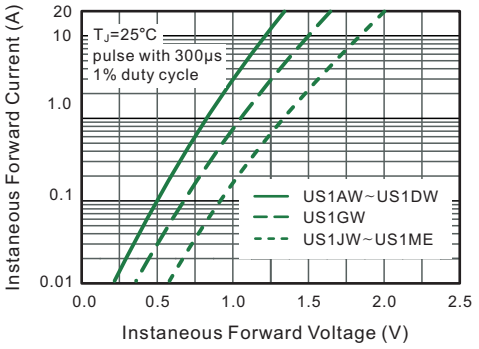


Fig.3 Typical Instaneous Forward Characteristics

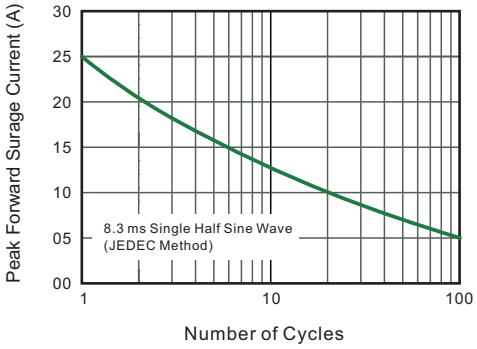
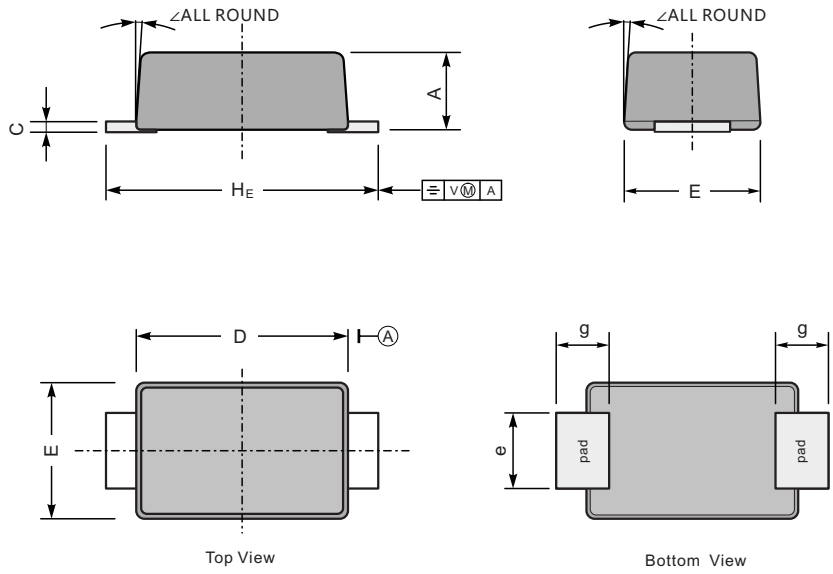


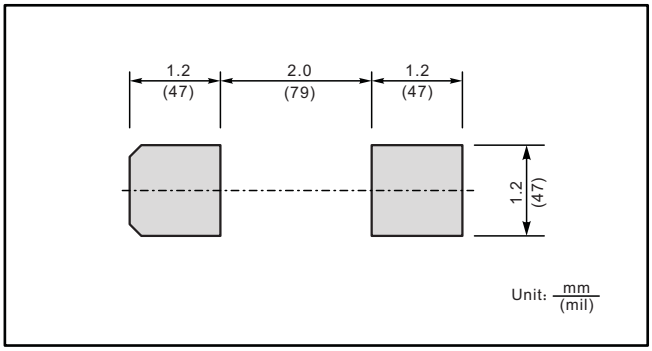
Fig.4 Maximum Non-Repetitive Peak Forward Surage Current

Product dimension (SOD-123FL)

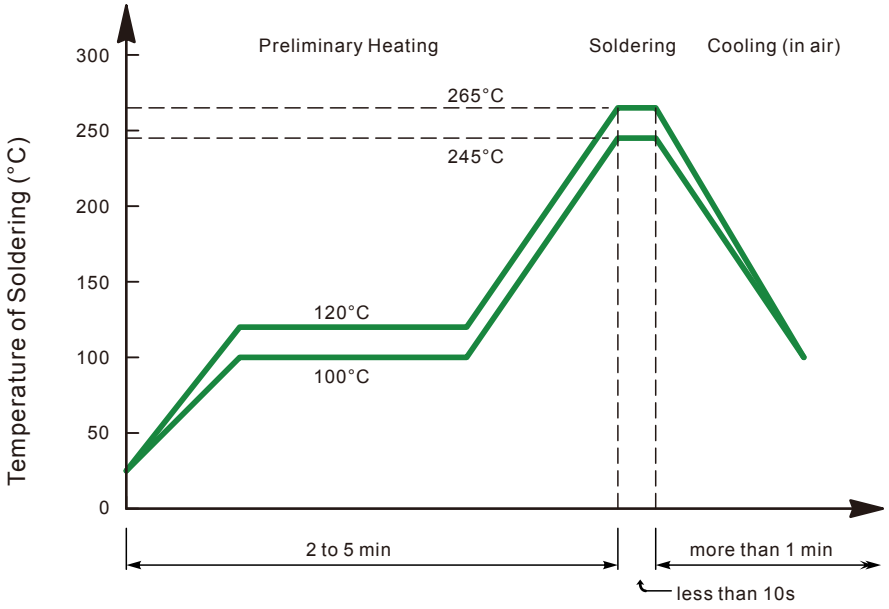


UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

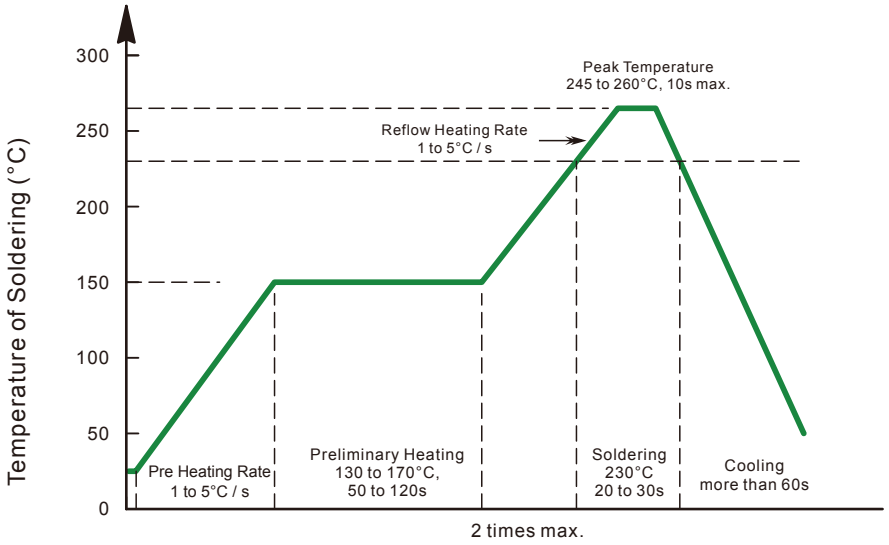
The recommended mounting pad size



• **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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