A7

VOLTAGE RANGE **1000 Volts**
CURRENT **1.0 Ampere**

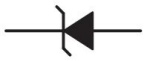
Features

RoHS COMPLIANT

- Glass passivated: chip 50mil
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 260℃/10S at terminals
- Component in accordance to ROHS 2002/95/1 and WEEE 2002/96/EC

Mechanical Data

- Case: JEDEC SOD-123FL mold plastic Body over glass passivated chip
- Terminals:Solder plated, solderable per J-STD-002B and JESD22-B102D
- Polarity: Laser band denote cathode band
- Weight: 0.00063ounce, 0.018grams



Maximum Ratings and Electrical Characteristics

- Ratings at 25℃ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER		SYMBOLS	A7	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	1000	Volts
Maximum RMS Voltage		V_{RMS}	700	Volts
Maximum DC Blocking Voltage		V_{DC}	1000	Volts
Maximum Average Forward Rectified Current		$I_{(AV)}$	1.0	Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	30	Amps
Maximum Instantaneous Forward Voltage at 1.0A		V_F	1.1	Volts
Power Dissipation Derate Above at 25℃		Pd	0.98	W
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A = 25℃	I_R	5.0	μA
	T_A = 125℃		50	
Maximum Reverse Recovery Time (NOTE3)		T_{RR}	1000 to 2000	nS
Typical Junction Capacitance (NOTE 1)		C_J	15	pF
Typical Thermal Resistance (NOTE 2)		$R_{\theta JA}$	60	℃/W
Operating and Storage Temperature Range		T_J,T_{STG}	-55 to +150	℃

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance from Junction to Ambient at. 1.8×1.8mm^2 copper pad areas.
3. Reverse Recovery Test Conditions:If=0.5A,Ir=1.0A,Irr=0.25A.

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Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

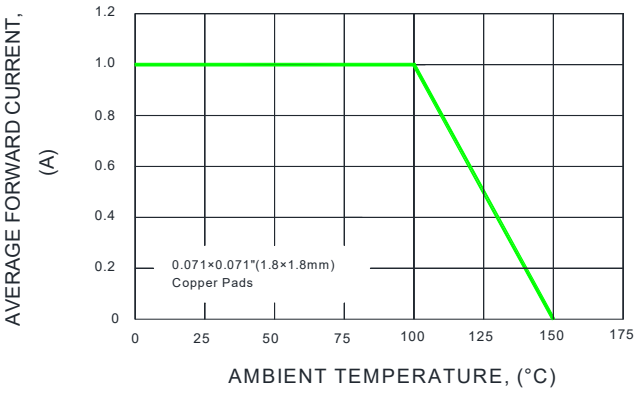


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

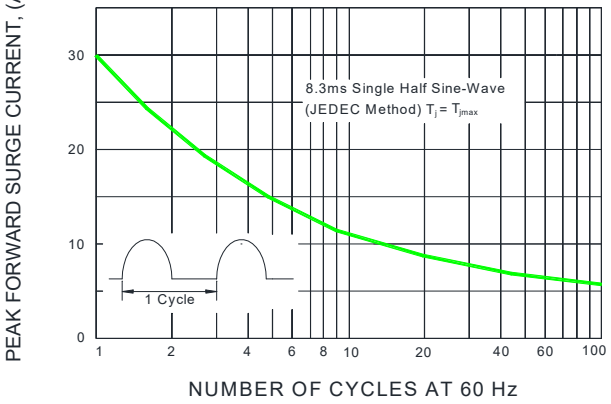


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

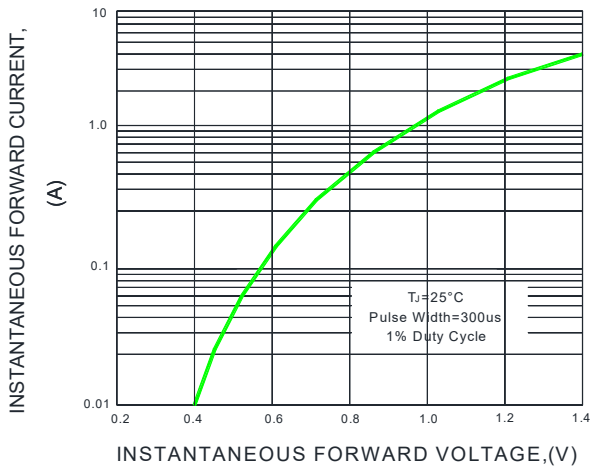


FIG.4-TYPICAL REVERSE CHARACTERISTICS

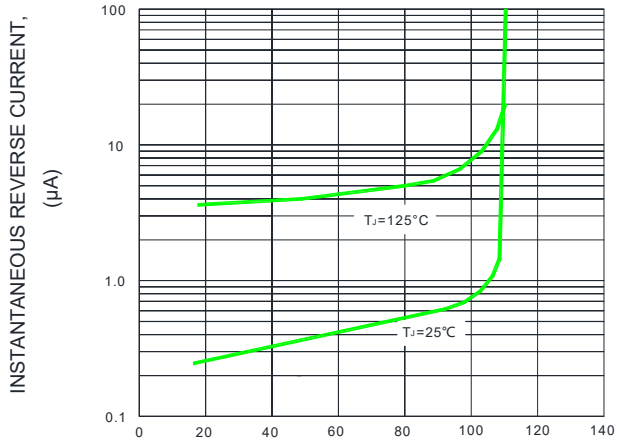
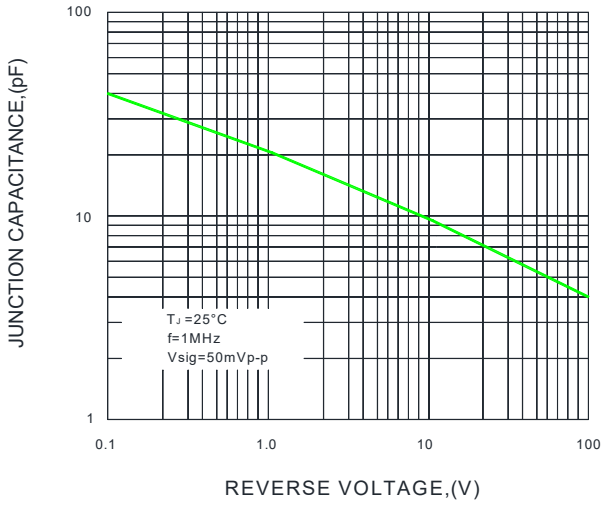


FIG.5-TYPICAL JUNCTION CAPACITANCE



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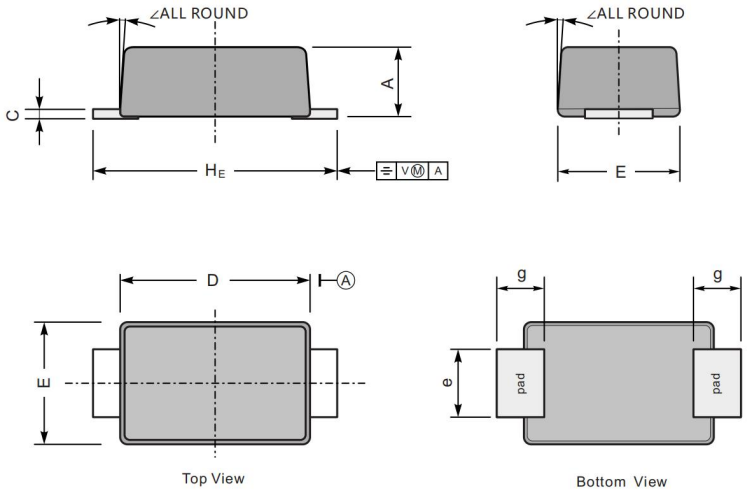
Package Outline Dimensions in inches (millimeters)

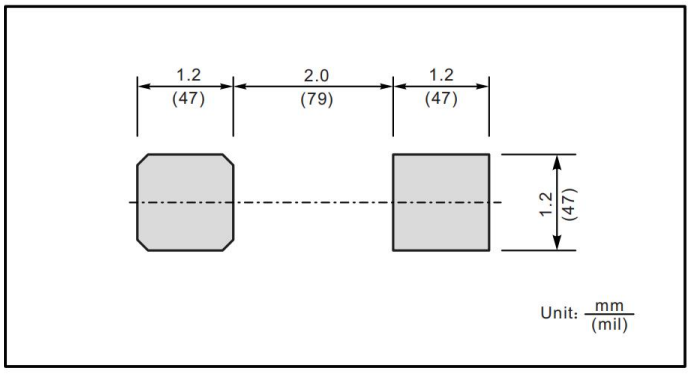
SOD-123FL

Unit: mm



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



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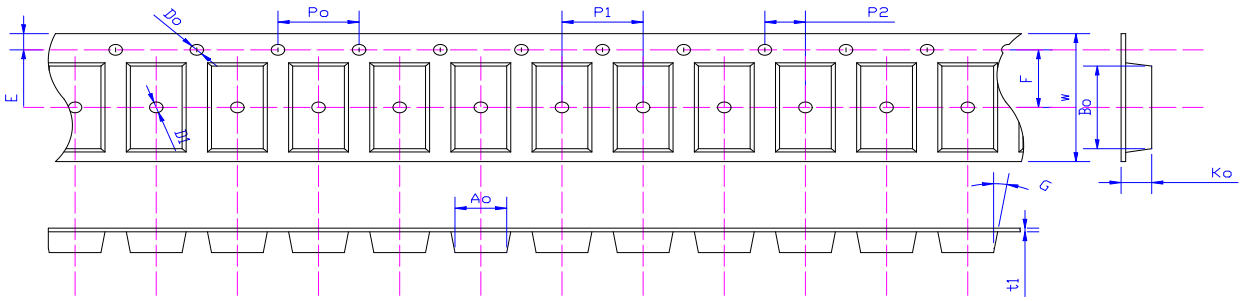
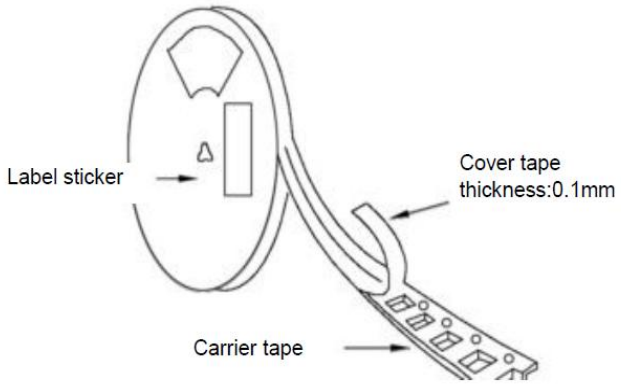
Packing Requirments

- PS black anti-static carrier tape packing



Specifications	Ao	Bo	Ko	Po	W	t1
SOD123FL	2.12±0.10	3.95±0.10	1.35±0.10	4.00±0.1	8.0±0.10	0.20±0.02

- 7 "antistatic plastic reel



DEVICE TYPE	07" Reel			
	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTOON	Q'TY/CARTON(pcs)
SOD123FL	3000	4	16	192000

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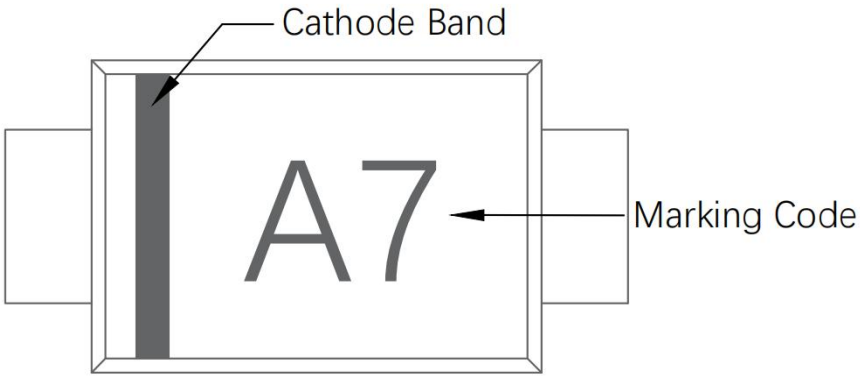
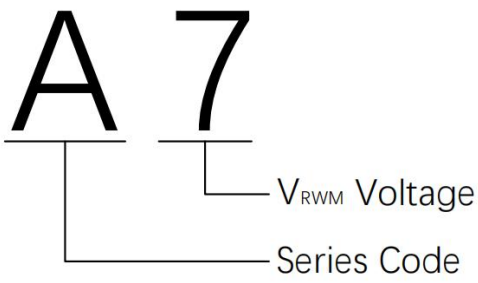
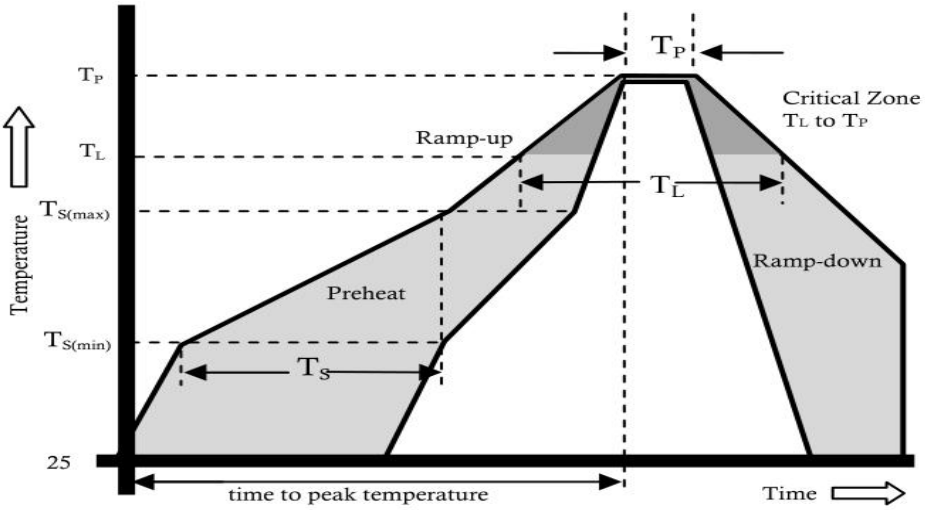
Marking Code



Part Number Code



Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T_L) to peak)		3°C/sec. Max.
T_S(max) to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T_L)(Liquidus)	+217°C
	Temperature (T_L)	60-150 secs.
Peak Temp (T_P)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C

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