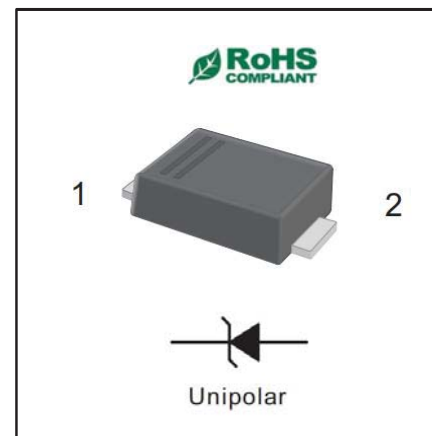


SURFACE MOUNT GLASS PASSIVATED STANDARD RECTIFIER

FEATURES

- Glass passivated chip
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 260°C/10S at terminals
- Component in accordance to ROHS 2002/95/1 and WEEE 2002/96/EC
- This product is available in AEC-Q101 compliant with PPAP capability
Note: For AEC-Q101 compliant products, please prefix - AT in the part number while ordering



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 °C ambient temperature unless otherwise specified.
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

PARAMETER		SYMBOLS	A1	A2	A3	A4	A5	A6	A7	UNITS
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	600	800	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	1.05							Volts
Power Dissipation Derate Above at 25°C		Pd	0.98							W
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A = 25°C	I _R	5.0							µA
	T _A = 125°C		50							
Maximum Reverse Recovery Time ^(NOTE3)		T _{RR}	2.0							mS
Typical Junction Capacitance ^(NOTE 1)		C _J	15							pF
Typical Thermal Resistance ^(NOTE 2)		R _{θJA}	60							°C/W
Operating and Storage Temperature Range		T _p T _{STG}	-55 to +150							°C

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance from Junction to Ambient at 1.8×1.8mm² copper pad areas.
3. Reverse Recovery Test Conditions: If=0.5A, Ir=1.0A, Irr=0.25A.

SURFACE MOUNT GLASS PASSIVATED STANDARD RECTIFIER

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

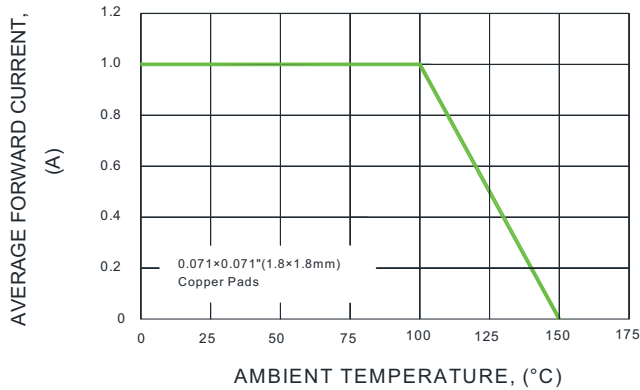


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

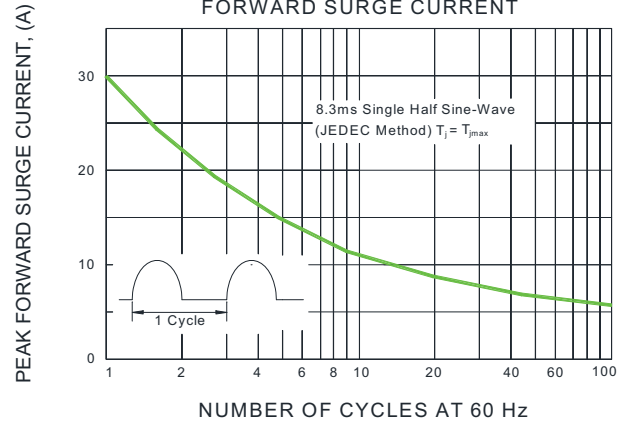


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

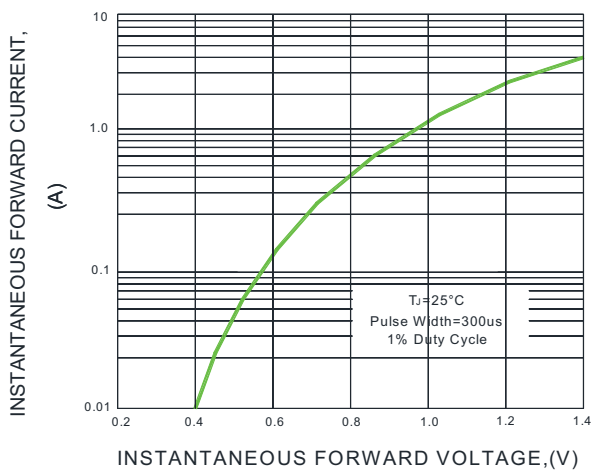


FIG.4-TYPICAL REVERSE CHARACTERISTICS

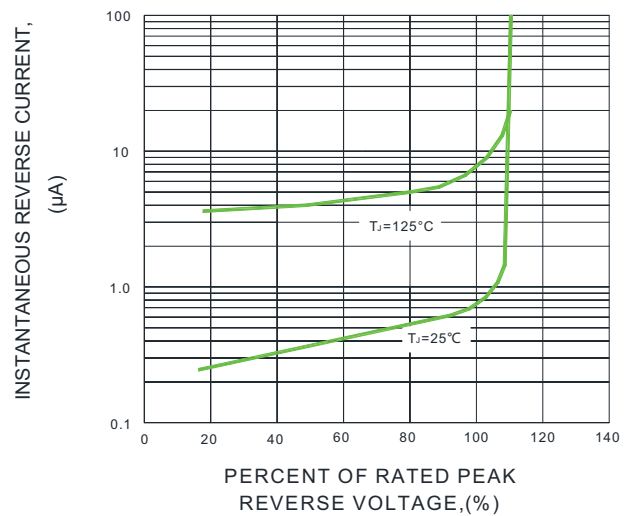
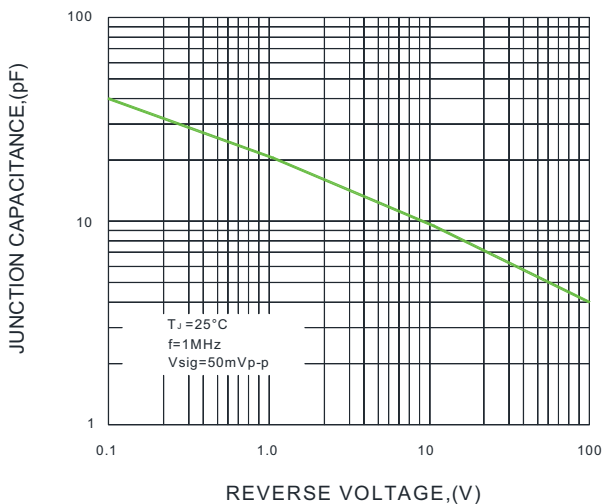


FIG.5-TYPICAL JUNCTION CAPACITANCE

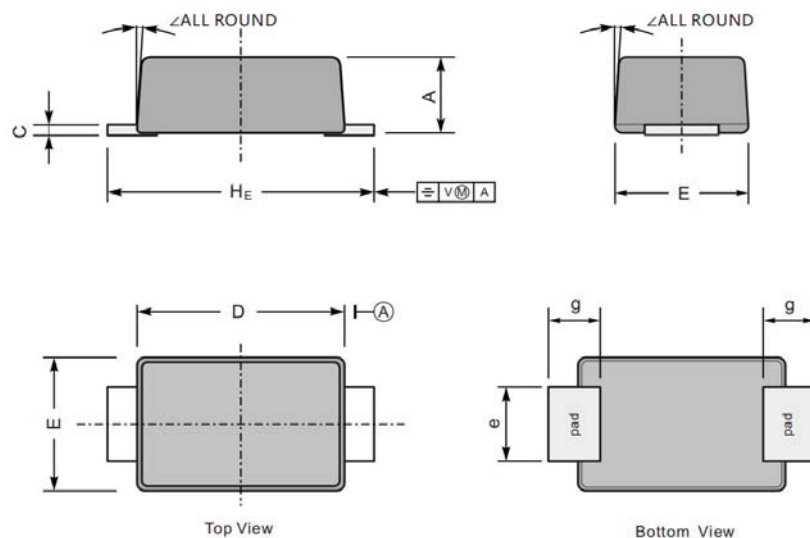


SURFACE MOUNT GLASS PASSIVATED STANDARD RECTIFIER

PACKAGE OUTLINE DIMENSIONS IN INCHES (MILLIMETERS)

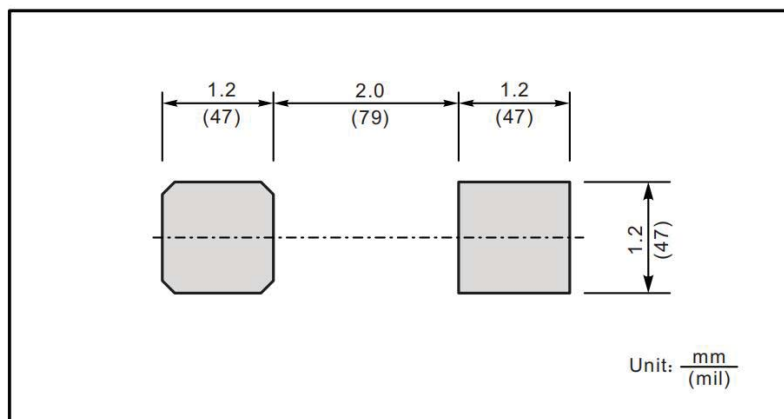
SOD-123FL

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	

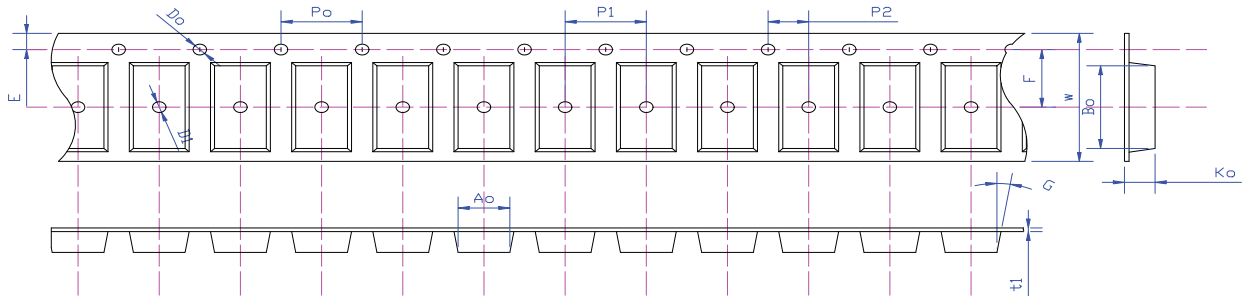
The recommended mounting pad size



SURFACE MOUNT GLASS PASSIVATED STANDARD RECTIFIER

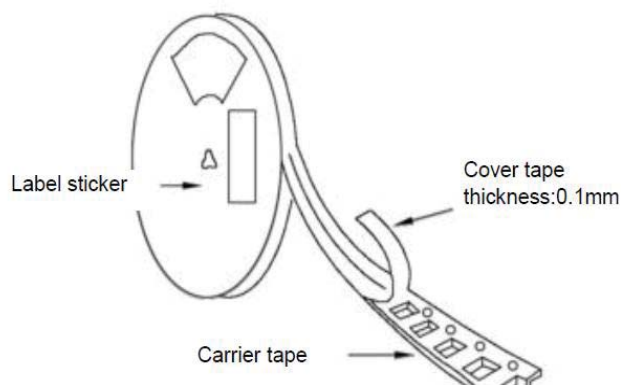
PACKING REQUIREMENTS

- PS black anti-static carrier tape packing



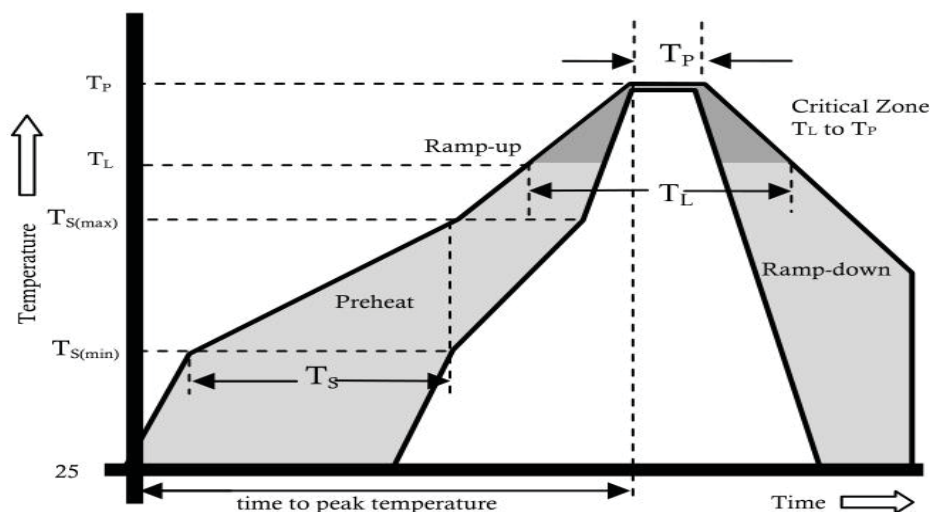
Specifications	Ao	Bo	Ko	Po	W	t1
SOD123FL	2.12±0.10	3.95±0.10	1.35±0.10	4.00±0.1	8.0±0.10	0.20±0.02

- 7 "antistatic plastic reel



SURFACE MOUNT GLASS PASSIVATED STANDARD RECTIFIER

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



SURFACE MOUNT GLASS PASSIVATED STANDARD RECTIFIER

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