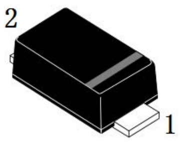
SODZ ***A -SH Series

GLASS PASSIVATED JUNCTION Zener voltage regulator diodes

1.0 Watt Steady State

Feature

- 1 W SOD-123-FL
- Zener voltage regulator diodes
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- We declare that the material of product compliance with RoHS requirements.
- Guarding for over voltage protection
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- MSL: 1



SOD123FL

We declare that the material of product is Haloggen free (green epoxy compound)

Mechanical Data

Case: JEDEC SOD-123-FL/MINI SMA molded plastic
Terminals : Plated terminals, solderable per MIL-STD-750,Method 2026
Polarity: Color band denoted cathode except Bipolar
Mounting Position: Any
Weight : Approximated 0.0155 gram

1.Electrical Characteristic

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%.

RATING	SYMBOL	VALUE	UNITS
Steady State Power Dissipation at T_L=75°C(Note1)	$P_{M(AV)}$	1.0	Watts
Z-current	IZ	PV/VZ	mA
Operating and Storage Temperature Range	T_J,T_{STG}	-50 to +150	°C

NOTES:

1. 8.0mm2 (.013mm thick) land areas
2. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

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2.Product Characteristic

Vz tolerance : ±5%; Tested with pulese tp=40ms;Ta=25℃   Vfmax =1.2V @ IF = 200mA   P=1 W

Type	Device marking code	Zener	Current	A and B Sufflx only			Leakage Current		Maximum Regulator Current2)
		Voltage	I zt	Z zt @ I zt	Z zk@ Izk	Z zk@ Izk	I_R	V_R	IZM @ Tamb =50 ° C
		Vz@Izt							
		Volts	mA	Ohms	Ohms	m A	uA Max	Volts	mA
SODZ5.1A-SH	Z5.1	5.1	49	7	550	1	100	1.0	178
SODZ5.6A-SH	Z5.6	5.6	45	5	600			2.0	164
SODZ6.2A-SH	Z6.2	6.2	41	2	700			3.0	146
SODZ6.8A-SH	Z6.8	6.8	37	4	1300			4	133
SODZ7.5A-SH	Z7.5	7.5	34	4.5	1300	0.5		5	121
SODZ8.2A-SH	Z8.2	8.2	31	5.5	1300	0.5		6	110
SODZ9.1A-SH	Z9.1	9.1	28	6	1300	0.5		7	100
SODZ10A-SH	Z10	10	25	7	1300	0.25		7.6	91
SODZ11A-SH	Z11	11	23	8	1300		5	8.4	83
SODZ12A-SH	Z12	12	21	9	1300			9.1	76
SODZ13A-SH	Z13	13	19	10	1300			9.9	69
SODZ15A-SH	Z15	15	17	14	1300			11.4	61
SODZ16A-SH	Z16	16	15.5	16	1300		5	12.2	57
SODZ18A-SH	Z18	18	14	20	1300			13.7	50
SODZ20A-SH	Z20	20	12.5	22	1300			15.2	45
SODZ22A-SH	Z22	22	11.5	23	1300			16.7	41
SODZ24A-SH	Z24	24	10.5	25	1300			18.2	38
SODZ27A-SH	Z27	27	9.5	35	1300			20.6	34
SODZ30A-SH	Z30	30	8.5	40	1500			22.8	30
SODZ33A-SH	Z33	33	7.5	45	1500		5	25.1	27
SODZ36A-SH	Z36	36	7	50	1500			27.4	25
SODZ39A-SH	Z39	39	6.5	60	1500			29.7	23
SODZ43A-SH	Z43	43	6	70	2500			32.7	22
SODZ47A-SH	Z47	47	5.5	80	2500			35.8	19
SODZ51A-SH	Z51	51	5	95	2500			38.8	18
SODZ56A-SH	Z56	56	4.5	110	2500			42.6	16
SODZ62A-SH	Z62	62	4	125	2500			47.1	14
SODZ68A-SH	Z68	68	3.7	150	2500			51.7	13
SODZ75A-SH	Z75	75	3.3	175	2500			56	12
SODZ82A-SH	Z82	82	3	200	3000			62.2	11
SODZ91A-SH	Z91	91	2.8	250	3000			69.2	10
SODZ100A-SH	Z100	100	2.5	350	3000			76	9
SODZ110A-SH	Z110	110	2	550	5000			83	8
SODZ120A-SH	Z120	120	1.5	750	5500			90	7
SODZ130A-SH	Z130	130	1	900	6000			98	6
SODZ150A-SH	Z150	150	1	1200	6500			113	6
SODZ160A-SH	Z160	160	1	1350	7000			120	6
SODZ180A-SH	Z180	180	1	1650	8500			135	5
SODZ200A-SH	Z200	200	1	1950	10000			150	4

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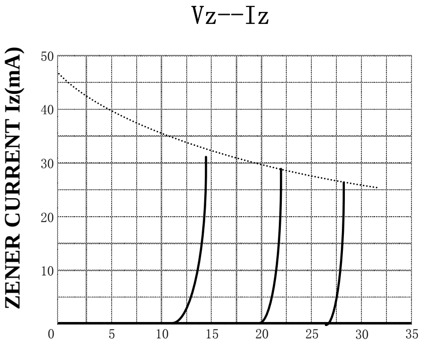
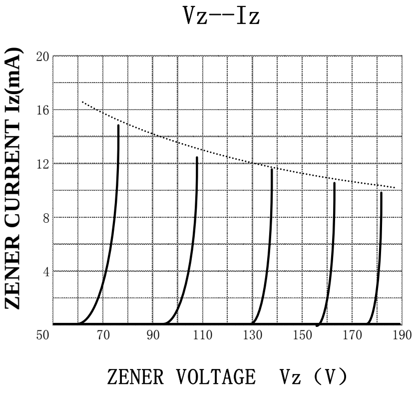
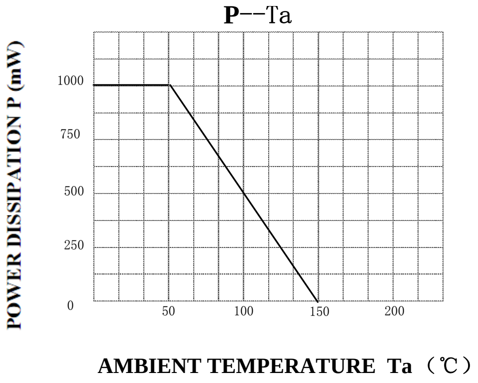
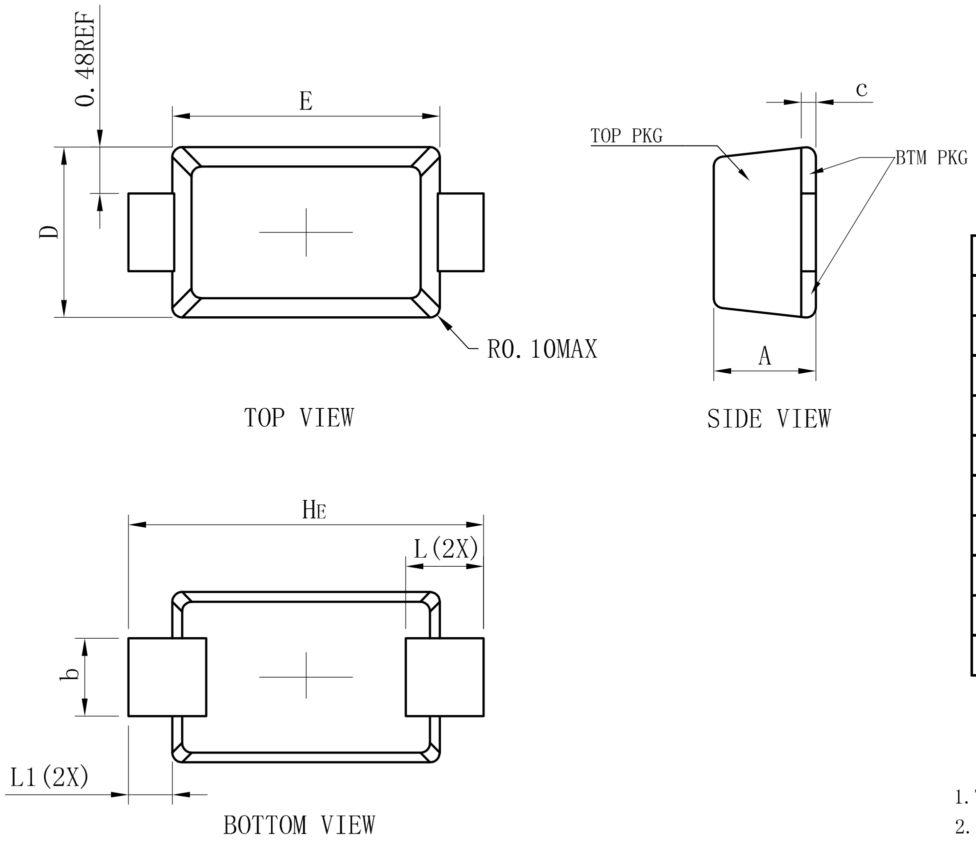
3.Characteristic Curves







4.OUTLINE AND DIMENSIONS

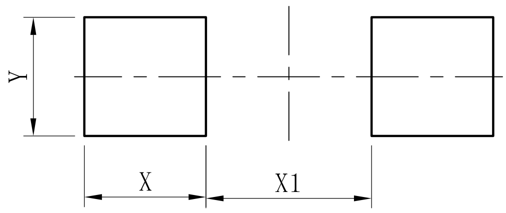


SOD123FL			
DIM	MIN	NOR	MAX
A	0.90	1.05	1.15
b	0.75	0.80	0.95
L	0.50	0.80	1.10
E	2.60	2.75	2.90
D	1.60	1.75	1.90
H_E	3.50	3.65	3.80
c	0.12	0.17	0.22
L1	0.25	0.45	0.65
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish Ra0.4±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um

5.SOLDERING FOOTPRINT



DIM	(mm)
X	1.20
Y	1.10
X1	2.00

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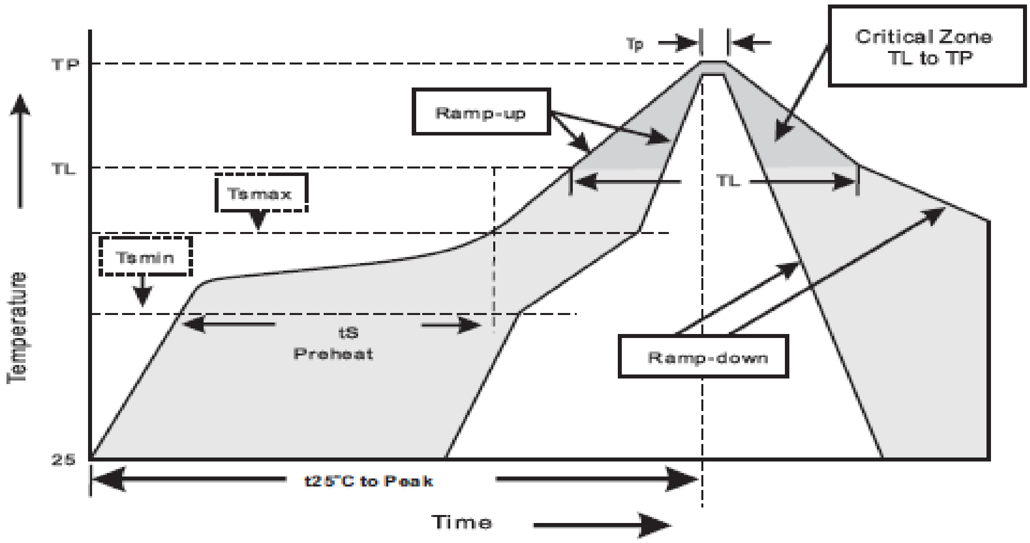
6.Suggested thermal profile for soldering process

1. Storage environment：Temperature=5~40℃ Humidity=55±25%
2. Reflow soldering of surface-mount device



3. Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T_L to T_P)	<3℃/sec
Preheat - Temperature Min(Tsmin) - Temperature Max(Tsmax) - Time(min to max)(t_S)	 150℃ 200℃ 60~120sec
Tsmax to T_L - Ramp-up Rate	 <3sec
Time maintained above: - Temperature (T_L) - Time(t_L)	 217℃ 60-260sec
Peak Temperature(T_P)	255 -0/+5℃
Time within 5℃ of actual Peak Temperature(T_P)	10~30sec
Ramp-down Rate	<6℃/sec
Time 25℃ to Peak Temperature	<6minutes

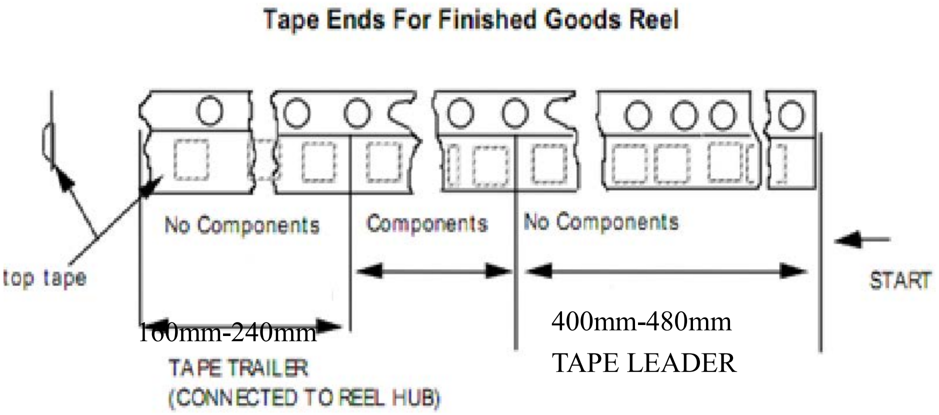
7. 2 Standard Products Taping Specification

标准产品编带规范

7.2.1 Tape length of no component

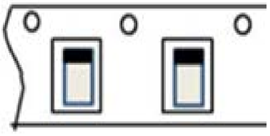
空带长度说明

Taping leader length 引导部分：440mm±40mm ， Tape trailer 尾部：200mm±40mmt



7.2.2 Component packaging orientation: The cathode lead is close to the carrier tape’s index hole.

产品放置方向：印阴极带引脚邻近载带索引孔



7.2.3 Tape enwind orientation

编带缠绕方向要求