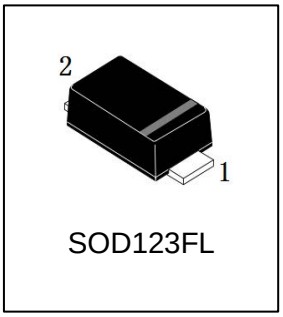
S-SODZ ***A -SH Series

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.
* S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
* Guarding for over voltage protection
* High temperature soldering guaranteed: 260°C/10 seconds at terminals
* MSL: 1



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 Voltage Vz@Izt	Current I zt	A and B Sufflx only Z zt @ I zt	Z zk@ Izk	Z zk@ Izk	Leakage Current I_R	V_R	Maximum Regulator Current2) IZM @ Tamb =50 ° C
		Volts	mA	Ohms	Ohms	m A	uA Max	Volts	mA
S-SODZ5.1A-SH	Z5.1	5.1	49	7	550	1	100	1. 0	178
S-SODZ5.6A-SH	Z5.6	5.6	45	5	600			2. 0	164
S-SODZ6.2A-SH	Z6.2	6.2	41	2	700			3. 0	146
S-SODZ6.8A-SH	Z6.8	6. 8	37	4	1300			4	133
S-SODZ7.5A-SH	Z7.5	7. 5	34	4. 5	1300	0. 5		5	121
S-SODZ8.2A-SH	Z8.2	8. 2	31	5. 5	1300	0. 5		6	110
S-SODZ9.1A-SH	Z9.1	9. 1	28	6	1300	0. 5		7	100
S-SODZ10A-SH	Z10	10	25	7	1300	0. 25		7. 6	91
S-SODZ11A-SH	Z11	11	23	8	1300		5	8. 4	83
S-SODZ12A-SH	Z12	12	21	9	1300			9. 1	76
S-SODZ13A-SH	Z13	13	19	10	1300			9. 9	69
S-SODZ15A-SH	Z15	15	17	14	1300			11. 4	61
S-SODZ16A-SH	Z16	16	15. 5	16	1300		5	12. 2	57
S-SODZ18A-SH	Z18	18	14	20	1300			13. 7	50
S-SODZ20A-SH	Z20	20	12. 5	22	1300			15. 2	45
S-SODZ22A-SH	Z22	22	11. 5	23	1300			16. 7	41
S-SODZ24A-SH	Z24	24	10. 5	25	1300			18. 2	38
S-SODZ27A-SH	Z27	27	9. 5	35	1300			20. 6	34
S-SODZ30A-SH	Z30	30	8. 5	40	1500			22. 8	30
S-SODZ33A-SH	Z33	33	7. 5	45	1500		5	25. 1	27
S-SODZ36A-SH	Z36	36	7	50	1500			27. 4	25
S-SODZ39A-SH	Z39	39	6. 5	60	1500			29. 7	23
S-SODZ43A-SH	Z43	43	6	70	2500			32. 7	22
S-SODZ47A-SH	Z47	47	5. 5	80	2500			35. 8	19
S-SODZ51A-SH	Z51	51	5	95	2500			38. 8	18
S-SODZ56A-SH	Z56	56	4. 5	110	2500			42. 6	16
S-SODZ62A-SH	Z62	62	4	125	2500			47. 1	14
S-SODZ68A-SH	Z68	68	3. 7	150	2500			51. 7	13
S-SODZ75A-SH	Z75	75	3. 3	175	2500			56	12
S-SODZ82A-SH	Z82	82	3	200	3000			62. 2	11
S-SODZ91A-SH	Z91	91	2. 8	250	3000			69. 2	10
S-SODZ100A-SH	Z100	100	2. 5	350	3000			76	9
S-SODZ110A-SH	Z110	110	2	550	5000			83	8
S-SODZ120A-SH	Z120	120	1.5	750	5500			90	7
S-SODZ130A-SH	Z130	130	1	900	6000			98	6
S-SODZ150A-SH	Z150	150	1	1200	6500			113	6
S-SODZ160A-SH	Z160	160	1	1350	7000			120	6
S-SODZ180A-SH	Z180	180	1	1650	8500			135	5
S-SODZ200A-SH	Z200	200	1	1950	10000			150	4

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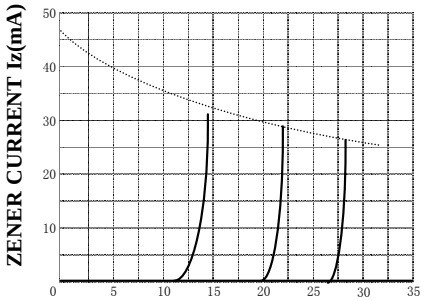
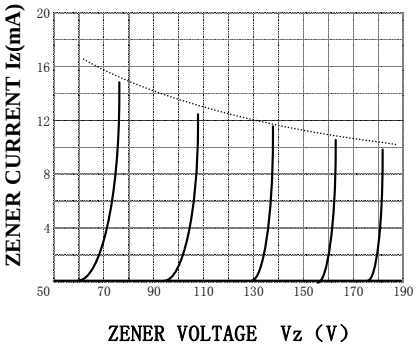
3.Characteristic Curves

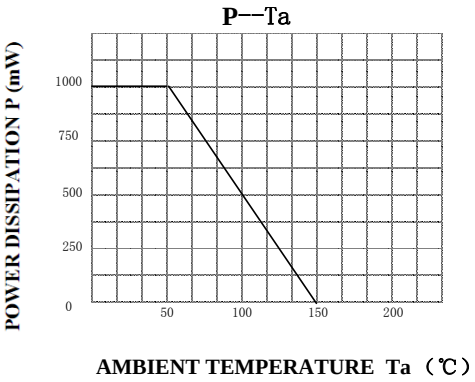
Vz--Iz



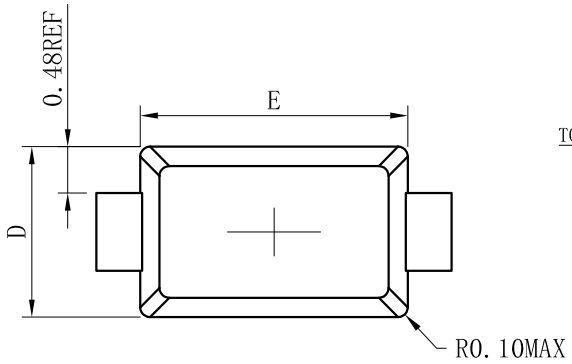
Vz--Iz



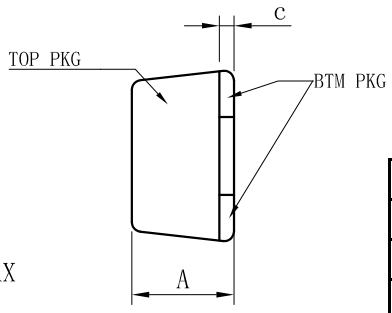
P--Ta



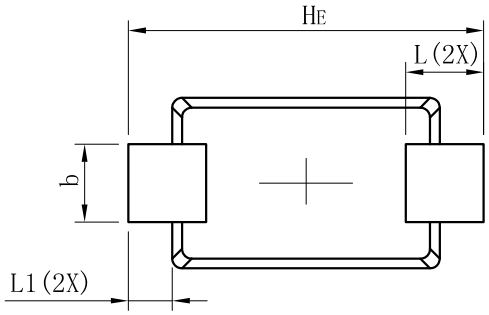
4.OUTLINE AND DIMENSIONS



TOP VIEW



SIDE VIEW



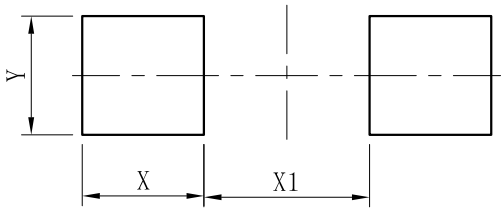
BOTTOM VIEW

SOD123FL			
DIM	MIN	NOR	MAX
A	0.90	1.05	1.15
b	0.75	0.80	0.95
L	0.80REF.		
E	2.60	2.75	2.90
D	1.60	1.75	1.90
HE	3.50	3.65	3.80
c	0.12	0.17	0.22
L1	0.45REF.		
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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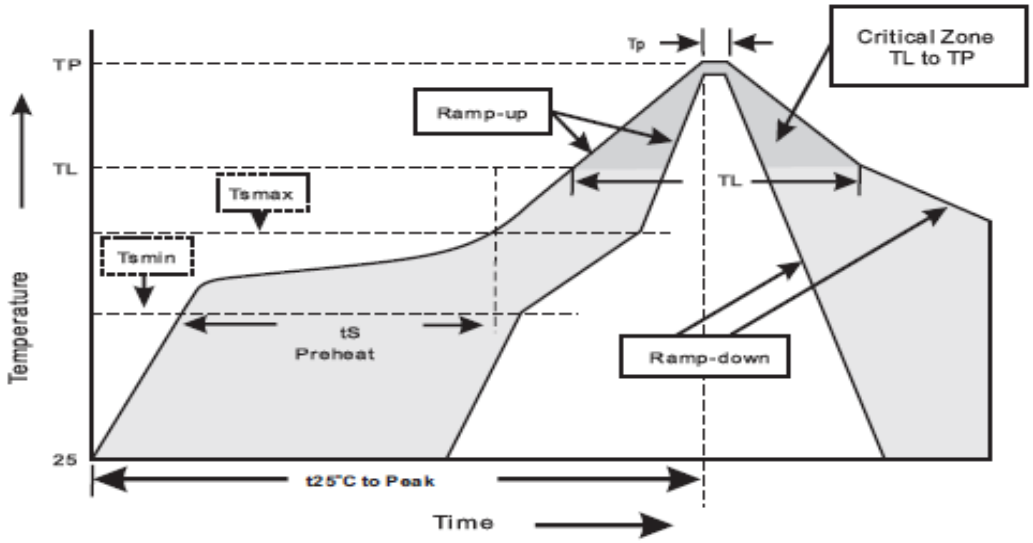
6.Suggested thermal profile for soldering process

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

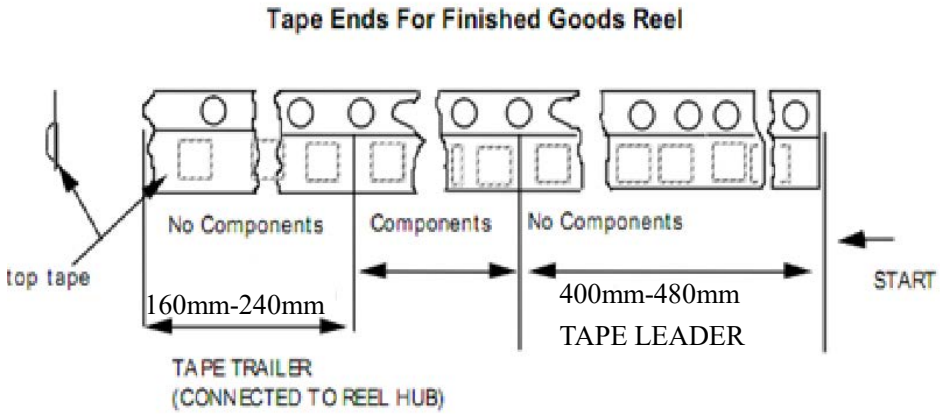
7. 1 Standard Products Taping Specification

标准产品编带规范

7.1.1 Tape length of no component

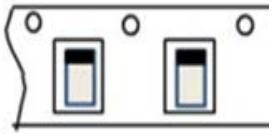
空带长度说明

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



7.1.2 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



7.1.3 Tape enwind orientation

编带缠绕方向要求