Silicon Planar Zener Diodes

FEATURES

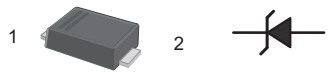
- Total power dissipation: Max. 500mW.
- Wide zener reverse voltage range 2.0V to 75V.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately±5%

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight:15mg 0.00048oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Simplified outline SOD-123FL and symbol

Absolute Maximum Ratings And Characteristics (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	500	mW
Forward Voltage at I_F = 10 mA	V_F	0.9	V
Typical thermal resistance juncting to ambient (1)	$R_{\theta JA}$	90	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (54 X 5 cm) copper areas pads.

Fig.1 Maximum Continuous Power Derating

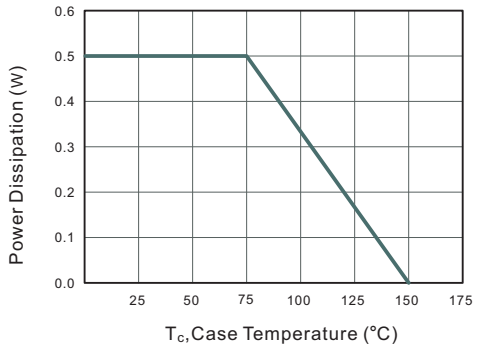
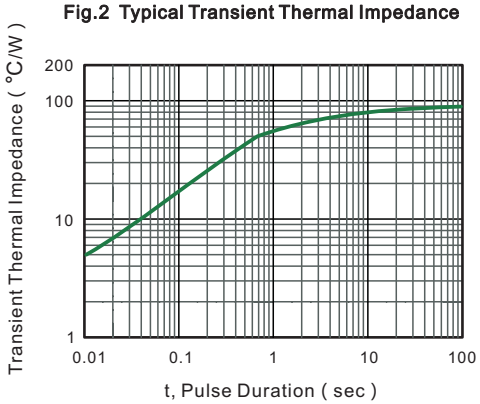


Fig.2 Typical Transient Thermal Impedance



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Characteristics at Ta = 25°C

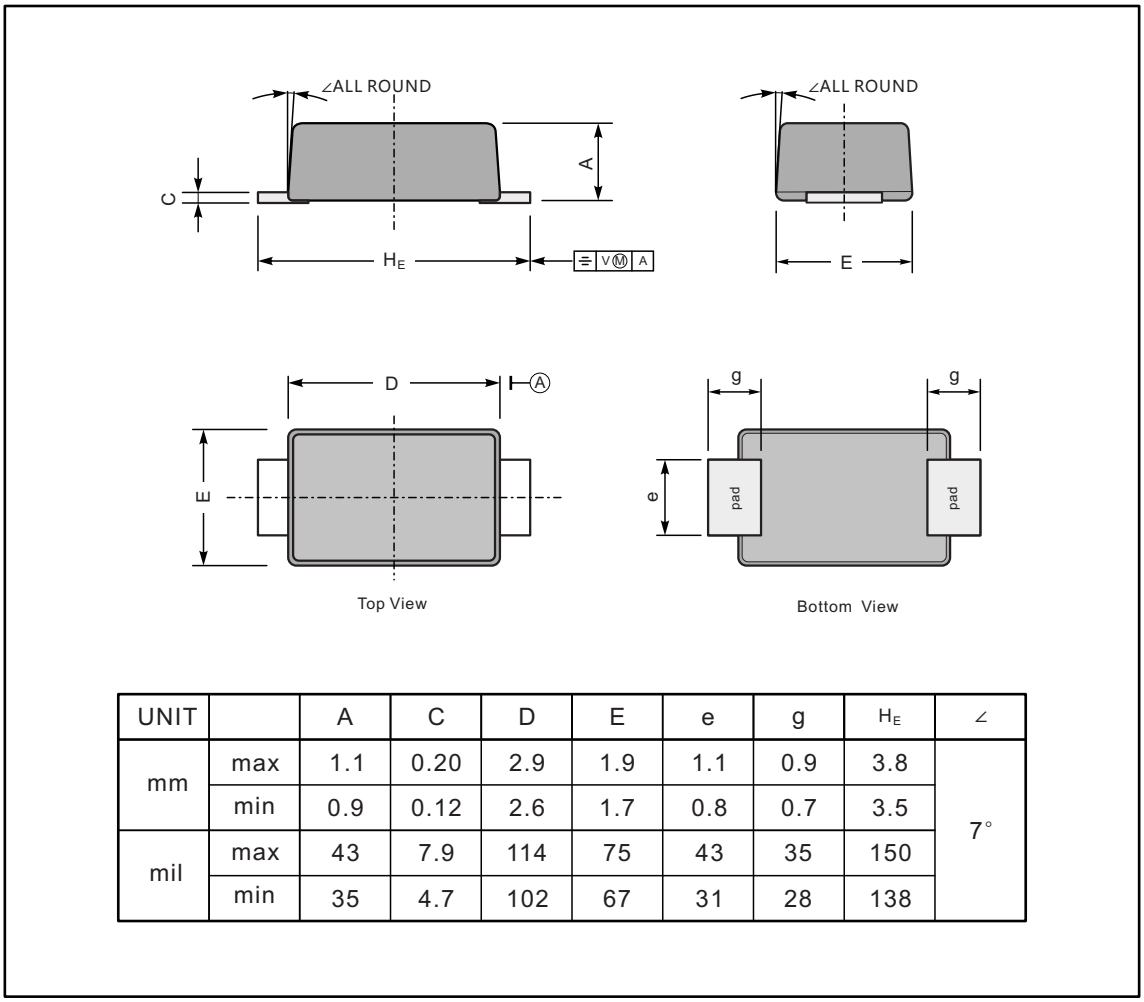
Type	Marking	Zener Voltage Range (1)				Dynamic Impedance	Reverse Current		Admissible Zener Current
		V_{ZT} (at I_{ZT})			I_{ZT}	Z_{ZT} (at I_{ZT})	I_R	at V_R	
		Min (V)	Nom (V)	Max (V)	(mA)	Max (Ω)	Max (μA)	(V)	I_{ZM} (mA)
MM1Z2V0L	4A	1.8	2.0	2.15	5	100	120	0.5	230
MM1Z2V2L	4B	2.08	2.2	2.33	5	100	120	0.7	210
MM1Z2V4L	4C	2.28	2.4	2.56	5	100	120	1	190
MM1Z2V7L	4D	2.5	2.7	2.9	5	110	120	1	170
MM1Z3V0L	4E	2.8	3.0	3.2	5	120	50	1	155
MM1Z3V3L	4F	3.1	3.3	3.5	5	130	20	1	140
MM1Z3V6L	4H	3.4	3.6	3.8	5	130	10	1	130
MM1Z3V9L	4J	3.7	3.9	4.1	5	130	5	1	120
MM1Z4V3L	4K	4.0	4.3	4.6	5	130	5	1	110
MM1Z4V7L	4M	4.4	4.7	5.0	5	130	2	1	100
MM1Z5V1L	4N	4.8	5.1	5.4	5	130	2	1.5	90
MM1Z5V6L	4P	5.2	5.6	6.0	5	80	1	2.5	85
MM1Z6V2L	4R	5.8	6.2	6.6	5	50	1	3.0	75
MM1Z6V8L	4X	6.4	6.8	7.2	5	30	0.5	3.5	70
MM1Z7V5L	4Y	7.0	7.5	7.9	5	30	0.5	4	63
MM1Z8V2L	4Z	7.7	8.2	8.7	5	30	0.5	5	57
MM1Z9V1L	5A	8.5	9.1	9.6	5	30	0.5	6	52
MM1Z10L	5B	9.4	10	10.6	5	30	0.1	7	47
MM1Z11L	5C	10.4	11	11.6	5	30	0.1	8	43
MM1Z12L	5D	11.4	12	12.7	5	35	0.1	9	40
MM1Z13L	5E	12.4	13	14.1	5	35	0.1	10	35
MM1Z15L	5F	13.8	15	15.6	5	40	0.1	11	32
MM1Z16L	5H	15.3	16	17.1	5	40	0.1	12	29
MM1Z18L	5J	16.8	18	19.1	5	45	0.1	13	26
MM1Z20L	5K	18.8	20	21.2	5	50	0.1	15	23
MM1Z22L	5M	2.08	22	23.3	5	55	0.1	17	21
MM1Z24L	5N	22.8	24	25.6	5	60	0.1	19	19
MM1Z27L	5P	25.1	27	28.9	5	70	0.1	21	17
MM1Z30L	5R	28	30	32	5	80	0.1	23	15
MM1Z33L	5X	31	33	35	5	80	0.1	25	14
MM1Z36L	5Y	34	36	38	5	90	0.1	27	13
MM1Z39L	5Z	37	39	41	2.5	100	2	30	12
MM1Z43L	6A	40	43	46	2.5	130	2	33	12
MM1Z47L	6B	44	47	50	2.5	150	2	36	10
MM1Z51L	6C	48	51	54	2	180	1	39	10
MM1Z56L	6D	52	56	60	2	180	1	43	8
MM1Z62L	6E	58	62	66	2	200	0.2	47	7
MM1Z68L	6F	64	68	72	2	250	0.2	52	6
MM1Z75L	6H	70	75	79	2	300	0.2	57	6

(1) V_{ZT} is tested with pulses (20 ms)

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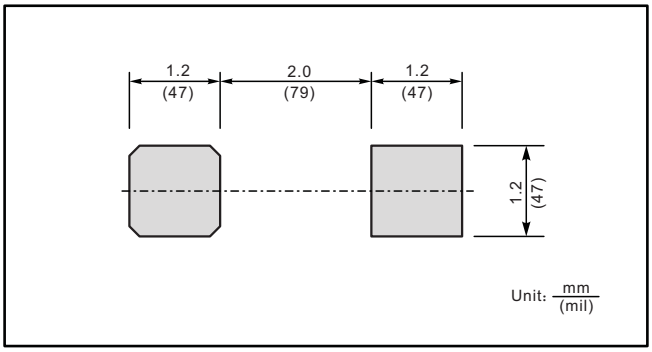
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads 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



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