



Silicon Planar Zener Diodes

**FEATURES**

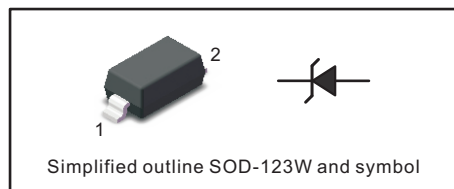
- Total power dissipation: Max. 500mW.
- Wide zener reverse voltage range 2.0V to 75V.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately  $\pm 5\%$

**MECHANICAL DATA**

- Case: SOD-123W
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 16mg/0.00056oz

**PINNING**

PIN	DESCRIPTION
1	Cathode
2	Anode

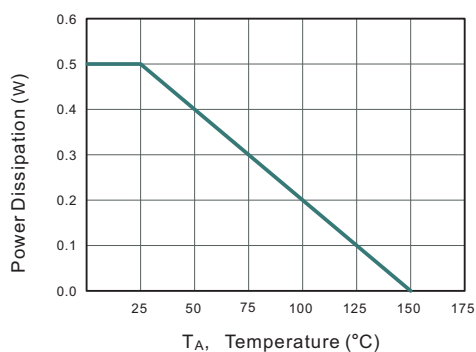


**Absolute Maximum Ratings And Characteristics ( Ta = 25 °C )**

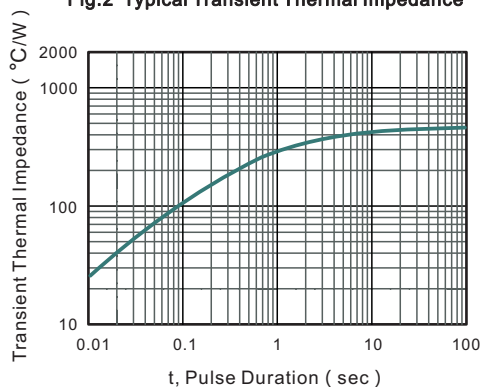
Parameter	Symbol	Value	Unit
Power Dissipation	$P_{tot}$	500	mW
Forward Voltage at $I_F = 10 \text{ mA}$	$V_F$	0.9	V
Typical thermal resistance junction to ambient <sup>(1)</sup>	$R_{\theta JA}$	340	$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	$^{\circ}\text{C}$

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

**Fig.1 Maximum Continuous Power Derating**



**Fig.2 Typical Transient Thermal Impedance**





Characteristics at Ta = 25°C

Type	Marking	Zener Voltage Range (1)			I <sub>ZT</sub> (mA)	Dynamic Impedance	Reverse Current	
		V <sub>ZT</sub> ( at I <sub>ZT</sub> )				Z <sub>ZT</sub> ( at I <sub>ZT</sub> )	I <sub>R</sub>	at V <sub>R</sub>
		Min ( V )	Nom ( V )	Max ( V )		Max (Ω)	Max ( μA )	( V )
MM1Z2V0W	4A	1.8	2.0	2.15	5	100	120	0.5
MM1Z2V2W	4B	2.08	2.2	2.33	5	100	120	0.7
MM1Z2V4W	4C	2.28	2.4	2.56	5	100	120	1
MM1Z2V7W	4D	2.5	2.7	2.9	5	110	120	1
MM1Z3V0W	4E	2.8	3.0	3.2	5	120	50	1
MM1Z3V3W	4F	3.1	3.3	3.5	5	130	20	1
MM1Z3V6W	4H	3.4	3.6	3.8	5	130	10	1
MM1Z3V9W	4J	3.7	3.9	4.1	5	130	5	1
MM1Z4V3W	4K	4	4.3	4.6	5	130	5	1
MM1Z4V7W	4M	4.4	4.7	5	5	130	2	1
MM1Z5V1W	4N	4.8	5.1	5.4	5	130	2	1.5
MM1Z5V6W	4P	5.2	5.6	6	5	80	1	2.5
MM1Z6V2W	4R	5.8	6.2	6.6	5	50	1	3
MM1Z6V8W	4X	6.4	6.8	7.2	5	30	0.5	3.5
MM1Z7V5W	4Y	7	7.5	7.9	5	30	0.5	4
MM1Z8V2W	4Z	7.7	8.2	8.7	5	30	0.5	5
MM1Z9V1W	5A	8.5	9.1	9.6	5	30	0.5	6
MM1Z10W	5B	9.4	10	10.6	5	30	0.1	7
MM1Z11W	5C	10.4	11	11.6	5	30	0.1	8
MM1Z12W	5D	11.4	12	12.7	5	35	0.1	9
MM1Z13W	5E	12.4	13	14.1	5	35	0.1	10
MM1Z15W	5F	13.8	15	15.6	5	40	0.1	11
MM1Z16W	5H	15.3	16	17.1	5	40	0.1	12
MM1Z18W	5J	16.8	18	19.1	5	45	0.1	13
MM1Z20W	5K	18.8	20	21.2	5	50	0.1	15
MM1Z22W	5M	20.8	22	23.3	5	55	0.1	17
MM1Z24W	5N	22.8	24	25.6	5	60	0.1	19
MM1Z27W	5P	25.1	27	28.9	5	70	0.1	21
MM1Z30W	5R	28	30	32	5	80	0.1	23
MM1Z33W	5X	31	33	35	5	80	0.1	25
MM1Z36W	5Y	34	36	38	5	90	0.1	27
MM1Z39W	5Z	37	39	41	2.5	100	2	30
MM1Z43W	6A	40	43	46	2.5	130	2	33
MM1Z47W	6B	44	47	50	2.5	150	2	36
MM1Z51W	6C	48	51	54	2.5	180	1	39
MM1Z56W	6D	52	56	60	2.5	180	1	43
MM1Z62W	6E	58	62	66	2.5	200	0.2	47
MM1Z68W	6F	64	68	72	2.5	250	0.2	52
MM1Z75W	6H	70	75	79	2.5	300	0.2	57

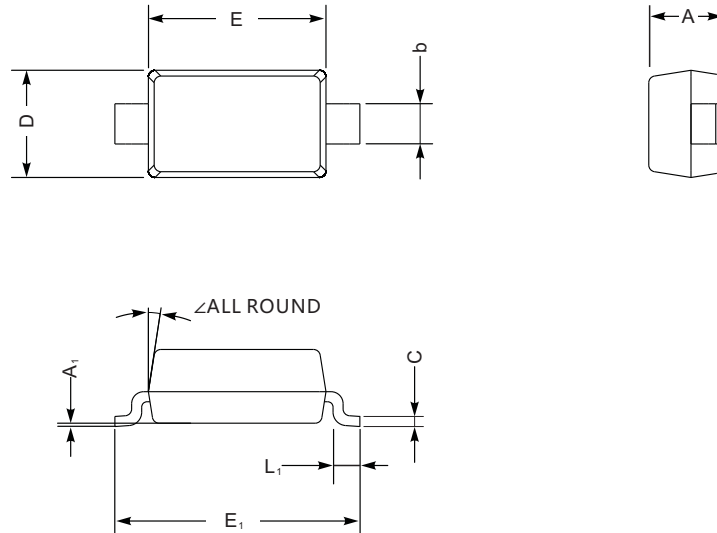
( 1 ) V<sub>ZT</sub> is tested with pulses (20 ms)



**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SOD-123W



SOD-123W mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	L <sub>1</sub>	b	A <sub>1</sub>	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

**The recommended mounting pad size**



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