



## Silicon Planar Zener Diodes

### FEATURES

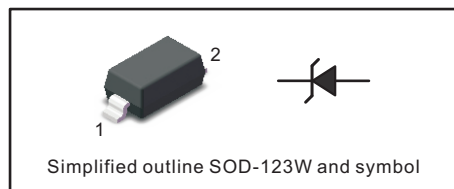
- Total power dissipation: Max. 500mW.
- Wide zener reverse voltage range 2.4V to 39V.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately  $\pm 5\%$

### 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
Typical thermal resistance junction to ambient <sup>(1)</sup>	$R_{\theta JA}$	340	$^{\circ}C/W$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	$^{\circ}C$

(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

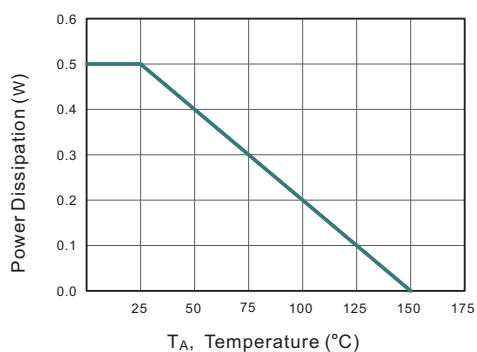
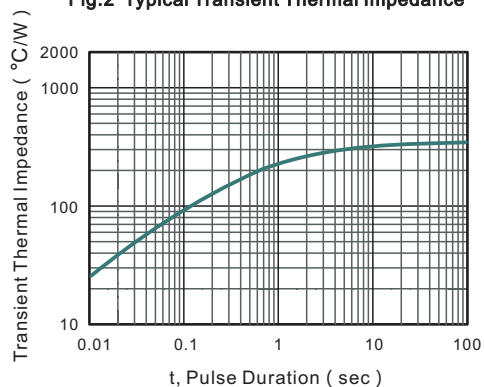


Fig.2 Typical Transient Thermal Impedance





Characteristics at Ta = 25°C Vf=1.2V max, If=100mA

Type	Marking	Zener Voltage Range <sup>(1)</sup>			Dynamic Impedance				Reverse Current	
		V <sub>ZT</sub> ( at I <sub>ZT</sub> )			I <sub>ZT</sub>	Z <sub>ZT</sub> ( at I <sub>ZT</sub> )	I <sub>ZK</sub>	Z <sub>ZK</sub> ( at I <sub>ZK</sub> )	I <sub>R</sub>	at V <sub>R</sub>
		Min ( V )	Nom ( V )	Max ( V )	(mA)	Max (Ω)	(mA)	Max (Ω)	Max ( uA )	( V )
MMSZ5221BW	C1	2.28	2.4	2.52	20	30	0.25	1200	100	1
MMSZ5222BW	C2	2.38	2.5	2.63	20	30	0.25	1250	100	1
MMSZ5223BW	C3	2.57	2.7	2.84	20	30	0.25	1300	75	1
MMSZ5225BW	C5	2.85	3	3.15	20	30	0.25	1600	50	1
MMSZ5226BW	G1	3.14	3.3	3.47	20	28	0.25	1600	25	1
MMSZ5227BW	G2	3.42	3.6	3.78	20	24	0.25	1700	15	1
MMSZ5228BW	G3	3.71	3.9	4.1	20	23	0.25	1900	10	1
MMSZ5229BW	G4	4.09	4.3	4.52	20	22	0.25	2000	5	1
MMSZ5230BW	G5	4.47	4.7	4.94	20	19	0.25	1900	5	2
MMSZ5231BW	E1	4.85	5.1	5.36	20	17	0.25	1600	5	2
MMSZ5232BW	E2	5.32	5.6	5.88	20	11	0.25	1600	5	3
MMSZ5233BW	E3	5.7	6.0	6.3	20	7	0.25	1600	5	3.5
MMSZ5234BW	E4	5.89	6.2	6.51	20	7	0.25	1000	5	4
MMSZ5235BW	E5	6.46	6.8	7.14	20	5	0.25	750	3	5
MMSZ5236BW	F1	7.13	7.5	7.88	20	6	0.25	500	3	6
MMSZ5237BW	F2	7.79	8.2	8.61	20	8	0.25	500	3	6
MMSZ5238BW	F3	8.27	8.7	9.14	20	8	0.25	600	3	6.5
MMSZ5239BW	F4	8.65	9.1	9.56	20	10	0.25	600	3	6.5
MMSZ5240BW	F5	9.5	10	10.5	20	17	0.25	600	3	8
MMSZ5241BW	H1	10.45	11	11.55	20	22	0.25	600	3	8.4
MMSZ5242BW	H2	11.4	12	12.6	20	30	0.25	600	2	9.1
MMSZ5243BW	H3	12.35	13	13.65	9.5	13	0.25	600	1	9.9
MMSZ5245BW	H5	14.25	15	15.75	8.5	16	0.25	600	0.5	11
MMSZ5246BW	J1	15.2	16	16.8	7.8	17	0.25	600	0.1	12
MMSZ5248BW	J3	17.1	18	18.9	7	21	0.25	600	0.1	14
MMSZ5250BW	J5	19	20	21	6.2	25	0.25	600	0.1	15
MMSZ5251BW	K1	20.9	22	23.1	5.6	29	0.25	600	0.1	17
MMSZ5252BW	K2	22.8	24	25.2	5.2	33	0.25	600	0.1	18
MMSZ5254BW	K4	25.65	27	28.35	5	41	0.25	600	0.1	21
MMSZ5255BW	K5	26.6	28	29.4	4.5	44	0.25	600	0.1	21
MMSZ5256BW	M1	28.5	30	31.5	4.2	49	0.25	600	0.1	23
MMSZ5257BW	M2	31.35	33	34.65	3.8	58	0.25	700	0.1	25
MMSZ5258BW	M3	34.2	36	37.8	3.4	70	0.25	700	0.1	27
MMSZ5259BW	M4	37.05	39	40.95	3.2	80	0.25	800	0.1	30

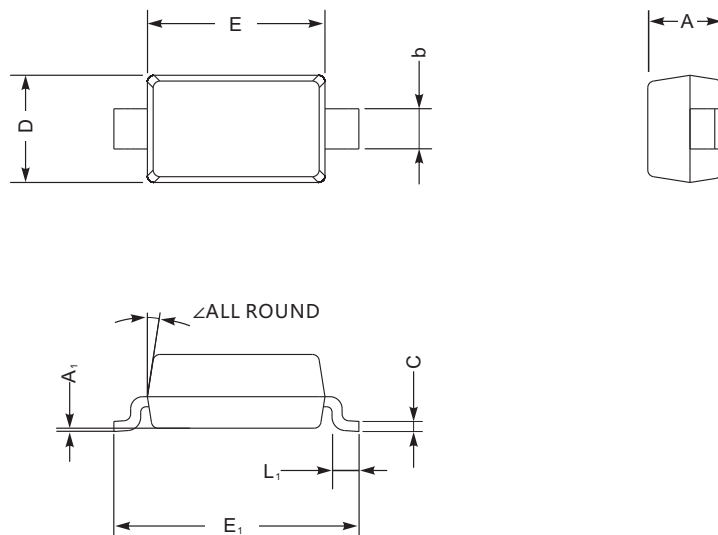
( 1 ) V<sub>ZT</sub> is tested with pulses (20 ms)



**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

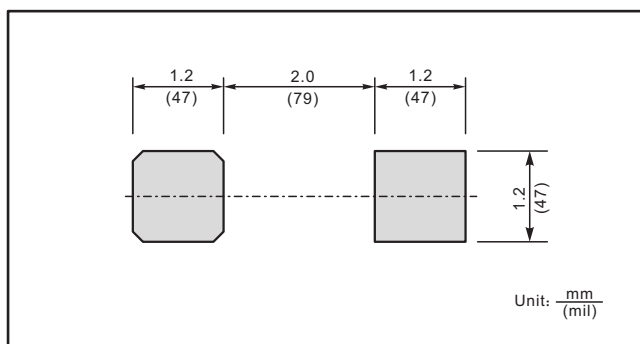
SOD-123W



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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