



Silicon Planar Zener Diodes

**FEATURES**

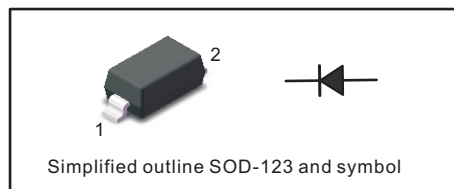
- Total power dissipation: Max. 500mW.
- Wide zener reverse voltage range 2.0V to 75V.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately  $\pm 2\%$

**MECHANICAL DATA**

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

**PINNING**

PIN	DESCRIPTION
1	Cathode
2	Anode

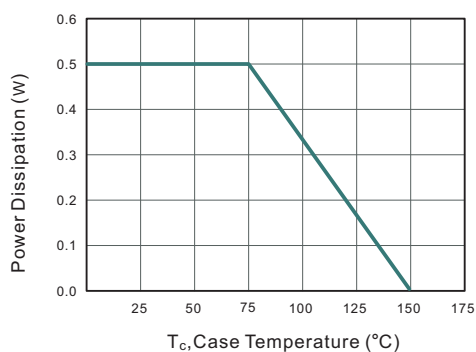


**Absolute Maximum Ratings And Characteristics ( Ta = 25 °C )**

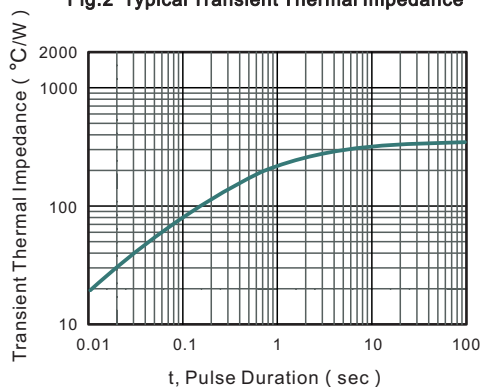
Parameter	Symbol	Value	Unit
Power Dissipation	$P_{tot}$	500	mW
Forward Voltage at $I_F = 10 \text{ mA}$	$V_F$	0.9	V
Typical thermal resistance junction to ambient <sup>(1)</sup>	$R_{\theta JA}$	340	$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	$^{\circ}\text{C}$

(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 <sup>(1)</sup>			I <sub>ZT</sub> (mA)	Dynamic Impedance Z <sub>ZT</sub> (at I <sub>ZT</sub> ) Max (Ω)	Reverse Current	
		V <sub>ZT</sub> (at I <sub>ZT</sub> )					I <sub>R</sub> Max (μA)	at V <sub>R</sub> (V)
		Min (V)	Nom (V)	Max (V)				
MM1Z2V0B	A4	1.96	2	2.04	5	100	120	0.5
MM1Z2V2B	B4	2.16	2.2	2.24	5	100	120	0.7
MM1Z2V4B	C4	2.35	2.4	2.45	5	100	120	1
MM1Z2V7B	D4	2.65	2.7	2.75	5	110	120	1
MM1Z3V0B	E4	2.94	3	3.06	5	120	50	1
MM1Z3V3B	F4	3.23	3.3	3.37	5	130	20	1
MM1Z3V6B	H4	3.53	3.6	3.67	5	130	10	1
MM1Z3V9B	J4	3.82	3.9	3.98	5	130	5	1
MM1Z4V3B	K4	4.21	4.3	4.39	5	130	5	1
MM1Z4V7B	M4	4.61	4.7	4.79	5	130	2	1
MM1Z5V1B	N4	5	5.1	5.20	5	130	2	1.5
MM1Z5V6B	P4	5.49	5.6	5.71	5	80	1	2.5
MM1Z6V2B	R4	6.08	6.2	6.32	5	50	1	3
MM1Z6V8B	X4	6.66	6.8	6.94	5	30	0.5	3.5
MM1Z7V5B	Y4	7.35	7.5	7.65	5	30	0.5	4
MM1Z8V2B	Z4	8.04	8.2	8.36	5	30	0.5	5
MM1Z9V1B	A5	8.92	9.1	9.28	5	30	0.5	6
MM1Z10B	B5	9.8	10	10.2	5	30	0.1	7
MM1Z11B	C5	10.78	11	11.22	5	30	0.1	8
MM1Z12B	D5	11.76	12	12.24	5	35	0.1	9
MM1Z13B	E5	12.74	13	13.26	5	35	0.1	10
MM1Z15B	F5	14.7	15	15.3	5	40	0.1	11
MM1Z16B	H5	15.68	16	16.32	5	40	0.1	12
MM1Z18B	J5	17.64	18	18.36	5	45	0.1	13
MM1Z20B	K5	19.6	20	20.4	5	50	0.1	15
MM1Z22B	M5	21.56	22	22.44	5	55	0.1	17
MM1Z24B	N5	23.52	24	24.48	5	60	0.1	19
MM1Z27B	P5	26.46	27	27.54	5	70	0.1	21
MM1Z30B	R5	29.4	30	30.6	5	80	0.1	23
MM1Z33B	X5	32.34	33	33.66	5	80	0.1	25
MM1Z36B	Y5	35.28	36	36.72	5	90	0.1	27
MM1Z39B	Z5	38.22	39	39.78	2.5	100	2	30
MM1Z43B	A6	42.14	43	43.86	2.5	130	2	33
MM1Z47B	B6	46.06	47	47.94	2.5	150	2	36
MM1Z51B	C6	49.98	51	52.02	2.5	180	1	39
MM1Z56B	D6	54.88	56	57.12	2.5	180	1	43
MM1Z62B	E6	60.76	62	63.24	2.5	200	0.2	47
MM1Z68B	F6	66.64	68	69.36	2.5	250	0.2	52
MM1Z75B	H6	73.5	75	76.5	2.5	300	0.2	57

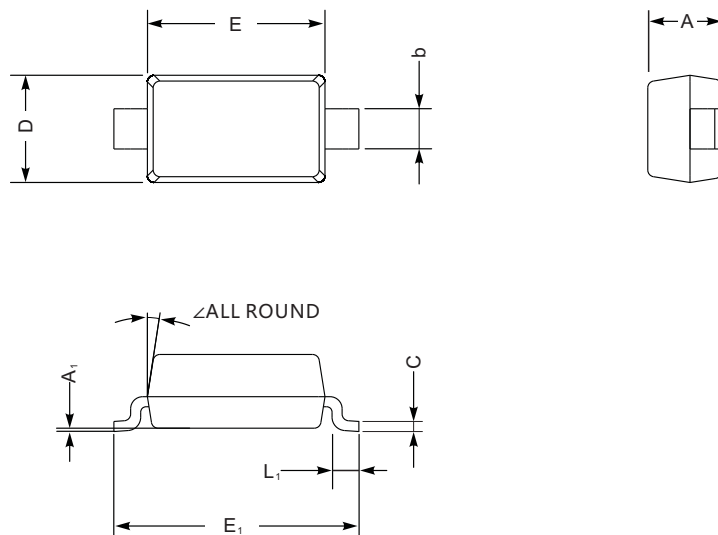
(1) V<sub>ZT</sub> is tested with pulses (20 ms)



**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SOD-123



SOD-123 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**

