

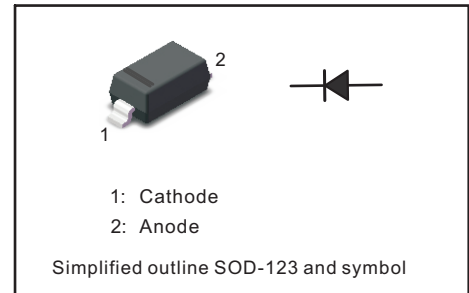
## Silicon Planar Zener Diodes

### 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



### 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 junction to ambient <sup>(1)</sup>	$R_{\theta JA}$	340	°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" (5 X 5 cm) copper areas pads.

Fig.1 Maximum Continuous Power Derating

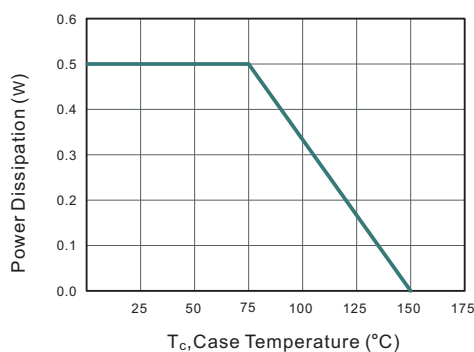
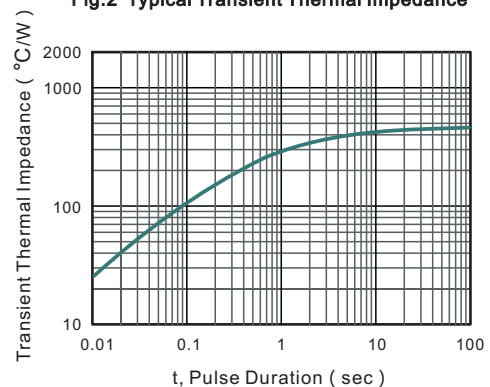


Fig.2 Typical Transient Thermal Impedance



## Characteristics at Ta = 25°C

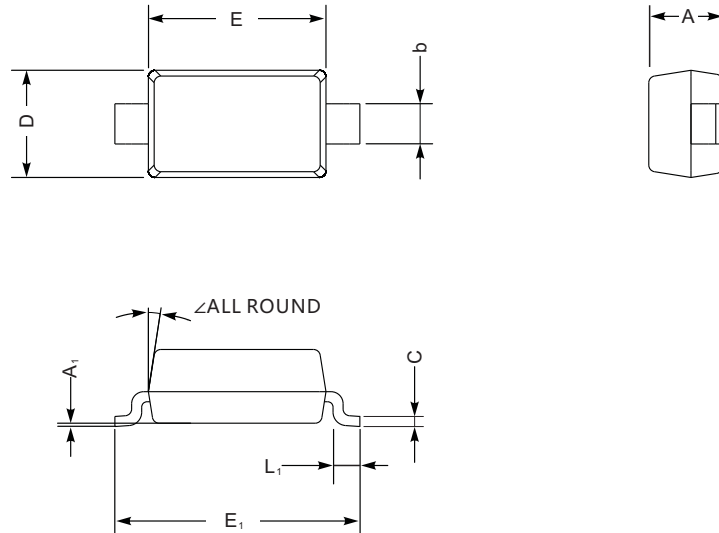
Type	Marking	Zener Voltage Range <sup>(1)</sup>			I <sub>ZT</sub> (mA)	Dynamic Impedance Z <sub>ZT</sub> (at I <sub>ZT</sub> ) Max (Ω)	Reverse Current	
		V <sub>ZT</sub> (at I <sub>ZT</sub> )					I <sub>R</sub> Max (μA)	at V <sub>R</sub> (V)
		Min (V)	Nom (V)	Max (V)				
BZT52B2V0	2WZ	1.96	2	2.04	5	100	120	0.5
BZT52B2V2	2WY	2.16	2.2	2.24	5	100	120	0.7
BZT52B2V4	2WX	2.35	2.4	2.45	5	100	120	1
BZT52B2V7	2W1	2.65	2.7	2.75	5	110	120	1
BZT52B3V0	2W2	2.94	3	3.06	5	120	50	1
BZT52B3V3	2W3	3.23	3.3	3.37	5	130	20	1
BZT52B3V6	2W4	3.53	3.6	3.67	5	130	10	1
BZT52B3V9	2W5	3.82	3.9	3.98	5	130	5	1
BZT52B4V3	2W6	4.21	4.3	4.39	5	130	5	1
BZT52B4V7	2W7	4.61	4.7	4.79	5	130	2	1
BZT52B5V1	2W8	5	5.1	5.20	5	130	2	1.5
BZT52B5V6	2W9	5.49	5.6	5.71	5	80	1	2.5
BZT52B6V2	2WA	6.08	6.2	6.32	5	50	1	3
BZT52B6V8	2WB	6.66	6.8	6.94	5	30	0.5	3.5
BZT52B7V5	2WC	7.35	7.5	7.65	5	30	0.5	4
BZT52B8V2	2WD	8.04	8.2	8.36	5	30	0.5	5
BZT52B9V1	2WE	8.92	9.1	9.28	5	30	0.5	6
BZT52B10	2WF	9.8	10	10.2	5	30	0.1	7
BZT52B11	2WG	10.78	11	11.22	5	30	0.1	8
BZT52B12	2WH	11.76	12	12.24	5	35	0.1	9
BZT52B13	2WI	12.74	13	13.26	5	35	0.1	10
BZT52B15	2WJ	14.7	15	15.3	5	40	0.1	11
BZT52B16	2WK	15.68	16	16.32	5	40	0.1	12
BZT52B18	2WL	17.64	18	18.36	5	45	0.1	13
BZT52B20	2WM	19.6	20	20.4	5	50	0.1	15
BZT52B22	2WN	21.56	22	22.44	5	55	0.1	17
BZT52B24	2WO	23.52	24	24.48	5	60	0.1	19
BZT52B27	2WP	26.46	27	27.54	5	70	0.1	21
BZT52B30	2WQ	29.4	30	30.6	5	80	0.1	23
BZT52B33	2WR	32.34	33	33.66	5	80	0.1	25
BZT52B36	2WS	35.28	36	36.72	5	90	0.1	27
BZT52B39	2WT	38.22	39	39.78	2.5	100	2	30
BZT52B43	2WU	42.14	43	43.86	2.5	130	2	33
BZT52B47	2WV	46.06	47	47.94	2.5	150	2	36
BZT52B51	2X1	49.98	51	52.02	2.5	180	1	39
BZT52B56	2X2	54.88	56	57.12	2.5	180	1	43
BZT52B62	2X3	60.76	62	63.24	2.5	200	0.2	47
BZT52B68	2X4	66.64	68	69.36	2.5	250	0.2	52
BZT52B75	2X5	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

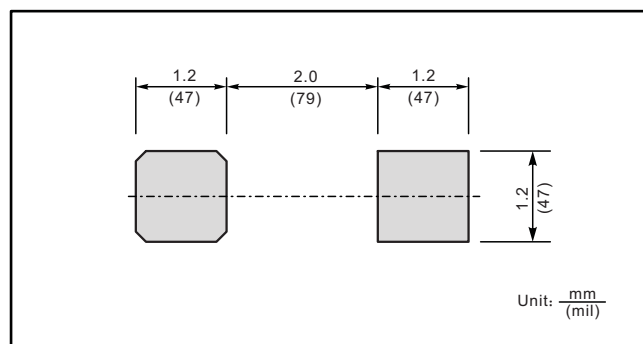
SOD-123



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



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