

MM1Z2B0AT THRU MM1ZB75AT

Silicon Planar Zener Diodes

Power Dissipation: 500mW

Zener Voltage: 2.0V to 75V

Features

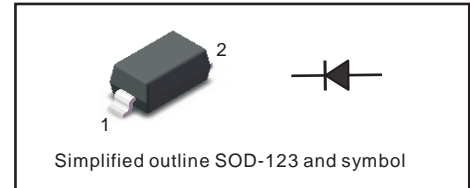
- ◆ Total power dissipation: Max. 500mW.
- ◆ Wide zener reverse voltage range 2.0V to 75V.
- ◆ Small plastic package suitable for surface mounted design
- ◆ Tolerance approximately $\pm 2\%$

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 ($T_a = 25^\circ\text{C}$)

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 juncting to ambient ⁽¹⁾	$R_{\theta JA}$	340	$^\circ\text{C/W}$
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

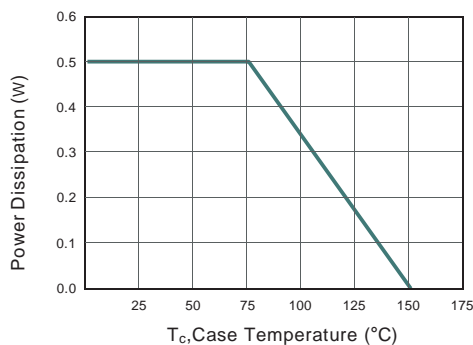
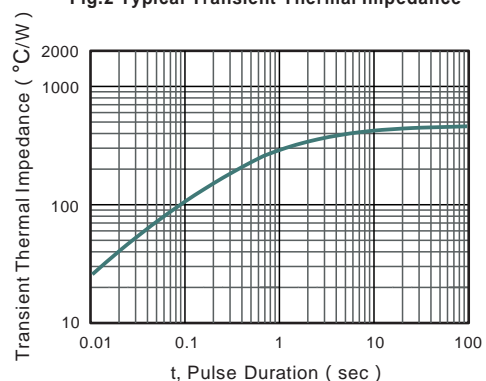


Fig.2 Typical Transient Thermal Impedance



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Characteristics at Ta = 25°C

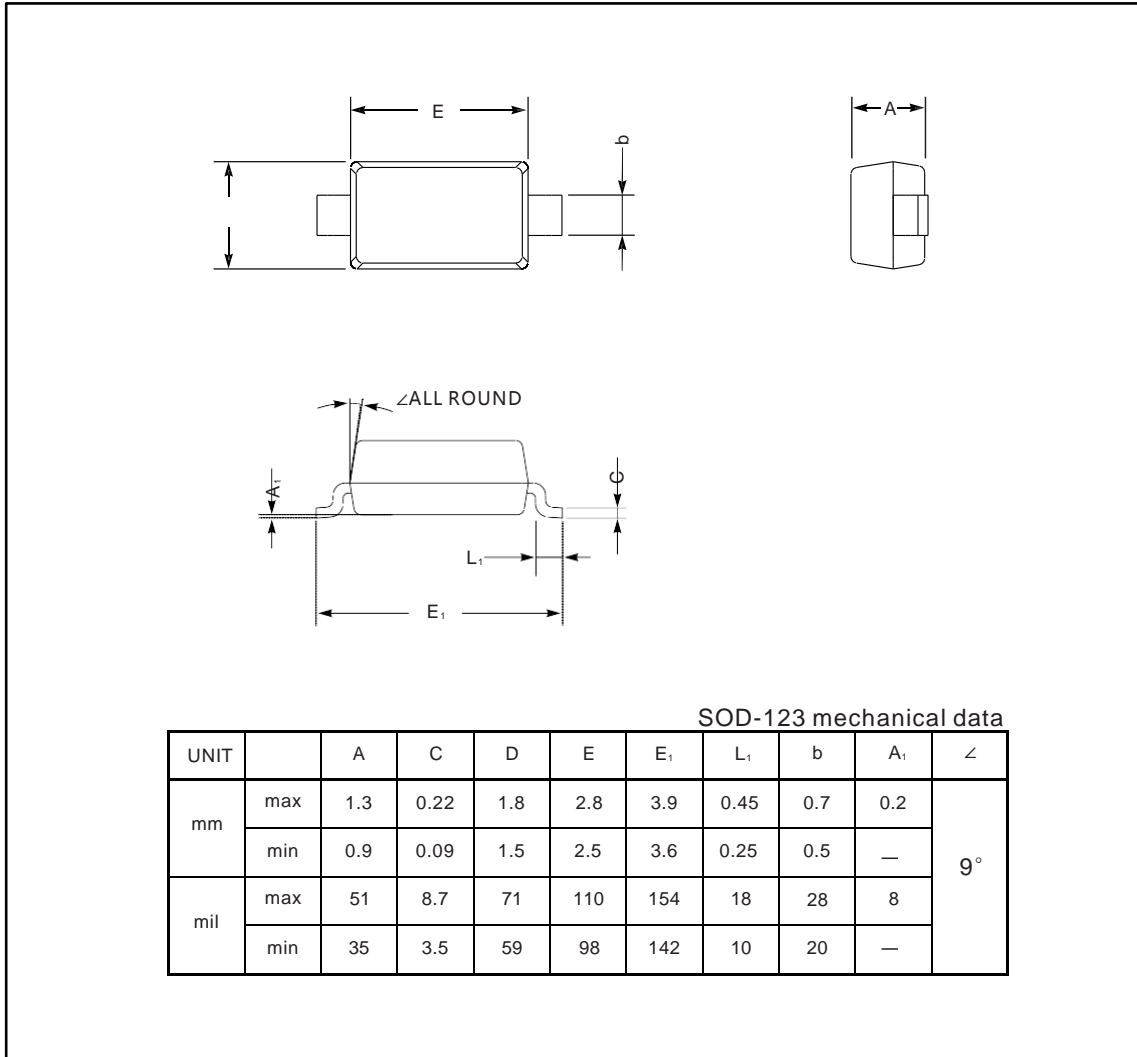
Type	Marking	Zener Voltage Range ⁽¹⁾			I _{ZT} (mA)	Dynamic Impedance Z _{ZT} (at I _{ZT}) Max (Ω)	Reverse Current	
		V _{ZT} (at I _{ZT})					I _R	at V _R
		Min (V)	Nom (V)	Max (V)			Max (μA)	(V)
MM1Z2B0AT	A4	1.96	2	2.04	5	100	120	0.5
MM1Z2B2AT	B4	2.16	2.2	2.24	5	100	120	0.7
MM1Z2B4AT	C4	2.35	2.4	2.45	5	100	120	1
MM1Z2B7AT	D4	2.65	2.7	2.75	5	110	120	1
MM1Z3B0AT	E4	2.94	3	3.06	5	120	50	1
MM1Z3B3AT	F4	3.23	3.3	3.37	5	130	20	1
MM1Z3B6AT	H4	3.53	3.6	3.67	5	130	10	1
MM1Z3B9AT	J4	3.82	3.9	3.98	5	130	5	1
MM1Z4B3AT	K4	4.21	4.3	4.39	5	130	5	1
MM1Z4B7AT	M4	4.61	4.7	4.79	5	130	2	1
MM1Z5B1AT	N4	5	5.1	5.20	5	130	2	1.5
MM1Z5B6AT	P4	5.49	5.6	5.71	5	80	1	2.5
MM1Z6B2AT	R4	6.08	6.2	6.32	5	50	1	3
MM1Z6B8AT	X4	6.66	6.8	6.94	5	30	0.5	3.5
MM1Z7B5AT	Y4	7.35	7.5	7.65	5	30	0.5	4
MM1Z8B2AT	Z4	8.04	8.2	8.36	5	30	0.5	5
MM1Z9B1AT	A5	8.92	9.1	9.28	5	30	0.5	6
MM1ZB10AT	B5	9.8	10	10.2	5	30	0.1	7
MM1ZB11AT	C5	10.78	11	11.22	5	30	0.1	8
MM1ZB12AT	D5	11.76	12	12.24	5	35	0.1	9
MM1ZB13AT	E5	12.74	13	13.26	5	35	0.1	10
MM1ZB15AT	F5	14.7	15	15.3	5	40	0.1	11
MM1ZB16AT	H5	15.68	16	16.32	5	40	0.1	12
MM1ZB18AT	J5	17.64	18	18.36	5	45	0.1	13
MM1ZB20AT	K5	19.6	20	20.4	5	50	0.1	15
MM1ZB22AT	M5	21.56	22	22.44	5	55	0.1	17
MM1ZB24AT	N5	23.52	24	24.48	5	60	0.1	19
MM1ZB27AT	P5	26.46	27	27.54	5	70	0.1	21
MM1ZB30AT	R5	29.4	30	30.6	5	80	0.1	23
MM1ZB33AT	X5	32.34	33	33.66	5	80	0.1	25
MM1ZB36AT	Y5	35.28	36	36.72	5	90	0.1	27
MM1ZB39AT	Z5	38.22	39	39.78	2.5	100	2	30
MM1ZB43AT	A6	42.14	43	43.86	2.5	130	2	33
MM1ZB47AT	B6	46.06	47	47.94	2.5	150	2	36
MM1ZB51AT	C6	49.98	51	52.02	2.5	180	1	39
MM1ZB56AT	D6	54.88	56	57.12	2.5	180	1	43
MM1ZB62AT	E6	60.76	62	63.24	2.5	200	0.2	47
MM1ZB68AT	F6	66.64	68	69.36	2.5	250	0.2	52
MM1ZB75AT	H6	73.5	75	76.5	2.5	300	0.2	57

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

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Package Outline

SOD-123



The recommended mounting pad size

