

Silicon Planar Zener Diodes

FEATURES

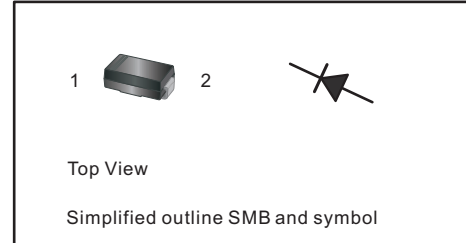
- Total power dissipation: Max. 1.5 W.
- Wide zener reverse voltage range 3.3V to 240V.
- Small plastic package suitable for surface mounted design.

MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 0.002oz

PINNING

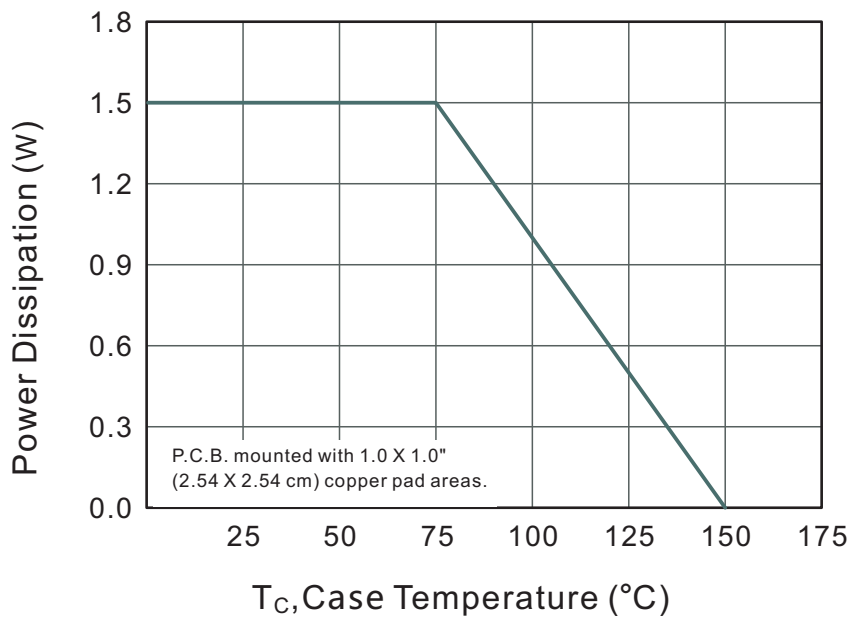
PIN	DESCRIPTION
1	Cathode
2	Anode



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

Parameter	Symbol	Value	Unit
Power Dissipation at $T_L=75^\circ\text{C}$	P_D	1.5	W
Forward Voltage at $I_F = 200 \text{ mA}$	V_F	1.5	V
Junction Temperature Range	T_J	- 55 to + 150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^\circ\text{C}$

Fig.1 Maximum Continuous Power Derating



Characteristics at T_a = 25°C

Type (note1)	Marking (note1)	Zener Voltage Range (note2)				Dynamic Impedance	Reverse Current		Admissible Zener Current
		V _{ZT} (at I _{ZT})			at I _{ZT}	Z _{ZT} (at I _{ZT})	I _R	at V _R	
		Min (V)	Nom (V)	Max (V)	(mA)	Max (Ω)	Max (μA)	(V)	I _{ZM} (mA)
1SMB5913B	913B	3.13	3.3	3.47	113.6	10	100	1	454
1SMB5914B	914B	3.42	3.6	3.78	104.2	9.0	75	1	416
1SMB5915B	915B	3.70	3.9	4.10	96.1	7.5	25	1	384
1SMB5916B	916B	4.08	4.3	4.52	87.2	6.0	5	1	348
1SMB5917B	917B	4.46	4.7	4.94	79.8	5.0	5	1.5	319
1SMB5918B	918B	4.84	5.1	5.36	73.5	4.0	5	2	294
1SMB5919B	919B	5.32	5.6	5.88	66.9	2.0	5	3	267
1SMB5920B	920B	5.89	6.2	6.51	60.5	2.0	5	4	241
1SMB5921B	921B	6.46	6.8	7.14	55	2.5	5	5.2	220
1SMB5922B	922B	7.12	7.5	7.88	50	3.0	5	6	200
1SMB5923B	923B	7.79	8.2	8.61	45.7	3.5	5	6.5	182
1SMB5924B	924B	8.60	9.1	9.56	41.2	4.0	5	7	164
1SMB5925B	925B	9.50	10	10.5	37.5	4.5	5	8	150
1SMB5926B	926B	10.4	11	11.6	34	5.5	1	8.4	136
1SMB5927B	927B	11.4	12	12.6	31.2	6.5	1	9	125
1SMB5928B	928B	12.35	13	14.1	28.8	7.0	1	9.9	115
1SMB5929B	929B	13.8	15	15.8	25	9.0	1	11.4	100
1SMB5930B	930B	15.2	16	16.8	23.4	10	1	12.2	93
1SMB5931B	931B	16.8	18	19.2	21	12	1	13.7	83
1SMB5932B	932B	19.0	20	21.2	19	14	1	15.2	75
1SMB5933B	933B	20.8	22	23.3	17	18	1	16.7	68
1SMB5934B	934B	22.8	24	25.2	16	19	1	18.2	62
1SMB5935B	935B	25.3	27	28.9	14	23	1	20.6	55
1SMB5936B	936B	28.2	30	32.0	12.5	26	1	23	50
1SMB5937B	937B	31.3	33	34.9	11.4	33	1	25	45
1SMB5938B	938B	34.2	36	37.9	10.4	38	1	27	41
1SMB5939B	939B	37.2	39	41.5	9.6	45	1	30	38
1SMB5940B	940B	40.9	43	45.6	8.7	53	1	33	34
1SMB5941B	941B	44.9	47	49.8	8.0	67	1	36	31
1SMB5942B	942B	48.6	51	54.0	7.3	70	1	39	29
1SMB5943B	943B	53.6	56	58.8	6.7	86	1	42	26
1SMB5944B	944B	58.9	62	65.6	6.0	100	1	47	24
1SMB5945B	945B	64.6	68	71.7	5.5	120	1	52	22
1SMB5946B	946B	71.2	75	78.8	5.0	140	1	57	20
1SMB5947B	947B	77.9	82	87.0	4.6	160	1	62	18
1SMB5948B	948B	86.0	91	96.0	4.1	200	1	69	16
1SMB5949B	949B	95.0	100	105	3.7	250	1	76	15
1SMB5950B	950B	104	110	116	3.4	300	1	84	13
1SMB5951B	951B	114	120	127	3.1	380	1	91	12
1SMB5952B	952B	125	130	142	2.9	450	1	100	11
1SMB5953B	953B	140	150	157	2.5	600	1	114	10
1SMB5954B	954B	152	160	168	2.3	700	1	121.6	9.0
1SMB5955B	955B	168	180	189	2.1	900	1	136.8	8.0
1SMB5956B	956B	189	200	211	1.9	1200	1	152	7.0
1SMB5957B	957B	228	240	252	1.5	1600	1	182.4	6.0

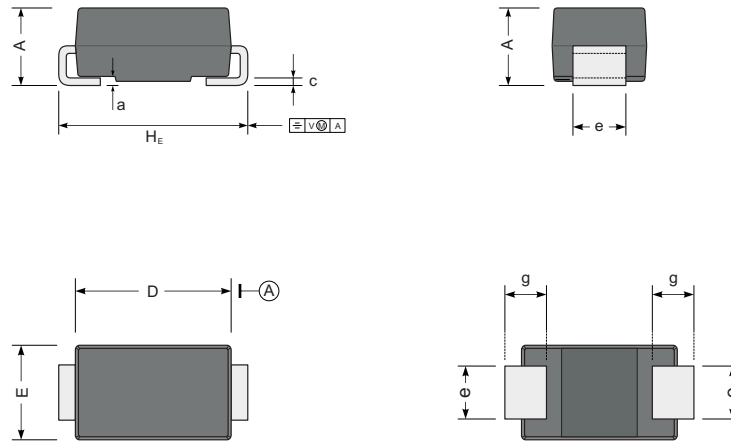
(1) Suffix "A" indicates ±10% tolerance, Suffix "B" indicates ±5% tolerance

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

PACKAGE OUTLINE

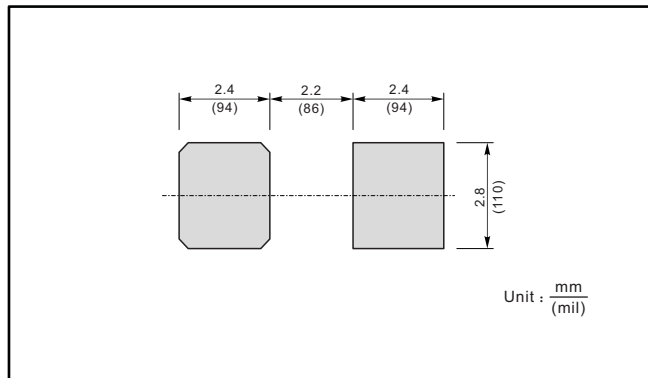
Plastic surface mounted package; 2 leads

SMB



UNIT		A	D	E	H _E	c	e	g	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	
mil	max	87	181	106	205	12	63	59	12
	min	75	157	91	185	6	51	35	

The recommended mounting pad size



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