BZT52CxxW

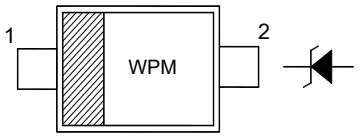
Silicon Planar Zener Diodes

Features

- Ideally suited for automated assembly processes
- Total power dissipation: max. 500 mW

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Please contact WPM sales for marking code.

Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Power Dissipation	T_L = 75℃ [1]	P_{tot}	500	mW
Junction Temperature		T_J	150	℃
Storage Temperature Range		T_{stg}	- 65 to + 150	℃

Characteristics at T_a = 25℃

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient [2]	$R_{\theta JA}$	340	℃/W
Thermal Resistance Junction to Lead [2]	$R_{\theta JL}$	150	℃/W
Forward Voltage at I_F = 10 mA	V_F	0.9	V

[1] FR−4 PCB = 89 * 38 mm.

[2] Mounted on an FR-4 PCB 38 * 38 * 1.6 mm with single-sided Cu pad areas 25mm^2(>70 µm thick).

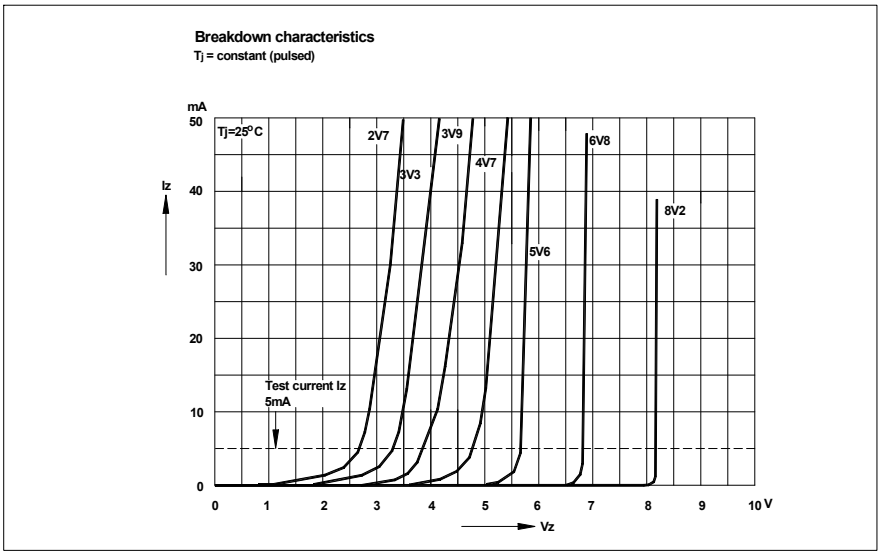
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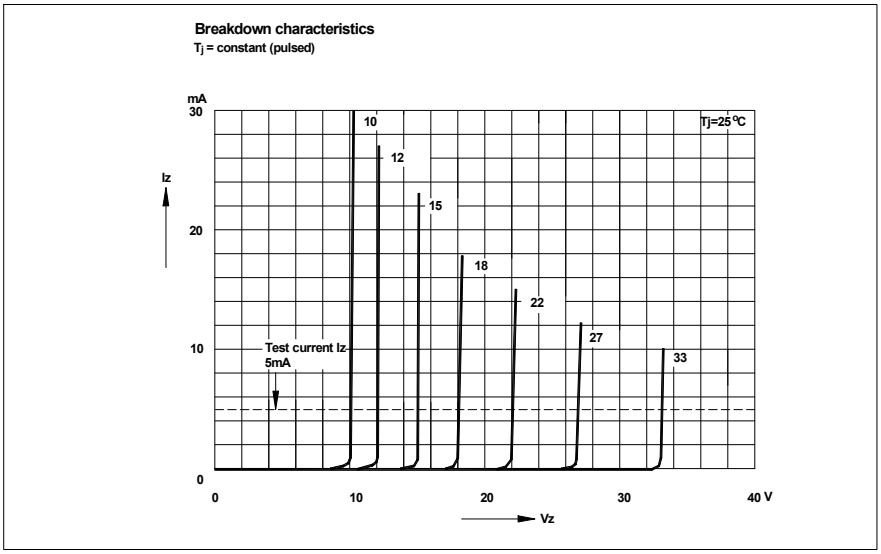
Characteristics at T_a = 25℃

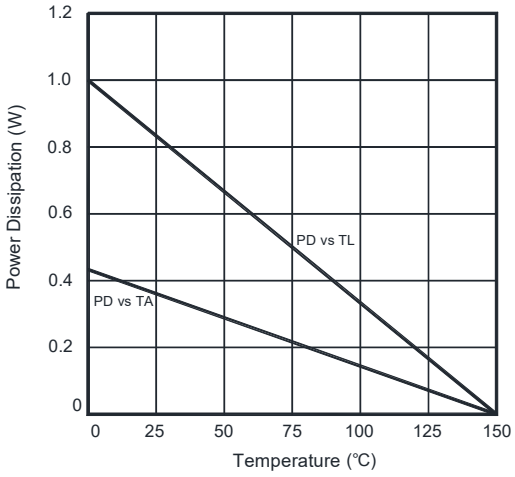
Type	Device Marking	Zener Voltage Range [1]			Dynamic Impedance				Reverse Leakage Current	
		V_{znom}	V_{ZT}	at I_{ZT}	Z_{ZT}	at I_{ZT}	Z_{ZK}	at I_{ZK}	I_R	at V_R
		V	V	mA	Max. (Ω)	mA	Max. (Ω)	mA	Max. (μA)	V
BZT52C2V4W	WX	2.4	2.2...2.6	5	100	5	600	1	50	1
BZT52C2V7W	W1	2.7	2.5...2.9	5	100	5	600	1	20	1
BZT52C3V0W	W2	3.0	2.8...3.2	5	95	5	600	1	10	1
BZT52C3V3W	W3	3.3	3.1...3.5	5	95	5	600	1	5	1
BZT52C3V6W	W4	3.6	3.4...3.8	5	90	5	600	1	5	1
BZT52C3V9W	W5	3.9	3.7...4.1	5	90	5	600	1	3	1
BZT52C4V3W	W6	4.3	4...4.6	5	90	5	600	1	3	1
BZT52C4V7W	W7	4.7	4.4...5	5	80	5	500	1	3	2
BZT52C5V1W	W8	5.1	4.8...5.4	5	60	5	480	1	2	2
BZT52C5V6W	W9	5.6	5.2...6	5	40	5	400	1	1	2
BZT52C6V2W	WA	6.2	5.8...6.6	5	10	5	150	1	3	4
BZT52C6V8W	WB	6.8	6.4...7.2	5	15	5	80	1	2	4
BZT52C7V5W	WC	7.5	7...7.9	5	15	5	80	1	1	5
BZT52C8V2W	WD	8.2	7.7...8.7	5	15	5	80	1	0.7	5
BZT52C9V1W	WE	9.1	8.5...9.6	5	15	5	100	1	0.5	6
BZT52C10W	WF	10	9.4...10.6	5	20	5	150	1	0.2	7
BZT52C11W	WG	11	10.4...11.6	5	20	5	150	1	0.1	8
BZT52C12W	WH	12	11.4...12.7	5	25	5	150	1	0.1	8
BZT52C13W	WI	13	12.4...14.1	5	30	5	170	1	0.1	8
BZT52C15W	WJ	15	13.8...15.6	5	30	5	200	1	0.1	10.5
BZT52C16W	WK	16	15.3...17.1	5	40	5	200	1	0.1	11.2
BZT52C18W	WL	18	16.8...19.1	5	45	5	225	1	0.1	12.6
BZT52C20W	WM	20	18.8...21.2	5	55	5	225	1	0.1	14
BZT52C22W	WN	22	20.8...23.3	5	55	5	250	1	0.1	15.4
BZT52C24W	WO	24	22.8...25.6	5	70	5	250	1	0.1	16.8
BZT52C27W	WP	27	25.1...28.9	2	80	2	300	0.5	0.1	18.9
BZT52C30W	WQ	30	28...32	2	80	2	300	0.5	0.1	21
BZT52C33W	WR	33	31...35	2	80	2	325	0.5	0.1	23.1
BZT52C36W	WS	36	34...38	2	90	2	350	0.5	0.1	25.2
BZT52C39W	WT	39	37...41	2	130	2	350	0.5	0.1	27.3
BZT52C43W	WU	43	40...46	2.5	130	2	500	1	2	33
BZT52C47W	WV	47	44...50	2.5	150	2	500	1	2	36
BZT52C51W	WW	51	48...54	2.5	180	2	500	1	1	39
BZT52C56W	Wd	56	52...60	2.5	180	2	500	1	1	43
BZT52C62W	WY	62	58...66	2.5	200	2	500	1	0.2	47
BZT52C68W	WZ	68	64...72	2.5	250	2	500	1	0.2	52
BZT52C75W	Wb	75	70...79	2.5	300	2	500	1	0.2	57

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

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Breakdown characteristics
Tj = constant (pulsed)
mA
Tj=25°C
Iz
2V7
3V3
3V9
4V7
5V6
6V8
8V2
Test current Iz
5mA
0
10
20
30
40
50
0 1 2 3 4 5 6 7 8 9 10 V
Vz

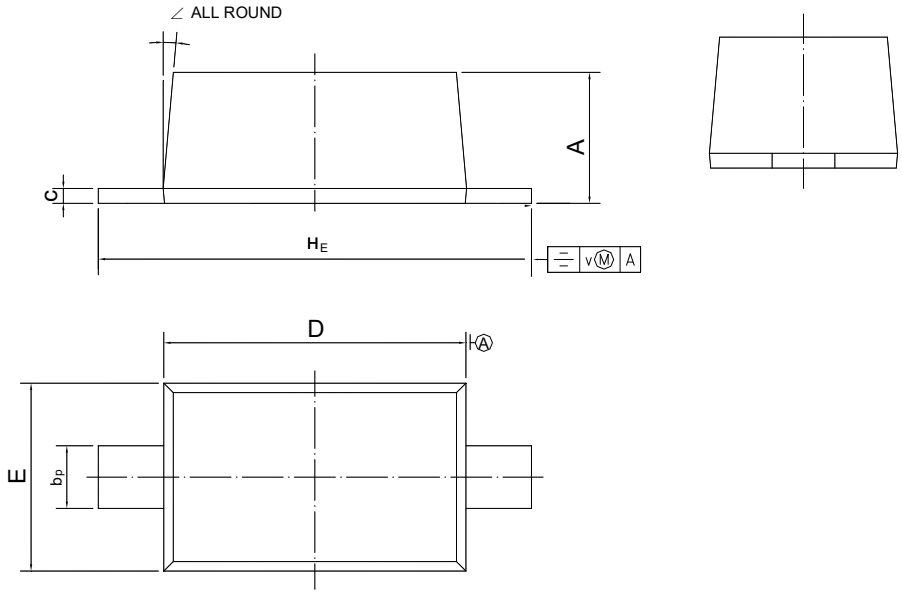

Breakdown characteristics
Tj = constant (pulsed)
mA
Tj=25°C
Iz
10
12
15
18
22
27
33
Test current Iz
5mA
0
10
20
30
0 10 20 30 40 V
Vz


Power Dissipation (W)
1.2
1.0
0.8
0.6
0.4
0.2
0
PD vs TL
PD vs TA
0 25 50 75 100 125 150
Temperature (°C)

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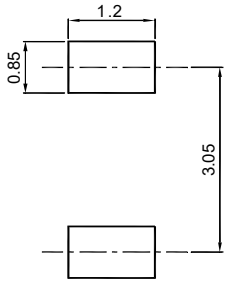
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-123**



UNIT	A	b_p	c	D	E	H_E	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.100	2.7 2.6	1.65 1.55	3.85 3.55	0.2	5°

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	(inch)	mm	(inch)	
SOD-123	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

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