

# BZT52C...W

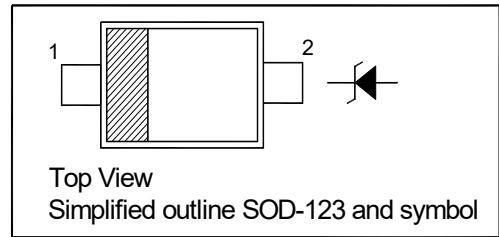
## Silicon Planar Zener Diodes

### Features

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

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

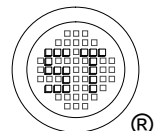
Parameter	Symbol	Value	Unit
Power Dissipation $T_L = 75^\circ\text{C}$ <sup>1)</sup>	$P_{\text{tot}}$	500	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	- 65 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient <sup>2)</sup>	$R_{\theta\text{JA}}$	340	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction to Lead <sup>1)</sup>	$R_{\theta\text{JL}}$	150	$^\circ\text{C}/\text{W}$

<sup>1)</sup> FR-4 PCB = 89 \* 38 mm.

<sup>2)</sup> Mounted on an FR-4 PCB 38 \* 38 \* 1.6 mm with single-sided Cu pad areas 25mm<sup>2</sup>(>70  $\mu\text{m}$  thick).



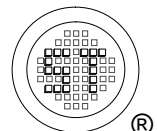
# BZT52C...W

Characteristics at  $T_a = 25^\circ\text{C}$  ( $V_F$  max : 0.9 V at  $I_F = 10$  mA)

Table 1

Type	Marking Code	Zener Voltage Range <sup>1)</sup>			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. ( $\Omega$ )	mA	Max. ( $\Omega$ )	mA	Max. ( $\mu\text{A}$ )	V
BZT52C2V4W	MH	2.4	2.2...2.6	5	100	5	600	1	50	1
BZT52C2V7W	MJ	2.7	2.5...2.9	5	100	5	600	1	20	1
BZT52C3V0W	MK	3.0	2.8...3.2	5	95	5	600	1	10	1
BZT52C3V3W	MM	3.3	3.1...3.5	5	95	5	600	1	5	1
BZT52C3V6W	MN	3.6	3.4...3.8	5	90	5	600	1	5	1
BZT52C3V9W	MP	3.9	3.7...4.1	5	90	5	600	1	3	1
BZT52C4V3W	MR	4.3	4...4.6	5	90	5	600	1	3	1
BZT52C4V7W	MX	4.7	4.4...5	5	80	5	500	1	3	2
BZT52C5V1W	MY	5.1	4.8...5.4	5	60	5	480	1	2	2
BZT52C5V6W	MZ	5.6	5.2...6	5	40	5	400	1	1	2
BZT52C6V2W	NA	6.2	5.8...6.6	5	10	5	150	1	3	4
BZT52C6V8W	NB	6.8	6.4...7.2	5	15	5	80	1	2	4
BZT52C7V5W	NC	7.5	7...7.9	5	15	5	80	1	1	5
BZT52C8V2W	ND	8.2	7.7...8.7	5	15	5	80	1	0.7	5
BZT52C9V1W	NE	9.1	8.5...9.6	5	15	5	100	1	0.5	6
BZT52C10W	NF	10	9.4...10.6	5	20	5	150	1	0.2	7
BZT52C11W	NH	11	10.4...11.6	5	20	5	150	1	0.1	8
BZT52C12W	NJ	12	11.4...12.7	5	25	5	150	1	0.1	8
BZT52C13W	NK	13	12.4...14.1	5	30	5	170	1	0.1	8
BZT52C15W	NM	15	13.8...15.6	5	30	5	200	1	0.1	10.5
BZT52C16W	NN	16	15.3...17.1	5	40	5	200	1	0.1	11.2
BZT52C18W	NP	18	16.8...19.1	5	45	5	225	1	0.1	12.6
BZT52C20W	NR	20	18.8...21.2	5	55	5	225	1	0.1	14
BZT52C22W	NX	22	20.8...23.3	5	55	5	250	1	0.1	15.4
BZT52C24W	NY	24	22.8...25.6	5	70	5	250	1	0.1	16.8
BZT52C27W	NZ	27	25.1...28.9	2	80	2	300	0.5	0.1	18.9
BZT52C30W	PA	30	28...32	2	80	2	300	0.5	0.1	21
BZT52C33W	PB	33	31...35	2	80	2	325	0.5	0.1	23.1
BZT52C36W	PC	36	34...38	2	90	2	350	0.5	0.1	25.2
BZT52C39W	PD	39	37...41	2	130	2	350	0.5	0.1	27.3
BZT52C43W	6A	43	40...46	2.5	130	2	500	1	2	33
BZT52C47W	6B	47	44...50	2.5	150	2	500	1	2	36
BZT52C51W	6C	51	48...54	2.5	180	2	500	1	1	39
BZT52C56W	6D	56	52...60	2.5	180	2	500	1	1	43
BZT52C62W	6E	62	58...66	2.5	200	2	500	1	0.2	47
BZT52C68W	6F	68	64...72	2.5	250	2	500	1	0.2	52
BZT52C75W	6H	75	70...79	2.5	300	2	500	1	0.2	57

<sup>1)</sup>  $V_{ZT}$  is tested with pulses (20 ms).



## Electrical Characteristics Curves

Fig 1. Zener Characteristics Curve

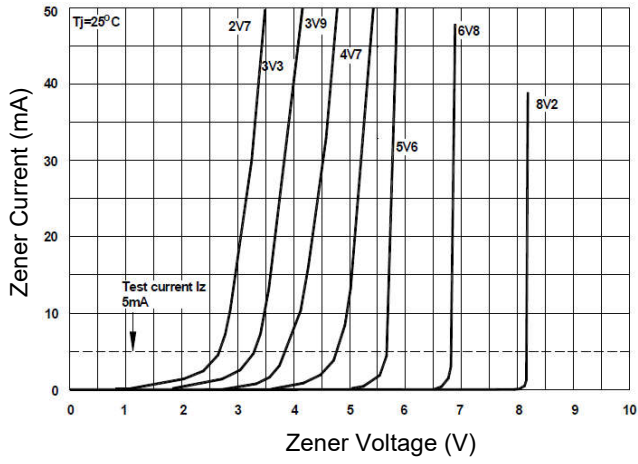


Fig 2. Zener Characteristics Curve

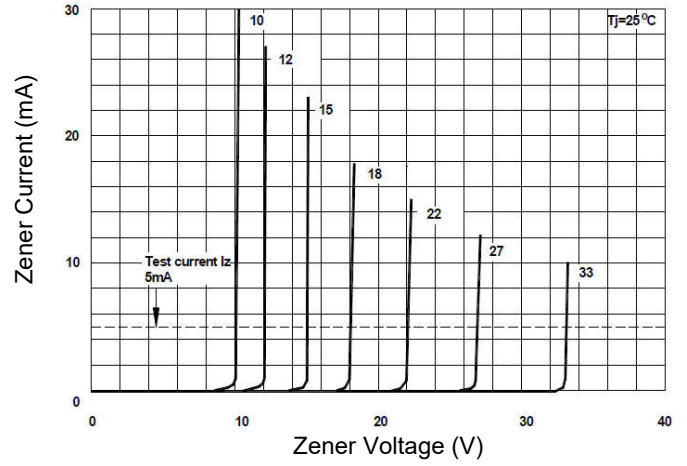
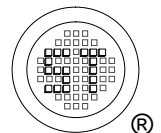
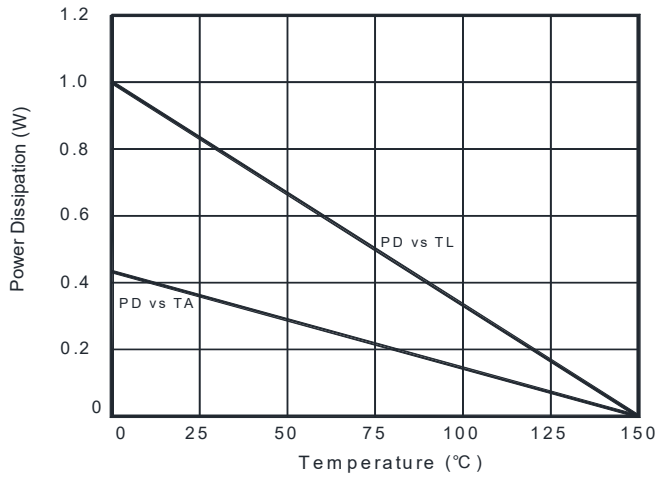


Fig 3. Power Derating Curve

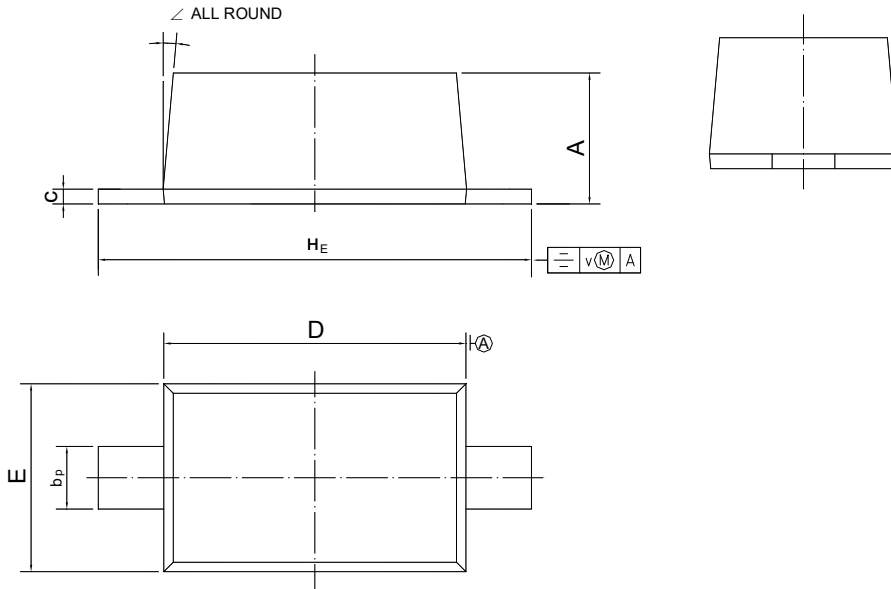


# BZT52C...W

## PACKAGE OUTLINE

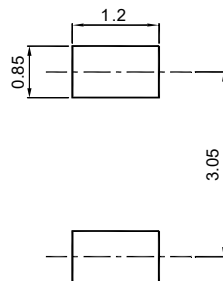
Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	b <sub>p</sub>	c	D	E	H <sub>E</sub>	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

### Marking information

"\*\*" = Part No (See Table 1 of Marking Code)

"III" = Cathode line

Font type: Arial

