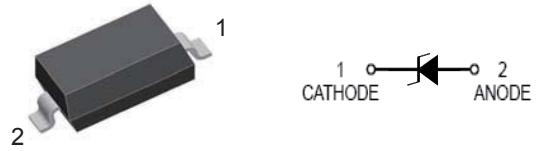


## Zener Diode in SOD-323

### Features

- Low Zener Impedance
- 200mW Power Dissipation
- High Stability and High Reliability
- Meet MSL level 2



### Mechanical Data

**Case:** SOD-323 (plastic package).

Lead free; RoHS compliant; Halogen free

■ **Molding Compound Flammability Rating:**

UL 94 V-0

■ **Terminals:** High temperature soldering guaranteed:

260 °C/10 sec. at terminals

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ $I_F = 10\text{mA}$	$V_F$	0.9	V
Power Dissipation(Note 1)	$P_d$	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~+150	°C

- 1) Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>
- 2) Short duration test pulse used to minimize self-heating effect
- 3) f=1KHz

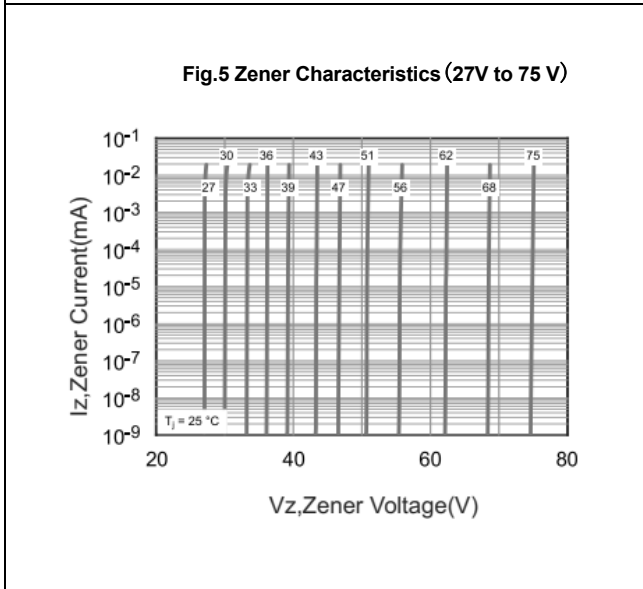
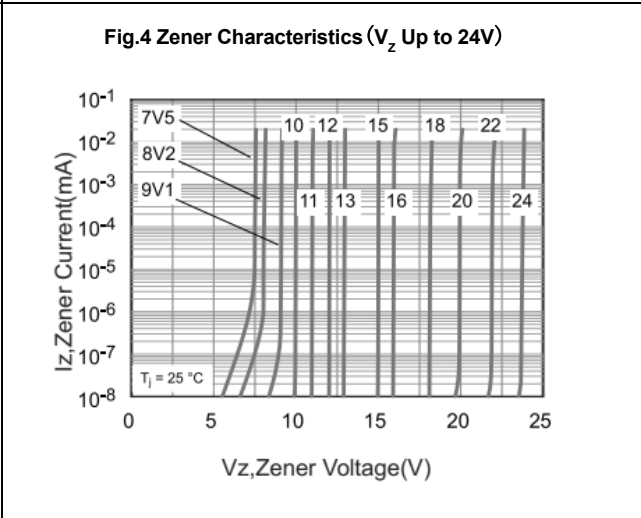
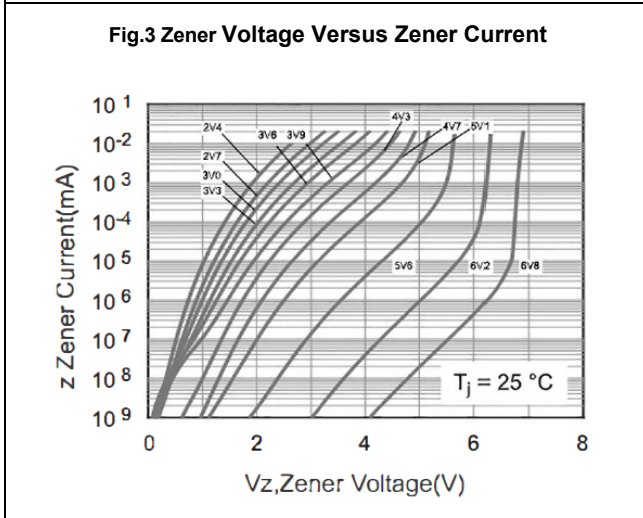
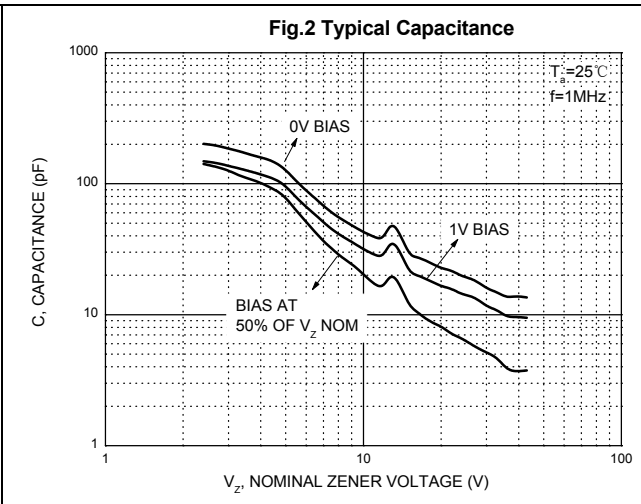
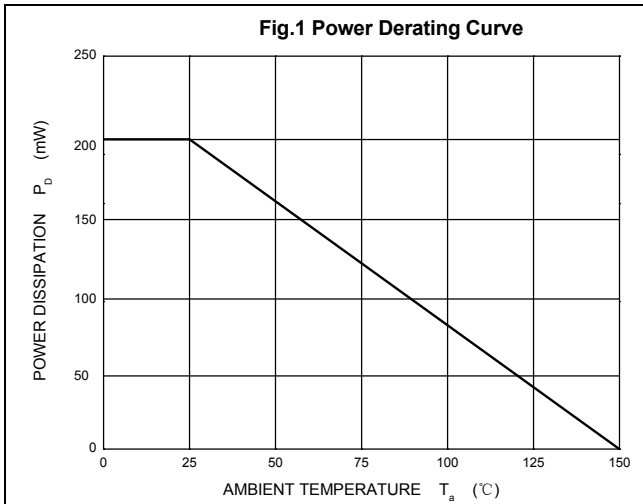
## Electrical Characteristics

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise specified)

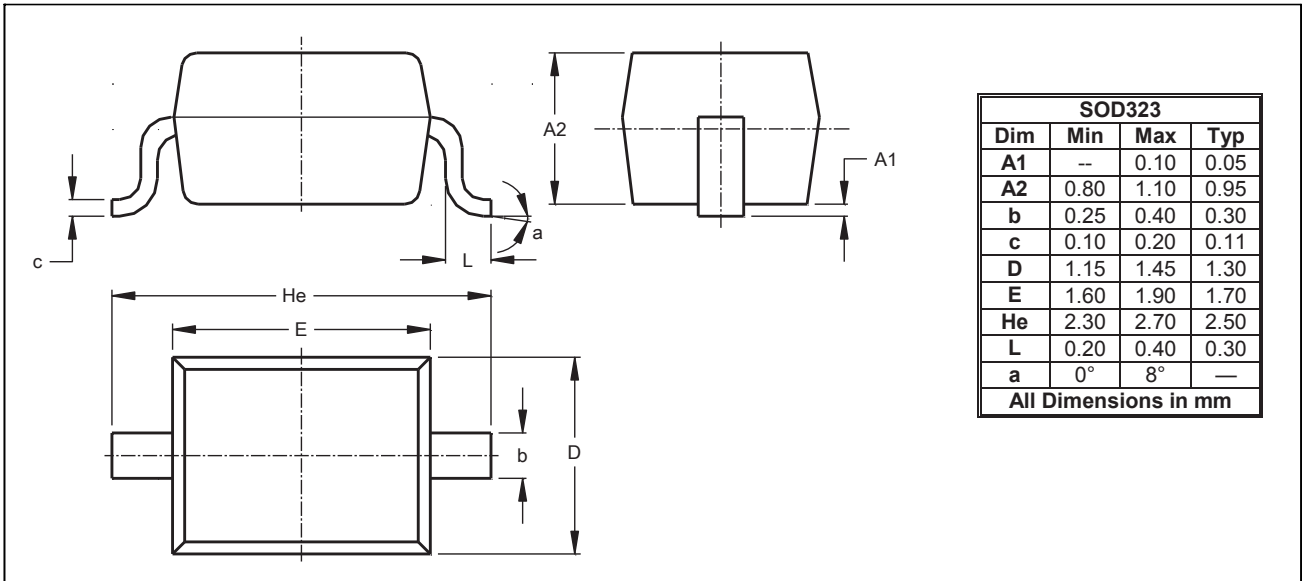
Type	Marking	Zener Voltage Range <sup>1)</sup>			Dynamic Impedance				Reverse Leakage Current	
		$V_{znom}$	$V_{ZT}$	at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$	at $V_R$
		V	V	mA	Max. ( $\Omega$ )	mA	Max. ( $\Omega$ )	mA	Max. ( $\mu\text{A}$ )	V
BZT52C2V4S	WX	2.4	2.2...2.6	5	100	5	600	1	50	1
BZT52C2V7S	W1	2.7	2.5...2.9	5	100	5	600	1	20	1
BZT52C3V0S	W2	3.0	2.8...3.2	5	95	5	600	1	10	1
BZT52C3V3S	W3	3.3	3.1...3.5	5	95	5	600	1	5	1
BZT52C3V6S	W4	3.6	3.4...3.8	5	90	5	600	1	5	1
BZT52C3V9S	W5	3.9	3.7...4.1	5	90	5	600	1	3	1
BZT52C4V3S	W6	4.3	4...4.6	5	90	5	600	1	3	1
BZT52C4V7S	W7	4.7	4.4...5	5	80	5	500	1	3	2
BZT52C5V1S	W8	5.1	4.8...5.4	5	60	5	480	1	2	2
BZT52C5V6S	W9	5.6	5.2...6	5	40	5	400	1	1	2
BZT52C6V2S	WA	6.2	5.8...6.6	5	10	5	150	1	3	4
BZT52C6V8S	WB	6.8	6.4...7.2	5	15	5	80	1	2	4
BZT52C7V5S	WC	7.5	7...7.9	5	15	5	80	1	1	5
BZT52C8V2S	WD	8.2	7.7...8.7	5	15	5	80	1	0.7	5
BZT52C9V1S	WE	9.1	8.5...9.6	5	15	5	100	1	0.5	6
BZT52C10S	WF	10	9.4...10.6	5	20	5	150	1	0.2	7
BZT52C11S	WG	11	10.4...11.6	5	20	5	150	1	0.1	8
BZT52C12S	WH	12	11.4...12.7	5	25	5	150	1	0.1	8
BZT52C13S	WI	13	12.4...14.1	5	30	5	170	1	0.1	8
BZT52C15S	WJ	15	13.8...15.6	5	30	5	200	1	0.1	10.5
BZT52C16S	WK	16	15.3...17.1	5	40	5	200	1	0.1	11.2
BZT52C18S	WL	18	16.8...19.1	5	45	5	225	1	0.1	12.6
BZT52C20S	WM	20	18.8...21.2	5	55	5	225	1	0.1	14
BZT52C22S	WN	22	20.8...23.3	5	55	5	250	1	0.1	15.4
BZT52C24S	WO	24	22.8...25.6	5	70	5	250	1	0.1	16.8
BZT52C27S	WP	27	25.1...28.9	2	80	2	300	0.5	0.1	18.9
BZT52C30S	WQ	30	28...32	2	80	2	300	0.5	0.1	21
BZT52C33S	WR	33	31...35	2	80	2	325	0.5	0.1	23.1
BZT52C36S	WS	36	34...38	2	90	2	350	0.5	0.1	25.2
BZT52C39S	WT	39	37...41	2	130	2	350	0.5	0.1	27.3
BZT52C43S	WU	43	40...46	2.5	130	2	500	1	2	33
BZT52C47S	WV	47	44...50	2.5	150	2	500	1	2	36
BZT52C51S	WW	51	48...54	2.5	180	2	500	1	1	39
BZT52C56S	XW	56	52...60	2.5	180	2	500	1	1	43
BZT52C62S	6E	62	58...66	2.5	200	2	500	1	0.2	47
BZT52C68S	6F	68	64...72	2.5	250	2	500	1	0.2	52
BZT52C75S	6H	75	70...79	2.5	300	2	500	1	0.2	57

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

**Typical Characteristics** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)



## Package Dimensions



## Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
BZT52CxxS	SOD-323	Tape and reel	3000pcs / reel	EIA STD RS-481

## Revision history

Date	Revision	Changes
9-Oct-2025	4.2	Update fig.3 and fig.4

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