

## Surface Mount Zener Diodes

**BZT52C2V4S~BZT52C75S**

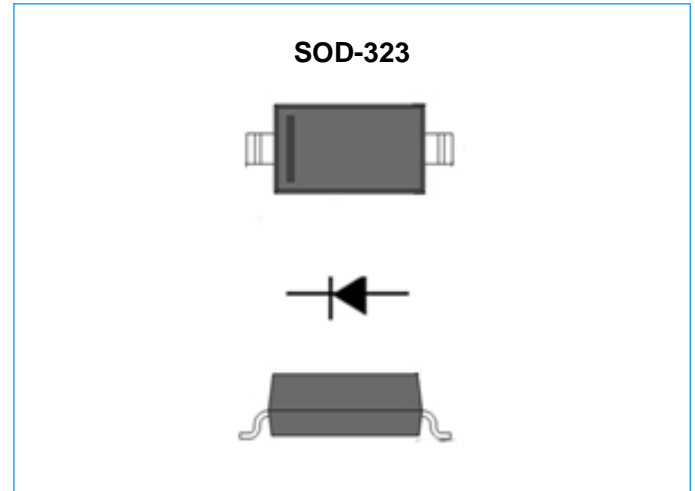
**2.4 to 75 V**

**200mW**

**SOD-323**

### Features

- u Constant Voltage control
- u Wide Voltage Range Selection 2.4V to 75V
- u SOD-323 Thin SMD package
- u RoHS compliant / Green EMC
- u Matte Tin (Sn) Lead finish
- u Device marking: Refer to table list



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

Parameter	Symbol	Value	Units
Power Dissipation (Note 1)	$P_D$	200	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 to +150	$^\circ\text{C}$
Maximum Regulator Current	$I_{ZM}$	$P_D / V_Z$	mA

Note1: Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>.

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### Electrical Characteristics (T<sub>A</sub>=25°C)

Part Number	Zener Voltage Range (Note 2)			Maximum Zener Impedance (Note 3)				Maximum Leakage Current (Note 2)	
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>	
	Nom.(V)	Min.(V)	Max.(V)	(Ω)	(mA)	(Ω)	(mA)	(μA)	(V)
BZT52C2V4S	2.4	2.20	2.60	100	5.0	600	1.0	50	1.0
BZT52C2V7S	2.7	2.50	2.90	100	5.0	600	1.0	20	1.0
BZT52C3V0S	3.0	2.80	3.20	95	5.0	600	1.0	10	1.0
BZT52C3V3S	3.3	3.10	3.50	95	5.0	600	1.0	5	1.0
BZT52C3V6S	3.6	3.40	3.80	90	5.0	600	1.0	5	1.0
BZT52C3V9S	3.9	3.70	4.10	90	5.0	600	1.0	3	1.0
BZT52C4V3S	4.3	4.00	4.60	90	5.0	600	1.0	3	1.0
BZT52C4V7S	4.7	4.40	5.00	80	5.0	500	1.0	3	2.0
BZT52C5V1S	5.1	4.80	5.40	60	5.0	480	1.0	2	2.0
BZT52C5V6S	5.6	5.20	6.00	40	5.0	400	1.0	1	2.0
BZT52C6V2S	6.2	5.80	6.60	10	5.0	150	1.0	3	4.0
BZT52C6V8S	6.8	6.40	7.20	15	5.0	80	1.0	2	4.0
BZT52C7V5S	7.5	7.00	7.90	15	5.0	80	1.0	1	5.0
BZT52C8V2S	8.2	7.70	8.70	15	5.0	80	1.0	0.7	5.0
BZT52C9V1S	9.1	8.50	9.60	15	5.0	100	1.0	0.5	6.0
BZT52C10S	10	9.40	10.60	20	5.0	150	1.0	0.2	7.0
BZT52C11S	11	10.40	11.60	20	5.0	150	1.0	0.1	8.0
BZT52C12S	12	11.40	12.70	25	5.0	150	1.0	0.1	8.0
BZT52C13S	13	12.40	14.10	30	5.0	170	1.0	0.1	8.0
BZT52C15S	15	13.80	15.60	30	5.0	200	1.0	0.1	10.5
BZT52C16S	16	15.30	17.10	40	5.0	200	1.0	0.1	11.2
BZT52C18S	18	16.80	19.10	45	5.0	225	1.0	0.1	12.6
BZT52C20S	20	18.80	21.20	55	5.0	225	1.0	0.1	14.0
BZT52C22S	22	20.80	23.30	55	5.0	250	1.0	0.1	15.4
BZT52C24S	24	22.80	25.60	70	5.0	250	1.0	0.1	16.8

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### Electrical Characteristics (Continue)

Part Number	Zener Voltage Range (Note 2)			Maximum Zener Impedance (Note 3)				Maximum Leakage Current (Note 2)	
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>	
	Nom.(V)	Min.(V)	Max.(V)	(Ω)	(mA)	(Ω)	(mA)	(μA)	(V)
BZT52C27S	27	25.10	28.90	80	2.0	300	0.5	0.1	18.9
BZT52C30S	30	28.00	32.00	80	2.0	300	0.5	0.1	21.0
BZT52C33S	33	31.00	35.00	80	2.0	325	0.5	0.1	23.1
BZT52C36S	36	34.00	38.00	90	2.0	350	0.5	0.1	25.2
BZT52C39S	39	37.00	41.00	130	2.0	350	0.5	0.1	27.3
BZT52C43S	43	40.00	46.00	100	2.0	700	1.0	0.1	32.0
BZT52C47S	47	44.00	50.00	100	2.0	750	1.0	0.1	35.0
BZT52C51S	51	48.00	54.00	100	2.0	750	1.0	0.1	38.0
BZT52C56S	56	53.20	58.80	200	2.0	400	0.5	0.045	39.2
BZT52C62S	62	58.90	65.10	215	2.0	423	0.5	0.045	43.4
BZT52C68S	68	64.60	71.40	240	2.0	447	0.5	0.045	47.6
BZT52C75S	75	71.25	78.75	255	2.0	470	0.5	0.045	52.5

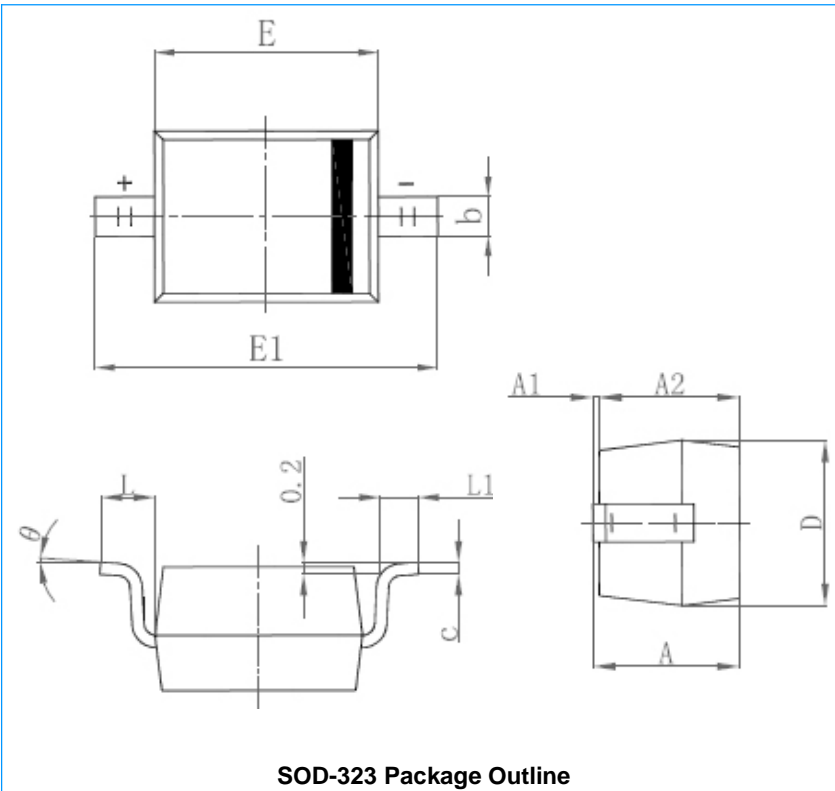
Note 2: Short duration test pulse used to minimize self-heating effect.

Note 3: f=1kHz.

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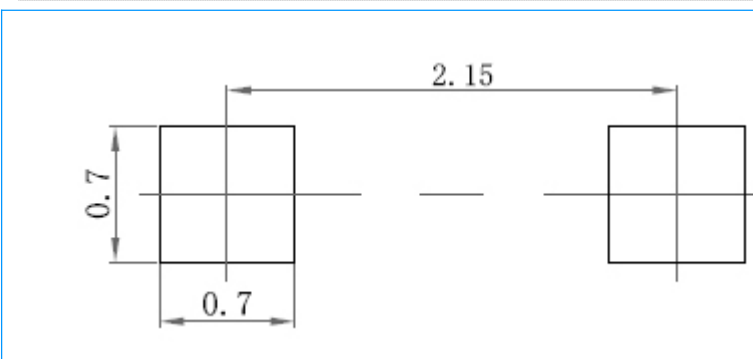
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### SOD-323 Package Dimensions



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
<b>A</b>	--	1.000	--	0.039
<b>A1</b>	0.000	0.100	0.000	0.004
<b>A2</b>	0.800	0.900	0.031	0.035
<b>b</b>	0.250	0.350	0.010	0.014
<b>c</b>	0.080	0.150	0.003	0.006
<b>D</b>	1.200	1.400	0.047	0.055
<b>E</b>	1.600	1.800	0.063	0.071
<b>E1</b>	2.550	2.750	0.100	0.108
<b>L</b>	0.475 REF.		0.019 REF.	
<b>L1</b>	0.250	0.400	0.010	0.016
<b>θ</b>	0°	8°	0°	8°

### SOD-323 Suggested Pad Layout


**Notes:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

### Ordering Information

Part Number	Package	Shipping
<b>BZT52C2V4S~BZT52C75S</b>	SOD-323	Tape & Reel 3000 PCS / 7" Reel