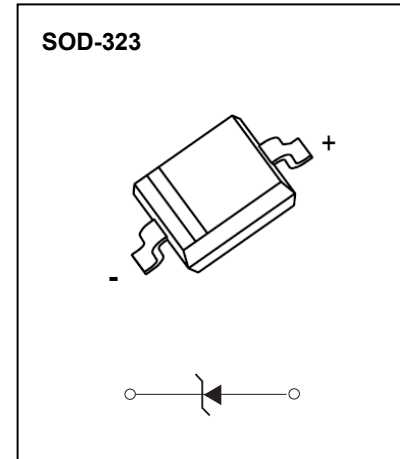




#### FEATURE

- Planar Die Construction
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Available in Lead Free Version



#### Maximum Ratings(Ta=25°C unless otherwise specified)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ I <sub>F</sub> = 10mA	V <sub>F</sub>	0.9	V
Power Dissipation(Note 1)	P <sub>d</sub>	200	mW
Thermal Resistance from Junction to Ambient	R <sub>θJA</sub>	625	/W
Junction Temperature	T <sub>j</sub>	150	
Storage Temperature Range	T <sub>stg</sub>	-55 ~ +150	



### ELECTRICAL CHARACTERISTICS

T<sub>a</sub>=25°C unless otherwise specified

Type Number	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Typical Temperature Coefficient @I <sub>ZTC</sub>		Test Current I <sub>ZTC</sub>
	V <sub>Z</sub> @I <sub>ZT</sub>			I <sub>ZT</sub>	Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub>	V <sub>R</sub>	mV/°C		
	Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V	Min	Max	
BZT52B2V4S	2.4	2.35	2.45	5	100	600	1.0	50	1.0	-3.5	0	5
BZT52B2V7S	2.7	2.65	2.75	5	100	600	1.0	20	1.0	-3.5	0	5
BZT52B3V0S	3.0	2.94	3.06	5	95	600	1.0	10	1.0	-3.5	0	5
BZT52B3V3S	3.3	3.23	3.37	5	95	600	1.0	5	1.0	-3.5	0	5
BZT52B3V6S	3.6	3.53	3.67	5	90	600	1.0	5	1.0	-3.5	0	5
BZT52B3V9S	3.9	3.82	3.98	5	90	600	1.0	3	1.0	-3.5	0	5
BZT52B4V3S	4.3	4.21	4.39	5	90	600	1.0	3	1.0	-3.5	0	5
BZT52B4V7S	4.7	4.61	4.79	5	80	500	1.0	3	2.0	-3.5	0.2	5
BZT52B5V1S	5.1	5.00	5.20	5	60	480	1.0	2	2.0	-2.7	1.2	5
BZT52B5V6S	5.6	5.49	5.71	5	40	400	1.0	1	2.0	-2.0	2.5	5
BZT52B6V2S	6.2	6.08	6.32	5	10	150	1.0	3	4.0	0.4	3.7	5
BZT52B6V8S	6.8	6.66	6.94	5	15	80	1.0	2	4.0	1.2	4.5	5
BZT52B7V5S	7.5	7.35	7.65	5	15	80	1.0	1	5.0	2.5	5.3	5
BZT52B8V2S	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2	5
BZT52B9V1S	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0	5
BZT52B10S	10	9.80	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0	5
BZT52B11S	11	10.78	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0	5
BZT52B12S	12	11.76	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0	5
BZT52B13S	13	12.74	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0	5
BZT52B15S	15	14.70	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0	5
BZT52B16S	16	15.68	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0	5
BZT52B18S	18	17.64	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0	5
BZT52B20S	20	19.60	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0	5
BZT52B22S	22	21.56	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0	5
BZT52B24S	24	23.52	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0	5
BZT52B27S	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3	2
BZT52B30S	30	29.40	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4	2
BZT52B33S	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4	2
BZT52B36S	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4	2
BZT52B39S	39	38.22	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2	2

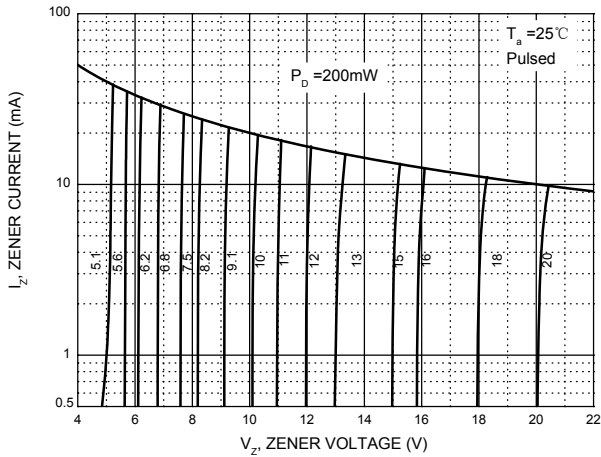
- Notes: 1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>.  
2. Short duration test pulse used to minimize self-heating effect.  
3. f = 1kHz.



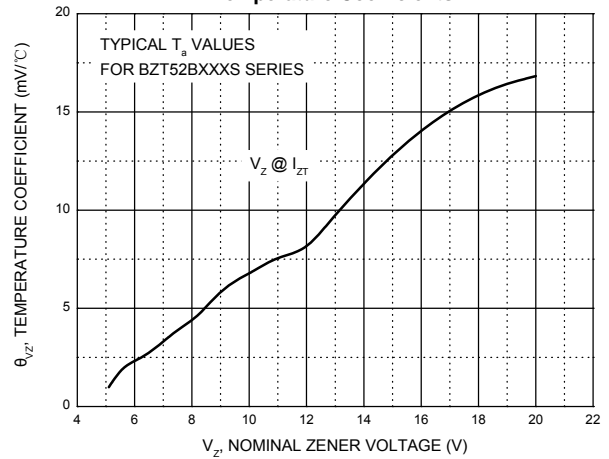
### Typical Characteristics

Notes: Our company currently provide 5.1 V - 20 V products only

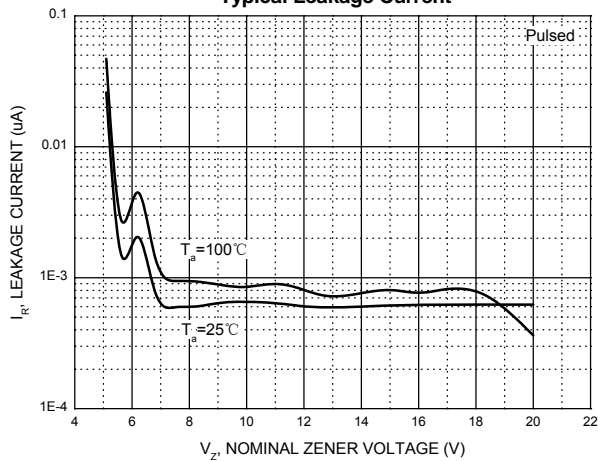
#### Zener Characteristics ( $V_z$ 5.1V to 20 V)



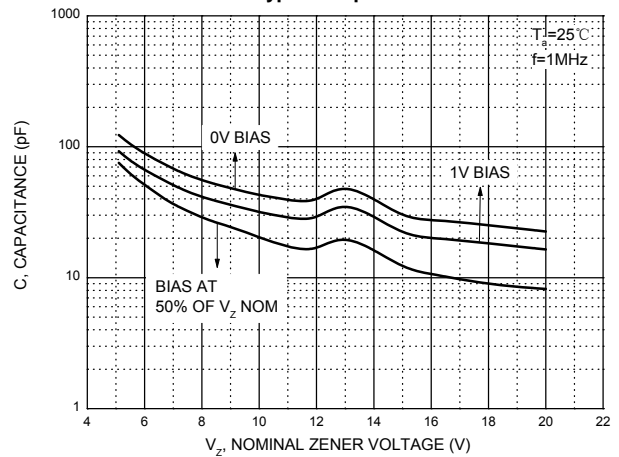
#### Temperature Coefficients



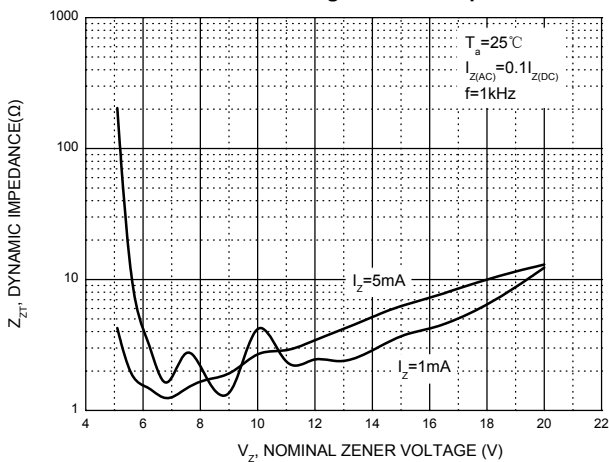
#### Typical Leakage Current



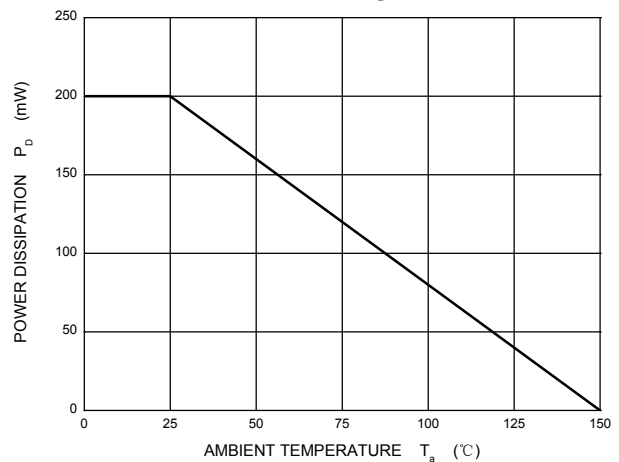
#### Typical Capacitance



#### Effect of Zener Voltage on Zener Impedance

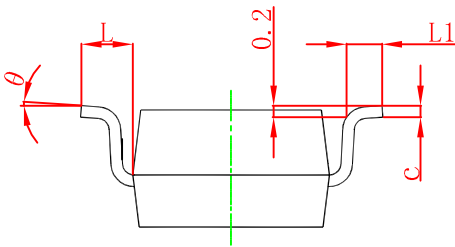
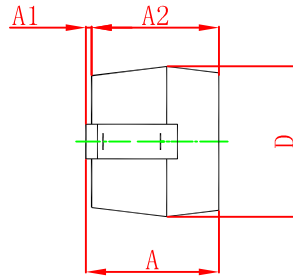
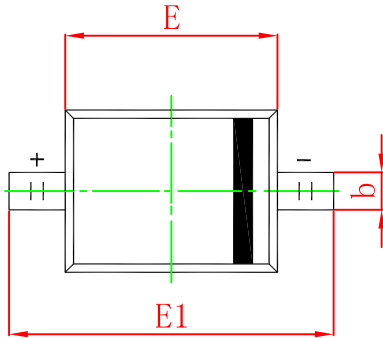


#### Power Derating Curve



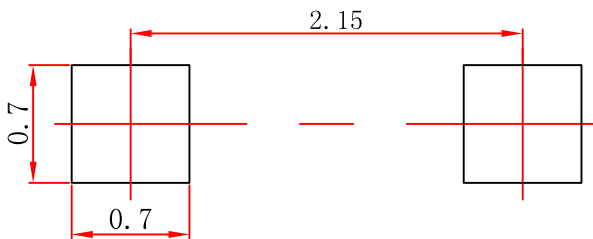


### SOD-323 Package Outline Dimensions



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

### SOD-323 Suggested Pad Layout



#### Note:

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