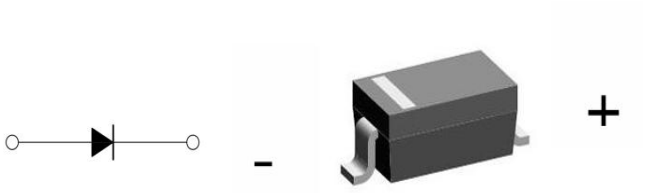
Plastic-Encapsulate Zener Diode

Parameter	Value	Unit
V_Z	2.4~43	V
P_D	200	mW



SOD-323

Features

- Planar die construction
- Power Dissipation of 200mW
- General purpose, medium current
- Ideally suited for automated assembly processes

Applications

- Surge protection
- Voltage stabilization
- Polarity Protection

Absolute Maximum Ratings (T_A=25ºC, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Forward Voltage@ I_F = 10mA	V_F	0.9	V
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	-55~+150	℃
Storage Temperature Range	T_{STG}	-55~+150	℃
Typical Thermal Resistance	$R_{\theta JA}$	625	℃/W

Electrical Characteristics (T_A=25℃)

Type Number	Marking	Nominal Zener Voltage				Zener Impedance			Leakage Current		Typica Temperature Coefficent @I_{ZTC} mV/℃	
		V_Z(V)			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R@V_R			
		Nom.	Min.	Max.	(mA)	(Ω)		(mA)	I_R(μA)	V_R(V)	Min.	Max.
BZT52B2V4S	2WX	2.4	2.35	2.45	5	100	600	1.0	50	1.0	-3.5	0
BZT52B2V7S	2W1	2.7	2.65	2.75	5	100	600	1.0	20	1.0	-3.5	0
BZT52B3VOS	2W2	3.0	2.94	3.06	5	95	600	1.0	10	1.0	-3.5	0
BZT52B3V3S	2W3	3.3	3.23	3.37	5	95	600	1.0	5	1.0	-3.5	0
BZT52B3V6S	2W4	3.6	3.53	3.67	5	90	600	1.0	5	1.0	-3.5	0
BZT52B3V9S	2W5	3.9	3.82	3.98	5	90	600	1.0	3	1.0	-3.5	0
BZT52B4V3S	2W6	4.3	4.21	4.39	5	90	600	1.0	3	1.0	-3.5	0
BZT52B4V7S	2W7	4.7	4.61	4.79	5	80	500	1.0	3	2.0	-3.5	0.2
BZT52B5V1S	2W8	5.1	5.00	5.20	5	60	480	1.0	2	2.0	-2.7	1.2
BZT52B5V6S	2W9	5.6	5.49	5.71	5	40	400	1.0	1	2.0	-2.0	2.5
BZT52B6V2S	2WA	6.2	6.08	6.32	5	10	150	1.0	3	4.0	0.4	3.7
BZT52B6V8S	2WB	6.8	6.66	6.94	5	15	80	1.0	2	4.0	1.2	4.5
BZT52B7V5S	2WC	7.5	7.35	7.65	5	15	80	1.0	1	5.0	2.5	5.3
BZT52B8V2S	2WD	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2
BZT52B9V1S	2WE	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0
BZT52B10S	2WF	10	9.80	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0
BZT52B11S	2WG	11	10.78	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0
BZT52B12S	2WH	12	11.76	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0
BZT52B13S	2WI	13	12.74	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0
BZT52B15S	2WJ	15	14.70	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0
BZT52B16S	2WK	16	15.68	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0
BZT52B18S	2WL	18	17.64	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0
BZT52B20S	2WM	20	19.60	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0
BZT52B22S	2WN	22	21.56	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0
BZT52B24S	2WO	24	23.52	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0
BZT52B27S	2WP	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3
BZT52B30S	2WQ	30	29.40	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4
BZT52B33S	2WR	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4
BZT52B36S	2WS	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4
BZT52B39S	2WT	39	38.22	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2
BZT52B43S	2WU	43	41.16	43.84	2	100	700	1.0	0.1	32.0	10.0	12.0

Typical Characteristics

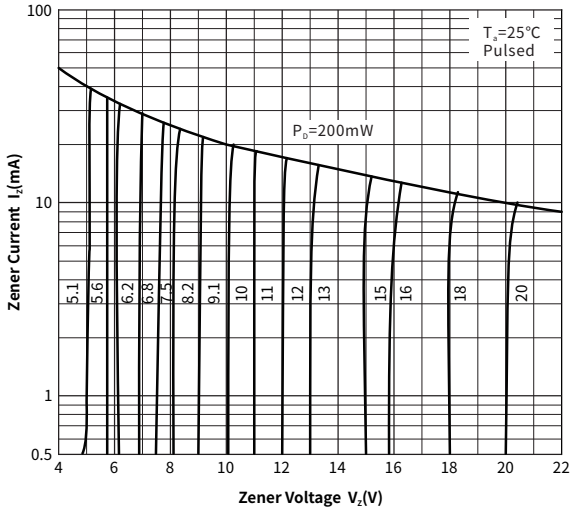


Fig. 1 Zener Characteristics(Vz 5.1V to 20V)

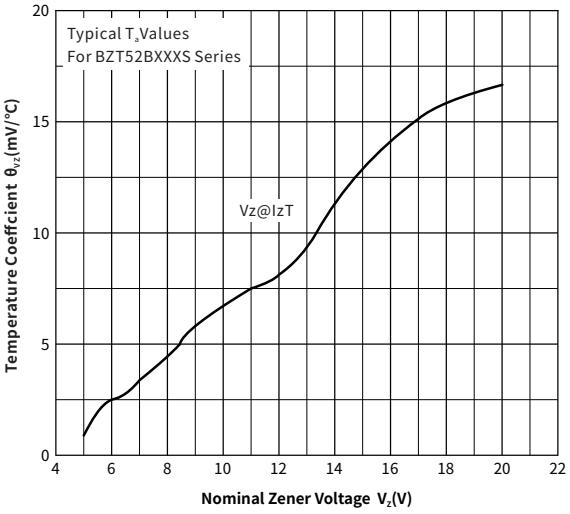


Fig.2 Temperature Coefficients

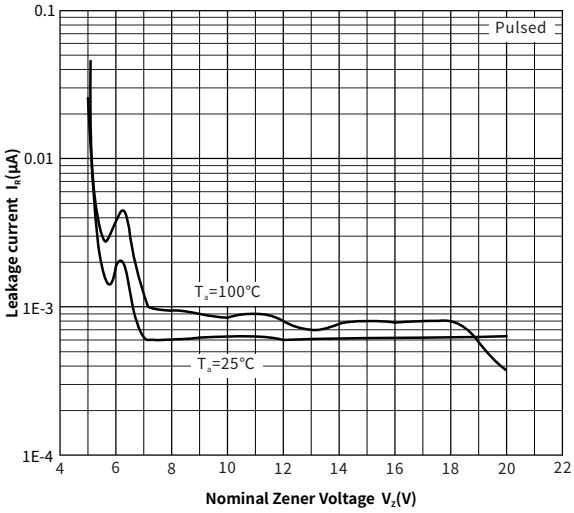


Fig.3 Typical Leakage Current

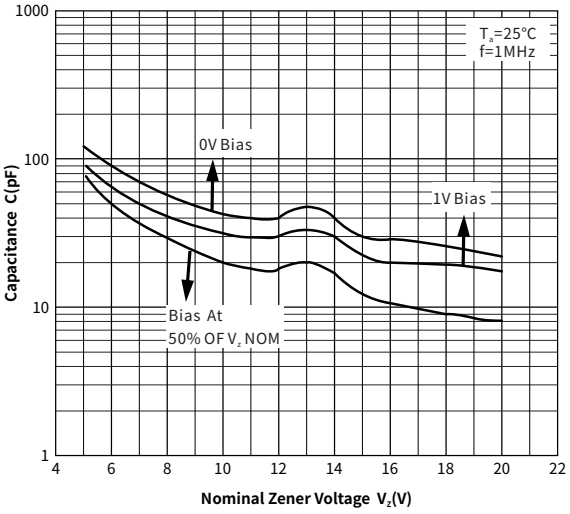


Fig.4 Typical Capacitance

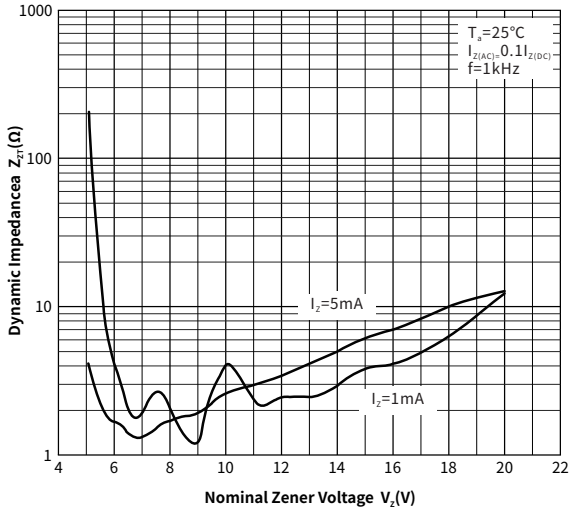


Fig.5 Effect of Zener Voltage on Zener Impedance

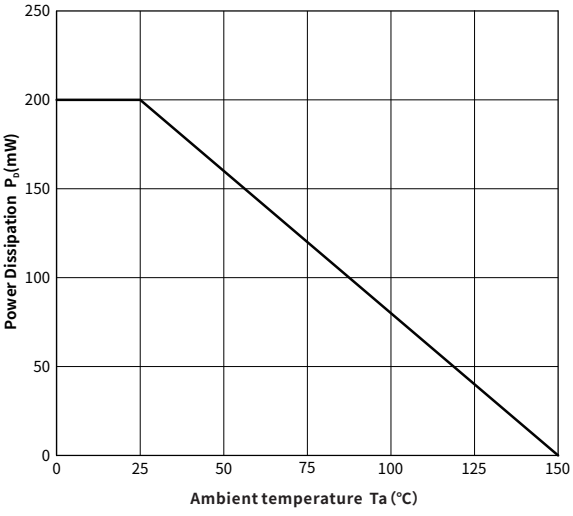
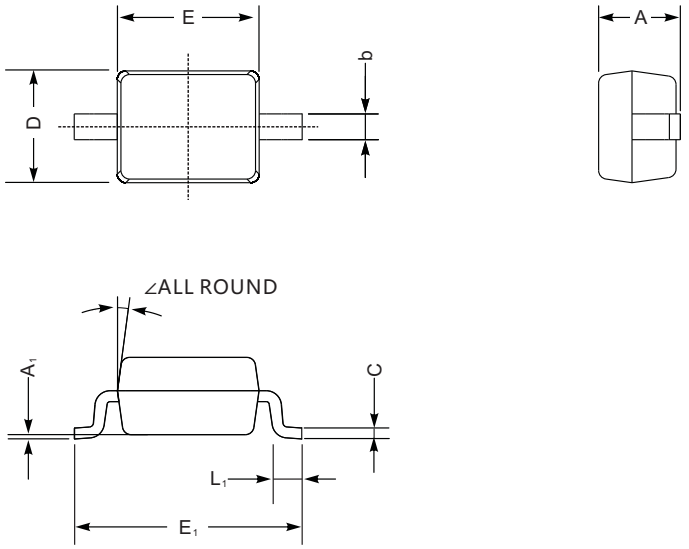


Fig.6 Power Derating Curve

Package Outlines (Dimensions in mm)

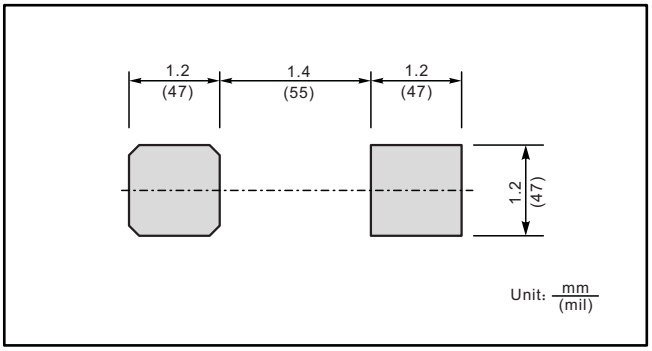
Plastic surface mounted package; 2 leads



SOD-323 mechanical data

UNIT		A	C	D	E	E_1	b	L_1	A_1	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	

The recommended mounting pad size



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