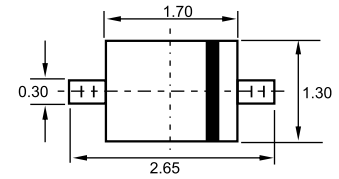



SOD-323

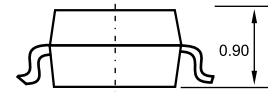
Features

- ✧ Planar Die Construction
- ✧ Ultra-Small Surface Mount Package
- ✧ Ideally suited for Automated Assembly Processes



Mechanical Data

- ✧ Case: SOD-323, Plastic
- ✧ Case material - UL Flammability Rating Classification 94V-0
- ✧ Polarity: Cathode Band
- ✧ Weight: 0.004 grams (approx.)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Characteristic	Symbol	Value	Unit
Forward Voltage (Note1) @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation 1	P_d	300	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	625	°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	°C

Notes: 1. Short duration test pulse used in minimize self-heating effect.

Electrical Characteristics

Type Number	Marking Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note3)			Maximum Reverse Current (Note 2)		Temperature Coefficient of Zener Voltage @ $I_{ZT} = 5mA$ mV/ °C	
		$V_Z @ I_{ZT}$			I_{ZT}	Z_{ZT}	$Z_{ZK} @ I_{ZK}$	I_{ZK}	k	V_R		
		Nom (V)	Min (V)	Max (V)	(mA)	Ω		mA	μA	V	Min	Max
BZT52C2V0S	WY	2.0	1.90	2.10	5	100	600	1	150	1.0	-3.5	0
BZT52C2V4S	WX	2.4	2.28	2.52	5	100	600	1	50	1.0	-3.5	0
BZT52C2V7S	W1	2.7	2.57	2.84	5	100	600	1	20	1.0	-3.5	0
BZT52C3V0S	W2	3.0	2.85	3.15	5	95	600	1	10	1.0	-3.5	0
BZT52C3V3S	W3	3.3	3.14	3.47	5	95	600	1	5	1.0	-3.5	0
BZT52C3V6S	W4	3.6	3.42	3.78	5	90	600	1	5	1.0	-3.5	0
BZT52C3V9S	W5	3.9	3.71	4.10	5	90	600	1	3	1.0	-3.5	0
BZT52C4V3S	W6	4.3	4.09	4.52	5	90	600	1	3	1.0	-3.5	0
BZT52C4V7S	W7	4.7	4.47	4.94	5	80	500	1	3	2.0	-3.5	0.2
BZT52C5V1S	W8	5.1	4.85	5.36	5	60	480	1	2	2.0	-2.7	1.2
BZT52C5V6S	W9	5.6	5.32	5.88	5	40	400	1	1	2.0	-2.0	2.5
BZT52C6V2S	WA	6.2	5.89	6.51	5	10	150	1	3	4.0	0.4	3.7
BZT52C6V8S	WB	6.8	6.46	7.14	5	15	80	1	2	4.0	1.2	4.5
BZT52C7V5S	WC	7.5	7.13	7.88	5	15	80	1	1	5.0	2.5	5.3
BZT52C8V2S	WD	8.2	7.79	8.61	5	15	80	1	0.7	5.0	3.2	6.2
BZT52C9V1S	WE	9.1	8.65	9.56	5	15	100	1	0.5	6.0	3.8	7.0
BZT52C10S	WF	10	9.50	10.50	5	20	150	1	0.2	7.0	4.5	8.0
BZT52C11S	WG	11	10.45	11.55	5	20	150	1	0.1	8.0	5.4	9.0
BZT52C12S	WH	12	11.40	12.60	5	25	150	1	0.1	8.0	6.0	10.0
BZT52C13S	WI	13	12.35	13.65	5	30	170	1	0.1	8.0	7.0	11.0
BZT52C15S	WJ	15	14.25	15.75	5	30	200	1	0.1	10.5	9.2	13.0
BZT52C16S	WK	16	15.20	16.80	5	40	200	1	0.1	11.2	10.4	14.0
BZT52C18S	WL	18	17.10	18.90	5	45	225	1	0.1	12.6	12.4	16.0
BZT52C20S	WM	20	19.00	21.00	5	55	225	1	0.1	14.0	14.4	18.0
BZT52C22S	WN	22	20.90	23.10	5	55	250	1	0.1	15.4	16.4	20.0
BZT52C24S	WO	24	22.80	25.20	5	70	250	1	0.1	16.8	18.4	22.0
BZT52C27S	WP	27	25.65	28.35	2	80	300	0	0.1	18.9	21.4	25.3
BZT52C30S	WQ	30	28.50	31.50	2	80	300	0	0.1	21.0	24.4	29.4
BZT52C33S	WR	33	31.35	34.65	2	80	325	0	0.1	23.1	27.4	33.4
BZT52C36S	WS	36	34.20	37.80	2	90	350	0	0.1	25.2	30.4	37.4
BZT52C39S	WT	39	37.05	40.95	2	130	350	0	0.1	27.3	33.4	41.2
BZT52C43S	WU	43	40.85	45.15	2	100	700	1	0.1	32.0	37.6	46.6
BZT52C47S	WV	47	44.65	49.35	2	100	750	1	0.1	35.0	42.0	51.8
BZT52C51S	WW	51	48.45	53.55	2	100	750	1	0.1	38.0	46.6	57.2
BZT52C56S	WX●	56	53.20	58.80	2	200	400	0	0.05	39.2	52.2	63.8
BZT52C62S	WY●	62	58.90	65.10	2	215	423	0	0.05	43.4	58.8	71.6
BZT52C68S	WZ	68	64.60	71.40	2	240	447	0	0.05	47.6	65.6	79.8
BZT52C75S	6H	75	71.25	78.75	2	255	470	0	0.05	52.5	73.4	88.6

Notes: 2. Short duration test pulse used to minimize self-heating effect.
3. $f = 1kHz$.

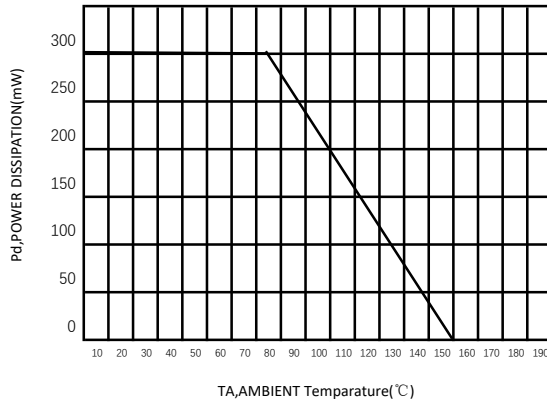


Fig.1. POWER DERATING CURVE

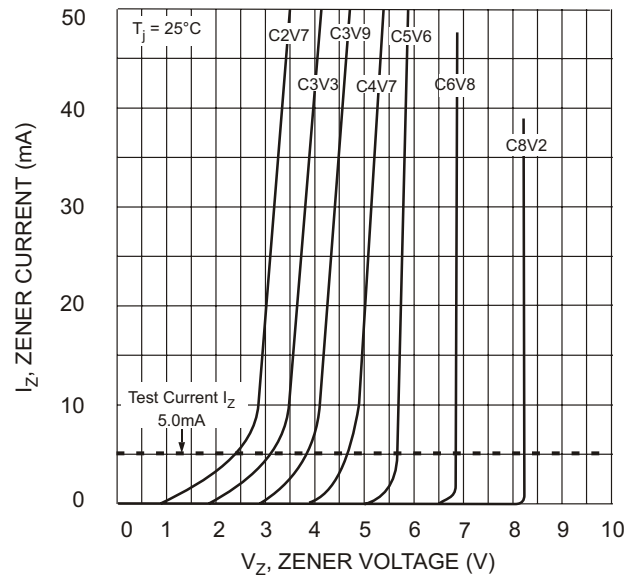


Fig. 2 Zener Breakdown Characteristics

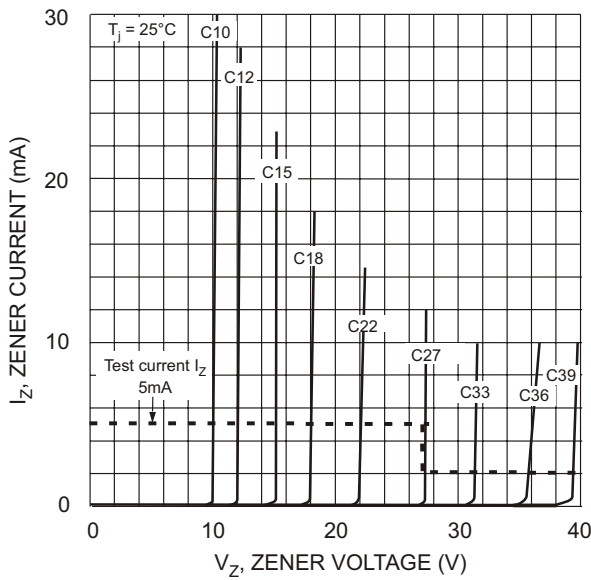


Fig. 3. Zener Breakdown Characteristics

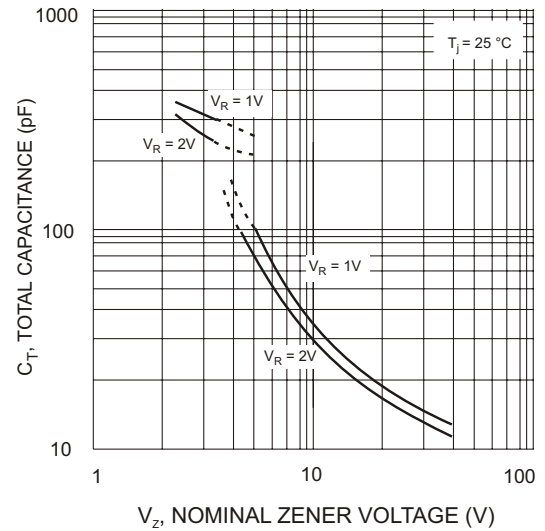


Fig. 4 Total Capacitance vs Nominal Zener Voltage

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SOD-323	3000/REEL	180000	44X44X22	9.00	8.00