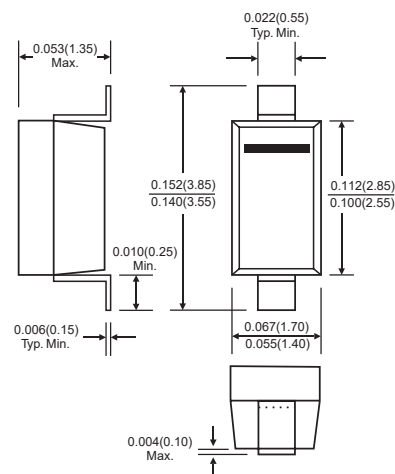


SOD-123



Dimensions in inches and (millimeters)

Features

- Wide zener voltage range selection: 2.4V to 51V.
- VZ Tolerance selection of $\pm 2\%$ (B series).
- Ideally suited for automated assembly processes.
- Moisture sensitivity level 1.

Applications

- Zener diode.
- Ultra-small surface mount package.

Ordering Information

Type No.	Marking	Package Code
BZT52B2V4-BZT52B51	See table 2	SOD-123

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ I _F =10mA	V _F	0.9	V
Power Dissipation	P _d	500	mW
Thermal resistance, junction to ambient air	R _{θjA}	305	°C/W
Junction temperature	T _j	150	°C
Storage temperature range	T _{stg}	-65 to +150	°C

Notes: These ratings are limiting values above which the serviceability of the diodes may be impaired.

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Type Number	Marking Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current	
		V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	I _{ZK}	Z _{ZK} @I _{ZK}	I _R	@V _R
		Nom(V)	Min(V)	Max(V)	mA	Ω	mA	Ω	μA	V
BZT52B2V4	2WX	2.4	2.35	2.45	5	94	1	564	45	1
BZT52B2V7	2W1	2.7	2.65	2.75	5	94	1	564	18	1
BZT52B3V0	2W2	3.0	2.94	3.06	5	89	1	564	9	1
BZT52B3V3	2W3	3.3	3.23	3.37	5	89	1	564	4.5	1
BZT52B3V6	2W4	3.6	3.53	3.67	5	84	1	564	4.5	1
BZT52B3V9	2W5	3.9	3.82	3.98	5	84	1	564	2.7	1
BZT52B4V3	2W6	4.3	4.21	4.39	5	84	1	564	2.7	1
BZT52B4V7	2W7	4.7	4.61	4.79	5	75	1	564	2.7	2
BZT52B5V1	2W8	5.1	5.00	5.20	5	56	1	470	1.8	2
BZT52B5V6	2W9	5.6	5.49	5.71	5	37	1	451	0.9	2
BZT52B6V2	2WA	6.2	6.08	6.32	5	9	1	376	2.7	4
BZT52B6V8	2WB	6.8	6.66	6.94	5	14	1	141	1.8	4
BZT52B7V5	2WC	7.5	7.35	7.65	5	14	1	75	0.9	5
BZT52B8V2	2WD	8.2	8.04	8.36	5	14	1	75	0.63	5
BZT52B9V1	2WE	9.1	8.92	9.28	5	14	1	94	0.45	6
BZT52B10	2WF	10	9.80	10.20	5	18	1	141	0.18	7
BZT52B11	2WG	11	10.78	11.22	5	18	1	141	0.09	8
BZT52B12	2WH	12	11.76	12.24	5	23	1	141	0.09	8
BZT52B13	2WI	13	12.74	13.26	5	28	1	160	0.09	8
BZT52B15	2WJ	15	14.70	15.30	5	28	1	188	0.045	10.5
BZT52B16	2WK	16	15.68	16.32	5	37	1	188	0.045	11.2
BZT52B18	2WL	18	17.64	18.36	5	42	1	212	0.045	12.6
BZT52B20	2WM	20	19.60	20.40	5	51	1	212	0.045	14.0
BZT52B22	2WN	22	21.56	22.44	5	51	1	235	0.045	15.4
BZT52B24	2WO	24	23.52	24.48	5	65	1	235	0.045	16.8
BZT52B27	2WP	27	26.46	27.54	5	75	0.5	282	0.045	18.9
BZT52B30	2WQ	30	29.40	30.60	5	75	0.5	282	0.045	21.0
BZT52B33	2WR	33	32.34	33.66	5	75	0.5	306	0.045	23.0
BZT52B36	2WS	36	35.28	36.72	5	84	0.5	329	0.045	25.2
BZT52B39	2WT	39	38.22	39.78	5	122	0.5	329	0.045	27.3
BZT52B43	2WU	43	42.14	43.86	5	141	0.5	353	0.045	30.1
BZT52B47	2WV	47	46.06	47.94	5	160	0.5	353	0.045	33.0
BZT52B51	2WW	51	49.98	52.02	5	169	0.5	376	0.045	35.7

- Notes: 1. The zener voltage (V_Z) is tested under pulse condition of 10ms.
 2. The device numbers listed have a standard tolerance on the nominal zener voltage of ±2%.
 3. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK}.

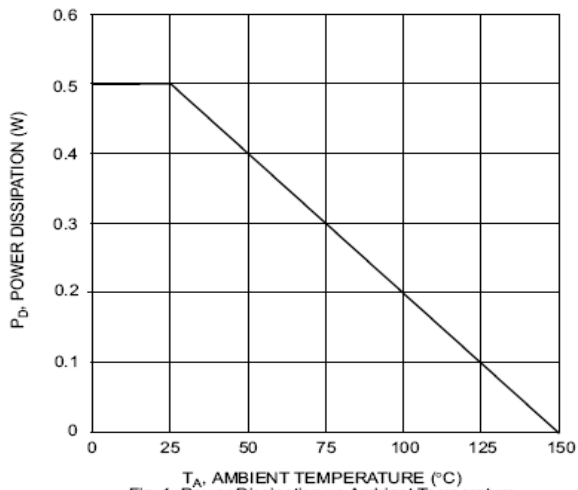
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified


Fig. 1 Power Dissipation vs Ambient Temperature

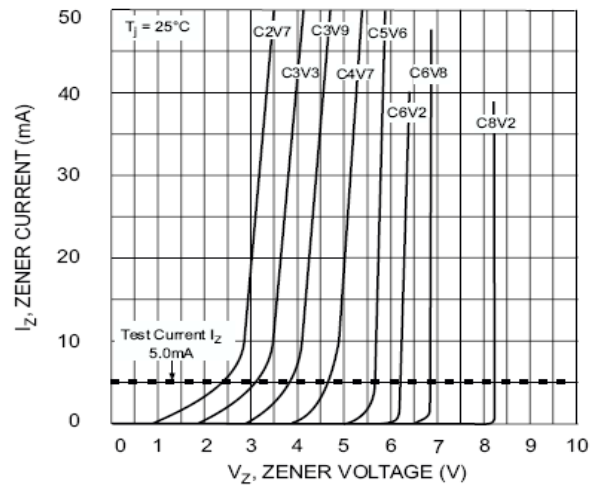


Fig. 2 Zener Breakdown Characteristics

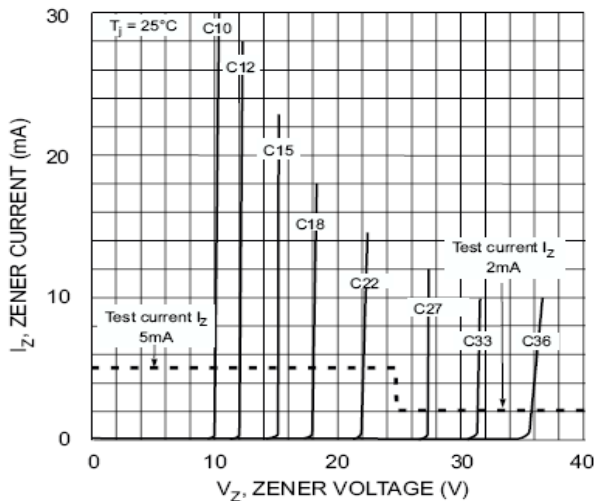


Fig. 3 Zener Breakdown Characteristics

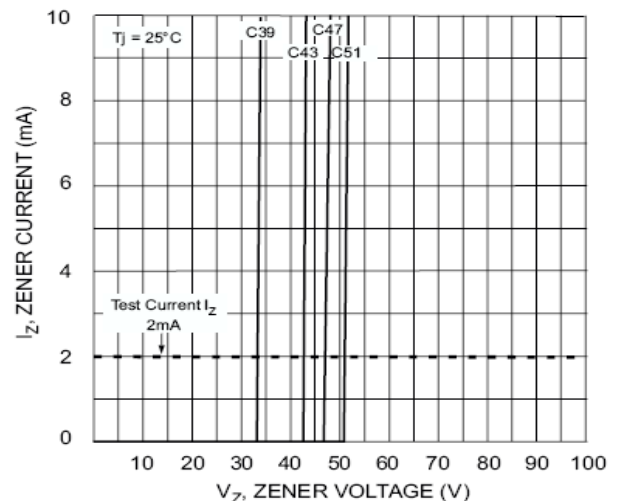


Fig. 4 Zener Breakdown Characteristics

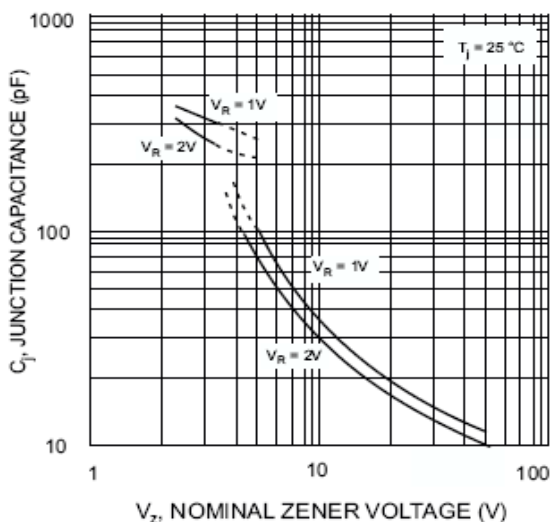


Fig. 5 Junction Capacitance vs Nominal Zener Voltage

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SOD-123	3000/REEL	90000	40X20X22	5.00	4.00

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