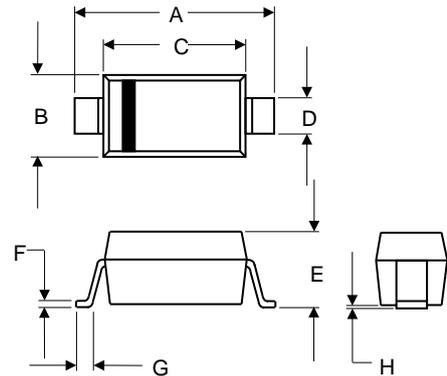


Features

- * Wide zener voltage range selection : 2.4V to 75V
- * Surface mount device type
- * Moisture sensitivity level 1
- * Vz Tolerance Selection of $\pm 2\%$
- * Matte tin (Sn) lead finish with Nickel (Ni) under plate



RoHS
COMPLIANT



SOD-123				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.138	0.150	3.50	3.80
B	0.059	0.067	1.50	1.70
C	0.100	0.106	2.54	2.70
D	0.020	0.028	0.50	0.70
E	0.036	0.048	0.91	1.21
F	0.003	0.008	0.08	0.20
G	0.008	0.016	0.20	0.40
H	---	0.004	---	0.10

Mechanical Data

- * Case: SOD-123 small outline plastic package
- * Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- * High temperature soldering guaranteed: 260°C/10s
- * Polarity: Indicated by cathode band
- * Weight : 8.85 \pm 0.5mg

Maximum Ratings And Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Forward voltage @ I _F = 10mA	V _F	1	V
Power dissipation	P _D	500	mW
Thermal resistance from junction to ambient (Note 1)	R _{θJA}	350	°C/W
Junction temperature	T _J	150	°C
Storage temperature	T _{STG}	- 65 to +150	°C

Notes: 1. Valid provided that electrodes are kept at ambient temperature



BZT52B2V4 THRU BZT52B75

500mW, 2% Tolerance SMD Zener Diodes

Electrical Characteristics (T_A=25°C unless otherwise noted)

Device type	Marking code	Zener voltage range				Maximum zener impedance			Maximum reverse current	
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	V _R
		Min (V)	Nom (V)	Max (V)	mA	Ohm		mA	μA	V
BZT52B2V4	5Y1	2.35	2.4	2.45	5	100	564	1	45	1
BZT52B2V7	5Z1	2.65	2.7	2.75	5	100	564	1	18	1
BZT52B3V0	6A1	2.94	3	3.06	5	100	564	1	9	1
BZT52B3V3	6B1	3.23	3.3	3.37	5	95	564	1	4.5	1
BZT52B3V6	6C1	3.53	3.6	3.67	5	90	564	1	4.5	1
BZT52B3V9	6D1	3.82	3.9	3.98	5	90	564	1	2.7	1
BZT52B4V3	6E1	4.21	4.3	4.39	5	90	564	1	2.7	1
BZT52B4V7	6F1	4.61	4.7	4.79	5	80	470	1	2.7	2
BZT52B5V1	6G1	5	5.1	5.2	5	60	451	1	1.8	2
BZT52B5V6	6H1	5.49	5.6	5.71	5	40	376	1	0.9	2
BZT52B6V2	6J1	6.08	6.2	6.32	5	10	141	1	2.7	4
BZT52B6V8	6K1	6.66	6.8	6.94	5	15	75	1	1.8	4
BZT52B7V5	6L1	7.35	7.5	7.65	5	15	75	1	0.9	5
BZT52B8V2	6M1	8.04	8.2	8.36	5	15	75	1	0.63	5
BZT52B9V1	6N1	8.92	9.1	9.28	5	15	94	1	0.45	6
BZT52B10	6P1	9.8	10	10.2	5	20	141	1	0.18	7
BZT52B11	6Q1	10.78	11	11.22	5	20	141	1	0.09	8
BZT52B12	6R1	11.76	12	12.24	5	25	141	1	0.09	8
BZT52B13	6S1	12.74	13	13.26	5	30	160	1	0.09	8
BZT52B15	6T1	14.7	15	15.3	5	30	188	1	0.045	10.5
BZT52B16	6U1	15.68	16	16.32	5	40	188	1	0.045	11.2
BZT52B18	6W1	17.64	18	18.36	5	45	212	1	0.045	12.6
BZT52B20	6X1	19.6	20	20.4	5	55	212	1	0.045	14
BZT52B22	6Y1	21.56	22	22.44	5	55	235	1	0.045	15.4
BZT52B24	6Z1	23.52	24	24.48	5	70	235	1	0.045	16.8
BZT52B27	7A1	26.46	27	27.54	2	80	282	0.5	0.045	18.9
BZT52B30	7B1	29.4	30	30.6	2	80	282	0.5	0.045	21
BZT52B33	7C1	32.34	33	33.66	2	80	306	0.5	0.045	23
BZT52B36	7D1	35.28	36	36.72	2	90	329	0.5	0.045	25.2
BZT52B39	7E1	38.22	39	39.78	2	130	329	0.5	0.045	27.3

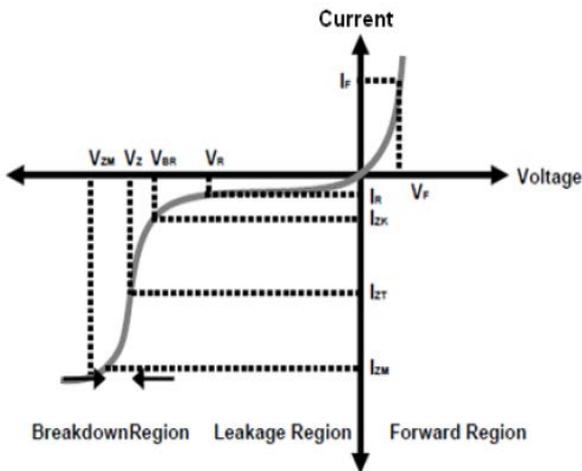
Electrical Characteristics (T_A=25°C unless otherwise noted)

Device type	Marking code	Zener voltage range				Maximum zener impedance			Maximum reverse current	
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	V _R
		Min (V)	Nom (V)	Max (V)	mA	Ohm		mA	μA	V
BZT52B43	7F1	42.14	43	43.86	2	150	353	0.5	0.045	30.1
BZT52B47	7G1	46.06	47	47.94	2	170	353	0.5	0.045	33
BZT52B51	7H1	49.98	51	52.02	2	180	376	0.5	0.045	35.7
BZT52B56	7J1	54.88	56	57.12	2	200	400	0.5	0.045	39.2
BZT52B62	7K1	60.76	62	63.24	2	215	423	0.5	0.045	43.4
BZT52B68	7L1	66.64	68	69.36	2	240	447	0.5	0.045	47.6
BZT52B75	7M1	73.5	75	76.5	2	255	470	0.5	0.045	52.5

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 normal 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 is superimposed to I_{ZT} or I_{ZK}.

ZENER I vs. V CHARACTERISTICS



- V_{BR}: Voltage at I_{ZK}
- I_{ZK}: Test current for voltage V_{BR}
- Z_{ZK}: Dynamic impedance at I_{ZK}
- I_{ZT}: Test current for voltage V_Z
- V_Z: Voltage at current I_{ZT}
- Z_{ZT}: Dynamic impedance at I_{ZT}
- I_{ZM}: Maximum steady state current
- V_{ZM}: Voltage at I_{ZM}

Ratings and Characteristic Curves

Fig. 1 Typical Forward Characteristics

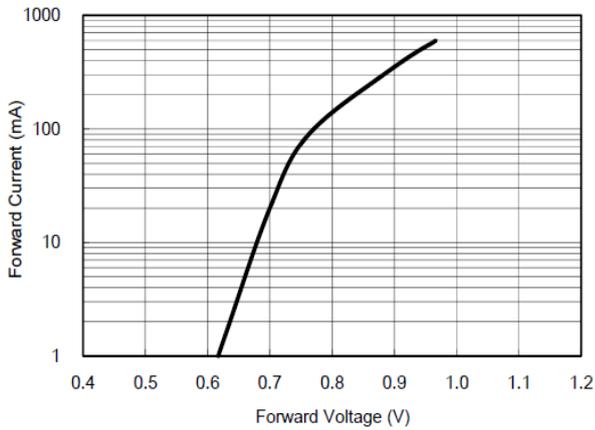


Fig. 2 Zener Breakdown Characteristics

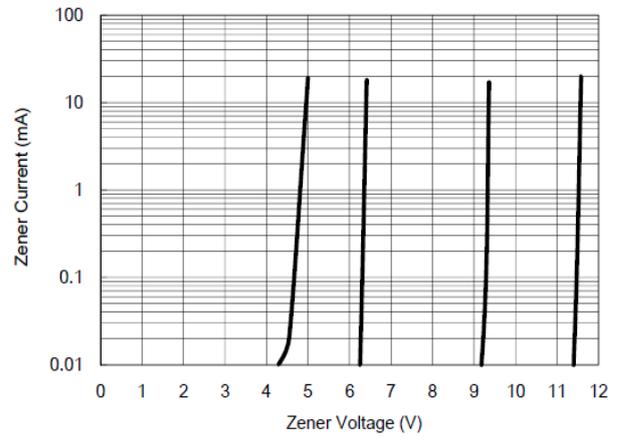


Fig. 3 Zener Breakdown Characteristics

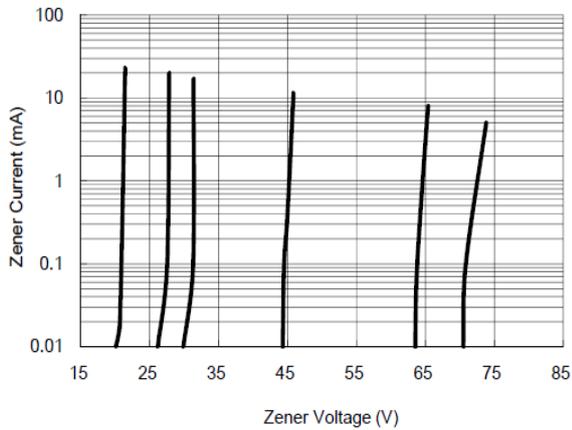


Fig. 4 Admissible Power Dissipation Curve

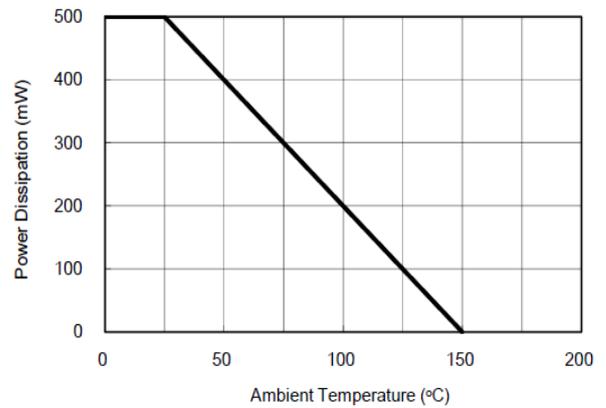


Fig. 5 Typical Capacitance

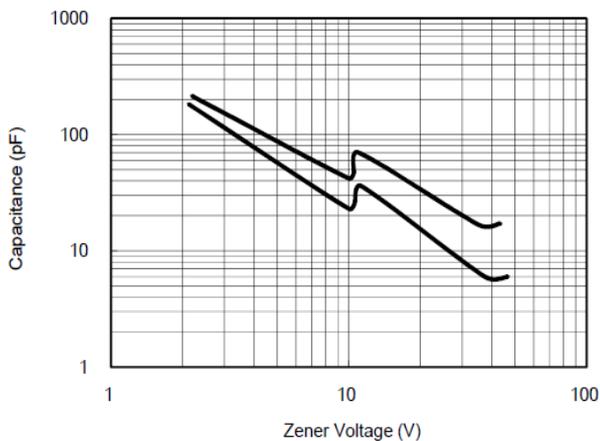
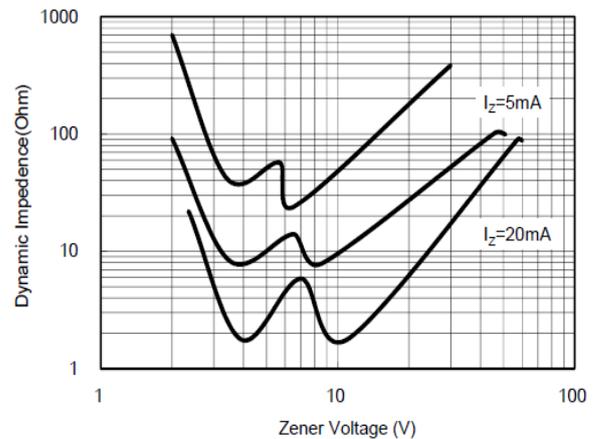


Fig. 6 Effect of Zener Voltage on Impedance





BZT52B2V4 THRU BZT52B75
500mW, 2% Tolerance SMD Zener Diodes

Ordering Information

Part No.	Package	Packing Code	Packing
BZT52B2V4 THRU BZT52B75	SOD-123	R30	3000pcs/Reel

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