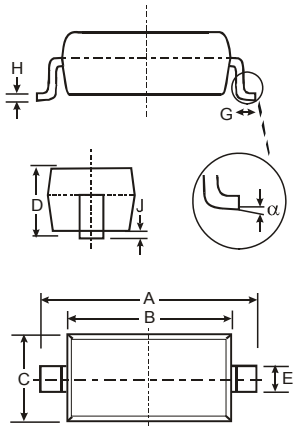
HAICHUANG SEMI

BZT52B2V4~BZT52B75

SURFACE MOUNT ZENMER DIODE

Features

- Planar Die Construction
- 350mW Power Dissipation on Ceramic PCB
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Available in Lead Free Version



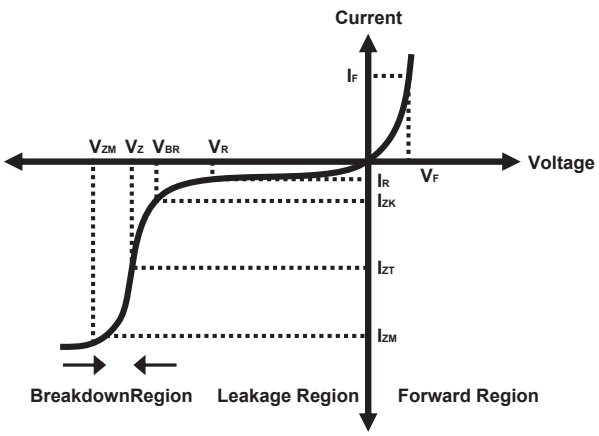
SOD-123		
Dim	**Min**	**Max**
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.45	0.65
	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	350	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{Stg}	- 55 to + 150	°C
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	357	°C/W
Forward Voltage at I_F = 10 mA	V_F	0.9	V

1) Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm²
2) Short duration test pulse used to minimize self-heating effect
3) f=1KHz

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}

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Part Number		V_Z @ I_{ZT} (Volt)			I_{ZT}(mA)	Z_{ZT} @ I_{ZT}(Ω)	I_{ZK}(mA)	Z_{ZK} @ I_{ZK}(Ω)	I_R @ V_R(μA)	V_R(V)
		Nom	Min	Max		Max		Max	Max	
BZT52B2V4	2WX	2.4	2.35	2.45	5	100	1	564	45	1
BZT52B2V7	2W1	2.7	2.65	2.75	5	100	1	564	18	1
BZT52B3V0	2W2	3.0	2.94	3.06	5	100	1	564	9	1
BZT52B3V3	2W3	3.3	3.23	3.37	5	95	1	564	4.5	1
BZT52B3V6	2W4	3.6	3.53	3.67	5	90	1	564	4.5	1
BZT52B3V9	2W5	3.9	3.82	3.98	5	90	1	564	2.7	1
BZT52B4V3	2W6	4.3	4.21	4.39	5	90	1	564	2.7	1
BZT52B4V7	2W7	4.7	4.61	4.79	5	80	1	470	2.7	2
BZT52B5V1	2W8	5.1	5	5.2	5	60	1	451	1.8	2
BZT52B5V6	2W9	5.6	5.49	5.71	5	40	1	376	0.9	2
BZT52B6V2	2WA	6.2	6.08	6.32	5	10	1	141	2.7	4
BZT52B6V8	2WB	6.8	6.66	6.94	5	15	1	75	1.8	4
BZT52B7V5	2WC	7.5	7.35	7.65	5	15	1	75	0.9	5
BZT52B8V2	2WD	8.2	8.04	8.36	5	15	1	75	0.63	5
BZT52B9V1	2WE	9.1	8.92	9.28	5	15	1	94	0.45	6
BZT52B10	2WF	10	9.8	10.2	5	20	1	141	0.18	7
BZT52B11	2WG	11	10.78	11.22	5	20	1	141	0.09	8
BZT52B12	2WH	12	11.76	12.24	5	25	1	141	0.09	8
BZT52B13	2WI	13	12.74	13.26	5	30	1	160	0.09	8
BZT52B15	2WJ	15	14.7	15.3	5	30	1	188	0.045	10.5
BZT52B16	2WK	16	15.68	16.32	5	40	1	188	0.045	11.2
BZT52B18	2WL	18	17.64	18.36	5	45	1	212	0.045	12.6
BZT52B20	2WM	20	19.6	20.4	5	55	1	212	0.045	14
BZT52B22	2WN	22	21.56	22.44	5	55	1	235	0.045	15.4
BZT52B24	2WO	24	23.52	24.48	5	70	1	235	0.045	16.8
BZT52B27	2WP	27	26.46	27.54	2	80	0.5	282	0.045	18.9
BZT52B30	2WQ	30	29.4	30.6	2	80	0.5	282	0.045	21
BZT52B33	2WR	33	32.34	33.66	2	80	0.5	306	0.045	23
BZT52B36	2WS	36	35.28	36.72	2	90	0.5	329	0.045	25.2
BZT52B39	2WT	39	38.22	39.78	2	130	0.5	329	0.045	27.3
BZT52B43	2WU	43	42.14	43.86	2	150	0.5	353	0.045	30.1
BZT52B47	2WV	47	46.06	47.94	2	170	0.5	353	0.045	33
BZT52B51	2WW	51	49.98	52.02	2	180	0.5	376	0.045	35.7
BZT52B56	2XW	56	54.88	57.12	2	200	0.5	400	0.045	39.2
BZT52B62	6E2	62	60.76	63.24	2	215	0.5	423	0.045	43.4
BZT52B68	6F2	68	66.64	69.36	2	240	0.5	447	0.045	47.6
BZT52B75	6H2	75	73.5	76.5	2	255	0.5	470	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 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 TRANSIENT CHARACTERISTICS

FIG 1 Typical Forward Characteristics

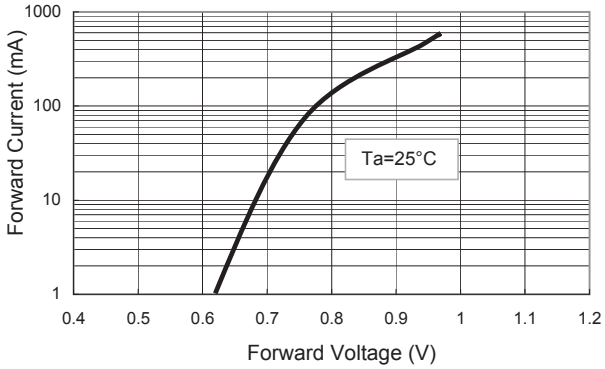


FIG 2 Zener Breakdown Characteristics

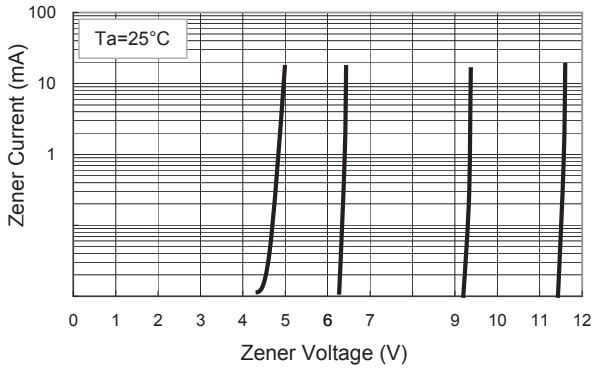


FIG 3 Zener Breakdown Characteristics

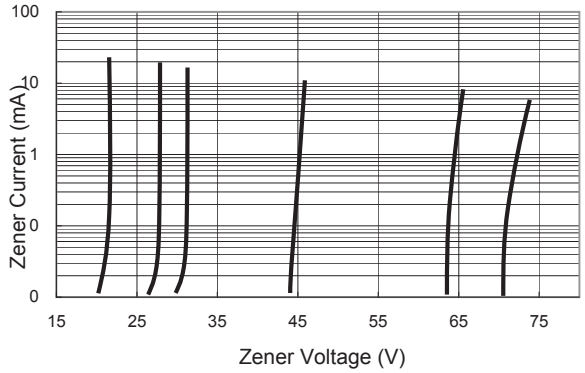


FIG 4 Admissible Power Disspation Curve

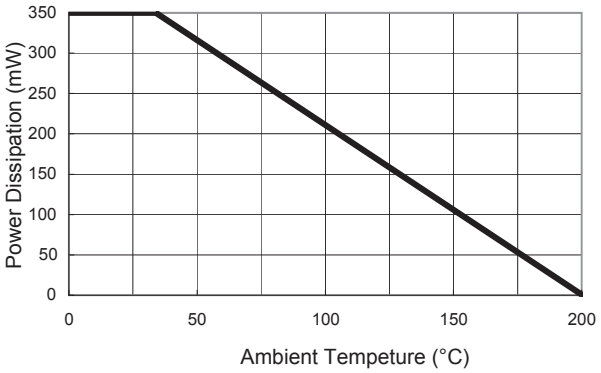


FIG 5 Typical Capacitance

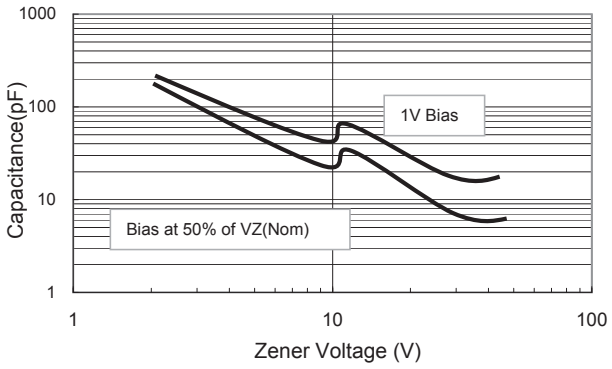
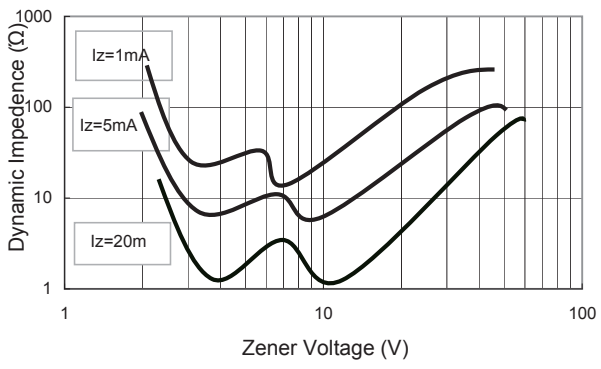


FIG 6 Effect of Zener Voltage on Impedence



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