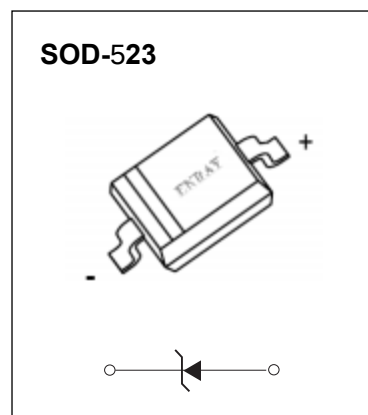


BZT52C2V0T-BZT52C75T ZENER DIODE

FEATURES

- Planar die construction
- 200mW power dissipation on ceramic PBC
- General purpose, medium current
- Ideally suited for automated assembly processes
- Available in lead free version



Marking:



XX= Device code, see table on page2 the marking code
The marking bar indicates the cathode

Maximum Ratings (T_a=25°C unless otherwise specified)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ I _F = 10mA	V _F	0.9	V
Power Dissipation(Note 1)	P _D	200	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	625	°C/W
Operation Junction and Storage Temperature Range	T _J , T _{stg}	-55~+150	°C

ELECTRICAL CHARACTERISTICS

T_a=25°C unless otherwise specified

Device	Device Marking	Zener Voltage (Note 1)				Zener Impedance			Leakage Current		θV_Z (mV/k) @ I_{ZT}		C @ $V_R = 0$ $f = 1\text{ MHz}$
		V_Z (Volts)			@ I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}		I_R @ V_R				
		Min	Nom	Max	mA	Ω	Ω	mA	μA	Volts	Min	Max	pF
BZT52C2V0T	WY	1.91	2.0	2.09	5	100	600	1.0	150	1.0	-3.5	0	450
BZT52C2V4T	00	2.2	2.4	2.6	5	100	1000	1.0	50	1.0	-3.5	0	450
BZT52C2V7T	01	2.5	2.7	2.9	5	100	1000	1.0	20	1.0	-3.5	0	450
BZT52C3V0T	02	2.8	3.0	3.2	5	100	1000	1.0	10	1.0	-3.5	0	450
BZT52C3V3T	05	3.1	3.3	3.5	5	95	1000	1.0	5	1.0	-3.5	0	450
BZT52C3V6T	06	3.4	3.6	3.8	5	90	1000	1.0	5	1.0	-3.5	0	450
BZT52C3V9T	07	3.7	3.9	4.1	5	90	1000	1.0	3	1.0	-3.5	-2.5	450
BZT52C4V3T	08	4.0	4.3	4.6	5	90	1000	1.0	3	1.0	-3.5	0	450
BZT52C4V7T	09	4.4	4.7	5.0	5	80	800	1.0	3	2.0	-3.5	0.2	260
BZT52C5V1T	0A	4.8	5.1	5.4	5	60	500	1.0	2	2.0	-2.7	1.2	225
BZT52C5V6T	0C	5.2	5.6	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	200
BZT52C6V2T	0E	5.8	6.2	6.6	5	10	100	1.0	3	4.0	0.4	3.7	185
BZT52C6V8T	0F	6.4	6.8	7.2	5	15	160	1.0	2	4.0	1.2	4.5	155
BZT52C7V5T	0G	7.0	7.5	7.9	5	15	160	1.0	1	5.0	2.5	5.3	140
BZT52C8V2T	0H	7.7	8.2	8.7	5	15	160	1.0	0.7	5.0	3.2	6.2	135
BZT52C9V1T	0K	8.5	9.1	9.6	5	15	160	1.0	0.2	7.0	3.8	7.0	130
BZT52C10T	0L	9.4	10	10.6	5	20	160	1.0	0.1	8.0	4.5	8.0	130
BZT52C11T	0M	10.4	11	11.6	5	20	160	1.0	0.1	8.0	5.4	9.0	130
BZT52C12T	0N	11.4	12	12.7	5	25	80	1.0	0.1	8.0	6.0	10	130
BZT52C13T	0P	12.4	13.25	14.1	5	30	80	1.0	0.1	8.0	7.0	11	120
BZT52C15T	0T	14.3	15	15.8	5	30	200	1.0	0.05	10.5	9.2	13	110
BZT52C16T	0U	15.3	16.2	17.1	2	40	200	1.0	0.05	11.2	10.4	14	105
BZT52C18T	0W	16.8	18	19.1	2	45	225	1.0	0.05	12.6	12.4	16	100
BZT52C20T	0Z	18.8	20	21.2	2	55	225	1.0	0.05	14.0	14.4	18	85
BZT52C22T	10	20.8	22	23.3	2	55	250	1.0	0.05	15.4	16.4	20	85
BZT52C24T	11	22.8	24.2	25.6	2	70	120	1.0	0.05	16.8	18.4	22	80
BZT52C27T	12	25.1	27	28.9	2	80	300	1.0	0.05	18.9	21.4	25.3	70
BZT52C30T	14	28	30	32	2	80	300	1.0	0.05	21.0	24.4	29.4	70
BZT52C33T	18	31	33	35	2	80	300	1.0	0.05	23.2	27.4	33.4	70
BZT52C36T	19	34	36	38	2	90	500	1.0	0.05	25.2	30.4	37.4	70
BZT52C39T	20	37	39	41	2	130	500	1.0	0.05	27.3	33.4	41.2	45
BZT52C43T	21	40	43	46	2	150	500	1.0	0.05	30.1	37.6	46.6	40
BZT52C47T	1A	44	47	50	2	170	500	1.0	0.05	32.9	42.0	51.8	40
BZT52C51T	1C	48	51	54	2	180	500	1.0	0.05	35.7	46.6	57.2	40
BZT52C56T	1D	52	56	60	2	200	500	1.0	0.05	39.2	52.2	63.8	40
BZT52C62T	1E	58	62	66	2	215	500	1.0	0.05	43.4	58.8	71.6	35
BZT52C68T	1F	64	68	72	2	240	500	1.0	0.05	47.6	65.6	79.8	35
BZT52C75T	1G	70	75	79	2	255	500	1.0	0.05	52.5	73.4	88.6	35

Notes: 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.

Typical Characteristics

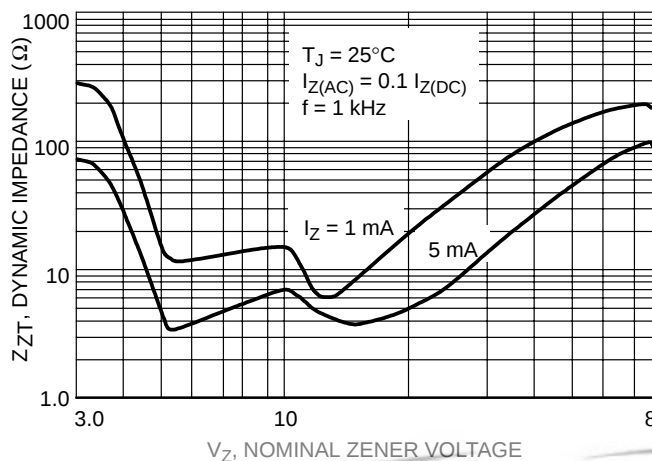


Figure 1. Effect of Zener Voltage on Zener Impedance

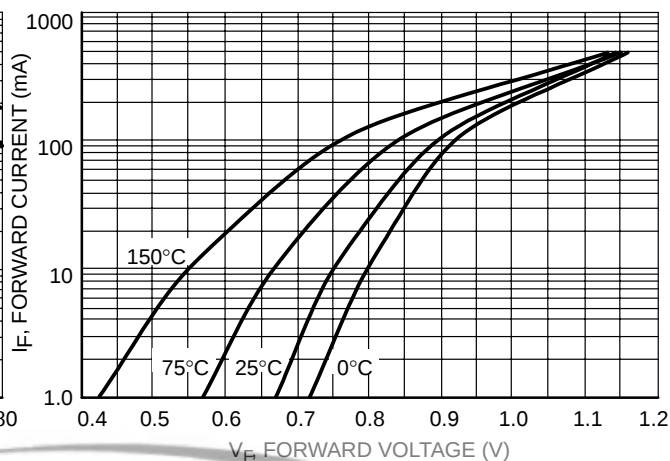


Figure 2. Typical Forward Voltage

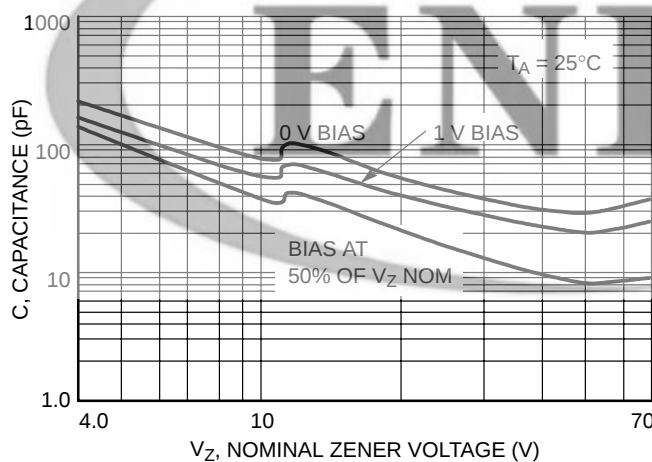


Figure 3. Typical Capacitance

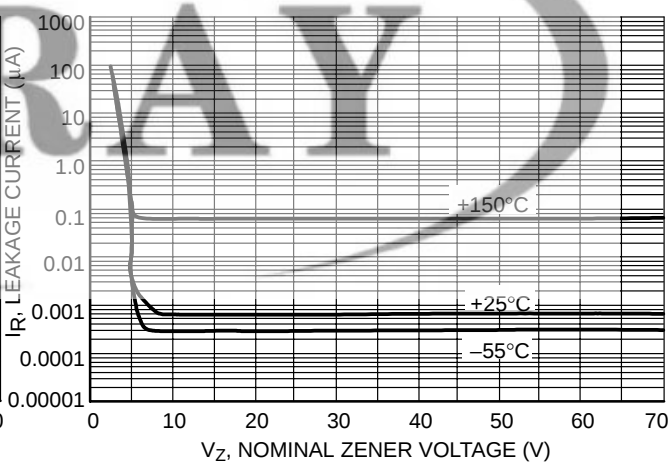


Figure 4. Typical Leakage Current

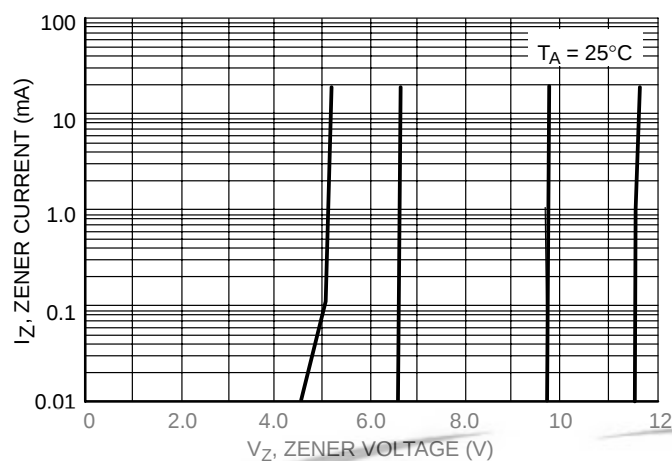


Figure 5. Zener Voltage versus Zener Current
(V_Z Up to 12 V)

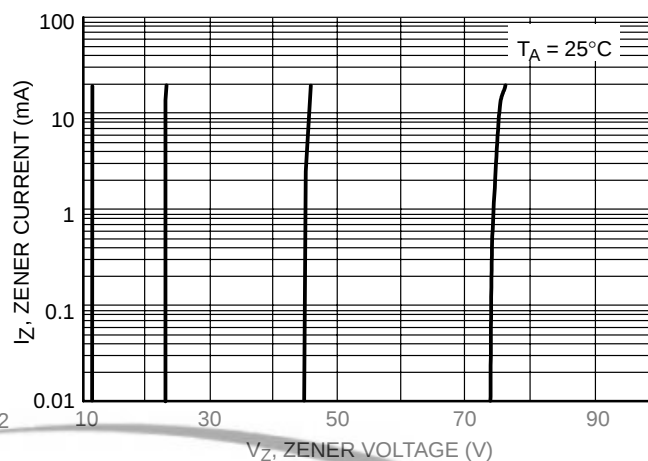


Figure 6. Zener Voltage versus Zener Current
(12 V to 75 V)

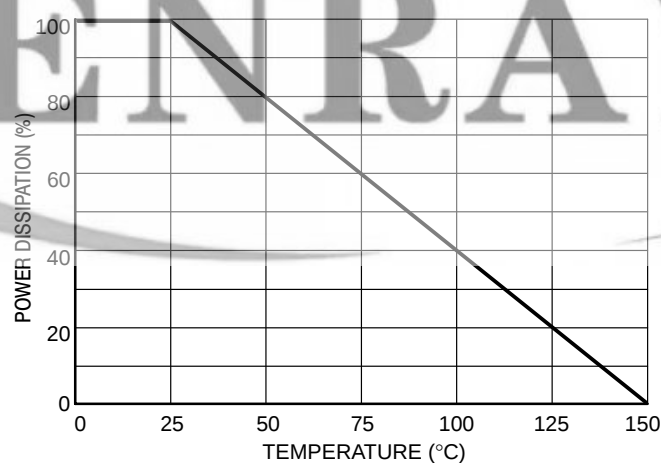
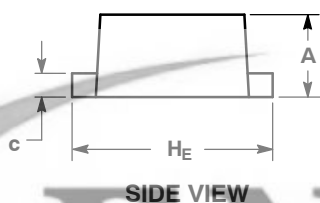
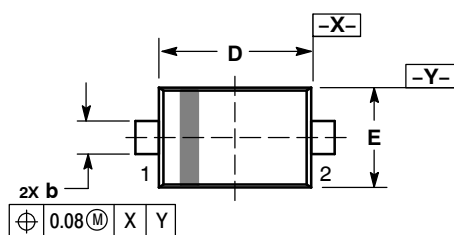


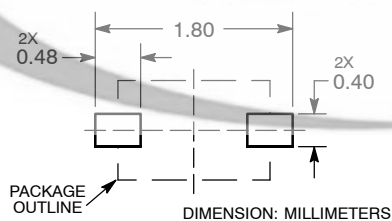
Figure 7. Steady State Power Derating

PACKAGE OUTLINE AND PAD LAYOUT INFORMATION

SOD-523 Package Outline Dimensions



RECOMMENDED SOLDERING FOOTPRINT*



NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

DIM	MILLIMETERS		
	MIN	NOM	MAX
A	0.50	0.60	0.70
b	0.25	0.30	0.35
c	0.07	0.14	0.20
D	1.10	1.20	1.30
E	0.70	0.80	0.90
H _E	1.50	1.60	1.70
L	0.30 REF		
L2	0.15	0.20	0.25