

Features

- Standard Vz Tolerance is $\pm 2\%$
- Planar Die Construction
- Ideally Suited for Automated Assembly Processes

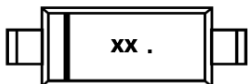
Mechanical Data

- Package: SOD-323 package name
- Moisture Sensitivity: Level 1, per J-STD-020
- Halogen Free. "Green" Device (Note1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish & RoHS Compliant
- Weight: 0.004 g (approximate)



SOD-323

Body Marking and Pin Layout

Body Marking	Internal structure
 XX: Device Marking Code¹ Bar: Cathode Pin Dot (optional): Manufacturing site marking ¹ Refer to the Marking Code for the specific device code.	

Ordering Information

Product Name	Reel Size	Packing Type	Qty/Reel
BZT52B3V0BS-TP THRU BZT52B51BS-TP	7"	Tape & Reel	3,000
BZT52B3V0BS-13P THRU BZT52B51BS-13P	13"	Tape & Reel	10,000

For packaging details, visit our website at <https://www.mccsemi.com/Package/List>

Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Power Dissipation ^(Note2)	P_D	400	mW
Maximum Instantaneous Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Operating Junction Temperature Range	T_J	-55 to 150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^{\circ}\text{C}$

Thermal characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Thermal Resistance from Junction to Ambient ^(Note 2)	$R_{\theta JA}$	313	$^{\circ}\text{C/W}$

Notes:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Mounted on PCB.

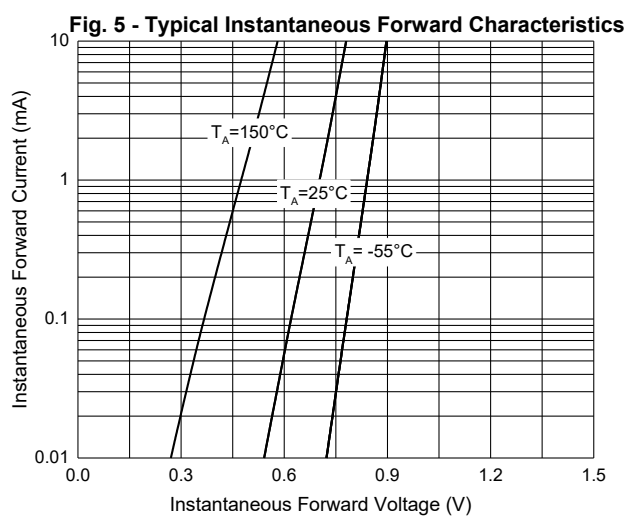
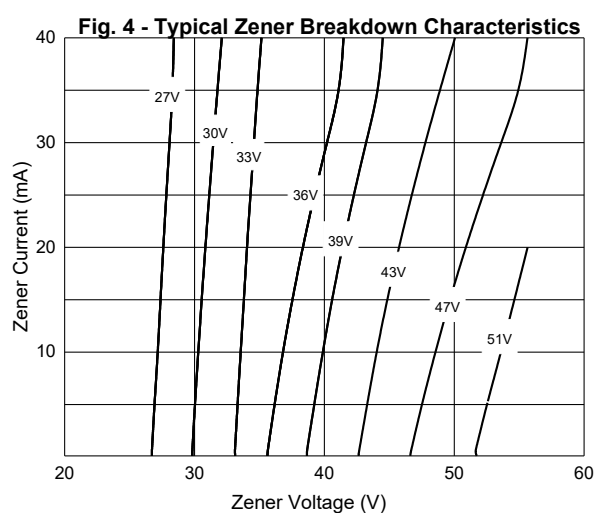
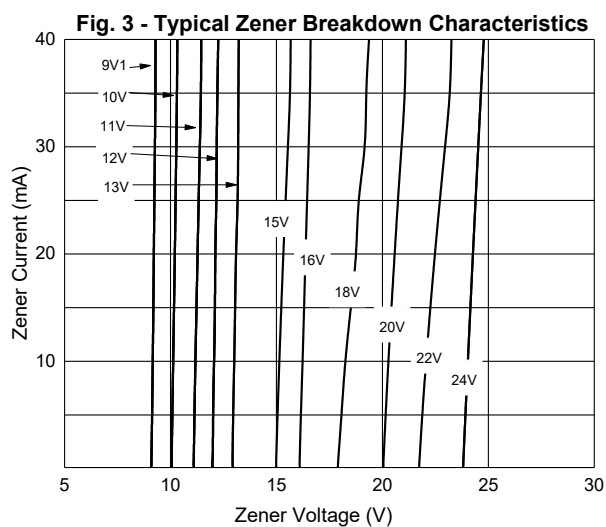
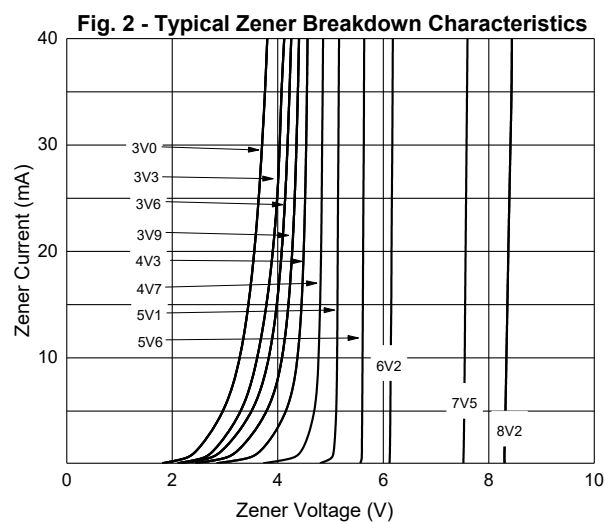
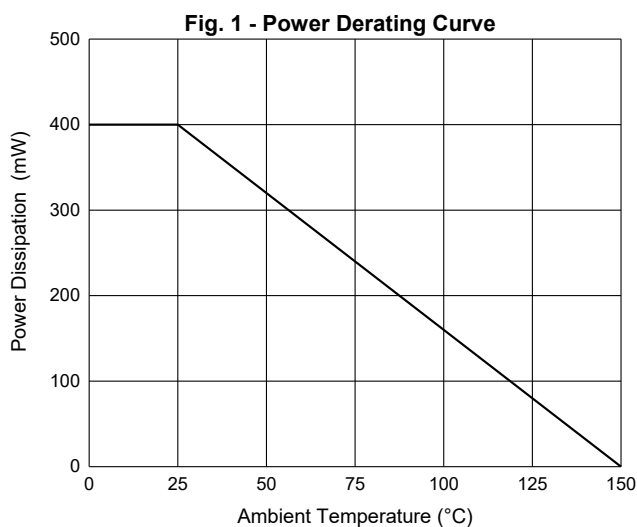
Electrical Characteristics (T_A=25°C unless otherwise specified)

Part Number	Zener Voltage ^(Note 3)			Test Current		Maximum Dynamic Impedance		Maximum Reverse Leakage Current		Typical Temperature Coefficient		Marking Code
	V _Z @I _{ZT}			I _{ZT}	I _{ZK}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _R	V _R	S _Z @I _{ZT}		
	Min(V)	Typ(V)	Max(V)	mA	mA	Ω	Ω	μA	V	Min (mV/°C)	Max (mV/°C)	
BZT52B3V0BS	2.94	3	3.06	5	1	89	564	9	1	-3.5	0	B2Z
BZT52B3V3BS	3.23	3.3	3.37	5	1	89	564	4.5	1	-3.5	0	B3Z
BZT52B3V6BS	3.53	3.6	3.67	5	1	84	564	4.5	1	-3.5	0	B4Z
BZT52B3V9BS	3.82	3.9	3.98	5	1	84	564	2.7	1	-3.5	0	B5Z
BZT52B4V3BS	4.21	4.3	4.39	5	1	84	564	2.7	1	-3.5	0	B6Z
BZT52B4V7BS	4.61	4.7	4.79	5	1	75	564	2.7	2	-3.5	0.2	B7Z
BZT52B5V1BS	5.00	5.1	5.2	5	1	60	480	2	2	-2.7	1.2	B8Z
BZT52B5V6BS	5.49	5.6	5.71	5	1	40	400	1	2	-2	2.5	B9Z
BZT52B6V2BS	6.08	6.2	6.32	5	1	10	150	3	4	0.4	3.7	BAZ
BZT52B6V8BS	6.66	6.8	6.94	5	1	15	141	2	4	1.2	4.5	BBZ
BZT52B7V5BS	7.35	7.5	7.65	5	1	15	80	1	5	2.5	5.3	BCZ
BZT52B8V2BS	8.04	8.2	8.36	5	1	15	80	0.7	5	3.2	6.2	BDZ
BZT52B9V1BS	8.92	9.1	9.28	5	1	15	100	0.5	6	3.8	7	BEZ
BZT52B10BS	9.80	10	10.2	5	1	20	150	0.2	7	4.5	8	BFZ
BZT52B11BS	10.78	11	11.22	5	1	20	150	0.1	8	5.4	9	BGZ
BZT52B12BS	11.76	12	12.24	5	1	25	150	0.1	8	6	10	BHZ
BZT52B13BS	12.74	13	13.26	5	1	30	170	0.1	8	7	11	BJZ
BZT52B15BS	14.70	15	15.3	5	1	30	200	0.1	10.5	9.2	13	BKZ
BZT52B16BS	15.68	16	16.32	5	1	40	200	0.1	11.2	10.4	14	BLZ
BZT52B18BS	17.64	18	18.36	5	1	45	225	0.1	12.6	12.4	16	BMZ
BZT52B20BS	19.60	20	20.4	5	1	55	225	0.1	14	14.4	18	BNZ
BZT52B22BS	21.56	22	22.44	5	1	51	235	0.045	15.4	16.4	20	BPZ
BZT52B24BS	23.52	24	24.48	5	1	65	235	0.045	16.8	18.4	22	BRZ
BZT52B27BS	26.46	27	27.54	5	0.5	75	282	0.045	18.9	21.4	25.3	BSZ
BZT52B30BS	29.40	30	30.6	5	0.5	75	282	0.045	21	24.4	29.4	BTZ
BZT52B33BS	32.34	33	33.66	5	0.5	75	306	0.045	23	27.4	33.4	BUZ
BZT52B36BS	35.28	36	36.72	5	0.5	84	329	0.045	25.2	30.4	37.4	BVZ
BZT52B39BS	38.22	39	39.78	5	0.5	122	329	0.045	27.3	33.4	41.2	BWZ
BZT52B43BS	42.14	43	43.86	5	0.5	141	353	0.045	30.1	37.6	46.6	BXZ
BZT52B47BS	46.06	47	47.94	5	0.5	160	353	0.045	33	42	51.8	BYZ
BZT52B51BS	49.98	51	52.02	2	0.5	169	376	0.045	35.7	46.6	57.2	BZZ

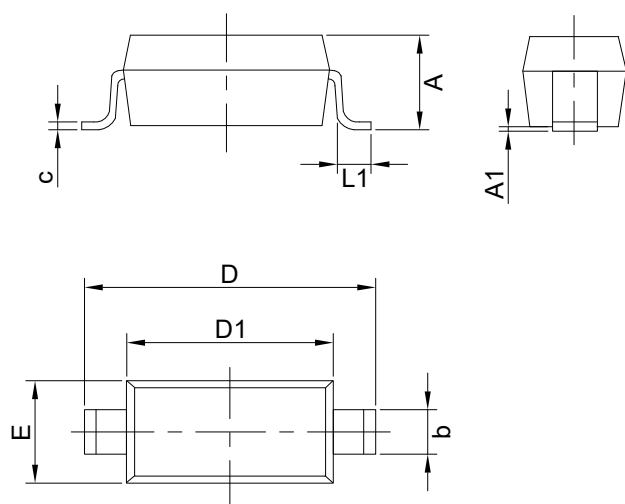
Notes:

3. Short-duration test pulses are used to minimize the self-heating effect.

Curve Characteristics



Package Outline

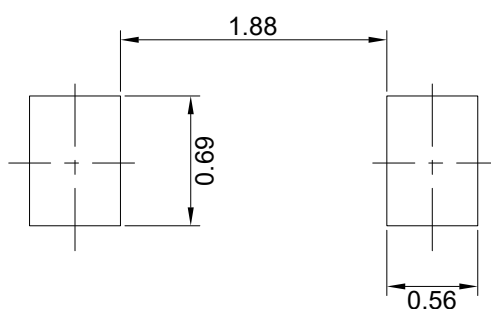


DIM	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.031	0.045	0.80	1.15*	Note 1
A1	0.000	0.006	0.00	0.15	
b	0.010	0.016	0.25	0.40	
c	0.003	0.010	0.08	0.25	
D	0.090	0.107	2.30	2.70	
D1	0.063	0.071	1.60	1.80	
E	0.045	0.055	1.15	1.40	
L1	0.004	0.018	0.10	0.45	

Notes:

1. Dimension A for products from manufacturing site VN is controlled at max 1.10 mm.

Suggested Pad Layout (Unit:mm)



Notes:

1. The suggested land pattern dimensions have been provided for reference only.
2. For further information, please refer to document IPC-7351A.

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