

## Features

- Standard Vz Tolerance is  $\pm 2\%$
- Planar Die Construction
- 400mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant t ("P" Suffix Designates RoHS Compliant. See Ordering Information)

**400 mW  
Zener Diode  
3.0 to 51 Volts**

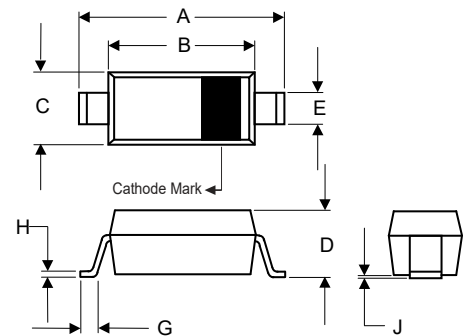
## Maximum Ratings

- Operating Junction Temperature Range:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage Temperature Range:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Thermal Resistance :  $313^{\circ}\text{C/W}$  Junction to Ambient

Parameter	Symbol	Rating	Conditions
Power Dissipation	$P_D$	400mW	Note 1
Maximum Forward Current	$I_{FM}$	300mA	
Maximum Forward Voltage	$V_F$	0.9V	$I_F=10\text{mA}$

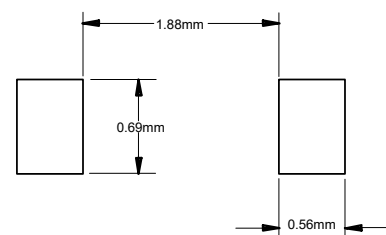
①  $P_D$  Device mounted on a printed-circuit board measuring  $11 \times 25 \times 1.6 \text{ mm}$

## SOD-323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.090	0.107	2.30	2.70	
B	0.063	0.071	1.60	1.80	
C	0.045	0.053	1.15	1.35	
D	0.031	0.045	0.80	1.15	
E	0.010	0.016	0.25	0.40	
G	0.004	0.018	0.10	0.45	
H	0.004	0.010	0.10	0.25	
J	----	0.006	----	0.15	

## Suggested Solder Pad Layout





# BZT52B3V0BS-BZT52B51BS

## Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Zener Voltage			Maximum Zener Impedance		Maximum Zener Impedance		Maximum Reverse Current $I_R(\text{Max}) @ V_R$		Marking Code
	$V_Z @ I_{ZT}$			$Z_{ZT} @ I_{ZT}$	$I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_{ZK}$	$I_R$	$V_R$	
	Min.(V)	Nom(V)	Max.(V)	$\Omega$	mA	$\Omega$	mA	$\mu\text{A}$	V	
BZT52B3V0BS	2.94	3.0	3.06	89	5.0	564	1.00	9.0	1.0	B2Z
BZT52B3V3BS	3.23	3.3	3.37	89	5.0	564	1.00	4.5	1.0	B3Z
BZT52B3V6BS	3.53	3.6	3.67	84	5.0	564	1.00	4.5	1.0	B4Z
BZT52B3V9BS	3.82	3.9	3.98	84	5.0	564	1.00	2.7	1.0	B5Z
BZT52B4V3BS	4.21	4.3	4.39	84	5.0	564	1.00	2.7	1.0	B6Z
BZT52B4V7BS	4.61	4.7	4.79	75	5.0	564	1.00	2.7	2.0	B7Z
BZT52B5V1BS	5.00	5.1	5.20	60	5.0	480	1.00	2.0	2.0	B8Z
BZT52B5V6BS	5.49	5.6	5.71	40	5.0	400	1.00	1.0	2.0	B9Z
BZT52B6V2BS	6.08	6.2	6.32	10	5.0	150	1.00	3.0	4.0	BAZ
BZT52B6V8BS	6.66	6.8	6.94	15	5.0	141	1.00	2.0	4.0	BBZ
BZT52B7V5BS	7.35	7.5	7.65	15	5.0	80	1.00	1.0	5.0	BCZ
BZT52B8V2BS	8.04	8.2	8.36	15	5.0	80	1.00	0.7	5.0	BDZ
BZT52B9V1BS	8.92	9.1	9.28	15	5.0	100	1.00	0.5	6.0	BEZ
BZT52B10BS	9.80	10	10.20	20	5.0	150	1.00	0.2	7.0	BFZ
BZT52B11BS	10.78	11	11.22	20	5.0	150	1.00	0.1	8.0	BGZ
BZT52B12BS	11.76	12	12.24	25	5.0	150	1.00	0.1	8.0	BHZ
BZT52B13BS	12.74	13	13.26	30	5.0	170	1.00	0.1	8.0	BJZ
BZT52B15BS	14.70	15	15.30	30	5.0	200	1.00	0.1	10.5	BKZ
BZT52B16BS	15.68	16	16.32	40	5.0	200	1.00	0.1	11.2	BLZ
BZT52B18BS	17.64	18	18.36	45	5.0	225	1.00	0.1	12.6	BMZ
BZT52B20BS	19.60	20	20.40	55	5.0	225	1.00	0.1	14.0	BNZ
BZT52B22BS	21.56	22	22.44	51	5.0	235	1.00	0.045	15.4	BPZ
BZT52B24BS	23.52	24	24.48	65	5.0	235	1.00	0.045	16.8	BRZ
BZT52B27BS	26.46	27	27.54	75	5.0	282	0.50	0.045	18.9	BSZ
BZT52B30BS	29.40	30	30.60	75	5.0	282	0.50	0.045	21.0	BTZ
BZT52B33BS	32.34	33	33.66	75	5.0	306	0.50	0.045	23.0	BUZ
BZT52B36BS	35.28	36	36.72	84	5.0	329	0.50	0.045	25.2	BVZ
BZT52B39BS	38.22	39	39.78	122	5.0	329	0.50	0.045	27.3	BWZ
BZT52B43BS	42.14	43	43.86	141	5.0	353	0.50	0.045	30.1	BXZ
BZT52B47BS	46.06	47	47.94	160	5.0	353	0.50	0.045	33.0	BYZ
BZT52B51BS	49.98	51	52.02	169	5.0	376	0.50	0.045	35.7	BZZ

## Curve Characteristics

Fig. 1 - Power Derating Curve

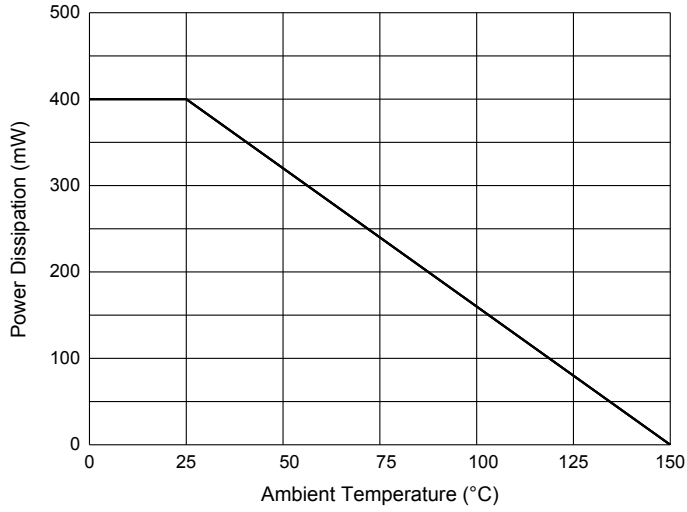


Fig. 2 - Typical Zener Breakdown Characteristics

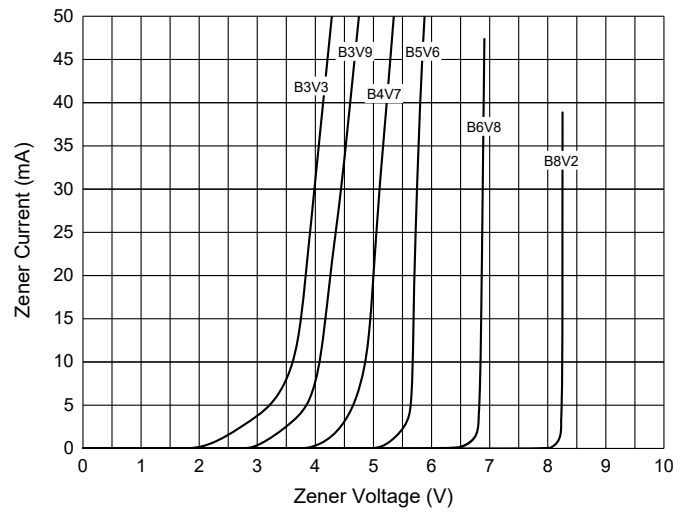
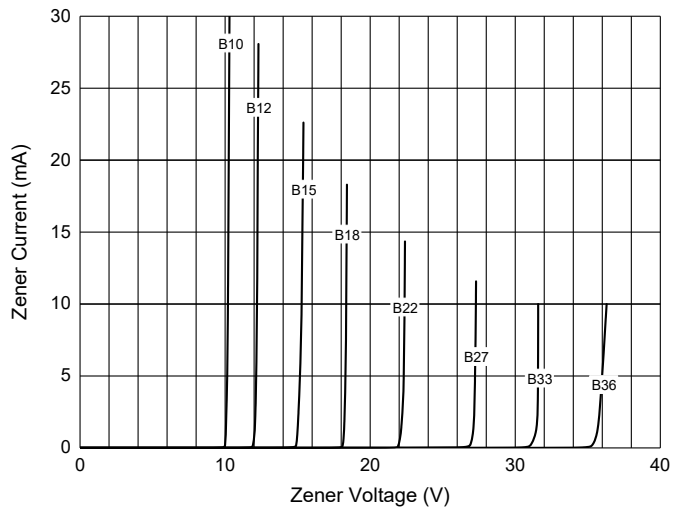


Fig. 3 - Typical Zener Breakdown Characteristics



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