



**THE DATASHEET OF
BZT52-B20S_R1_00001**





BZT52-B2V4S SERIES

SURFACE MOUNT SILICON ZENER DIODES

VOLTAGE 2.4 to 75 Volt **POWER** 200 mWatt

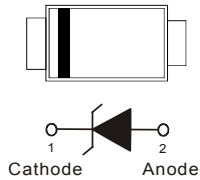
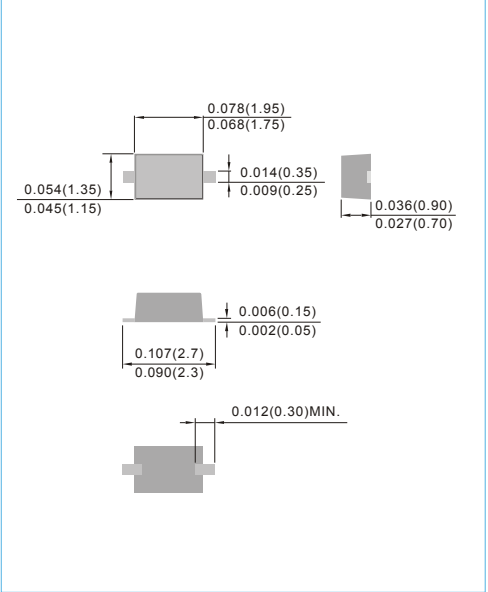
SOD-323 Unit : inch(mm)

FEATURES

- Planar Die construction
- 200mW Power Dissipation
- Zener Voltages from 2.4~75V
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: SOD-323, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Apporx. Weight: 0.00014 ounces, 0.0041 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Power Dissipation @ $T_A=25^{\circ}\text{C}$ (Note A)	P_D	200	mW
Typical Thermal Resistance(Note B)	$R_{\theta JA}$	650	$^{\circ}\text{C}/\text{W}$
Operating Junction and Storage Temperature Range	T_J	-55 to +150	$^{\circ}\text{C}$

NOTES:

- A. Mounted on a FR-4 PCB, single-sided copper, with 100cm² copper pad area.
- B. Mounted on a FR-4 PCB, single-sided copper, mini pad.



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Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Marking Code
	V _Z @ I _{ZT}			Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R @ V _R		
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	
200 mWatts Zener Diodes										
BZT52-B2V4S	2.4	2.35	2.45	85	5.0	600	1.00	100	1.0	W1
BZT52-B2V7S	2.7	2.64	2.75	83	5.0	600	1.00	75	1.0	W2
BZT52-B3S	3.0	2.94	3.06	95	5.0	600	1.00	50	1.0	W3
BZT52-B3V3S	3.3	3.23	3.37	95	5.0	600	1.00	25	1.0	W4
BZT52-B3V6S	3.6	3.52	3.67	95	5.0	600	1.00	15	1.0	W5
BZT52-B3V9S	3.9	3.82	3.98	95	5.0	600	1.00	10	1.0	W6
BZT52-B4V3S	4.3	4.21	4.39	95	5.0	600	1.00	5.0	1.0	W7
BZT52-B4V7S	4.7	4.61	4.79	78	5.0	500	1.00	5.0	1.0	W8
BZT52-B5V1S	5.1	5.00	5.20	60	5.0	480	1.00	0.1	0.8	W9
BZT52-B5V6S	5.6	5.49	5.71	40	5.0	400	1.00	0.1	1.0	WA
BZT52-B5V8S	5.8	5.68	5.92	30	5.0	300	1.00	0.1	1.5	85C
BZT52-B6V2S	6.2	6.08	6.32	10	5.0	150	1.00	0.1	2.0	WB
BZT52-B6V8S	6.8	6.66	6.94	8	5.0	80	1.00	0.1	3.0	WC
BZT52-B7V5S	7.5	7.35	7.65	7	5.0	80	1.00	0.1	5.0	WD
BZT52-B8V2S	8.2	8.04	8.36	7	5.0	80	1.00	0.1	6.0	WE
BZT52-B8V7S	8.7	8.53	8.87	7	5.0	100	1.00	0.1	6.5	87C
BZT52-B9V1S	9.1	8.92	9.28	10	5.0	100	1.00	0.1	7.0	WF
BZT52-B10S	10	9.80	10.20	15	5.0	150	1.00	0.1	7.5	WG
BZT52-B11S	11	10.78	11.22	20	5.0	150	1.00	0.1	8.5	WH
BZT52-B12S	12	11.76	12.24	20	5.0	150	1.00	0.1	9.0	WI
BZT52-B13S	13	12.74	13.26	25	5.0	170	1.00	0.1	10.0	WK
BZT52-B14S	14	13.72	14.28	25	5.0	170	1.00	0.1	10.5	WJ
BZT52-B15S	15	14.70	15.30	30	5.0	200	1.00	0.1	11.0	WL
BZT52-B16S	16	15.68	16.32	40	5.0	200	1.00	0.1	12.0	WM
BZT52-B17S	17	16.66	17.34	40	5.0	200	1.00	0.1	13.0	17C
BZT52-B18S	18	17.64	18.36	50	5.0	225	1.00	0.1	14.0	WN
BZT52-B20S	20	19.60	20.40	50	5.0	225	1.00	0.1	15.0	WO
BZT52-B22S	22	21.56	22.44	55	5.0	250	1.00	0.1	17.0	WP
BZT52-B24S	24	23.52	24.48	80	5.0	250	1.00	0.1	18.0	WR
BZT52-B27S	27	26.46	27.54	80	5.0	300	1.00	0.1	20.0	WS
BZT52-B28S	28	27.44	28.56	80	5.0	300	1.00	0.1	22.0	28C
BZT52-B30S	30	29.40	30.60	80	5.0	300	1.00	0.1	22.5	WT
BZT52-B33S	33	32.34	33.66	80	5.0	325	1.00	0.1	25.0	WU
BZT52-B36S	36	35.28	36.72	90	5.0	350	1.00	0.1	27.0	WW
BZT52-B39S	39	38.22	39.78	90	5.0	350	1.00	0.1	29.0	WX
BZT52-B43S	43	42.14	43.86	100	5.0	375	1.00	0.1	32.0	WY
BZT52-B47S	47	46.06	47.94	100	5.0	375	1.00	0.1	35.0	WZ
BZT52-B51S	51	49.98	52.02	100	5.0	400	1.00	0.1	38.0	XA
BZT52-B56S	56	54.88	57.12	135	2.5	1000	1.00	0.1	42.0	X2
BZT52-B62S	62	60.76	63.24	150	2.5	1000	1.00	0.1	46.0	X3
BZT52-B68S	68	66.64	69.36	200	2.5	1000	1.00	0.1	51.0	X4
BZT52-B75S	75	73.50	76.50	250	2.5	1000	1.00	0.1	56.0	X5



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Fig.1 Power Derating Curve



Fig.2 Typical Junction Capacitance

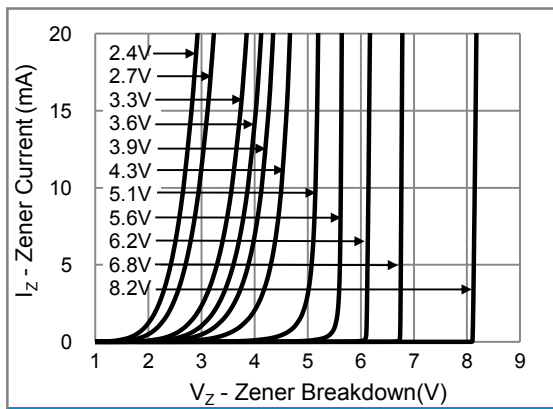


Fig.3 Typical Zener Breakdown

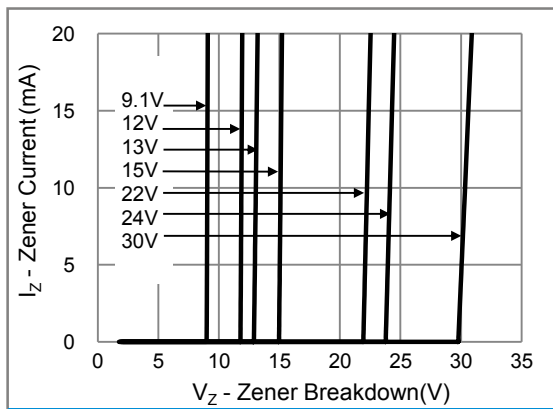


Fig.4 Typical Zener Breakdown

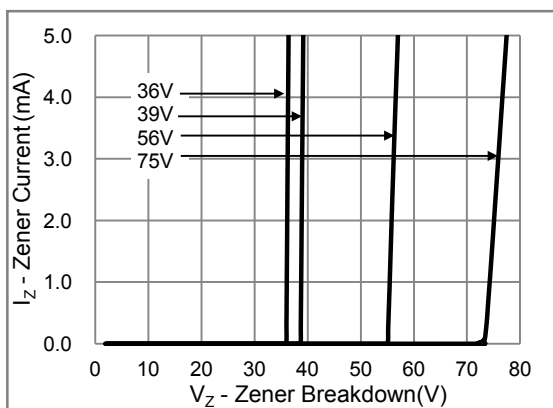
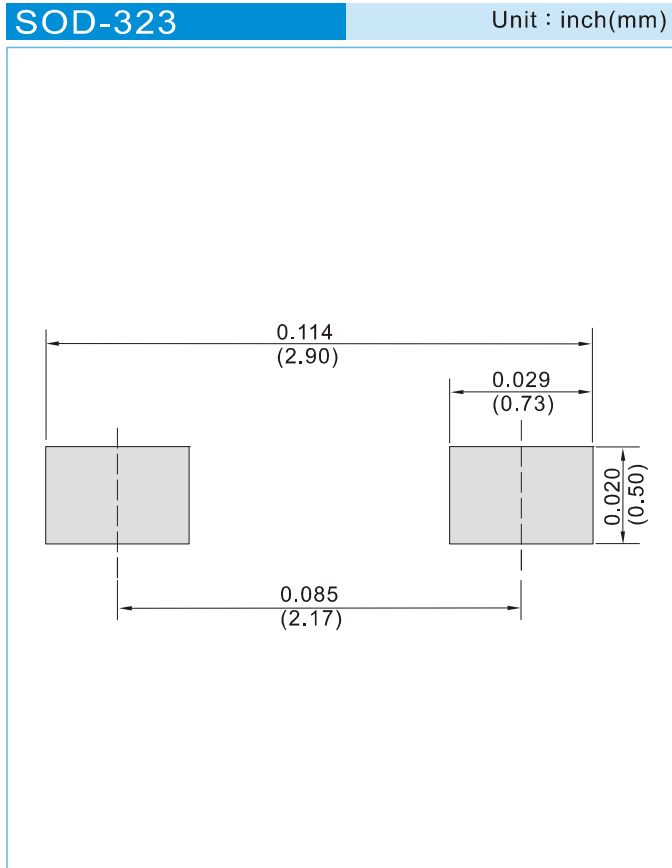


Fig.5 Typical Zener Breakdown



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 12K per 13" plastic Reel
T/R - 5K per 7" plastic Reel



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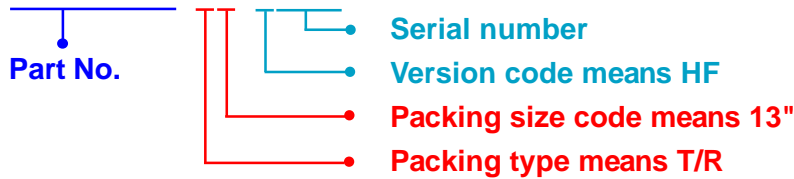
Part No_packing code_Version

BZT52-B2V4S_R1_00001

BZT52-B2V4S_R2_00001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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