

**BZT52B2V4S THRU BZT52B75S**  
PLASTIC-ENCAPSULATE ZENER DIODE



<b>VOLTAGE</b>	2.4~75 Volts	<b>POWER</b>	200 mW	<b>SOD-323</b>	<b>Marking and Polarity</b>
----------------	--------------	--------------	--------	----------------	-----------------------------

**FEATURES**

- Low Zener Impedance
- Power Dissipation of 200mW
- High Stability and High Reliability
- Zener Voltage Tolerance: ± 2%(B Series)

**MECHANICAL DATA**

- **Package:** SOD-323
- **Epoxy UL:** 94V-0
- **Mounting position:** Any
- **Weight:** approx. 0.004g

**Remark:**

- ①. 2xx=Module code,xx=W X~X5
- ②. White band denotes cathode

**Maximum Ratings & Thermal Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Power Dissipation (Note1)	$P_D$	200	mW
Maximum instantaneous forward voltage@ $I_F=10mA$ (Note2)	$V_F$	1.0	V
Operating Temperature Range	$T_{OPR}$	-55~+150	°C
Storage temperature range	$T_{STG}$	-55~+150	°C
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	400 (Note1)	°C/W

- Notes: 1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>
2. Pulse width < 10 ms

**BZT52B2V4S THRU BZT52B75S**  
PLASTIC-ENCAPSULATE ZENER DIODE



**Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).**

Device	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current	
		V <sub>z@Izt</sub>			I <sub>zt</sub>	Z <sub>zt</sub> @I <sub>zt</sub>	Z <sub>zk</sub> @I <sub>zk</sub>	I <sub>zk</sub>	IR	VR
		Min(V)	Nom(V)	Max(V)	mA	Ω		mA	uA	V
BZT52B2V4S	2WX	2.35	2.4	2.45	5	100	600	1.0	50	1.0
BZT52B2V7S	2W1	2.65	2.7	2.75	5	100	600	1.0	20	1.0
BZT52B3V0S	2W2	2.94	3.0	3.06	5	95	600	1.0	10	1.0
BZT52B3V3S	2W3	3.23	3.3	3.37	5	95	600	1.0	5	1.0
BZT52B3V6S	2W4	3.53	3.6	3.67	5	90	600	1.0	5	1.0
BZT52B3V9S	2W5	3.82	3.9	3.98	5	90	600	1.0	3	1.0
BZT52B4V3S	2W6	4.21	4.3	4.39	5	90	600	1.0	3	1.0
BZT52B4V7S	2W7	4.61	4.7	4.79	5	80	500	1.0	3	2.0
BZT52B5V1S	2W8	5.00	5.1	5.20	5	60	480	1.0	2	2.0
BZT52B5V6S	2W9	5.49	5.6	5.71	5	40	400	1.0	1	2.0
BZT52B6V2S	2WA	6.08	6.2	6.32	5	10	150	1.0	3	4.0
BZT52B6V8S	2WB	6.66	6.8	6.94	5	15	80	1.0	2	4.0
BZT52B7V5S	2WC	7.35	7.5	7.65	5	15	80	1.0	1	5.0
BZT52B8V2S	2WD	8.04	8.2	8.36	5	15	80	1.0	0.7	5.0
BZT52B9V1S	2WE	8.92	9.1	9.28	5	15	100	1.0	0.5	6.0
BZT52B10S	2WF	9.80	10.0	10.20	5	20	150	1.0	0.2	7.0
BZT52B11S	2WG	10.78	11.0	11.22	5	20	150	1.0	0.1	8.0
BZT52B12S	2WH	11.76	12.0	12.24	5	25	150	1.0	0.1	8.0
BZT52B13S	2WI	12.74	13.0	13.26	5	30	170	1.0	0.1	8.0
BZT52B15S	2WJ	14.70	15.0	15.30	5	30	200	1.0	0.1	10.5
BZT52B16S	2WK	15.68	16.0	16.32	5	40	200	1.0	0.1	11.2
BZT52B18S	2WL	17.64	18.0	18.36	5	45	225	1.0	0.1	12.6
BZT52B20S	2WM	19.60	20.0	20.40	5	55	225	1.0	0.1	14.0
BZT52B22S	2WN	21.56	22.0	22.44	5	55	250	1.0	0.1	15.4
BZT52B24S	2WO	23.52	24.0	24.48	5	70	250	1.0	0.1	16.8
BZT52B27S	2WP	26.46	27.0	27.54	2	80	300	0.5	0.1	18.9
BZT52B30S	2WQ	29.40	30.0	30.60	2	80	300	0.5	0.1	21.0
BZT52B33S	2WR	32.34	33.0	33.66	2	80	325	0.5	0.1	23.1
BZT52B36S	2WS	35.28	36.0	36.72	2	90	350	0.5	0.1	25.2
BZT52B39S	2WT	38.22	39.0	39.78	2	130	350	0.5	0.1	27.3
BZT52B43S	2WU	42.14	43.0	43.86	2	130	350	0.5	0.1	29.4
BZT52B47S	2WV	46.06	47.0	48.17	2	170	1000	0.25	0.1	36.0
BZT52B51S	2X1	49.98	51.0	52.27	2	180	1300	0.25	0.1	39.0
BZT52B56S	2X2	54.88	56.0	57.40	2	200	1400	0.25	0.1	43.0
BZT52B62S	2X3	60.76	62.0	63.55	2	225	1400	0.25	0.1	47.0
BZT52B68S	2X4	66.64	68.0	69.70	2	240	1600	0.25	0.1	52.0
BZT52B75S	2X5	73.13	75.0	76.87	2	265	1700	0.25	0.1	56.0

**BZT52B2V4S THRU BZT52B75S**  
PLASTIC-ENCAPSULATE ZENER DIODE



**RATING AND CHARACTERISTIC CURVES**

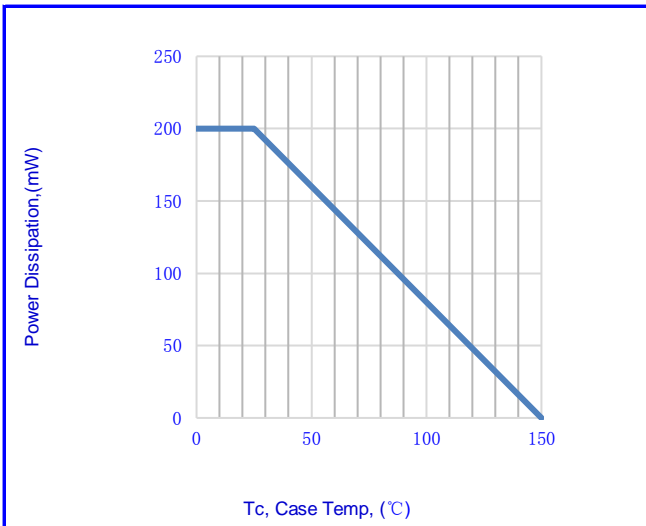


Fig.1-POWER DISSIPATION VS. AMBIENT TEMP.

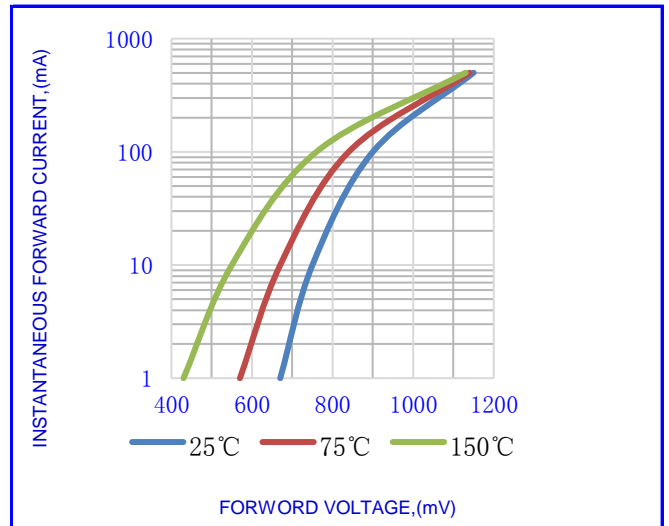


Fig.2- Forward characteristics

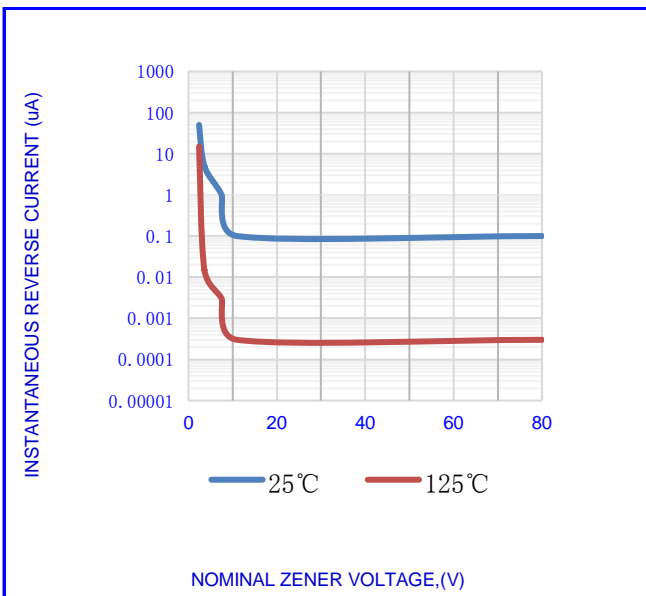


Fig.3- TYPICAL REVERSE CHARACTERISTICS

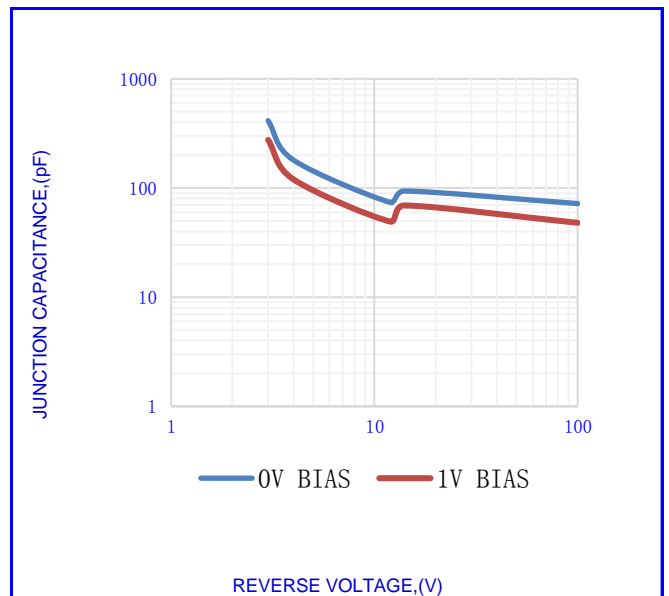


Fig.4- TYPICAL JUNCTION CAPACITANCE

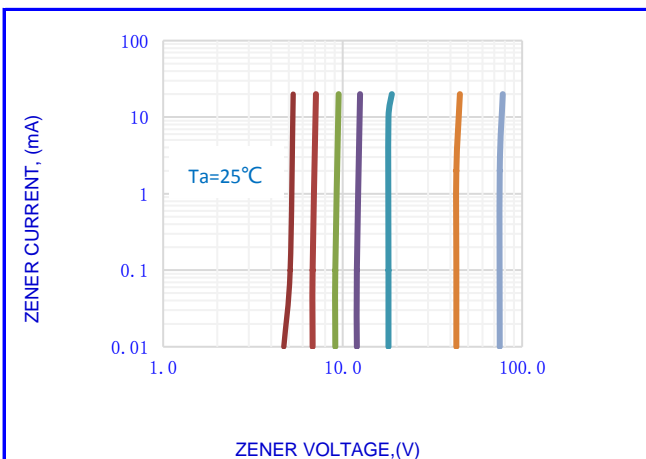


Fig.5-ZENER BREAKDOWN CHARACTERISTICS

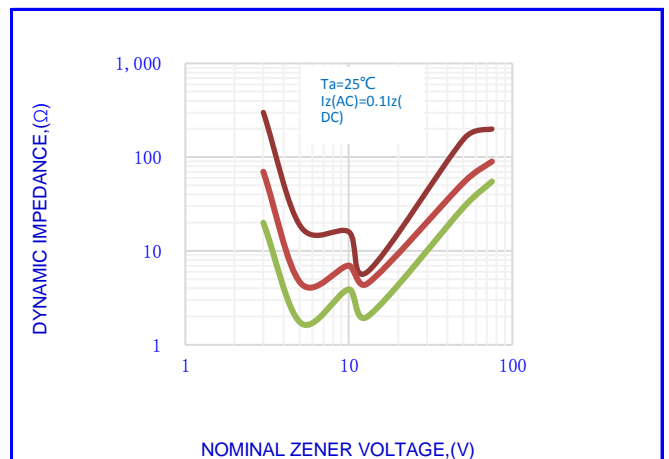


Fig.6-EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

**BZT52B2V4S THRU BZT52B75S**  
PLASTIC-ENCAPSULATE ZENER DIODE



OUTLINE DRAWINGS		SOD-323				
		OUTLINE DIMENSIONS				
		Millimeters			Inches	
Dim.	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.600	-	1.800	0.063	-	0.071
B	2.400	-	2.700	0.094	-	0.106
C	1.200	-	1.400	0.047	-	0.055
D	-	-	1.000	-	-	0.039
E	0.250	-	0.350	0.010	-	0.014
F	0.080	-	0.150	0.003	-	0.006
G	-	0.475	-	-	0.019	-
H	-	-	0.120	-	-	0.005

MOUNTING PAD LAYOUT		SOD-323				
		OUTLINE DIMENSIONS				
		Millimeters			Inches	
Dim.	Min.	Typ.	Max.	Min.	Typ.	Max.
A	--	2.900	--	--	0.114	--
B	--	0.500	--	--	0.020	--
C	--	1.440	--	--	0.057	--
D	--	0.730	--	--	0.029	--

Packing Information						
Package	Pack	Reel Size (mm)	Quantity (pcs/reel)	Inner Box Size LxWxH(mm)	Carton Size LxWxH(mm)	Quantity (Inner Box/carton)
SOD-323	T/R	Φ180	3000	210x208x203	440x440x230	4

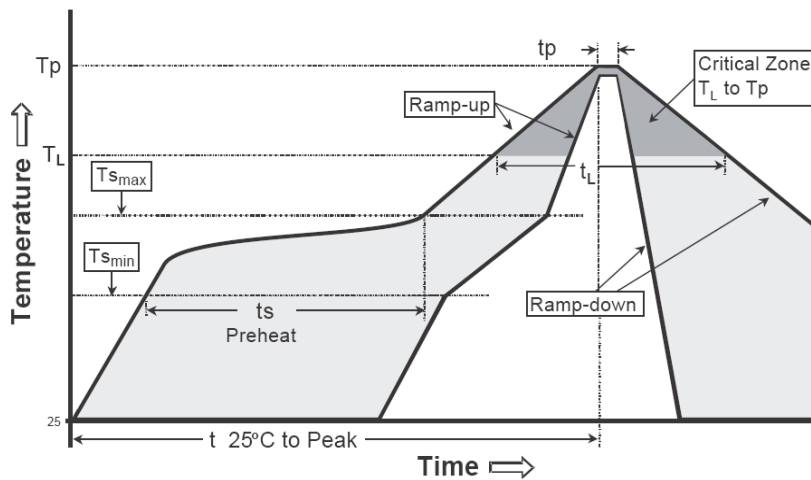
**BZT52B2V4S THRU BZT52B75S**  
PLASTIC-ENCAPSULATE ZENER DIODE



**Recommended wave soldering condition**

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

**Recommended temperature profile for IR reflow**



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (T <sub>smax</sub> to T <sub>p</sub> )	3°C/second max.	3°C/second max.
Preheat -Temperature Min(TS min) -Temperature Max(TS max) -Time(ts min to ts max)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
Time maintained above: -Temperature (T <sub>L</sub> ) - Time (t <sub>L</sub> )	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature(T <sub>p</sub> )	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

**BZT52B2V4S THRU BZT52B75S**  
PLASTIC-ENCAPSULATE ZENER DIODE



**Disclaimer**

- Reproducing and modifying information of the document is prohibited without permission from niuhang electronics co., LTD.
- Niuhan Electronics co., LTD. reserves the rights to make changes of the content herein the document anytime without notification.
- Niuhan Electronics co., LTD. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Niuhan Electronics co., LTD. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Niuhan Electronics co., LTD. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Niuhan Electronics co., LTD. for any damages resulting from such improper use or sale.
- When the appearance of the product and chip size does not change, in order to product the customer. quality, change the internal structure and the production process niuhang can not notify

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Zener Diodes](#) category:*

*Click to view products by [NH](#) manufacturer:*

Other Similar products are found below :

[RKZ13B2KG#P1](#) [DL5234B](#) [1N4682](#) [1N4693](#) [1N4732A](#) [1N4736A](#) [1N4750A](#) [1N4759ARL](#) [1N5241B](#) [1N5365B](#) [1N5369B](#) [1N747A](#)  
[1N964B](#) [1N966B](#) [1N968B](#) [1N972B](#) [JANS1N4974US](#) [1N4692](#) [1N4702](#) [1N4704](#) [1N4711](#) [1N4714](#) [1N4745ARL](#) [1N4752ARL](#) [1N4760ARL](#)  
[1N5221B](#) [1N5242BTR](#) [1N5350B](#) [1N5352B](#) [1N961BRR1](#) [1N964BRL](#) [RKZ5.1BKU#P6](#) [3SMAJ5946B-TP](#) [3SMAJ5950B-TP](#)  
[MMSZ5230BQ-13-F](#) [MMSZ5232BQ-13-F](#) [BZX84C7V5](#) [3SMAJ5945B-TP](#) [3SMAJ5947B-TP](#) [3SMBJ5941B-TP](#) [DZ2S240M0L](#) [SMAZ27-](#)  
[TP](#) [ZMM5224B-7](#) [RD16UM-T1-A](#) [RD39S-T1-A](#) [RD10S-T1-A](#) [CDZT2R5.6B](#) [1N4762A G](#) [Z1SMA18](#) [JANTX1N4553B](#)