

BZT52B2V4 THRU BZT52B75
PLASTIC-ENCAPSULATE ZENER DIODE



VOLTAGE	2.4~75 Volts	POWER	500 mW	SOD-123	Marking and Polarity
----------------	--------------	--------------	--------	----------------	-----------------------------

FEATURES

- Low Zener Impedance
- Power Dissipation of 500mW
- High Stability and High Reliability
- Zener Voltage Tolerance: ± 2%(B Series)

MECHANICAL DATA

Package: SOD-123
Epoxy UL: 94V-0
Mounting position: Any
Weight: approx. 0.01g

Remark:

- ①. 2xx=Modle code,xx=WX-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	500	mW
Maximum instantaneous forward voltage@IF=10mA (Note2)	V_F	0.9	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 25mm²
2. Pulse width < 10 ms

BZT52B2V4 THRU BZT52B75
PLASTIC-ENCAPSULATE ZENER DIODE



Electrical Characteristic (Rating at 25°C ambient temperature unless otherwise specified).

Device	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current	
		V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	IR	VR
		Min(V)	Nom(V)	Max(V)	mA	Ω		mA	uA	V
BZT52B2V4	2WX	2.35	2.4	2.45	5	100	600	1.0	50	1.0
BZT52B2V7	2W1	2.65	2.7	2.75	5	100	600	1.0	20	1.0
BZT52B3V0	2W2	2.94	3.0	3.06	5	95	600	1.0	10	1.0
BZT52B3V3	2W3	3.23	3.3	3.37	5	95	600	1.0	5	1.0
BZT52B3V6	2W4	3.53	3.6	3.67	5	90	600	1.0	5	1.0
BZT52B3V9	2W5	3.82	3.9	3.98	5	90	600	1.0	3	1.0
BZT52B4V3	2W6	4.21	4.3	4.39	5	90	600	1.0	3	1.0
BZT52B4V7	2W7	4.61	4.7	4.79	5	80	500	1.0	3	2.0
BZT52B5V1	2W8	5.00	5.1	5.20	5	60	480	1.0	2	2.0
BZT52B5V6	2W9	5.49	5.6	5.71	5	40	400	1.0	1	2.0
BZT52B6V2	2WA	6.08	6.2	6.32	5	10	150	1.0	3	4.0
BZT52B6V8	2WB	6.66	6.8	6.94	5	15	80	1.0	2	4.0
BZT52B7V5	2WC	7.35	7.5	7.65	5	15	80	1.0	1	5.0
BZT52B8V2	2WD	8.04	8.2	8.36	5	15	80	1.0	0.7	5.0
BZT52B9V1	2WE	8.92	9.1	9.28	5	15	100	1.0	0.5	6.0
BZT52B10	2WF	9.80	10.0	10.20	5	20	150	1.0	0.2	7.0
BZT52B11	2WG	10.78	11.0	11.22	5	20	150	1.0	0.1	8.0
BZT52B12	2WH	11.76	12.0	12.24	5	25	150	1.0	0.1	8.0
BZT52B13	2WI	12.74	13.0	13.26	5	30	170	1.0	0.1	8.0
BZT52B15	2WJ	14.70	15.0	15.30	5	30	200	1.0	0.1	10.5
BZT52B16	2WK	15.68	16.0	16.32	5	40	200	1.0	0.1	11.2
BZT52B18	2WL	17.64	18.0	18.36	5	45	225	1.0	0.1	12.6
BZT52B20	2WM	19.60	20.0	20.40	5	55	225	1.0	0.1	14.0
BZT52B22	2WN	21.56	22.0	22.44	5	55	250	1.0	0.1	15.4
BZT52B24	2WO	23.52	24.0	24.48	5	70	250	1.0	0.1	16.8
BZT52B27	2WP	26.46	27.0	27.54	2	80	300	0.5	0.1	18.9
BZT52B30	2WQ	29.40	30.0	30.60	2	80	300	0.5	0.1	21.0
BZT52B33	2WR	32.34	33.0	33.66	2	80	325	0.5	0.1	23.1
BZT52B36	2WX	35.28	36.0	36.72	2	90	350	0.5	0.1	25.2
BZT52B39	2WT	38.22	39.0	39.78	2	130	350	0.5	0.1	27.3
BZT52B43	2WU	42.14	43.0	43.86	2	130	350	0.5	0.1	29.4
BZT52B47	2WV	46.06	47.0	48.17	2	170	1000	0.25	0.1	36.0
BZT52B51	X1	49.98	51.0	52.27	2	180	1300	0.25	0.1	39.0
BZT52B56	X2	54.88	56.0	57.40	2	200	1400	0.25	0.1	43.0
BZT52B62	X3	60.76	62.0	63.55	2	225	1400	0.25	0.1	47.0
BZT52B68	X4	66.64	68.0	69.70	2	240	1600	0.25	0.1	52.0
BZT52B75	X5	73.13	75.0	76.87	2	265	1700	0.25	0.1	56.0

BZT52B2V4 THRU BZT52B75
PLASTIC-ENCAPSULATE ZENER DIODE



RATING AND CHARACTERISTIC CURVES

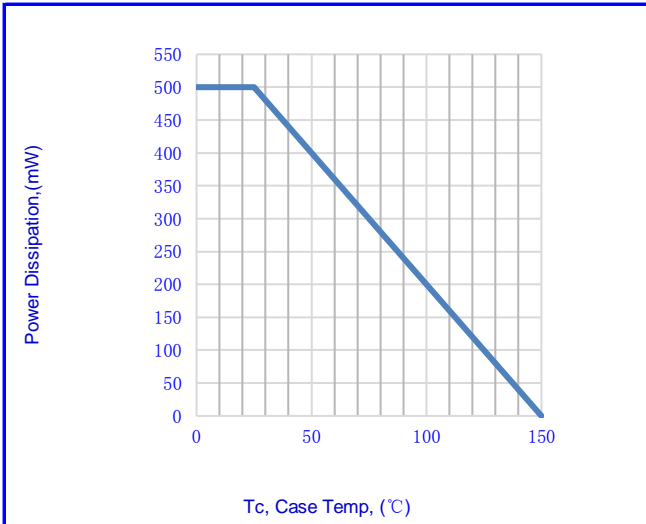


Fig.1-POWER DISSIPATION VS. AMBIENT TEMP.

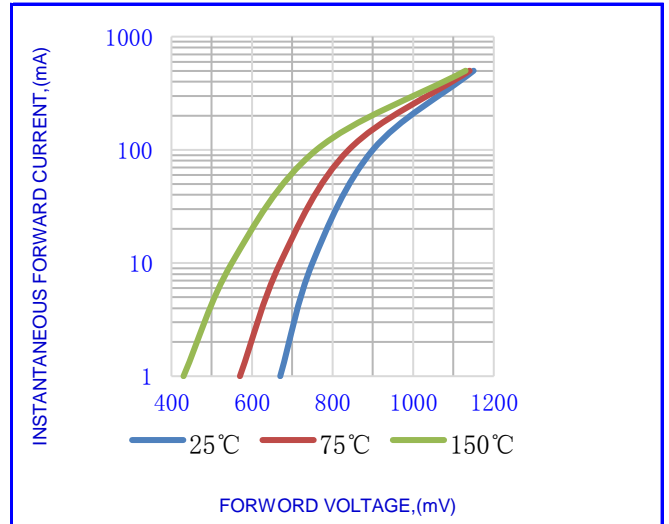


Fig.2- Forward characteristics

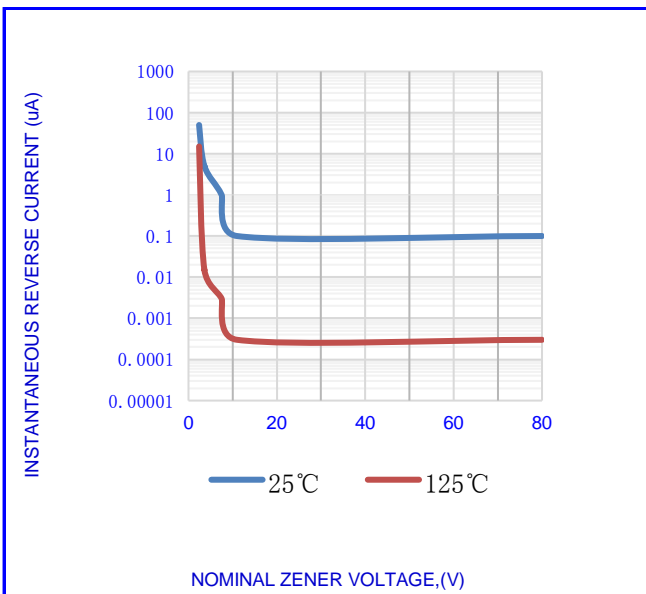


Fig.3- TYPICAL REVERSE CHARACTERISTICS

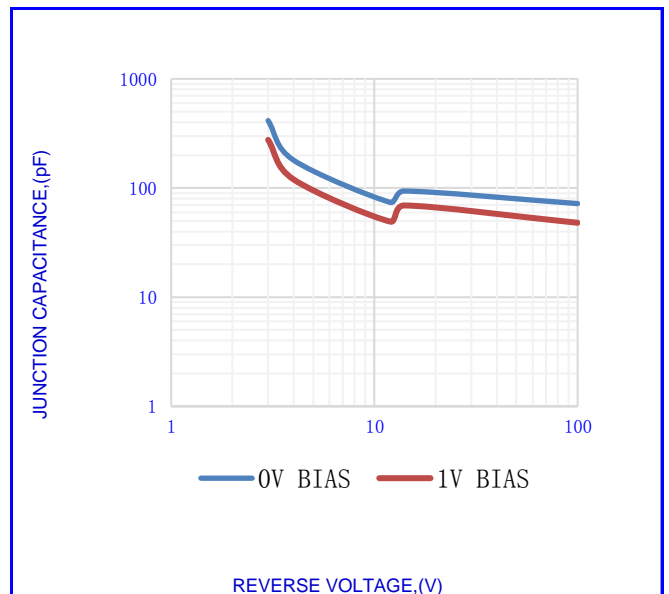


Fig.4- TYPICAL JUNCTION CAPACITANCE

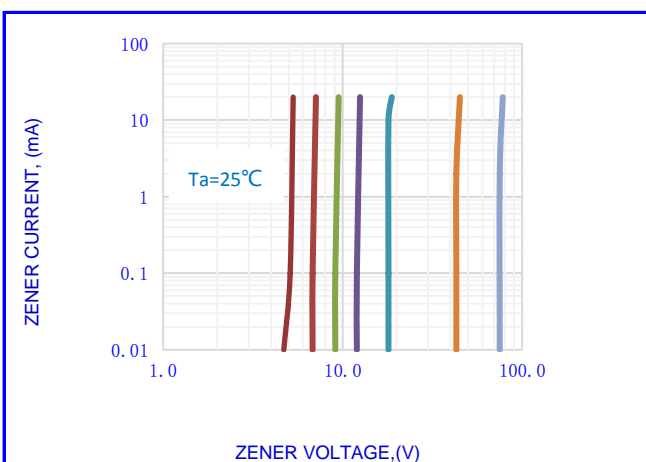


Fig.5-ZENER BREAKDOWN CHARACTERISTICS

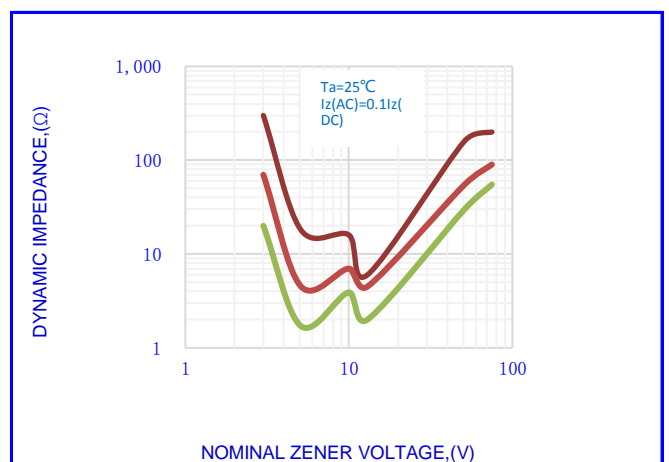
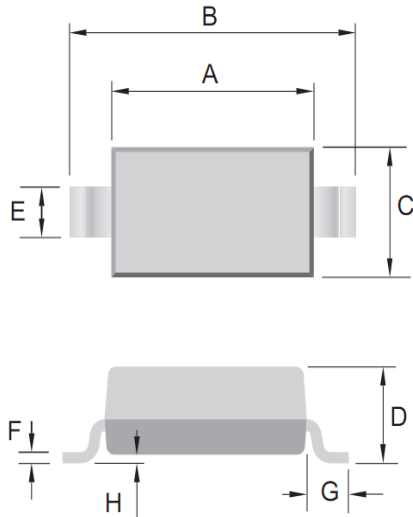


Fig.6-EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

BZT52B2V4 THRU BZT52B75
PLASTIC-ENCAPSULATE ZENER DIODE



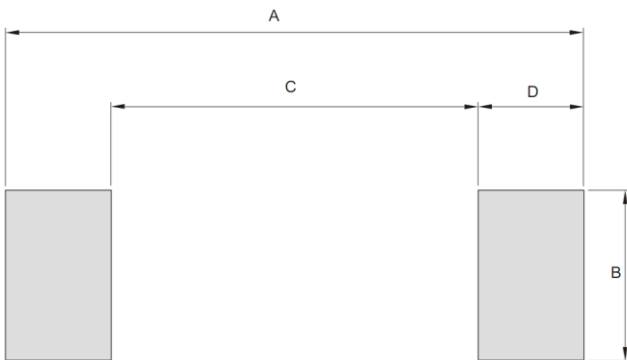
OUTLINE DRAWINGS



SOD-123

OUTLINE DIMENSIONS						
Dim.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.500	-	2.800	0.098	-	0.110
B	3.600	-	3.900	0.142	-	0.154
C	1.400	-	1.800	0.055	-	0.071
D	0.950	-	1.350	0.037	-	0.053
E	0.500	-	0.700	0.020	-	0.028
F	-	-	0.200	-	-	0.008
G	0.400	-	-	0.016	-	-
H	-	-	0.120	-	-	0.005

MOUNTING PAD LAYOUT



SOD-123

OUTLINE DIMENSIONS						
Dim.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	--	4.250	--	--	0.167	--
B	--	1.220	--	--	0.048	--
C	--	2.700	--	--	0.106	--
D	--	0.780	--	--	0.031	--

PACKING INFORMATION

SOD-123

Package Method	Reel Size (mm)	Quantity (pcs/reel)	Inner Box Size LxWxH(mm)	Quantity (pcs/Inner Box)	Carton Size LxWxH(mm)	Quantity (pcs/carton)
Tape Reel	Φ180	3000	185x185x90	21000	400x400x300	252000

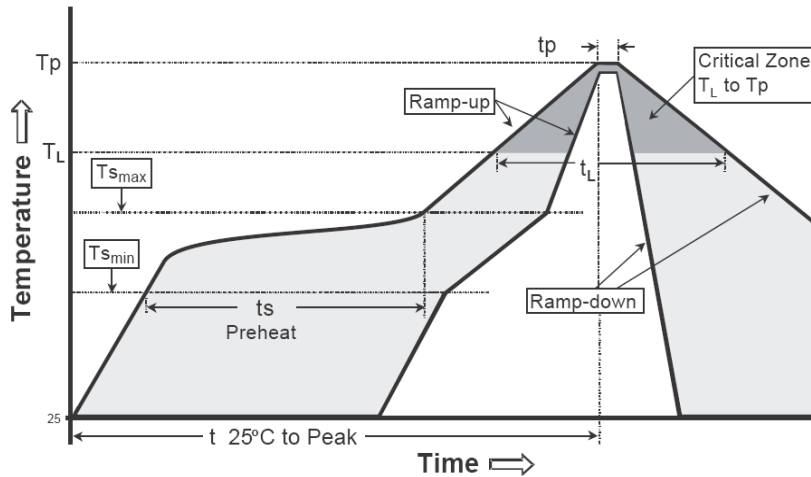
BZT52B2V4 THRU BZT52B75
PLASTIC-ENCAPSULATE ZENER DIODE



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 _{smax} to T _p)	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 _L) - Time (t _L)	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature(T _p)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(t _p)	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.

BZT52B2V4 THRU BZT52B75
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](#)