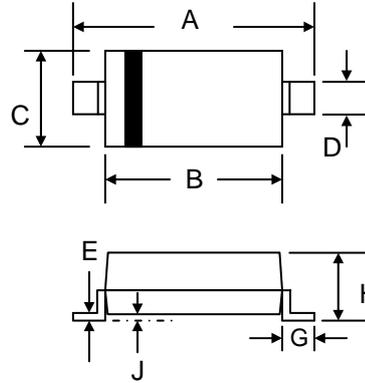


### Features

- Planar Die Construction
- 500mW Power Dissipation
- 2.4V – 51V Nominal Zener Voltage
- 2% Standard Vz Tolerance
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-0



SOD-123		
Dim	Min	Max
A	3.6	3.9
B	2.5	2.8
C	1.4	1.8
D	0.5	0.7
E	—	0.2
G	0.4	—
H	0.95	1.35
J	—	0.12
All Dimensions in mm		

### Mechanical Data

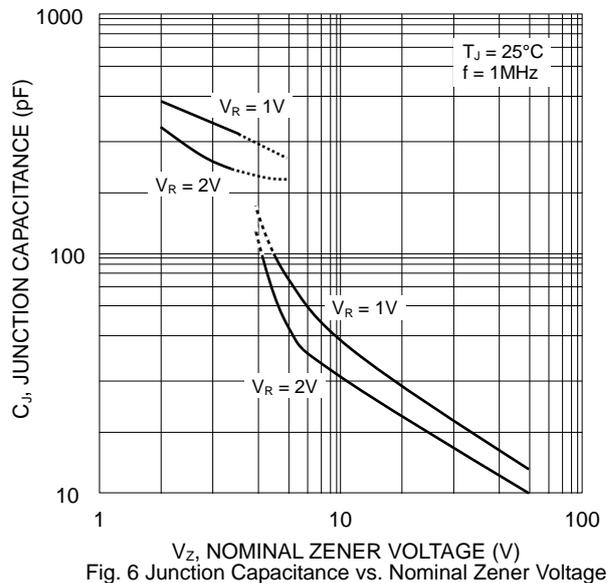
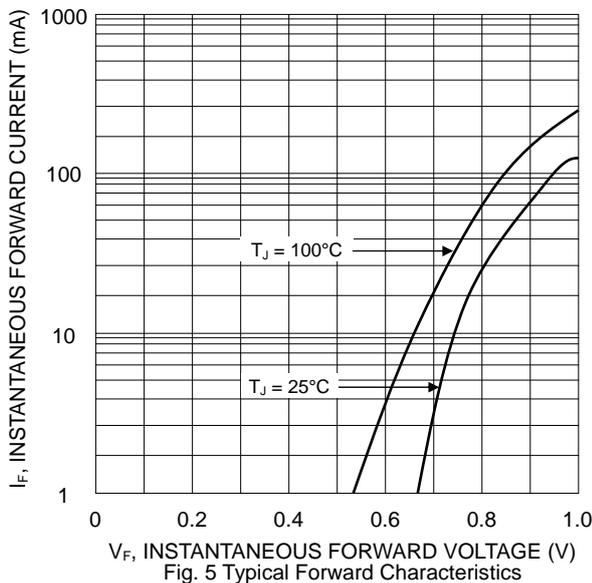
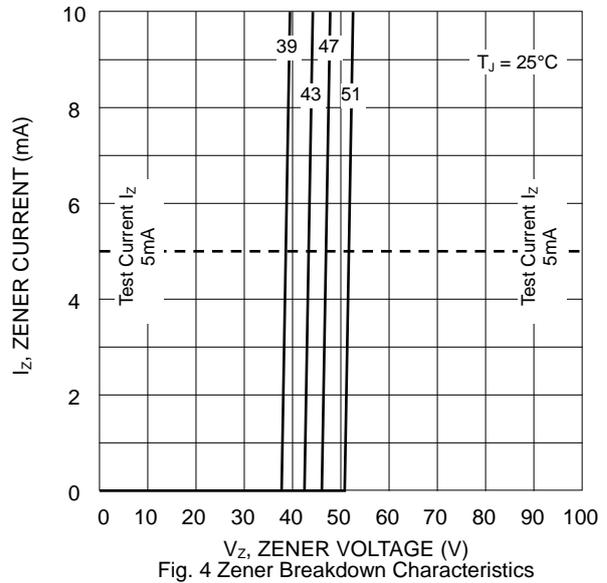
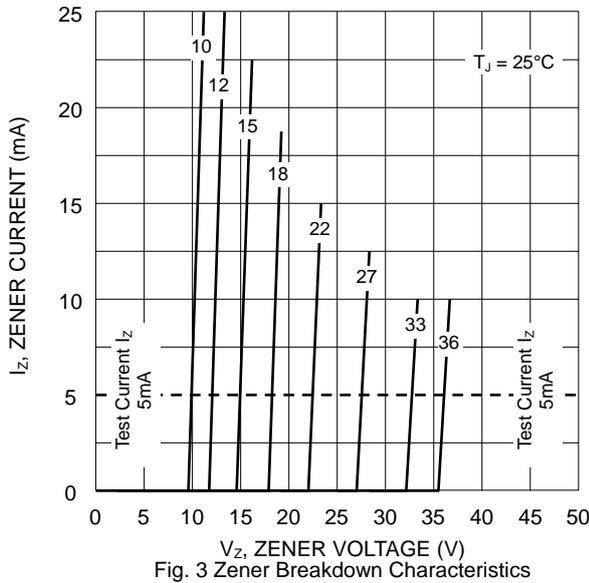
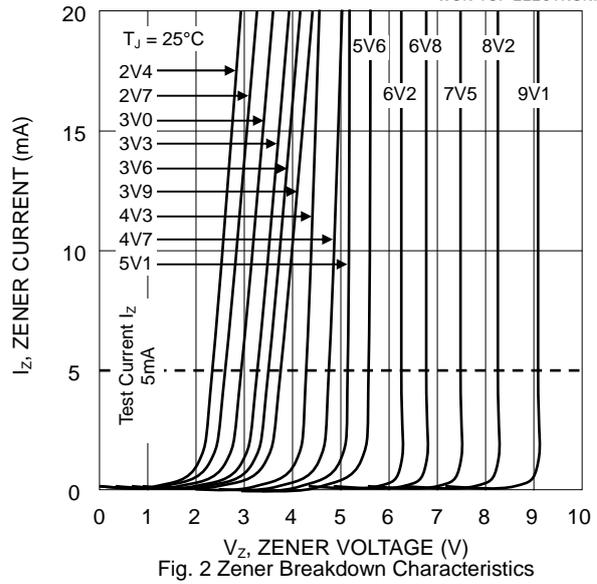
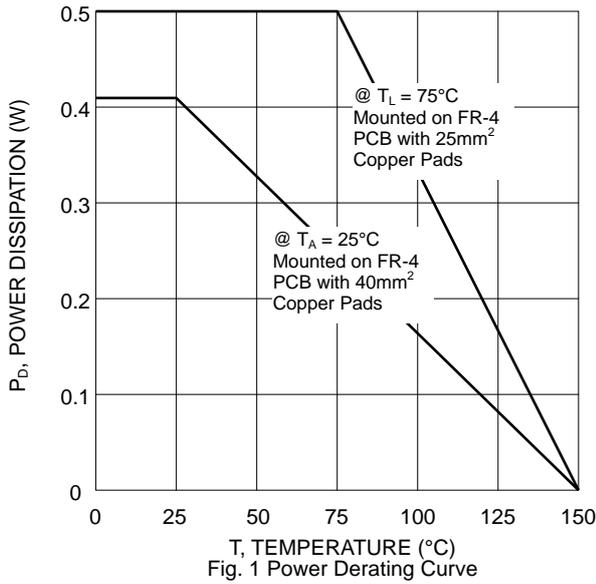
- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams (approx.)
- Marking: Device Code
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 5**

### Maximum Ratings @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation at T <sub>L</sub> = 75°C (Note 1)	P <sub>D</sub>	500	mW
Power Dissipation at T <sub>A</sub> = 25°C (Note 2)	P <sub>D</sub>	410	mW
Forward Voltage @ I <sub>F</sub> = 10mA	V <sub>F</sub>	0.9	V
Thermal Resistance, Junction to Ambient (Note 2, 3)	R <sub>JA</sub>	340	°C/W
Thermal Resistance, Junction to Lead (Note 2, 3)	R <sub>JL</sub>	150	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

- Note: 1. Mounted on ceramic substrate with 25mm<sup>2</sup> copper pads.  
 2. Mounted on ceramic substrate with 40mm<sup>2</sup> copper pads.  
 3. Thermal resistance measurement obtained via infrared scan method.

# BZT52B2V4 – BZT52B51

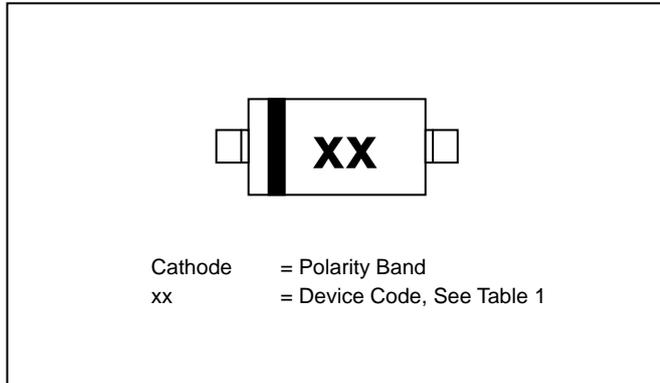


**Electrical Characteristics (@T<sub>A</sub>=25°C unless otherwise specified) Table 1**

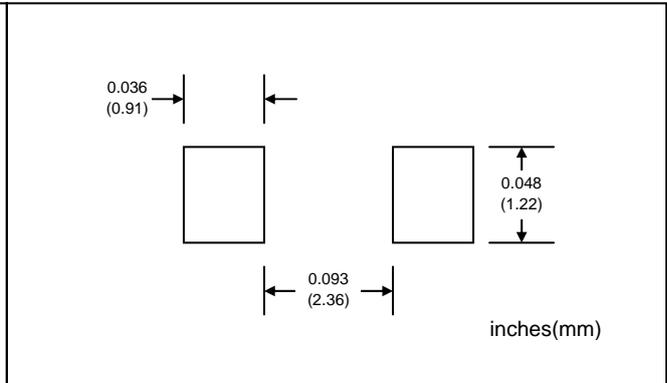
Type Number (Note 1)	Device Marking Code (Note 2)		Zener Voltage Range (Note 3)			Maximum Zener Impedance (Note 4)				Max Reverse Leakage Current		Temp. Coefficient of Zener Voltage @ I <sub>ZT</sub> (mV/°C)	
			V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub>	@ V <sub>R</sub>		
	TW	CN	Nom (V)	Min (V)	Max (V)	( )	(mA)	( )	(mA)	(μA)	(V)	Min	Max
BZT52B2V4	W1	W1•	2.4	2.35	2.45	85	5.0	600	1.0	100	1.0	-9	-4
BZT52B2V7	W2	W2•	2.7	2.65	2.75	83	5.0	500	1.0	75	1.0	-9	-4
BZT52B3V0	W3	W3•	3.0	2.94	3.06	95	5.0	500	1.0	50	1.0	-9	-3
BZT52B3V3	W4	W4•	3.3	3.23	3.37	95	5.0	500	1.0	25	1.0	-8	-3
BZT52B3V6	W5	W5•	3.6	3.53	3.67	95	5.0	500	1.0	15	1.0	-8	-3
BZT52B3V9	W6	W6•	3.9	3.82	3.98	95	5.0	500	1.0	10	1.0	-7	-3
BZT52B4V3	W7	W7•	4.3	4.21	4.39	95	5.0	500	1.0	5.0	1.0	-6	-1
BZT52B4V7	W8	W8•	4.7	4.61	4.79	78	5.0	500	1.0	5.0	1.0	-5	+2
BZT52B5V1	W9	W9•	5.1	5.00	5.20	60	5.0	480	1.0	0.1	0.8	-3	+4
BZT52B5V6	WA	WA•	5.6	5.49	5.71	40	5.0	400	1.0	0.1	1.0	-2	+6
BZT52B6V2	WB	WB•	6.2	6.08	6.32	10	5.0	200	1.0	0.1	2.0	-1	+7
BZT52B6V8	WC	WC•	6.8	6.66	6.94	8	5.0	150	1.0	0.1	3.0	+2	+7
BZT52B7V5	WD	WD•	7.5	7.35	7.65	7	5.0	50	1.0	0.1	5.0	+3	+7
BZT52B8V2	WE	WE•	8.2	8.04	8.36	7	5.0	50	1.0	0.1	6.0	+4	+7
BZT52B9V1	WF	WF•	9.1	8.92	9.28	10	5.0	50	1.0	0.1	7.0	+5	+8
BZT52B10	WG	WG•	10	9.80	10.20	15	5.0	70	1.0	0.1	7.5	+5	+8
BZT52B11	WH	WH•	11	10.80	11.20	20	5.0	70	1.0	0.1	8.5	+5	+9
BZT52B12	WI	WI•	12	11.80	12.20	20	5.0	90	1.0	0.1	9.0	+6	+9
BZT52B13	WK	WJ•	13	12.70	13.30	25	5.0	110	1.0	0.1	10	+7	+9
BZT52B15	WL	WK•	15	14.70	15.30	30	5.0	110	1.0	0.1	11	+7	+9
BZT52B16	WM	WL•	16	15.70	16.30	40	5.0	170	1.0	0.1	12	+8	+9.5
BZT52B18	WN	WM•	18	17.60	18.40	50	5.0	170	1.0	0.1	14	+8	+9.5
BZT52B20	WO	WN•	20	19.60	20.40	50	5.0	220	1.0	0.1	15	+8	+10
BZT52B22	WP	WO•	22	21.60	22.40	55	5.0	220	1.0	0.1	17	+8	+10
BZT52B24	WR	WP•	24	23.50	24.50	80	5.0	220	1.0	0.1	18	+8	+10
BZT52B27	WS	WQ•	27	26.50	27.50	80	5.0	250	1.0	0.1	20	+8	+10
BZT52B30	WT	WR•	30	29.40	30.60	80	5.0	250	1.0	0.1	22.5	+8	+10
BZT52B33	WU	WS•	33	32.30	33.70	80	5.0	250	1.0	0.1	25	+8	+10
BZT52B36	WW	WT•	36	35.30	36.70	90	5.0	250	1.0	0.1	27	+8	+10
BZT52B39	WX	WU•	39	38.20	39.80	90	5.0	300	1.0	0.1	29	+10	+12
BZT52B43	WY	WV•	43	42.10	43.90	100	5.0	700	1.0	0.1	32	+10	+12
BZT52B47	WZ	WW•	47	46.10	47.90	100	5.0	750	1.0	0.1	35	+10	+12
BZT52B51	XA	X1•	51	50.00	52.00	100	5.0	750	1.0	0.1	38	+10	+12

- Note: 1. Type numbers listed have standard tolerance on the nominal zener voltage of ±2%.  
 2. TW: Marking code for Taiwan plant. CN: Marking code for China plant.  
 3. Measured with pulses t<sub>p</sub> = 5ms.  
 4. f = 1KHz

## MARKING INFORMATION

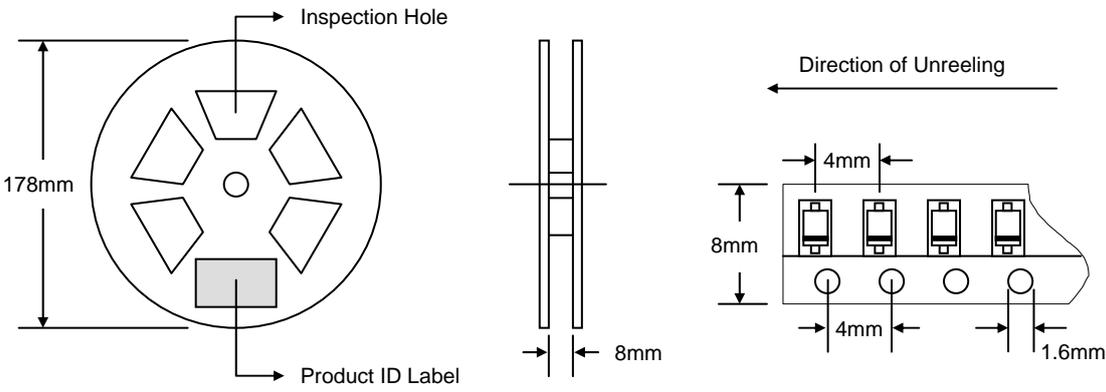


## RECOMMENDED FOOTPRINT



## PACKAGING INFORMATION

### TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	10.0

**Note:** 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.  
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
BZT52Bxx-T1	SOD-123	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BZT52B2V4-T1-LF.**

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