

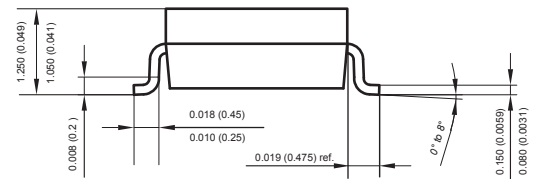
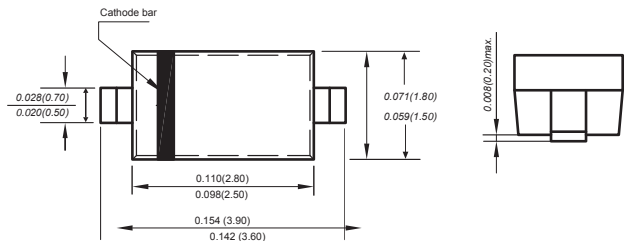
### Features

1. Total power dissipation: Max. 500mW.
2. Wide zener reverse voltage range 2.0V to 75V.
3. Small plastic package suitable for surface mounted design.
4. Tolerance approximately  $\pm 5\%$

**SOD-123**

**RoHS**  
COMPLIANT

**Pb**  
Pb-Free



Dimensions in inches and (millimeters)

### Mechanical Data

**Case** : JEDEC SOD-123 Molded plastic body

**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any

**Weight** : 0.00056 ounce, 0.016 grams

### Ordering Information

Type No.	Marking	Package Code	
BZT52C2V0-BZT52C75	See table 2	SOD-123	
<b>MAXIMUM RATING @ Ta=25°C unless otherwise specified</b>			
Parameter	Symbol	Value	Unit
Forward Voltage @ I <sub>F</sub> =10mA	V <sub>F</sub>	0.9	V
Power Dissipation	P <sub>d</sub>	500	mW
Typical thermal resistance junction to ambient <sup>(1)</sup>	R <sub>θJA</sub>	305	°C/W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-65-150	°C

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.



## BZT52C2V0 ~ BZT52C75

### Surface Mount Zener Diode

#### Electrical Characteristics (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Type	Marking	Zener Voltage Range			I <sub>ZT</sub>	Dynamic Impedance	Reverse Current		
		V <sub>ZT</sub> ( at I <sub>ZT</sub> )					Z <sub>ZT</sub> ( at I <sub>ZT</sub> )	I <sub>R</sub>	at V <sub>R</sub>
		Min (V)	Nom(V)	Max (V)			(mA)	Max (Ω)	Max ( μA )
BZT52C2V0	WY	1.8	2.0	2.15	5	100	120	0.5	
BZT52C2V2	WZ	2.08	2.2	2.33	5	100	120	0.7	
BZT52C2V4	WX	2.28	2.4	2.56	5	100	120	1	
BZT52C2V7	W1	2.5	2.7	2.9	5	110	120	1	
BZT52C3V0	W2	2.8	3.0	3.2	5	120	50	1	
BZT52C3V3	W3	3.1	3.3	3.5	5	130	20	1	
BZT52C3V6	W4	3.4	3.6	3.8	5	130	10	1	
BZT52C3V9	W5	3.7	3.9	4.1	5	130	5	1	
BZT52C4V3	W6	4	4.3	4.6	5	130	5	1	
BZT52C4V7	W7	4.4	4.7	5	5	130	2	1	
BZT52C5V1	W8	4.8	5.1	5.4	5	130	2	1.5	
BZT52C5V6	W9	5.2	5.6	6	5	80	1	2.5	
BZT52C6V2	WA	5.8	6.2	6.6	5	50	1	3	
BZT52C6V8	WB	6.4	6.8	7.2	5	30	0.5	3.5	
BZT52C7V5	WC	7	7.5	7.9	5	30	0.5	4	
BZT52C8V2	WD	7.7	8.2	8.7	5	30	0.5	5	
BZT52C9V1	WE	8.5	9.1	9.6	5	30	0.5	6	
BZT52C10	WF	9.4	10	10.6	5	30	0.1	7	
BZT52C11	WG	10.4	11	11.6	5	30	0.1	8	
BZT52C12	WH	11.4	12	12.7	5	35	0.1	9	
BZT52C13	WI	12.4	13	14.1	5	35	0.1	10	
BZT52C15	WJ	13.8	15	15.6	5	40	0.1	11	
BZT52C16	WK	15.3	16	17.1	5	40	0.1	12	
BZT52C18	WL	16.8	18	19.1	5	45	0.1	13	
BZT52C20	WM	18.8	20	21.2	5	50	0.1	15	
BZT52C22	WN	20.8	22	23.3	5	55	0.1	17	
BZT52C24	WO	22.8	24	25.6	5	60	0.1	19	
BZT52C27	WP	25.1	27	28.9	5	70	0.1	21	
BZT52C30	WQ	28	30	32	5	80	0.1	23	
BZT52C33	WR	31	33	35	5	80	0.1	25	
BZT52C36	WS	34	36	38	5	90	0.1	27	
BZT52C39	WT	37	39	41	2.5	100	2	30	
BZT52C43	WU	40	43	46	2.5	130	2	33	
BZT52C47	WV	44	47	50	2.5	150	2	36	
BZT52C51	WW	48	51	54	2.5	180	1	39	
BZT52C56	XW	52	56	60	2.5	180	1	43	
BZT52C62	6E	58	62	66	2.5	200	0.2	47	
BZT52C68	6F	64	68	72	2.5	250	0.2	52	
BZT52C75	6H	70	75	79	2.5	300	0.2	57	

( 1 ) V<sub>ZT</sub> is tested with pulses (20 ms)



Typical Characteristics

Fig.1 Maximum Continuous Power Derating

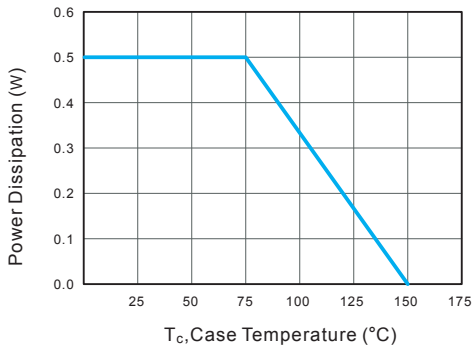
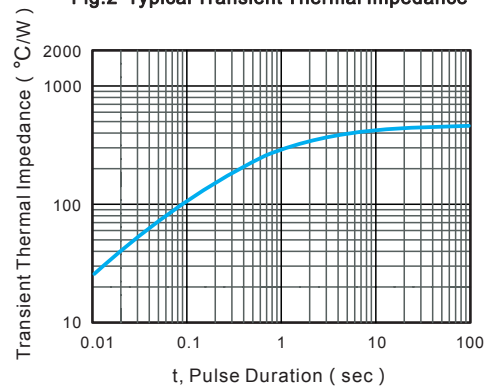
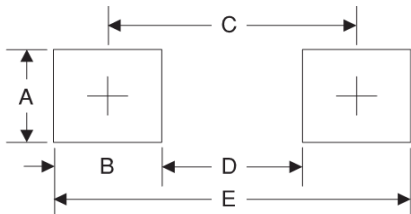


Fig.2 Typical Transient Thermal Impedance



Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2.0	0.079
E	4.4	0.173