

2V4 WX 1206 SOD123	7V5 WC 1206 SOD123	24V WO 1206 SOD123
2V7 W1 1206 SOD123	8V2 WD 1206 SOD123	27V WP 1206 SOD123
3V0 W2 1206 SOD123	9V1 WE 1206 SOD123	30V WQ 1206 SOD123
3V3 W3 1206 SOD123	10V WF 1206 SOD123	1N4148 T4 1206 SOD123
3V6 W4 1206 SOD123	11V WG 1206 SOD123	
3V9 W5 1206 SOD123	12V WH 1206 SOD123	
4V3 W6 1206 SOD123	13V WI 1206 SOD123	
4V7 W7 1206 SOD123	15V WJ 1206 SOD123	
5V1 W8 1206 SOD123	16V WK 1206 SOD123	
5V6 W9 1206 SOD123	18V WL 1206 SOD123	
6V2 WA 1206 SOD123	20V WM 1206 SOD123	
6V8 WB 1206 SOD123	22V WN 1206 SOD123	

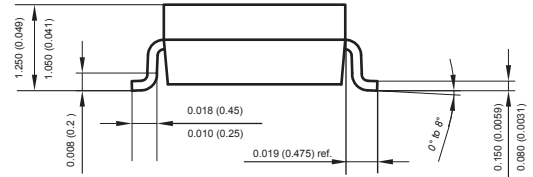
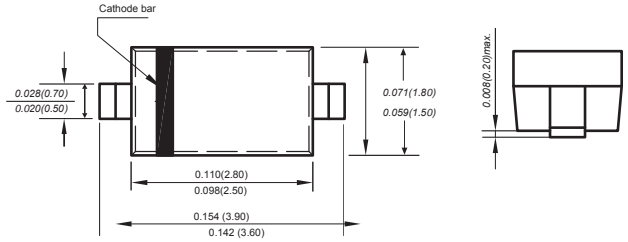


# SURFACE MOUNT ZENER DIODE

## Features

- ◆ Total power dissipation: Max. 500mW.
- ◆ Wide zener reverse voltage range 2.0V to 75V.
- ◆ Small plastic package suitable for surface mounted design.
- ◆ Tolerance approximately ±5%

**SOD-123**



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

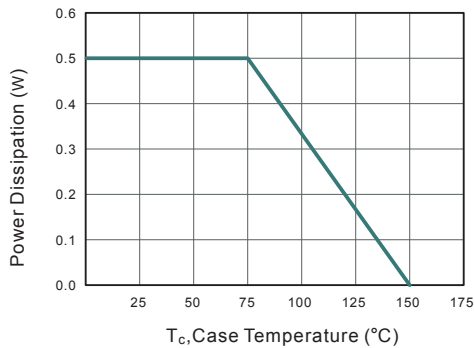
Type No.	Marking	Package Code
BZT52C2V0-BZT52C75	See table 2	SOD-123

**MAXIMUM RATING @ Ta=25°C unless otherwise specified**

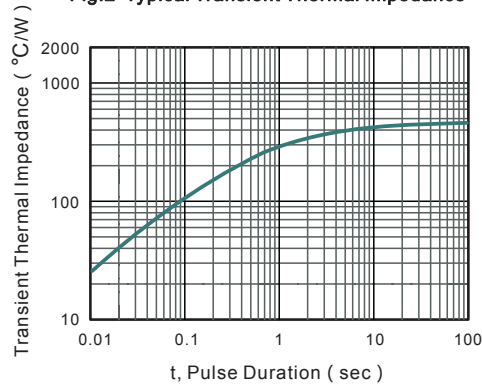
Parameter	Symbol	Value	Unit
Forward Voltage @ I <sub>F</sub> =10mA	V <sub>F</sub>	0.9	V
Power Dissipation	P <sub>d</sub>	500	mW
Typical thermal resistance junction to ambient <sup>(1)</sup>	R <sub>θJA</sub>	305	°C/W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-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.

**Fig.1 Maximum Continuous Power Derating**



**Fig.2 Typical Transient Thermal Impedance**

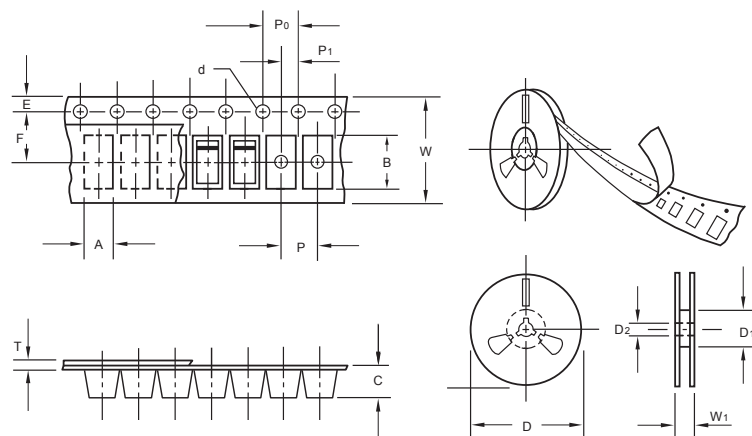


# ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Type	Marking	Zener Voltage Range <sup>(1)</sup>			I <sub>ZT</sub> (mA)	Dynamic Impedance Z <sub>ZT</sub> (at I <sub>ZT</sub> ) Max (Ω)	Reverse Current	
		V <sub>ZT</sub> (at I <sub>ZT</sub> )					I <sub>R</sub> Max (μA)	at V <sub>R</sub> (V)
		Min (V)	Nom (V)	Max (V)				
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)

## Packing information



unit:mm

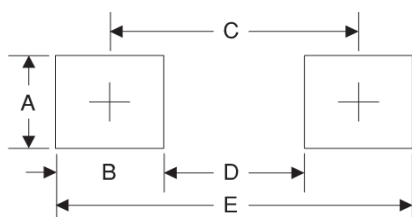
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D <sub>1</sub>	min	50.0
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W <sub>1</sub>	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

## 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

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