

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 $\pm 5\%$

PINNING



PIN	DESCRIPTION
1	Cathode
2	Anode

Mechanical Data

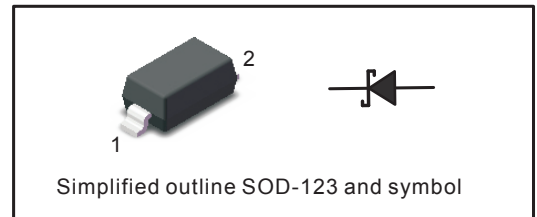
Case : JEDEC SOD-123 Molded plastic body

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 @ $I_F=10\text{mA}$	V_F	0.9	V
Power Dissipation	P_d	500	mW
Typical thermal resistance junction to ambient ⁽¹⁾	$R_{\theta JA}$	340	°C/W
Junction temperature	T_j	-55-150	°C
Storage temperature range	T_{stg}	-55-150	°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

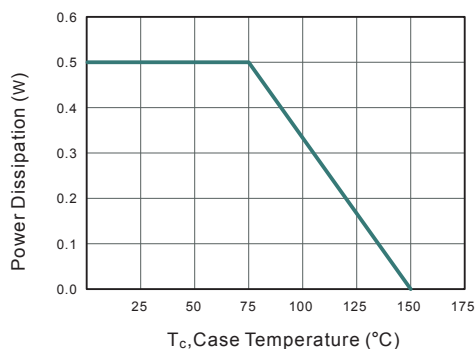
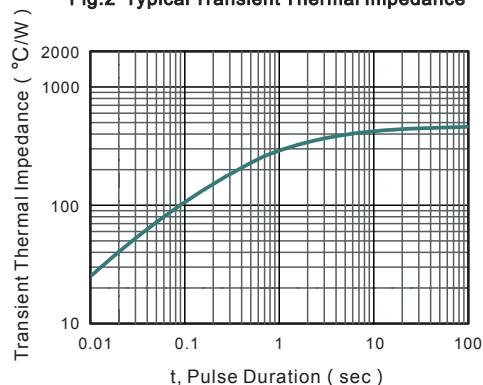


Fig.2 Typical Transient Thermal Impedance





BZT52C2V0 - BZT52C75

Zener Voltage - 2 to 75 Volts Peak Pulse Power - 0.5 W

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

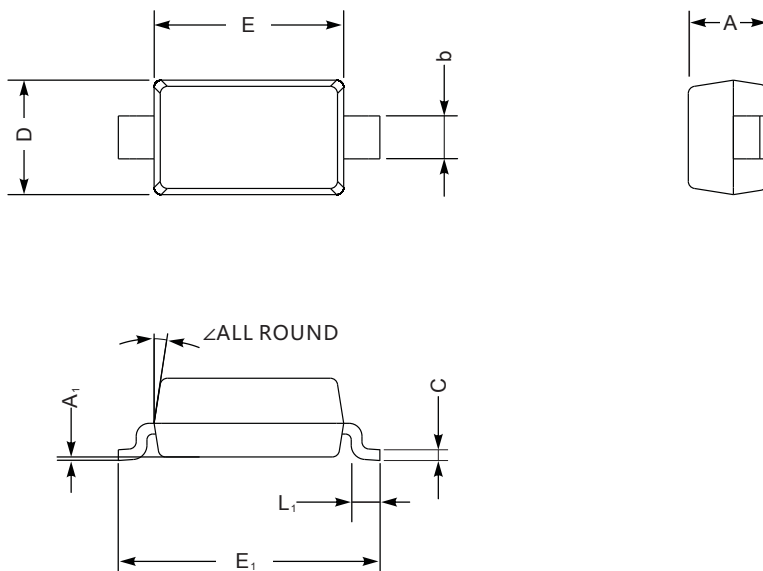
Type	Marking	Zener Voltage Range ⁽¹⁾				Dynamic Impedance	Reverse Current	
		V _{ZT} (at I _{ZT})			I _{ZT}	Z _{ZT} (at I _{ZT})	I _R	at V _R
		Min (V)	Nom (V)	Max (V)	(mA)	Max (Ω)	Max (μA)	(V)
BZT52C2V0	WY	1.8	2.0	2.15	5	100	120	0.5
BZT52C2V2	WZ	2.08	2.2	2.33	5	100	120	0.7
BZT52C2V4	WX	2.28	2.4	2.56	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_{ZT} is tested with pulses (20 ms)

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



SOD-123 mechanical data

UNIT		A	C	D	E	E ₁	L ₁	b	A ₁	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

The recommended mounting pad size

