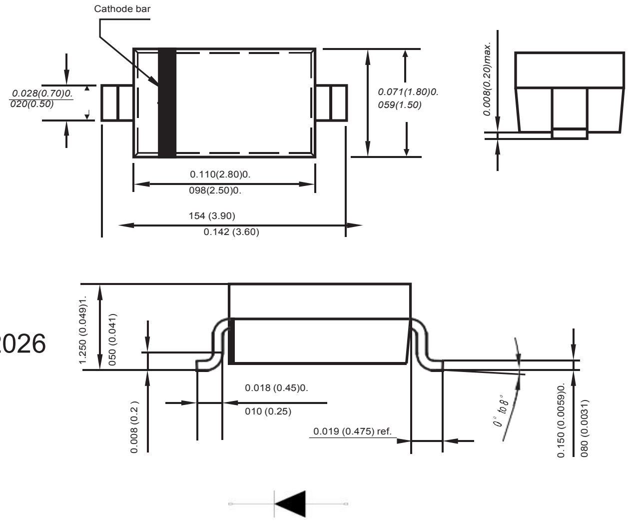
BZT52C2V0-BZT52C75

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℃ unless otherwise specified

Parameter	Symbol	Value	Unit
Forward Voltage @ I_F=10mA	V_F	0.9	V
Power Dissipation	P_d	500	mW
Typical thermal resistance juncting to ambient (1)	$R_{\theta JA}$	305	℃/W
Junction temperature	T_j	150	℃
Storage temperature range	T_{stg}	-65-150	℃

(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

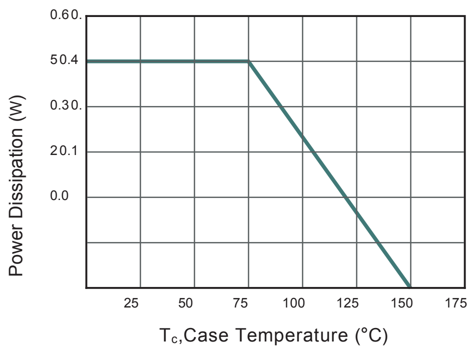
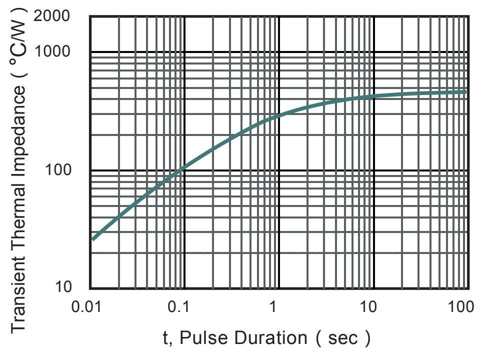
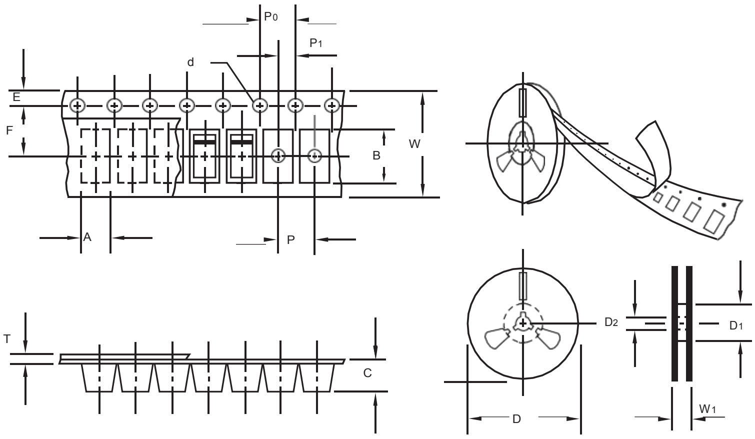


Fig.2 Typical Transient Thermal Impedance



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) 0
BZT52C2V0	WY	1.8	2.02.	2.152	5	100	120	.5
BZT52C2V2	WZ	2.082	22.4	.332.	5	100	120	0.7
BZT52C2V4	WX	.282.	2.73.	56	5	100	120	11
BZT52C2V7	W1	5	03.3	2.93	5	110	120	11
BZT52C3V0	W2	2.8	3.63.	.23.	5	120	50	11
BZT52C3V3	W3	3.13.	94.3	53.8	5	130	20	11
BZT52C3V6	W4	4	4.75.	4.14	5	130	10	1.5
BZT52C3V9	W5	3.7	15.6	.6	5	130	55	2.5
BZT52C4V3	W6	4	6.26.		5	130	22	
BZT52C4V7	W7	4.4	87.5	5	5	130	11	
BZT52C5V1	W8	4.8	8.29.	5.4	5	130		
BZT52C5V6	W9	5.2	110	6	5	80		
BZT52C6V2	WA	5.8	1112	6.67	5	50		33.
BZT52C6V8	WB	6.4	13	.27.	5	30	0.50	545
BZT52C7V5	WC	7	1516	98.7	5	30	.50.	67
BZT52C8V2	WD	7.7	18	9.6	5	30	50.5	89
BZT52C9V1	WE	8.5	2022		5	30	0.10	10
BZT52C10	WF	9.4	24	10.6	5	30	.10.	11
BZT52C11	WG	10.4	2730	11.6	5	30	10.1	12
BZT52C12	WH	11.4	33	12.7	5	35	0.10	13
BZT52C13	WI	12.4	3639	14.1	5	35	.10.	15
BZT52C15	WJ	13.8	43	15.6	5	40	10.1	17
BZT52C16	WK	15.3	4751	17.1	5	40	0.10	19
BZT52C18	WL	16.8	56	19.1	5	45	.10.	21
BZT52C20	WM	18.8	6268	21.2	5	50	10.1	23
BZT52C22	WN	20.8	75	23.3	5	55	0.10	25
BZT52C24	WO	22.8		25.6	5	60	.1	27
BZT52C27	WP	25.1		28.9	5	70		30
BZT52C30	WQ	28		32	5	80		33
BZT52C33	WR	31		35	5	80		36
BZT52C36	WS	34		38	5	90		39
BZT52C39	WT	37		41	2.5	100	22	43
BZT52C43	WU	40		46	2.5	130	21	47
BZT52C47	WV	44		50	2.5	150	1	52
BZT52C51	WW	48		54	2.5	180		57
BZT52C56	XW	52		60	2.5	180		
BZT52C62	6E	58		66	2.5	200	0.20	
BZT52C68	6F	64		72	2.5	250	.20.	
BZT52C75	6H	70		79	2.5	300	2	

(1) V_{ZT} is tested with pulses (20 ms)



unit:mm

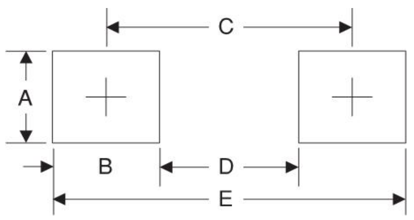
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D_1	min	50.0
Feed hole diameter	D_2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P_0	0.1	4.00
Embossment center	P_1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W_1	1.0	10.5

Note:Devices are packed in accor dance with EIA standar 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

Flow (wave) soldering (solder dipping)

Product	Peak Temperature	Dipping Time
Pb device	245℃±5℃	5sec±1sec
Pb-Free device	260℃+0/-5℃	5sec±1sec

This integrated circuit can be damaged by ESD BYSEMI Corporation recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedure can cause damage. ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.