



**THE DATASHEET OF  
BZT52-C39\_R1\_00001**





# BZT52-C2V4~BZT52-C75

## SURFACE MOUNT SILICON ZENER DIODES

**VOLTAGE** 2.4 to 75 Volt **POWER** 410 mWatt

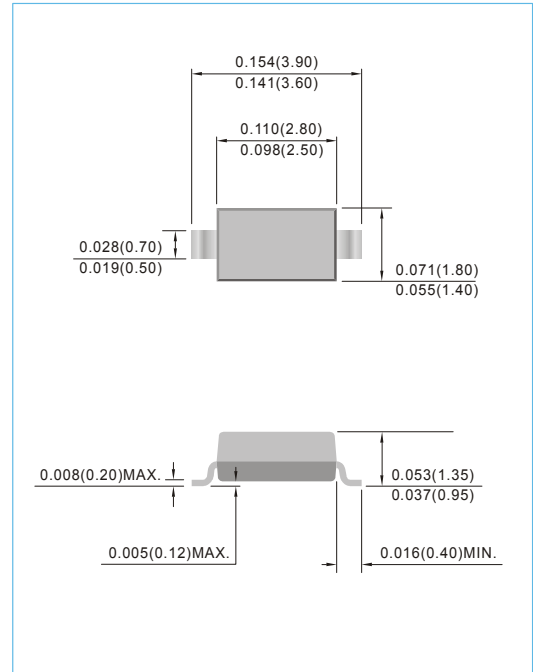
**SOD-123** Unit : inch(mm)

### FEATURES

- Planar Die construction
- 410mW Power Dissipation
- Zener Voltages from 2.4~75V
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: See Diagram Below
- Approx. Weight: 0.0004 ounces, 0.01 grams

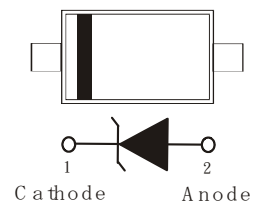


## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNITS
Maximum Power Dissipation (Note A) at 25°C	P <sub>D</sub>	410	mW
Typical Thermal Resistance	R <sub>JA</sub>	510	°C/W
Operating Junction Temperature and Storage Temperature Range	T <sub>J</sub>	-55 to +150	°C

### NOTES:

- Mounted on a FR-4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.
- Mounted on a FR-4 PCB, single-sided copper, mini pad.



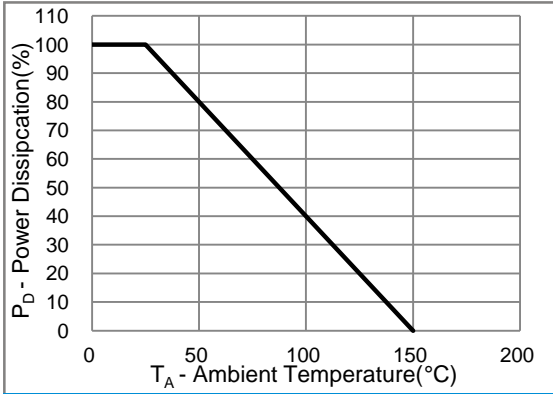


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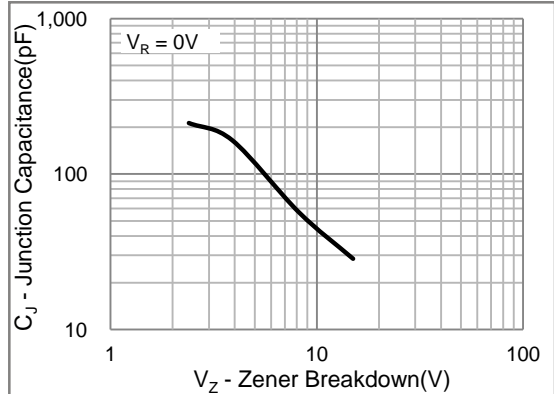
Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Marking Code
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>		
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	
<b>410 mWatts Zener Diodes</b>										
BZT52-C2V4	2.4	2.28	2.52	85	5.0	600	1.00	100	1.0	W1
BZT52-C2V7	2.7	2.57	2.84	83	5.0	600	1.00	75	1.0	W2
BZT52-C3	3.0	2.85	3.15	95	5.0	600	1.00	50	1.0	W3
BZT52-C3V3	3.3	3.14	3.47	95	5.0	600	1.00	25	1.0	W4
BZT52-C3V6	3.6	3.42	3.78	95	5.0	600	1.00	15	1.0	W5
BZT52-C3V9	3.9	3.71	4.10	95	5.0	600	1.00	10	1.0	W6
BZT52-C4V3	4.3	4.09	4.52	95	5.0	600	1.00	5.0	1.0	W7
BZT52-C4V7	4.7	4.47	4.94	78	5.0	500	1.00	5.0	1.0	W8
BZT52-C5V1	5.1	4.85	5.36	60	5.0	480	1.00	0.1	0.8	W9
BZT52-C5V6	5.6	5.32	5.88	40	5.0	400	1.00	0.1	1.0	WA
BZT52-C6V2	6.2	5.89	6.51	10	5.0	150	1.00	0.1	2.0	WB
BZT52-C6V8	6.8	6.46	7.14	8	5.0	80	1.00	0.1	3.0	WC
BZT52-C7V5	7.5	7.13	7.88	7	5.0	80	1.00	0.1	5.0	WD
BZT52-C8V2	8.2	7.79	8.61	7	5.0	80	1.00	0.1	6.0	WE
BZT52-C8V7	8.7	8.27	9.14	7	5.0	100	1.00	0.1	6.5	87C
BZT52-C9V1	9.1	8.65	9.56	10	5.0	100	1.00	0.1	7.0	WF
BZT52-C10	10	9.50	10.50	15	5.0	150	1.00	0.1	7.5	WG
BZT52-C11	11	10.45	11.55	20	5.0	150	1.00	0.1	8.5	WH
BZT52-C12	12	11.40	12.60	20	5.0	150	1.00	0.1	9.0	WI
BZT52-C13	13	12.35	13.65	25	5.0	170	1.00	0.1	10.0	WK
BZT52-C14	14	13.30	14.70	25	5.0	170	1.00	0.1	10.5	WJ
BZT52-C15	15	14.25	15.75	30	5.0	200	1.00	0.1	11.0	WL
BZT52-C16	16	15.20	16.80	40	5.0	200	1.00	0.1	12.0	WM
BZT52-C17	17	16.15	17.85	40	5.0	200	1.00	0.1	13.0	17C
BZT52-C18	18	17.10	18.90	50	5.0	225	1.00	0.1	14.0	WN
BZT52-C20	20	19.00	21.00	50	5.0	225	1.00	0.1	15.0	WO
BZT52-C22	22	20.90	23.10	55	5.0	250	1.00	0.1	17.0	WP
BZT52-C24	24	22.80	25.20	80	5.0	250	1.00	0.1	18.0	WR
BZT52-C27	27	25.65	28.35	80	5.0	300	1.00	0.1	20.0	WS
BZT52-C28	28	26.60	29.40	80	5.0	300	1.00	0.1	22.0	28C
BZT52-C30	30	28.50	31.50	80	5.0	300	1.00	0.1	22.5	WT
BZT52-C33	33	31.35	34.65	80	5.0	325	1.00	0.1	25.0	WU
BZT52-C36	36	34.20	37.80	90	5.0	350	1.00	0.1	27.0	WW
BZT52-C39	39	37.05	40.95	90	5.0	350	1.00	0.1	29.0	WX
BZT52-C43	43	40.85	45.15	100	5.0	375	1.00	0.1	32.0	WY
BZT52-C47	47	44.65	49.35	100	5.0	375	1.00	0.1	35.0	WZ
BZT52-C51	51	48.45	53.55	100	5.0	400	1.00	0.1	38.0	XA
BZT52-C56	56	53.20	58.80	135	2.5	1000	1.00	0.1	42.0	X2
BZT52-C62	62	58.90	65.10	150	2.5	1000	1.00	0.1	46.0	X3
BZT52-C68	68	64.60	71.40	200	2.5	1000	1.00	0.1	51.0	X4
BZT52-C75	75	71.25	78.75	250	2.5	1000	1.00	0.1	56.0	X5



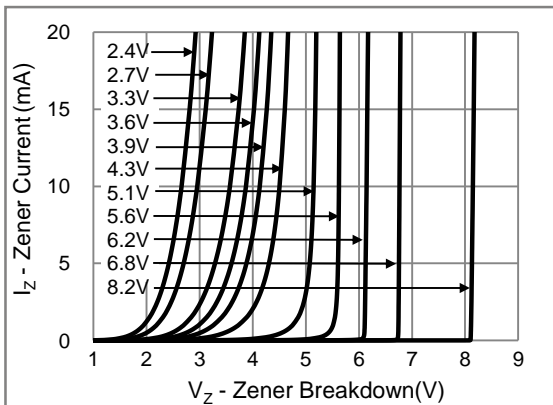
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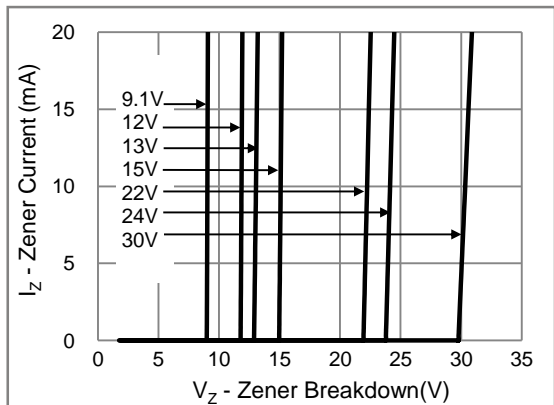
**Fig.1 Power Derating Curve**



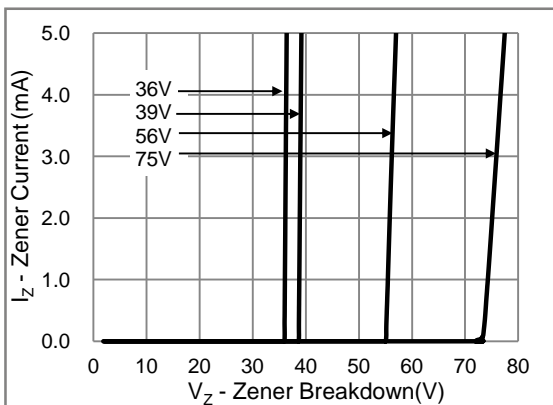
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Zener Breakdown**



**Fig.4 Typical Zener Breakdown**

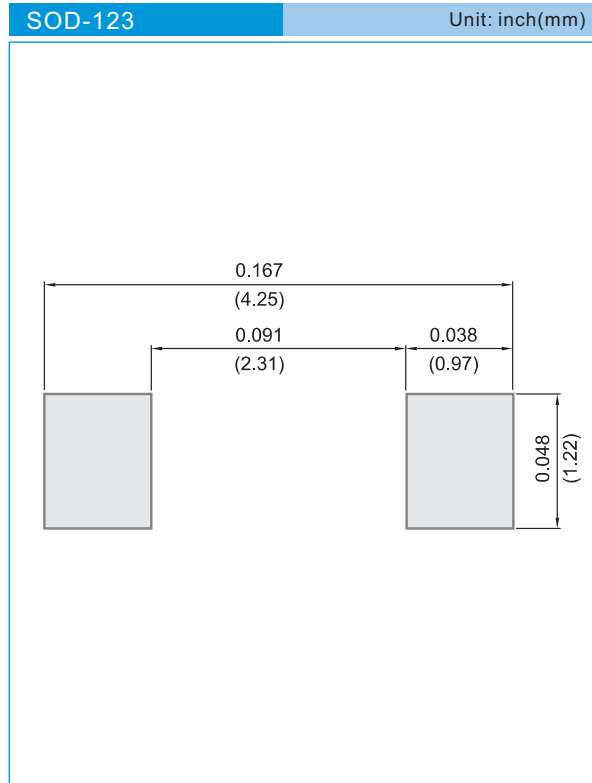


**Fig.5 Typical Zener Breakdown**



# BZT52-C2V4~BZT52-C75

## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information
  - T/R - 10K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel



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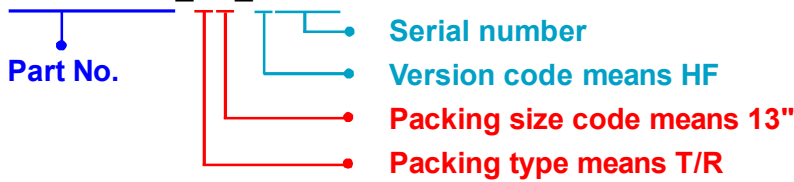
**Part No\_packing code\_Version**

BZT52-C2V4\_R1\_00001

BZT52-C2V4\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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