

DATA SHEET

BZT52-C2V4 SERIES

SURFACE MOUNT SILICON ZENER DIODES

VOLTAGE 2.4 to 39 Volts **POWER** 410 mWatts

SOD-123

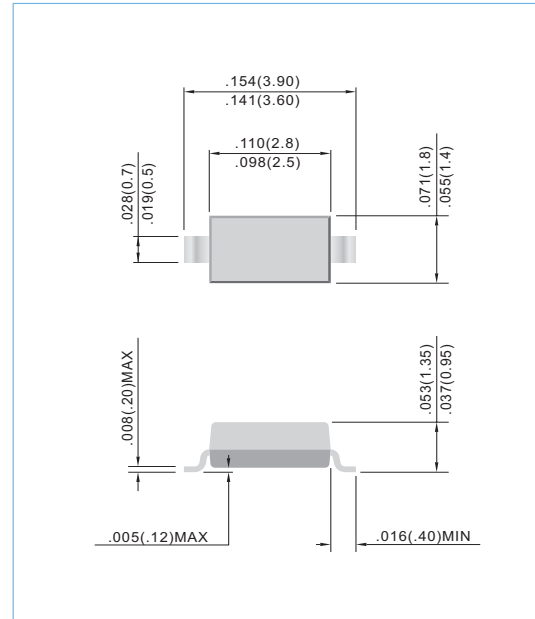
Unit: inch (mm)

FEATURES

- Planar Die construction
- 410mW Power Dissipation
- Zener Voltages from 2.4~39V
- Ideally Suited for Automated Assembly Processes
- Pb free product are available : 99% Sn above can meet RoHS environment substance directive request

MECHANICAL DATA

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: See Diagram Below
- Approx. Weight: 0.008 grams
- Mounting Position: Any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Maximum Forward Voltage Drop at IF=10mA	V _F	0.9	V
Power Dissipation (Notes A) at 25°C	P _D	410	mW
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) (Notes B)	I _{FSM}	2.0	Amps
Operating Junction and Storage Temperature Range	T _J	-55 to +150	°C

NOTES:

A. Mounted on 5.0mm²(.013mm thick) land areas.

B. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

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Part Number	Marking Code	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current	
		V _Z @ I _{ZT}			Z _{zT} @ I _{ZT}		Z _{zK} @ I _{zK}		I _R @ V _R	
		Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V
410 mWatts Zener Diodes										
BZT52-C2V4	W1	2.4	2.28	2.52	85	5.0	600	1.00	100	1.0
BZT52-C2V7	W2	2.7	2.57	2.84	83	5.0	500	1.00	75	1.0
BZT52-C3	W3	3	2.85	3.15	95	5.0	500	1.00	50	1.0
BZT52-C3V3	W4	3.3	3.14	3.47	95	5.0	500	1.00	25	1.0
BZT52-C3V6	W5	3.6	3.42	3.78	95	5.0	500	1.00	15	1.0
BZT52-C3V9	W6	3.9	3.71	4.10	95	5.0	500	1.00	10	1.0
BZT52-C4V3	W7	4.3	4.09	4.52	95	5.0	500	1.00	5.0	1.0
BZT52-C4V7	W8	4.7	4.47	4.94	78	5.0	500	1.00	5.0	1.0
BZT52-C5V1	W9	5.1	4.85	5.36	60	5.0	480	1.00	0.1	0.8
BZT52-C5V6	WA	5.6	5.32	5.88	40	5.0	400	1.00	0.1	1.0
BZT52-C6V2	WB	6.2	5.89	6.51	10	5.0	200	1.00	0.1	2.0
BZT52-C6V8	WC	6.8	6.46	7.14	8	5.0	150	1.00	0.1	3.0
BZT52-C7V5	WD	7.5	7.13	7.88	7	5.0	50	1.00	0.1	5.0
BZT52-C8V2	WE	8.2	7.79	8.61	7	5.0	50	1.00	0.1	6.0
BZT52-C9V1	WF	9.1	8.65	9.56	10	5.0	50	1.00	0.1	7.0
BZT52-C10	WG	10	9.50	10.50	15	5.0	70	1.00	0.1	7.5
BZT52-C11	WH	11	10.45	11.55	20	5.0	70	1.00	0.1	8.5
BZT52-C12	WI	12	11.40	12.60	20	5.0	90	1.00	0.1	9.0
BZT52-C13	WK	13	12.35	13.65	25	5.0	110	1.00	0.1	10.0
BZT52-C15	WL	15	14.25	15.75	30	5.0	110	1.00	0.1	11.0
BZT52-C16	WM	16	15.20	16.80	40	5.0	170	1.00	0.1	12.0
BZT52-C18	WN	18	17.10	18.90	50	5.0	170	1.00	0.1	14.0
BZT52-C20	WO	20	19.00	21.00	50	5.0	220	1.00	0.1	15.0
BZT52-C22	WP	22	20.90	23.10	55	5.0	220	1.00	0.1	17.0
BZT52-C24	WR	24	22.80	25.20	80	5.0	220	1.00	0.1	18.0
BZT52-C27	WS	27	25.65	28.35	80	5.0	250	1.00	0.1	20.0
BZT52-C30	WT	30	28.50	31.50	80	5.0	250	1.00	0.1	22.5
BZT52-C33	WU	33	31.35	34.65	80	5.0	250	1.00	0.1	25.0
BZT52-C36	WW	36	34.20	37.80	90	5.0	250	1.00	0.1	27.0
BZT52-C39	WX	39	37.05	40.95	90	5.0	300	1.00	0.1	29.0

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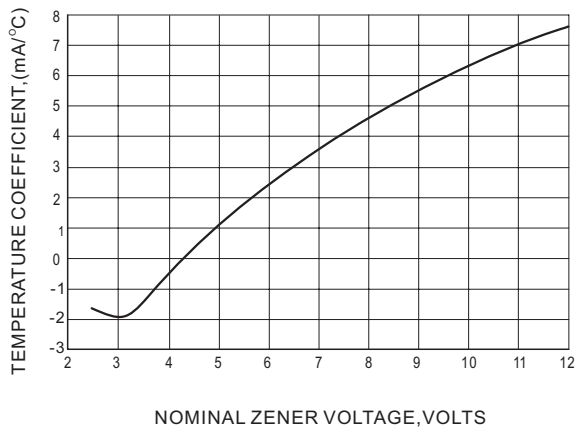


Fig.1 TEMPERATURE COEFFICIENTS

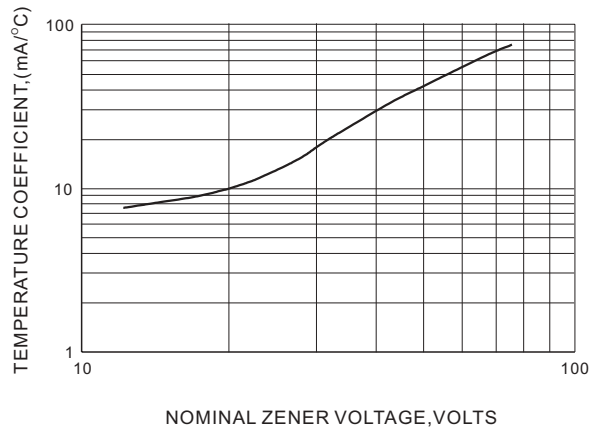


Fig.2 TEMPERATURE COEFFICIENTS

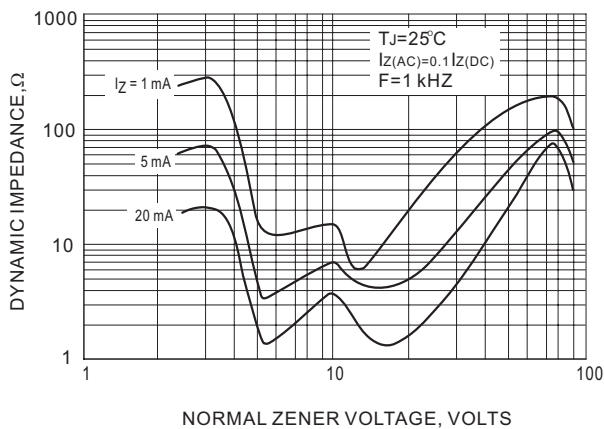


Fig.3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

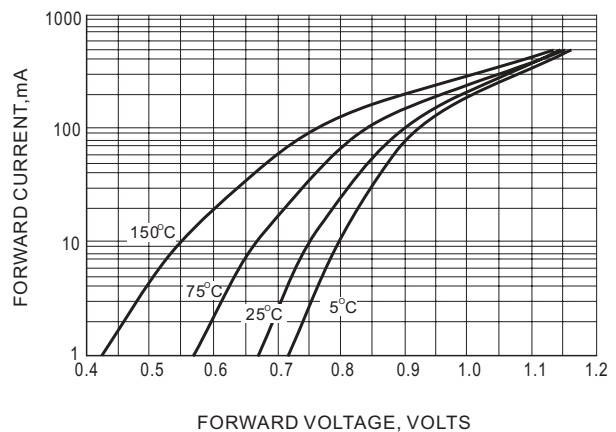


Fig.4 TYPICAL FORWARD VOLTAGE

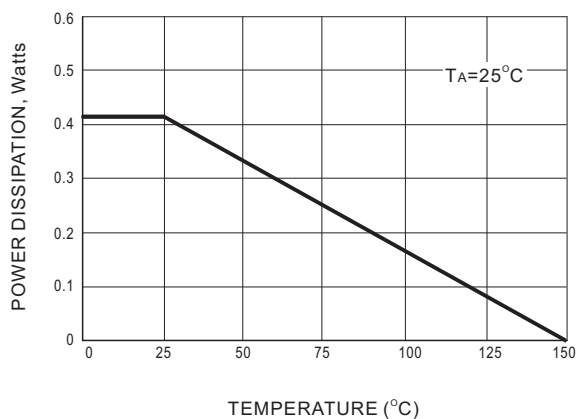


Fig.5 STEADY STATE POWER DERATING

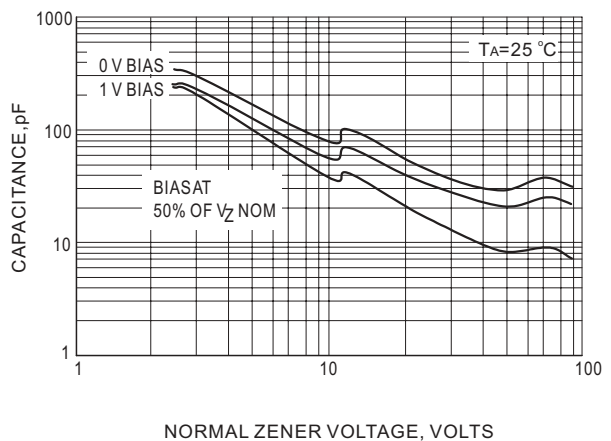


Fig.6 TYPICAL CAPACITANCE

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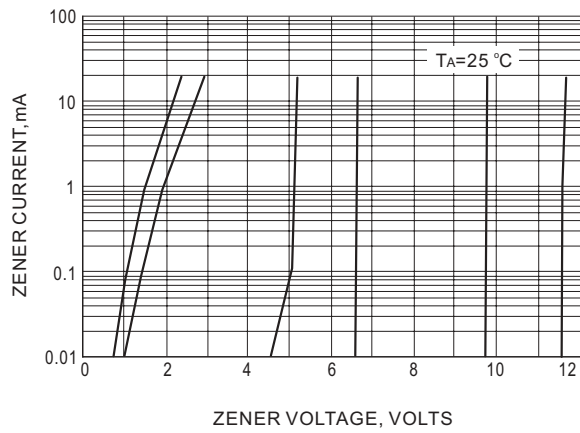


Fig.7 ZENER VOLTAGE VERSUS ZENER CURRENT

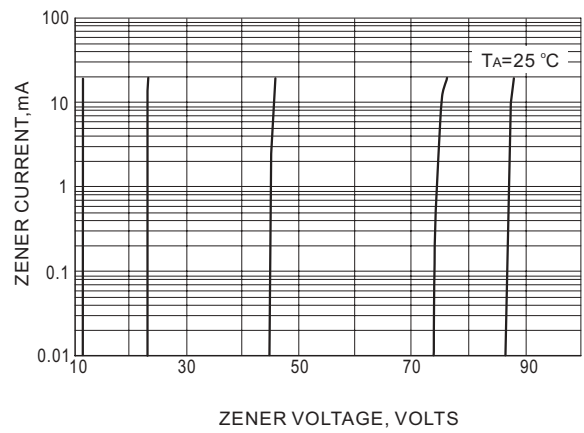


Fig.8 ZENER VOLTAGE VERSUS ZENER CURRENT

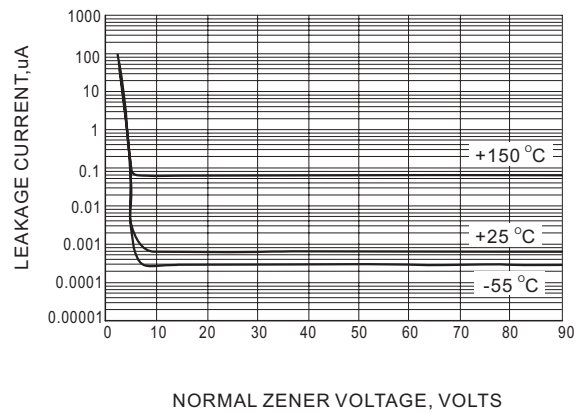
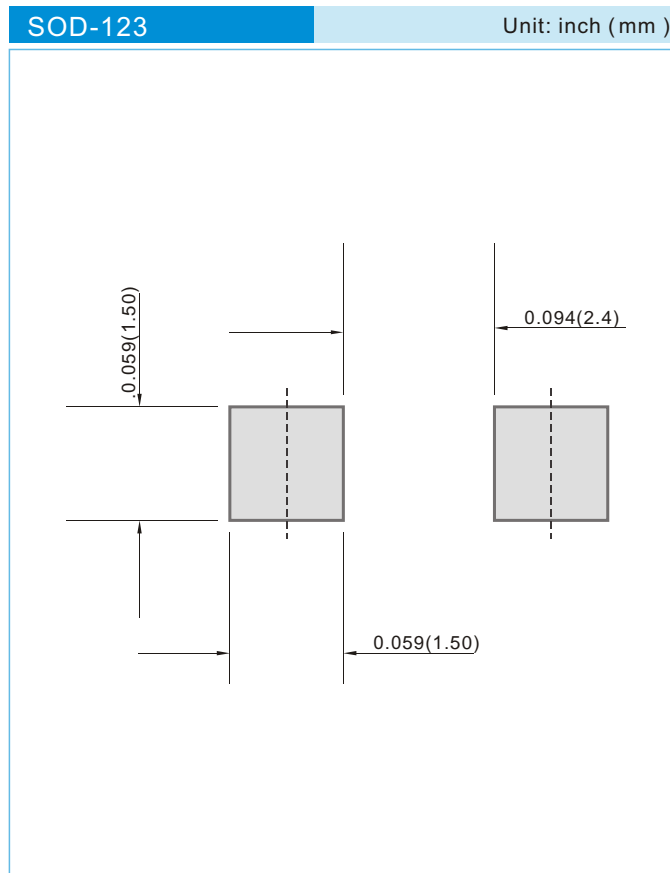


Fig.9 TYPICAL LEAKAGE CURRENT

MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information

T/R - 10K per 13" plastic Reel

T/R - 3.0K per 7" plastic Reel

LEGAL STATEMENT

IMPORTANT NOTICE

This information is intended to unambiguously characterize the product in order to facilitate the customer's evaluation of the device in the application. The information will help the customer's technical experts determine that the device is compatible and interchangeable with similar devices made by other vendors. The information in this data sheet is believed to be reliable and accurate. The specifications and information herein are subject to change without notice. New products and improvements in products and product characterization are constantly in process. Therefore, the factory should be consulted for the most recent information and for any special characteristics not described or specified.

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