



DATA SHEET

BZX84C SERIES

SURFACE MOUNT SILICON ZENER DIODES

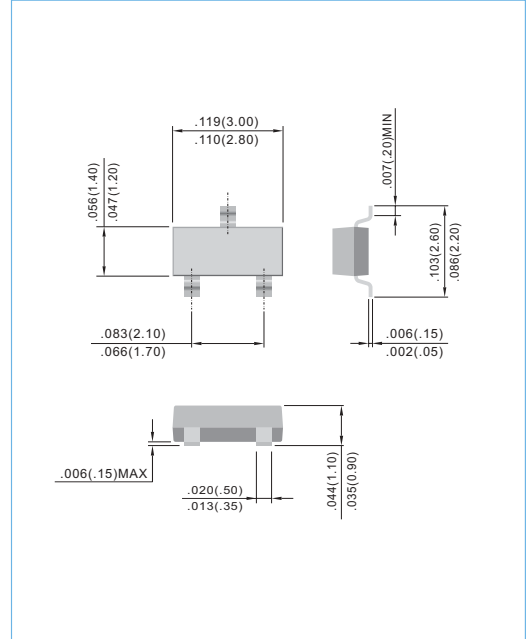
VOLTAGE	2.4 - 39 Volts	POWER	410 mWatts	SOT-23	Unit: inch (mm)
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FEATURES

- Planar Die construction
- 410mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Both normal and Pb free product are available :
Normal : 80~95% Sn, 5~20% Pb
Pb free: 98.5% Sn above

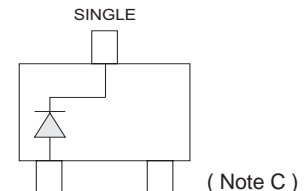
MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- 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 $I_F=10\text{mA}$	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_{SM}	2.0	Amps
Operating Junction and Storage Temperature Range	T_J	-55 to +150	$^\circ\text{C}$



NOTES:

- Mounted on 5.0mm^2 (.013mm thick) land areas.
- Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
- For Structure Purpose only.



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	uA	V
410 mWatts Zener Diodes										
BZX84C2V4	W1	2.4	2.28	2.52	100	5.0	600	1.00	50	1.0
BZX84C2V7	W2	2.7	2.57	2.84	100	5.0	600	1.00	20	1.0
BZX84C3	W3	3	2.85	3.15	95	5.0	600	1.00	10	1.0
BZX84C3V3	W4	3.3	3.14	3.47	95	5.0	600	1.00	5.0	1.0
BZX84C3V6	W5	3.6	3.42	3.78	90	5.0	600	1.00	5.0	1.0
BZX84C3V9	W6	3.9	3.71	4.10	90	5.0	600	1.00	3.0	1.0
BZX84C4V3	W7	4.3	4.09	4.52	90	5.0	600	1.00	3.0	1.0
BZX84C4V7	W8	4.7	4.47	4.94	80	5.0	500	1.00	3.0	2.0
BZX84C5V1	W9	5.1	4.85	5.36	60	5.0	480	1.00	2.0	2.0
BZX84C5V6	WA	5.6	5.32	5.88	40	5.0	400	1.00	1.0	2.0
BZX84C6V2	WB	6.2	5.89	6.51	10	5.0	150	1.00	3.0	4.0
BZX84C6V8	WC	6.8	6.46	7.14	15	5.0	80	1.00	2.0	4.0
BZX84C7V5	WD	7.5	7.13	7.88	15	5.0	80	1.00	1.0	5.0
BZX84C8V2	WE	8.2	7.79	8.61	15	5.0	80	1.00	0.7	5.0
BZX84C9V1	WF	9.1	8.65	9.56	15	5.0	100	1.00	0.5	6.0
BZX84C10	WG	10	9.50	10.50	20	5.0	150	1.00	0.2	7.0
BZX84C11	WH	11	10.45	11.55	20	5.0	150	1.00	0.1	8.0
BZX84C12	WI	12	11.40	12.60	25	5.0	150	1.00	0.1	8.0
BZX84C13	WK	13	12.35	13.65	30	5.0	170	1.00	0.1	8.0
BZX84C15	WL	15	14.25	15.75	30	5.0	200	1.00	0.1	10.5
BZX84C16	WM	16	15.20	16.80	40	5.0	200	1.00	0.1	11.2
BZX84C18	WN	18	17.10	18.90	45	5.0	225	1.00	0.1	12.6
BZX84C20	WO	20	19.00	21.00	55	5.0	225	1.00	0.1	14.0
BZX84C22	WP	22	20.90	23.10	55	5.0	250	1.00	0.1	15.4
BZX84C24	WR	24	22.80	25.20	70	5.0	250	1.00	0.1	16.8
BZX84C27	WS	27	25.65	28.35	80	5.0	300	1.00	0.1	18.9
BZX84C30	WT	30	28.50	31.50	80	5.0	300	1.00	0.1	21.0
BZX84C33	WU	33	31.35	34.65	80	5.0	325	1.00	0.1	23.1
BZX84C36	WW	36	34.20	37.80	90	5.0	350	1.00	0.1	25.2
BZX84C39	WX	39	37.05	40.95	130	5.0	350	1.00	0.1	27.3

STANDARD VOLTAGE TOLERANCE IS ± 5% AND :

SUFFIX " B " FOR ± 2%

SUFFIX " C " FOR ± 5%

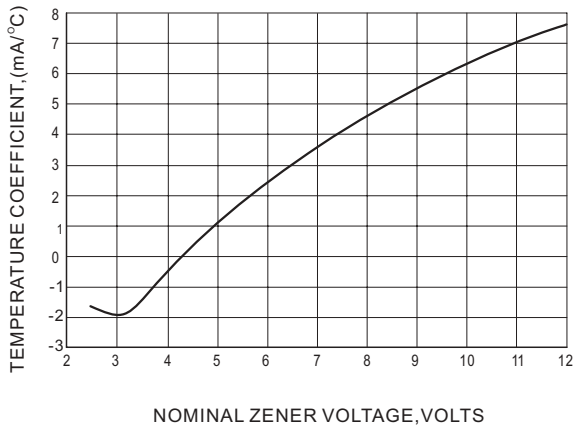


Fig.1 TEMPERATURE COEFFICIENTS

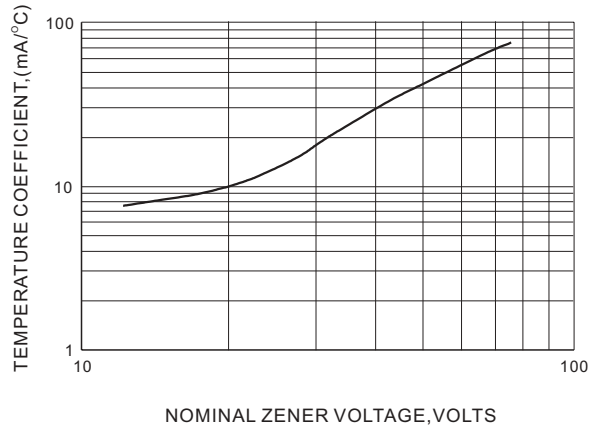


Fig.2 TEMPERATURE COEFFICIENTS

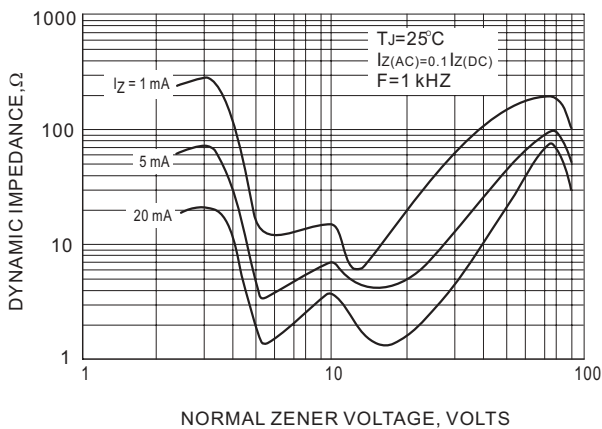


Fig.3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

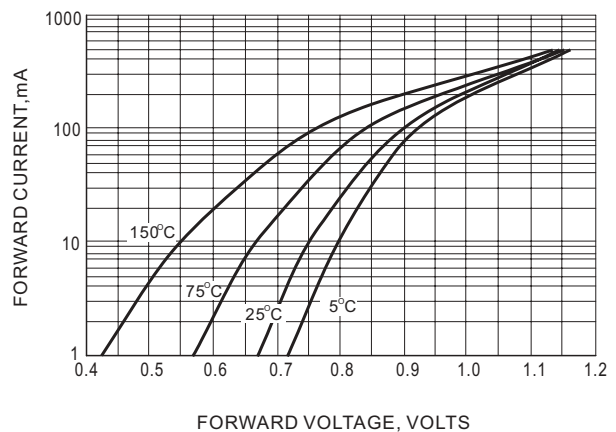


Fig.4 TYPICAL FORWARD VOLTAGE

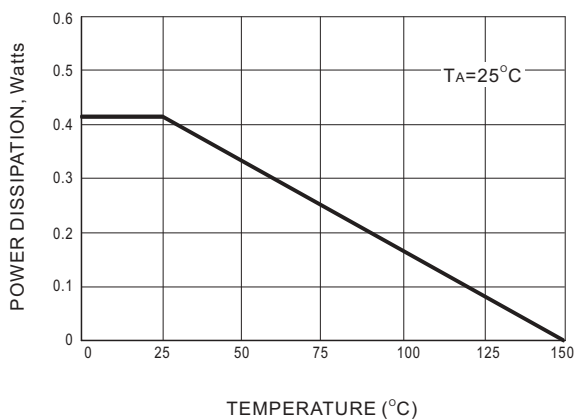


Fig.5 STEADY STATE POWER DERATING

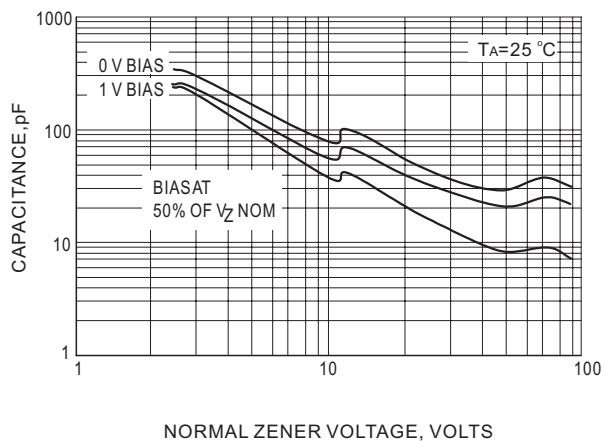


Fig.6 TYPICAL CAPACITANCE

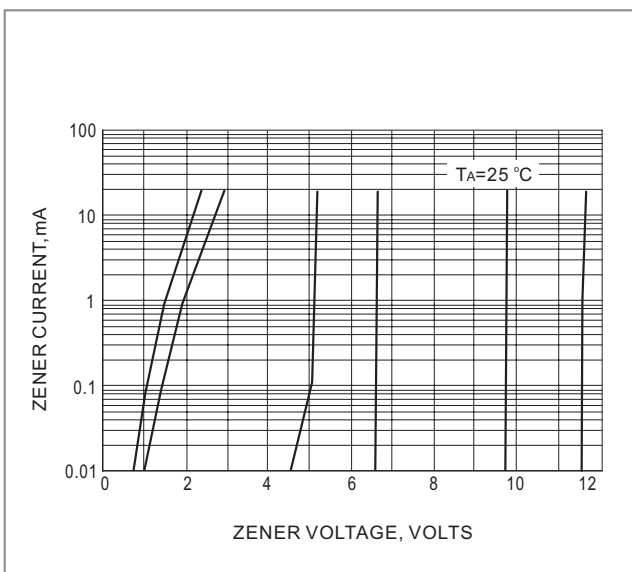


Fig. 7 ZENER VOLTAGE VERSUS ZENER CURRENT

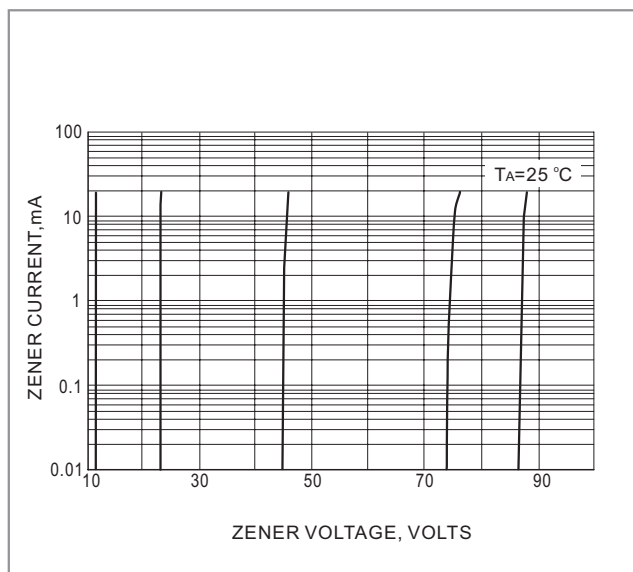


Fig. 8 ZENER VOLTAGE VERSUS ZENER CURRENT

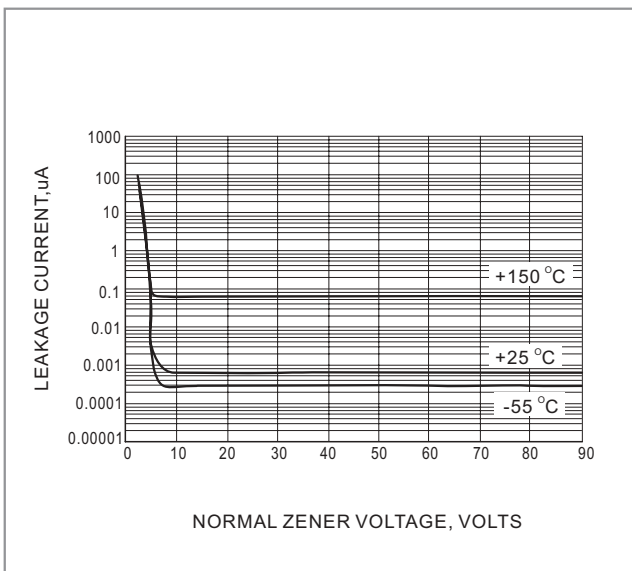


Fig. 9 TYPICAL LEAKAGE CURRENT