

1. DATA SHEET

BZX84B SERIES

SURFACE MOUNT SILICON ZENER DIODES

VOLTAGE 4.3 - 39 Volts

POWER 410 mWatts

SOT-23

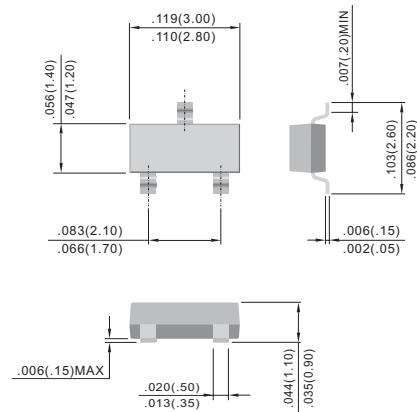
Unit: inch (mm)

FEATURES

- Planar Die construction
- 410mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

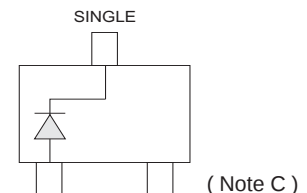
MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202G, 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_{FSM}	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	V _Z @ I _{ZT}			Maximum Zener Impedance				Maximum Leakage Current		Package
					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 mWatt ZENER DIODES											
BZX84B4V3	4B3	4.3	4.21	4.39	90	5.0	600	1.00	3.0	1.0	SOT-23
BZX84B4V7	4B7	4.7	4.61	4.79	80	5.0	500	1.00	3.0	2.0	SOT-23
BZX84B5V1	5B1	5.1	5.00	5.20	60	5.0	480	1.00	2.0	2.0	SOT-23
BZX84B5V6	5B6	5.6	5.49	5.71	40	5.0	400	1.00	1.0	2.0	SOT-23
BZX84B6V2	6B2	6.2	6.08	6.32	10	5.0	150	1.00	3.0	4.0	SOT-23
BZX84B6V8	6B8	6.8	6.66	6.94	15	5.0	80	1.00	2.0	4.0	SOT-23
BZX84B7V5	7B5	7.5	7.35	7.65	15	5.0	80	1.00	1.0	5.0	SOT-23
BZX84B8V2	8B2	8.2	8.04	8.36	15	5.0	80	1.00	0.7	5.0	SOT-23
BZX84B9V1	9B1	9.1	8.92	9.28	15	5.0	100	1.00	0.5	6.0	SOT-23
BZX84B10	10B	10	9.80	10.20	20	5.0	150	1.00	0.2	7.0	SOT-23
BZX84B11	11B	11	10.78	11.22	20	5.0	150	1.00	0.1	8.0	SOT-23
BZX84B12	12B	12	11.76	12.24	25	5.0	150	1.00	0.1	8.0	SOT-23
BZX84B13	13B	13	12.74	13.26	30	5.0	170	1.00	0.1	8.0	SOT-23
BZX84B14	14B	14	13.72	14.28	30	5.0	170	1.00	0.1	10.0	SOT-23
BZX84B15	15B	15	14.70	15.30	30	5.0	200	1.00	0.1	10.5	SOT-23
BZX84B16	16B	16	15.68	16.32	40	5.0	200	1.00	0.1	11.2	SOT-23
BZX84B17	17B	17	16.66	17.34	40	5.0	200	1.00	0.1	12.2	SOT-23
BZX84B18	18B	18	17.64	18.36	45	5.0	225	1.00	0.1	12.6	SOT-23
BZX84B20	20B	20	19.60	20.40	55	5.0	225	1.00	0.1	14.0	SOT-23
BZX84B22	22B	22	21.56	22.44	55	5.0	250	1.00	0.1	15.4	SOT-23
BZX84B24	24B	24	23.52	24.48	70	5.0	250	1.00	0.1	16.8	SOT-23
BZX84B27	27B	27	26.46	27.54	80	5.0	300	1.00	0.1	18.9	SOT-23
BZX84B28	28B	28	27.44	28.56	80	5.0	300	1.00	0.1	20.5	SOT-23
BZX84B30	30B	30	29.40	30.60	80	5.0	300	1.00	0.1	21.0	SOT-23
BZX84B33	33B	33	32.34	33.66	80	5.0	325	1.00	0.1	23.1	SOT-23
BZX84B36	36B	36	35.28	36.72	90	5.0	350	1.00	0.1	25.2	SOT-23
BZX84B39	39B	39	38.22	39.8	130	5.0	350	1.00	0.1	27.3	SOT-23

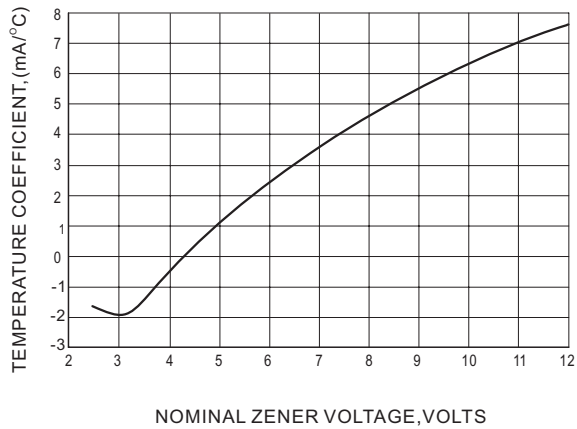


Fig.1 TEMPERATURE COEFFICIENTS

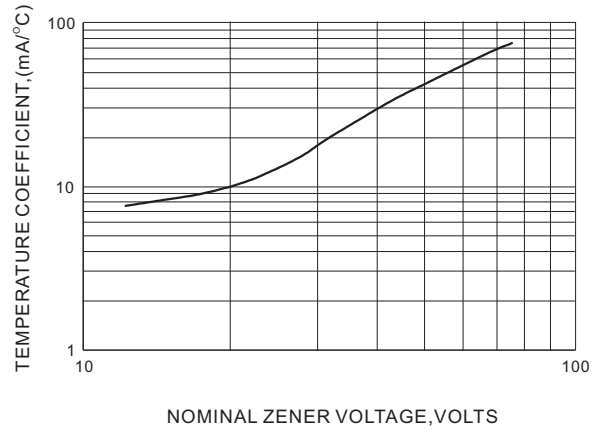


Fig.2 TEMPERATURE COEFFICIENTS

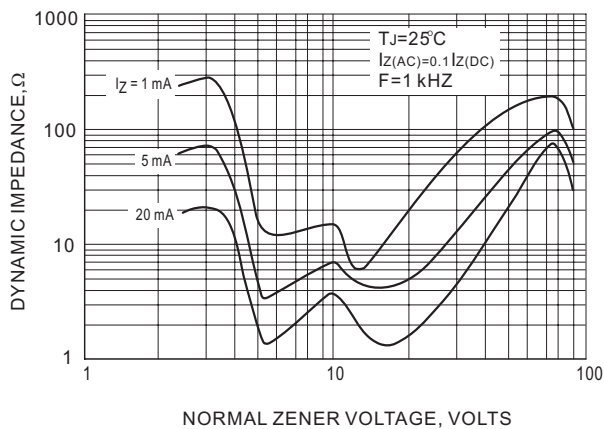


Fig.3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

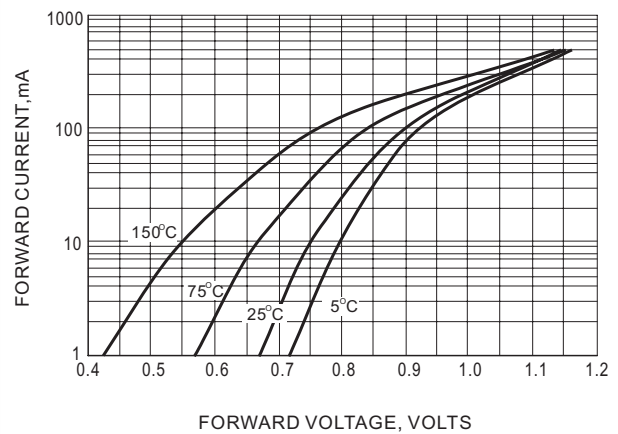


Fig.4 TYPICAL FORWARD VOLTAGE

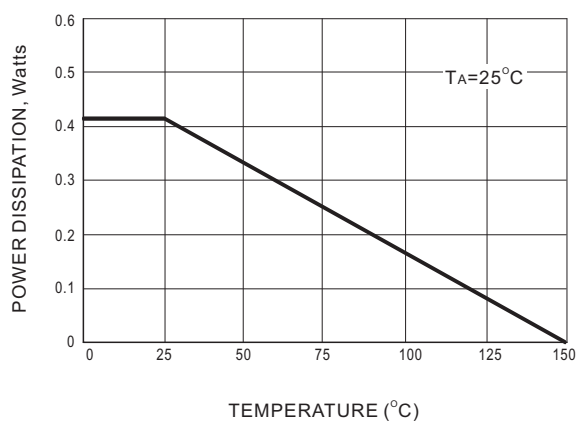


Fig.5 STEADY STATE POWER DERATING

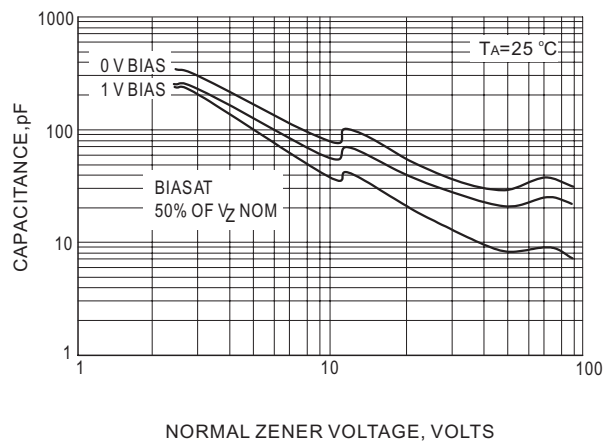


Fig.6 TYPICAL CAPACITANCE

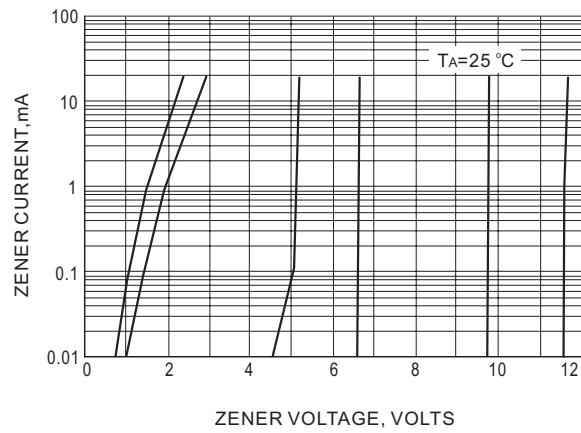


Fig. 7 ZENER VOLTAGE VERSUS ZENER CURRENT

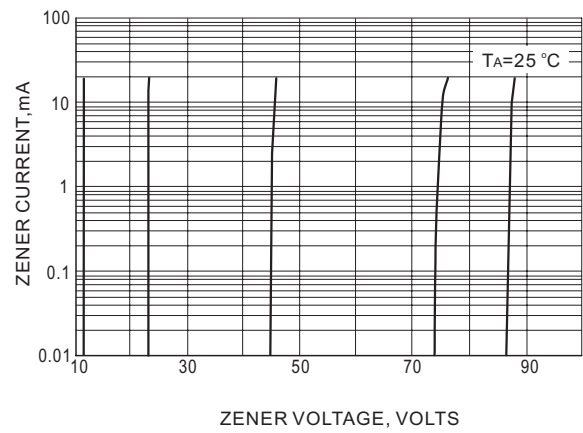


Fig. 8 ZENER VOLTAGE VERSUS ZENER CURRENT

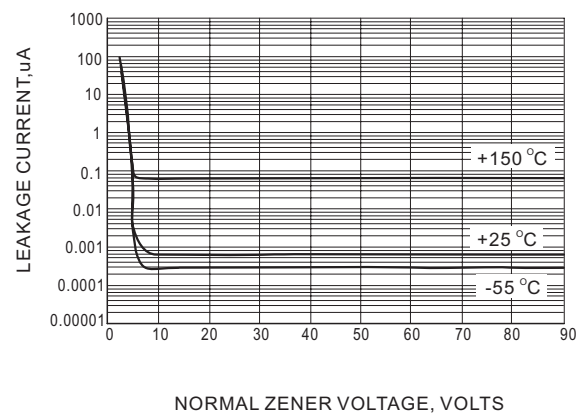


Fig. 9 TYPICAL LEAKAGE CURRENT