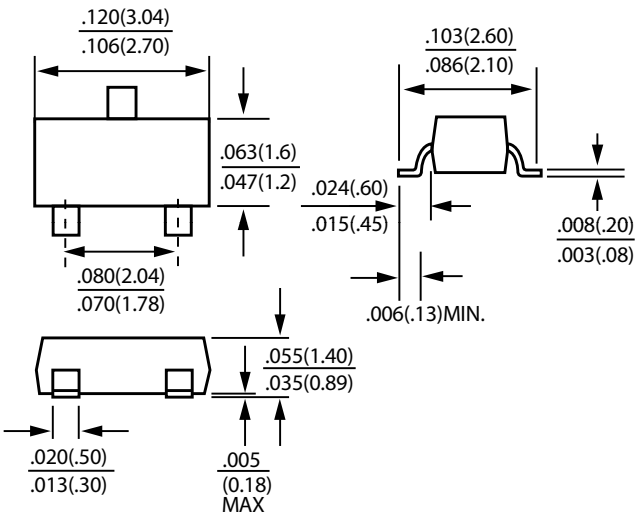
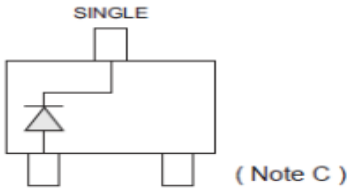
BZX84C SERIES

500mW Zener Diode



SOT-23

Dimensions in inches and (millimeters)



Features

- Planar Die construction
- 500mW Power Dissipation
- Zener Voltages from 2.4V - 51V
- Ultra-Small Surface Mount Package Power dissipation

Mechanical Data

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202E, Method 20
- Polarity: See Diagram Below
- Approx. Weight: 0.008 grams
- Mounting Position: Any

Absolute Maximum Ratings			
Parameter	**Symbol**	**Value**	**UNIT**
Power Dissipation (Note 1) at Tamb=25°C	P_{TOT}	500	mW
Operating Junction and Storage Temperature Range	T_J ,T_S	-55 to +150	°C
Valid provided that leads at a distance of 10mm from case kept at ambient temperature.			

Note : 1.Mounted on 5.0mm^2(.013mm thick) land areas.

BZX84C SERIES

500mW Zener Diode

500 mWatt Zener Diodes / SOT-23

Part Number	Nominal Zener Voltage				Max. Zener Impedance				Max. Reverse Leakage Current		Marking Code
	V_Z @ I_{ZT}				Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R @ V_R		
	Nom. V	Min. V	Max. V	mA	Ω	mA	Ω	mA	uA	V	
BZX84C2V4	2.4	2.28	2.52	5.0	100.0	5.0	600	1.00	50.0	1.0	W1 / Z11
BZX84C2V7	2.7	2.57	2.84	5.0	100.0	5.0	600	1.00	20.0	1.0	W2 / Z12
BZX84C3	3.0	2.85	3.15	5.0	95.0	5.0	600	1.00	10.0	1.0	W3 / Z13
BZX84C3V3	3.3	3.14	3.47	5.0	95.0	5.0	600	1.00	5.0	1.0	W4 / Z14
BZX84C3V6	3.6	3.42	3.78	5.0	90.0	5.0	600	1.00	5.0	1.0	W5 / Z15
BZX84C3V9	3.9	3.71	4.10	5.0	90.0	5.0	600	1.00	3.0	1.0	W6 / Z16
BZX84C4V3	4.3	4.09	4.52	5.0	90.0	5.0	600	1.00	3.0	1.0	W7 / Z17
BZX84C4V7	4.7	4.47	4.94	5.0	80.0	5.0	500	1.00	3.0	2.0	W8 / Z1
BZX84C5V1	5.1	4.85	5.36	5.0	60.0	5.0	480	1.00	2.0	2.0	W9 / Z2
BZX84C5V6	5.6	5.32	5.88	5.0	40.0	5.0	400	1.00	1.0	2.0	WA / Z3
BZX84C6V2	6.2	5.89	6.51	5.0	10.0	5.0	150	1.00	3.0	4.0	WB / Z4
BZX84C6V8	6.8	6.46	7.14	5.0	15.0	5.0	80	1.00	2.0	4.0	WC / Z5
BZX84C7V5	7.5	7.13	7.88	5.0	15.0	5.0	80	1.00	1.0	5.0	WD / Z6
BZX84C8V2	8.2	7.79	8.61	5.0	15.0	5.0	80	1.00	0.7	5.0	WE / Z7
BZX84C9V1	9.1	8.65	9.56	5.0	15.0	5.0	100	1.00	0.5	6.0	WF / Z8
BZX84C10	10.0	9.50	10.50	5.0	20.0	5.0	150	1.00	0.2	7.0	WG / Z9
BZX84C11	11.0	10.45	11.55	5.0	20.0	5.0	150	1.00	0.1	8.0	WH / Y1
BZX84C12	12.0	11.40	12.60	5.0	25.0	5.0	150	1.00	0.1	8.0	WI / Y2
BZX84C13	13.0	12.35	13.65	5.0	30.0	5.0	170	1.00	0.1	8.0	WK / Y3
BZX84C15	15.0	14.25	15.75	5.0	30.0	5.0	200	1.00	0.1	10.5	WL / Y4
BZX84C16	16.0	15.20	16.80	5.0	40.0	5.0	200	1.00	0.1	11.2	WM / Y5
BZX84C18	18.0	17.10	18.90	5.0	45.0	5.0	225	1.00	0.1	12.6	WN / Y6
BZX84C20	20.0	19.00	21.00	5.0	55.0	5.0	225	1.00	0.1	14.0	WO / Y7
BZX84C22	22.0	20.90	23.10	5.0	55.0	5.0	250	1.00	0.1	15.4	WP / Y8
BZX84C24	24.0	22.80	25.20	5.0	70.0	5.0	250	1.00	0.1	16.8	WR / Y9
BZX84C27	27.0	25.65	28.35	5.0	80.0	5.0	300	1.00	0.1	18.9	WS / Y10
BZX84C30	30.0	28.50	31.50	5.0	80.0	5.0	300	1.00	0.1	21.0	WT / Y11
BZX84C33	33.0	31.35	34.65	5.0	80.0	5.0	235	1.00	0.1	23.1	WU / Y12
BZX84C36	36.0	34.20	37.80	5.0	90.0	5.0	350	1.00	0.1	25.2	WW / Y13
BZX84C39	39.0	37.05	40.95	5.0	130.0	5.0	350	1.00	0.1	27.3	WX / Y14
BZX84C43	43.0	40.85	45.15	5.0	150.0	5.0	375	1.00	0.1	30.1	WY / Y15
BZX84C47	47.0	44.65	49.35	5.0	170.0	5.0	375	1.00	0.1	32.9	WZ / Y16
BZX84C51	51.0	48.45	53.55	5.0	100.0	5.0	400	1.00	0.1	35.7	XA / Y17

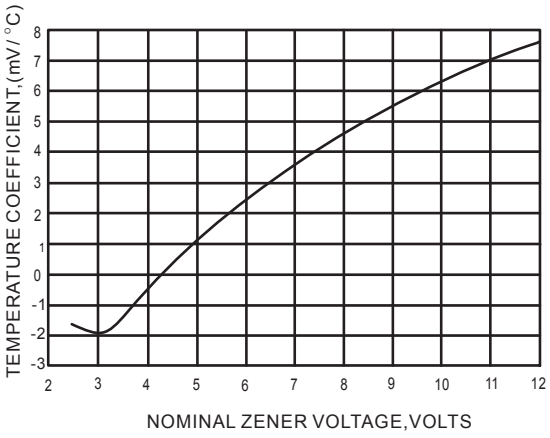


Fig.1 TEMPERATURE COEFFICENTS

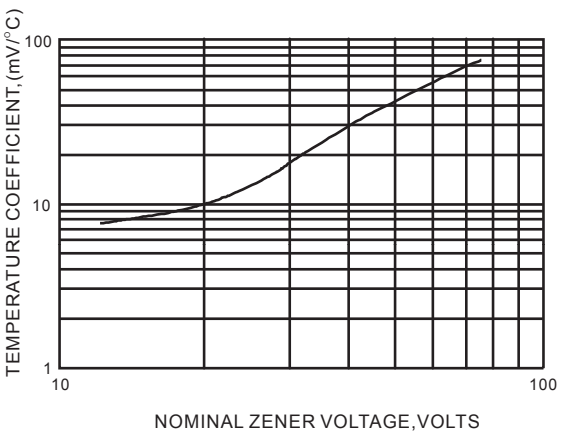


Fig.2 TEMPERATURE COEFFICENTS

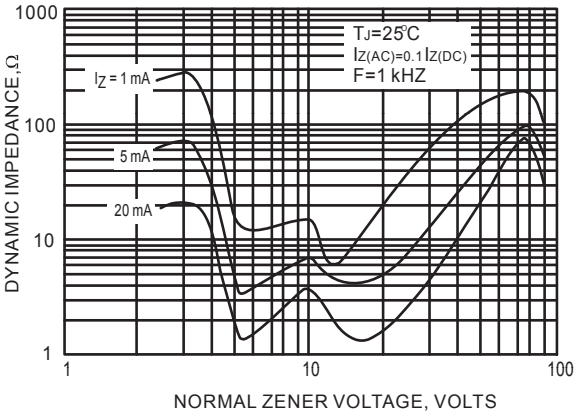


Fig.3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

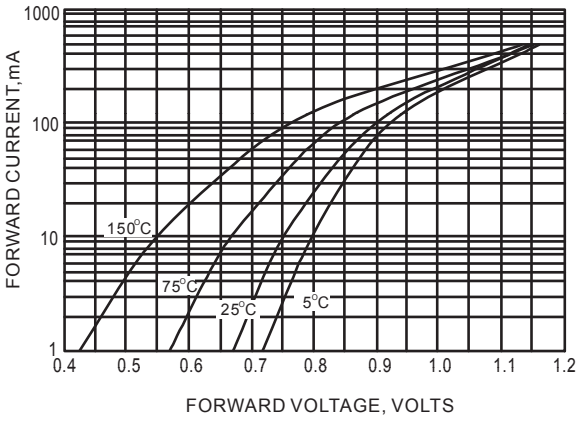


Fig.4 TYPICAL FORWARD VOLTAGE

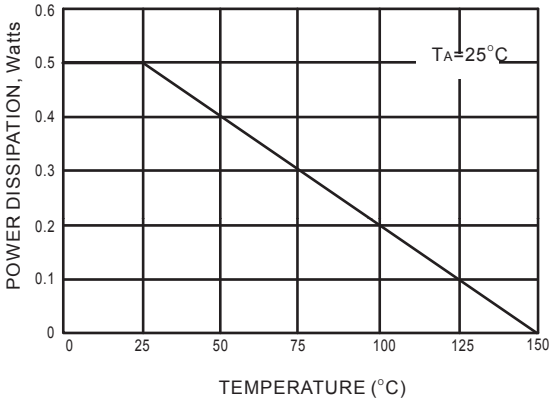


Fig.5 STEADY STATE POWER DERATING

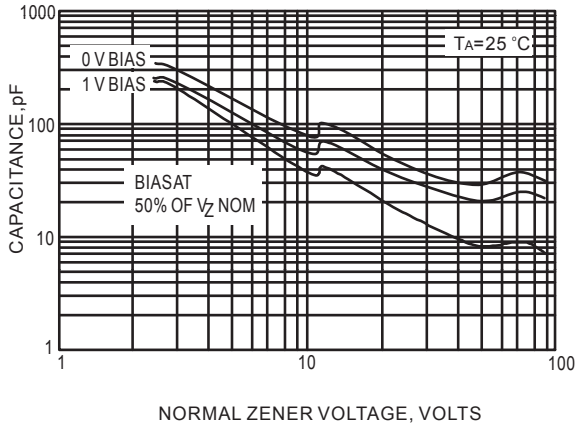


Fig.6 TYPICAL CAPACITANCE

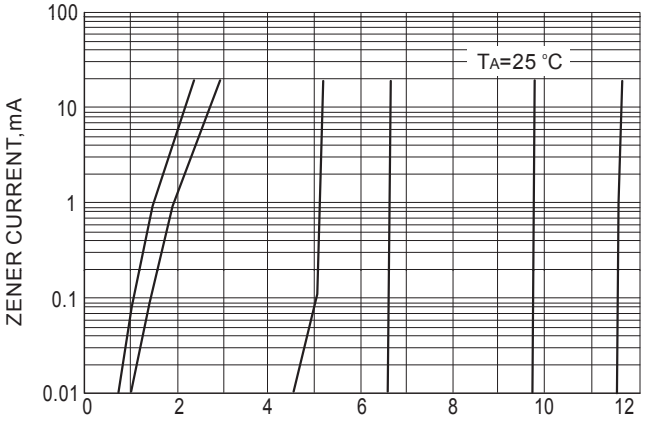


Fig.7 ZENER VOLTAGE VERSUS ZENER CURRENT

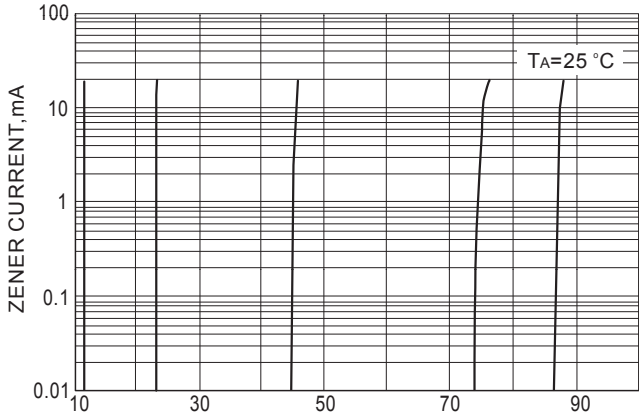


Fig.8 ZENER VOLTAGE VERSUS ZENER CURRENT

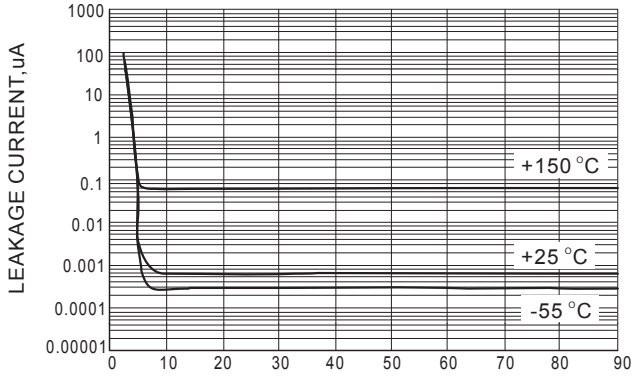


Fig.9 TYPICAL LEAKAGE CURRENT