PANJIT SEMI CONDUCTOR

1. DATA SHEET

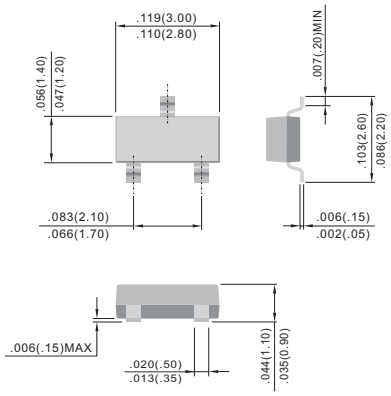
BZX84B SERIES

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

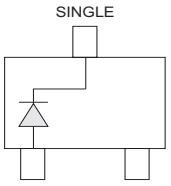


MECHANICAL DATA

- 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 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



(Note 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.

C. 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	O	mA	O	mA	uA	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

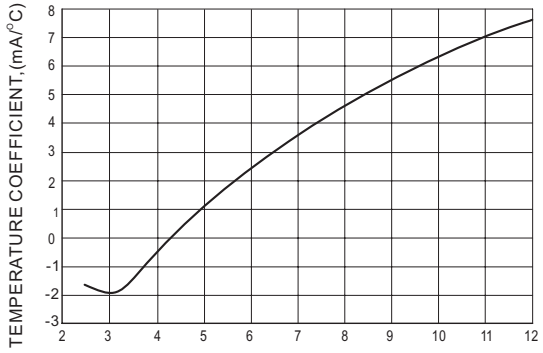


Fig.1 TEMPERATURE COEFFICENTS

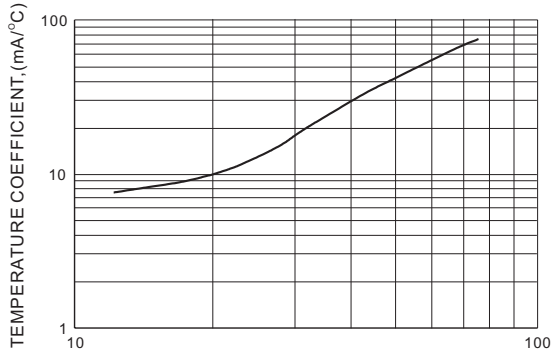


Fig.2 TEMPERATURE COEFFICENTS

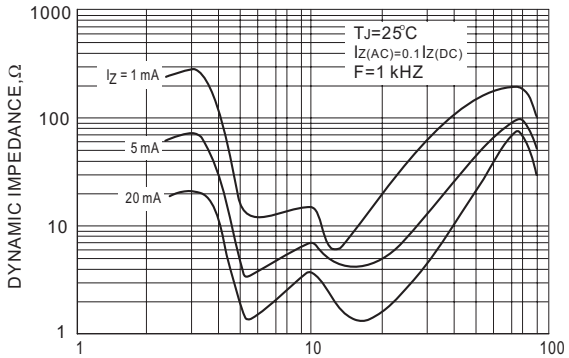


Fig.3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

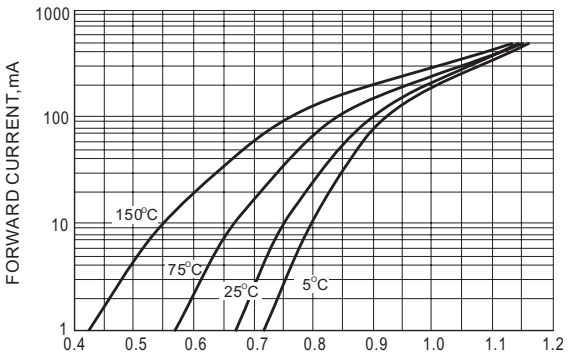


Fig.4 TYPICAL FORWARD VOLTAGE

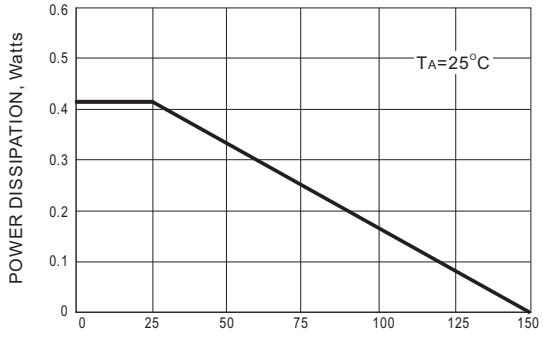


Fig.5 STEADY STATE POWER DERATING

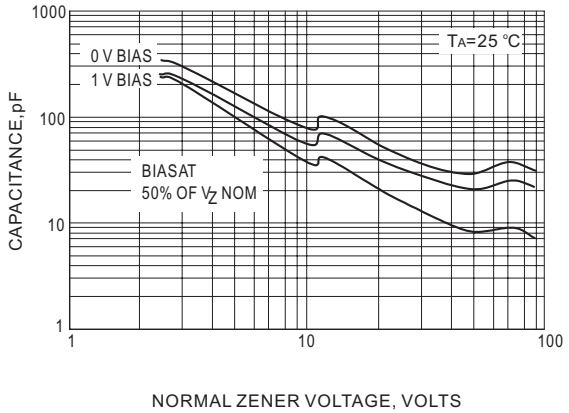


Fig.6 TYPICAL CAPACITANCE

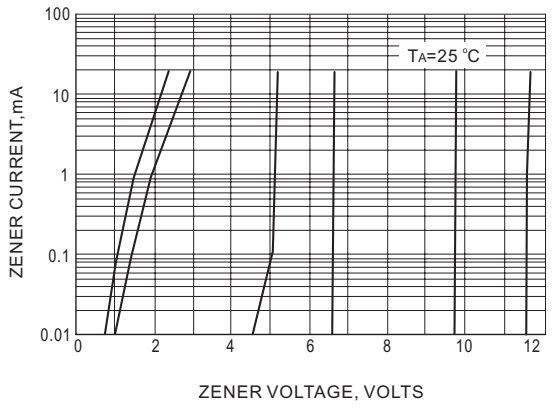


Fig.7 ZENER VOLTAGE VERSUS ZENER CURRENT

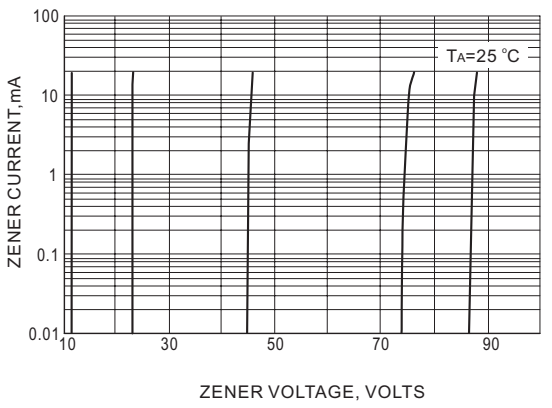


Fig.8 ZENER VOLTAGE VERSUS ZENER CURRENT

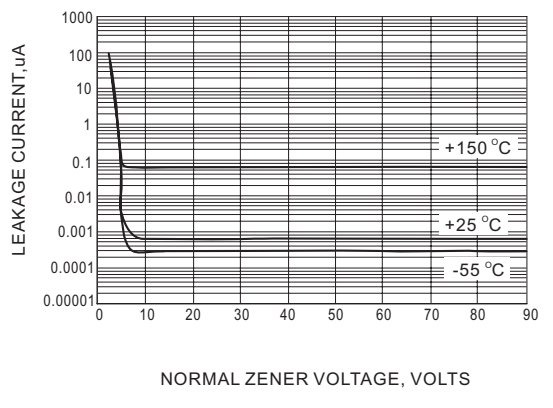


Fig.9 TYPICAL LEAKAGE CURRENT