PANJIT SEMI CONDUCTOR

DATA SHEET

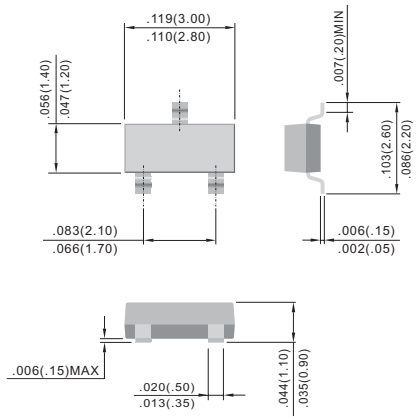
BZX84C SERIES

SURFACE MOUNT SILICON ZENER DIODES

VOLTAGE 2.4 - 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

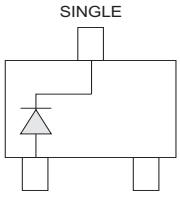


MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202G, Method 208
- Polarity: See Diagram Below
- Approx. Weight: 8mg
- 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	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%

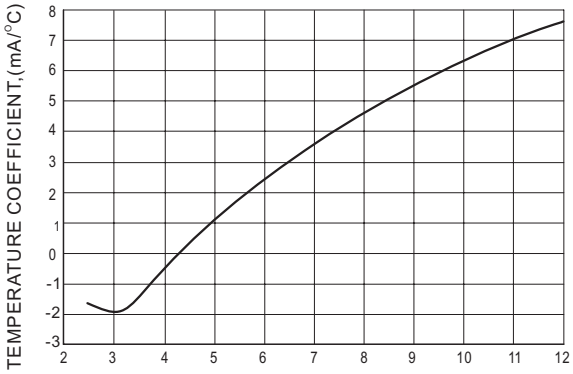


Fig.1 TEMPERATURE COEFFICENTS

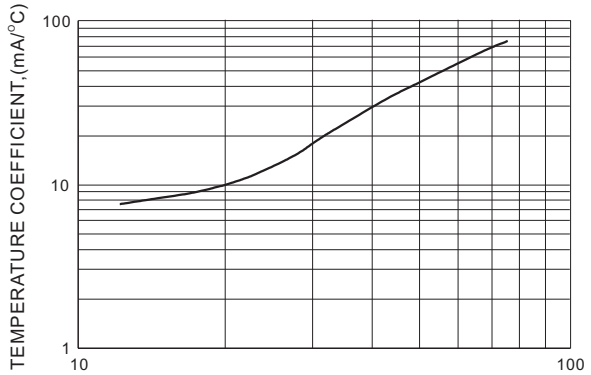


Fig.2 TEMPERATURE COEFFICENTS

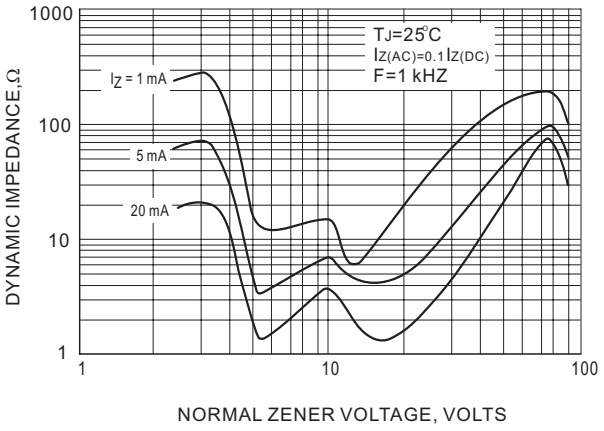


Fig.3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

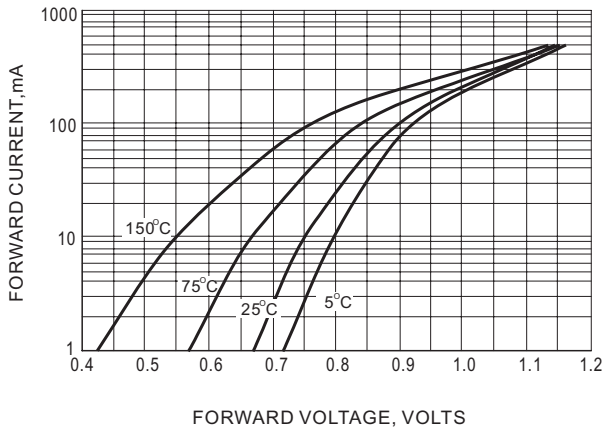


Fig.4 TYPICAL FORWARD VOLTAGE

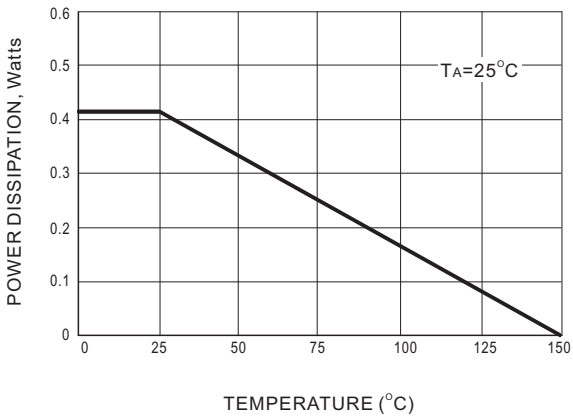


Fig.5 STEADY STATE POWER DERATING

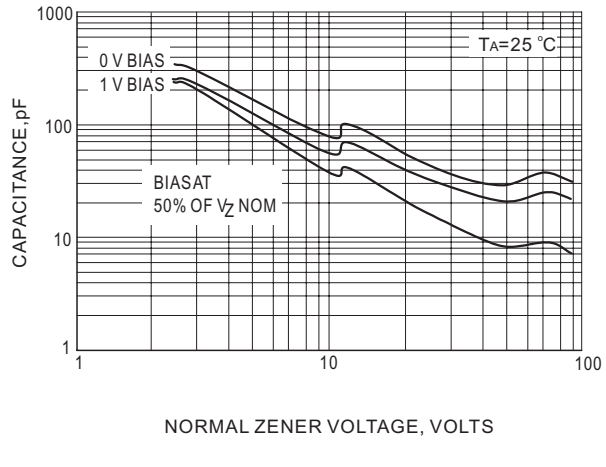


Fig.6 TYPICAL CAPACITANCE

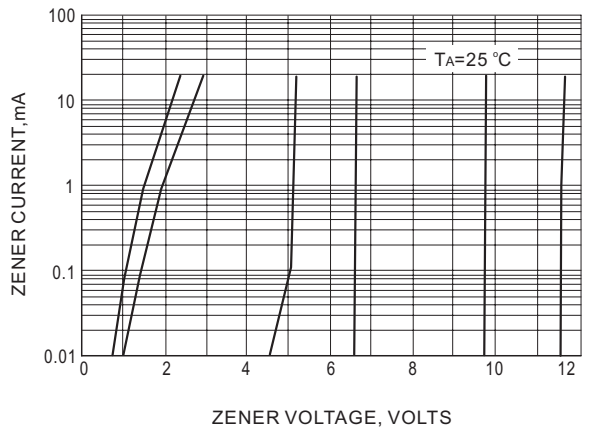


Fig.7 ZENER VOLTAGE VERSUS ZENER CURRENT

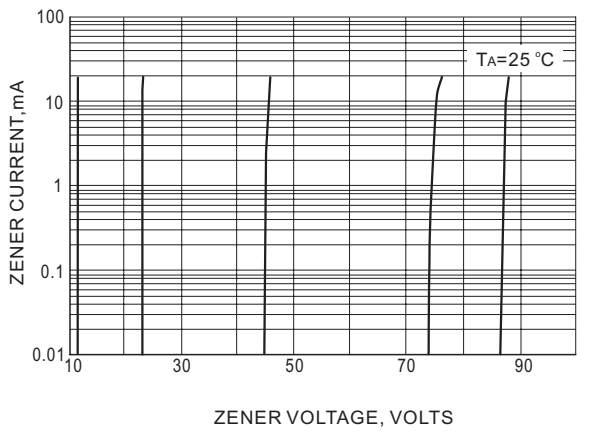


Fig.8 ZENER VOLTAGE VERSUS ZENER CURRENT

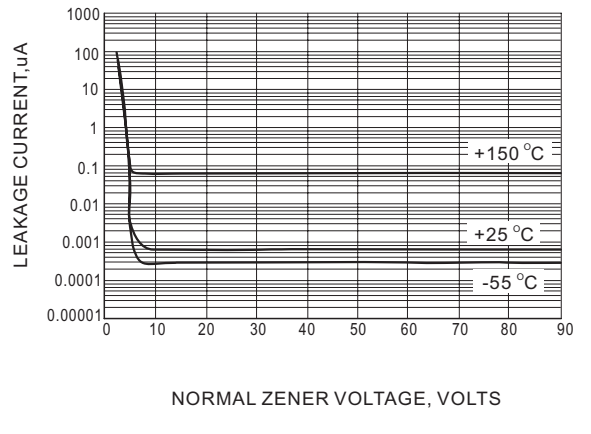
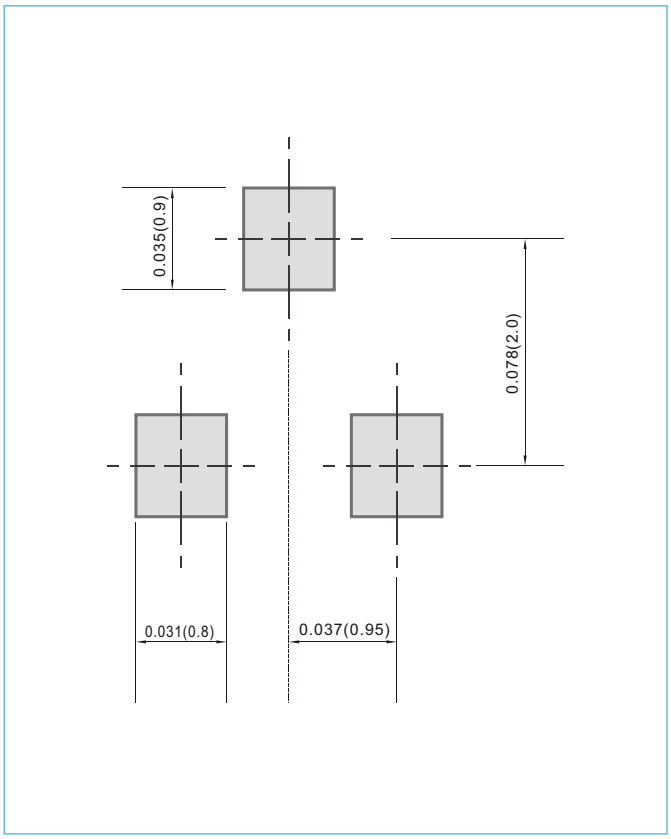


Fig.9 TYPICAL LEAKAGE CURRENT

MOUNTING PAD LAYOUT

SOT-23 Unit: inch (mm)



ORDER INFORMATION

- Packing information

  T/R - 12K 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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