

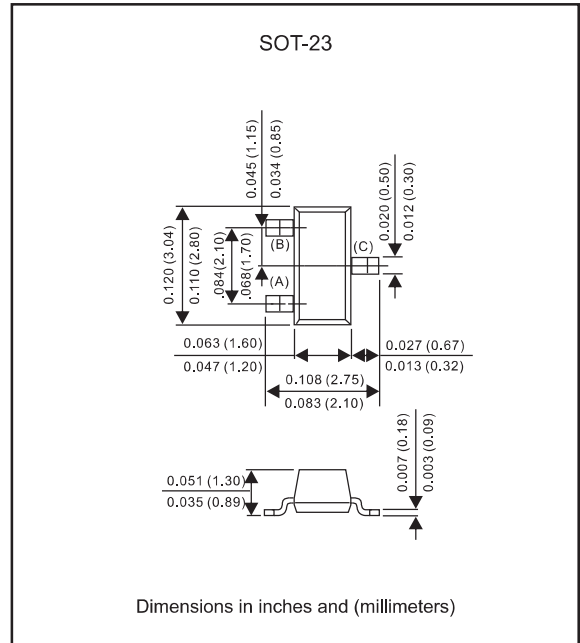
Features

- Silicon epitaxial planar chip structure.
- Wide zener reverse voltage range 2.4V to 75V.
- Small package size for high density applications.
- Ideally suited for automated assembly processes.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Compliant to Halogen-free.

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOT-23
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any

Package outline



Maximum ratings (at $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Power Dissipation at $T_A=25^\circ\text{C}$	Mounted on Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.	P_D			300	mW
Thermal Resistance	Junction to Ambient	$R_{\theta JA}$		417		$^\circ\text{C}/\text{W}$
Operating junction temperature range		T_J	-55		+150	$^\circ\text{C}$
Storage temperature range		T_{STG}	-55		+150	$^\circ\text{C}$

Electrical characteristics (at T_A=25°C unless otherwise noted)

Part No.	Marking code	Zener voltage			Zener impedance				Leakage current	
		V _Z @ I _{ZT} ¹ (Volts)			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	V _R
		Min.	Nom.	Max.	mA	(Ω)Max	(Ω)Max	mA	(uA)Max	Volts
BZX84C2V4	Z11	2.2	2.4	2.6	5.0	100	600	1	50	1.0
BZX84C2V7	Z12	2.5	2.7	2.9	5.0	100	600	1	20	1.0
BZX84C3V0	Z13	2.8	3.0	3.2	5.0	95	600	1	10	1.0
BZX84C3V3	Z14	3.1	3.3	3.5	5.0	95	600	1	5	1.0
BZX84C3V6	Z15	3.4	3.6	3.8	5.0	90	600	1	5	1.0
BZX84C3V9	Z16	3.7	3.9	4.1	5.0	90	600	1	3	1.0
BZX84C4V3	Z17	4.0	4.3	4.6	5.0	90	600	1	3	1.0
BZX84C4V7	Z1	4.4	4.7	5.0	5.0	80	500	1	3	2.0
BZX84C5V1	Z2	4.8	5.1	5.4	5.0	60	480	1	2	2.0
BZX84C5V6	Z3	5.2	5.6	6.0	5.0	40	400	1	1	2.0
BZX84C6V2	Z4	5.8	6.2	6.6	5.0	10	150	1	3	4.0
BZX84C6V8	Z5	6.4	6.8	7.2	5.0	15	80	1	2	4.0
BZX84C7V5	Z6	7.0	7.5	7.9	5.0	15	80	1	1	5.0
BZX84C8V2	Z7	7.7	8.2	8.7	5.0	15	80	1	0.7	5.0
BZX84C9V1	Z8	8.5	9.1	9.6	5.0	15	100	1	0.5	6.0
BZX84C10	Z9	9.4	10	10.6	5.0	20	150	1	0.2	7.0
BZX84C11	Y1	10.40	11	11.60	5.0	20	150	1	0.1	8.0
BZX84C12	Y2	11.40	12	12.70	5.0	25	150	1	0.1	8.0
BZX84C13	Y3	12.35	13	14.10	5.0	30	170	1	0.1	8.0
BZX84C15	Y4	13.80	15	15.75	5.0	30	200	1	0.1	10.5
BZX84C16	Y5	15.20	16	17.10	5.0	40	200	1	0.1	11.2
BZX84C18	Y6	16.80	18	19.10	5.0	45	225	1	0.1	12.6
BZX84C20	Y7	18.80	20	21.20	5.0	55	225	1	0.1	14.0
BZX84C22	Y8	20.80	22	23.30	5.0	55	250	1	0.1	15.4
BZX84C24	Y9	22.80	24	25.60	5.0	70	250	1	0.1	16.8
BZX84C27	Y10	25.10	27	28.9	2.0	80	300	0.5	0.1	18.9
BZX84C30	Y11	28.00	30	32.0	2.0	80	300	0.5	0.1	21.0
BZX84C33	Y12	31.00	33	35.0	2.0	80	325	0.5	0.1	23.1
BZX84C36	Y13	34.00	36	38.0	2.0	90	350	0.5	0.1	25.2
BZX84C39	Y14	37.00	39	41.0	2.0	130	350	0.5	0.1	27.3
BZX84C43	Y15	40.00	43	46.00	5.0	150	700	1	0.1	30.1
BZX84C47	Y16	44.00	47	50.00	5.0	170	750	1	0.1	32.9
BZX84C51	Y17	48.00	51	54.00	5.0	180	750	1	0.1	35.7
BZX84C56	Y18	52.00	56	60.00	2.0	200	750	1	0.1	39.2
BZX84C62	Y19	58.00	62	66.00	2.0	215	1000	1	0.2	43.4
BZX84C68	Y20	64.00	68	72.00	2.0	250	1600	1	0.2	47.6
BZX84C75	Y21	70.00	75	79.00	2.0	300	1700	1	0.2	52.5

*1 Pulse width = 10 ms

Rating and characteristic curves (BZX84C2V4 THRU BZX84C75)

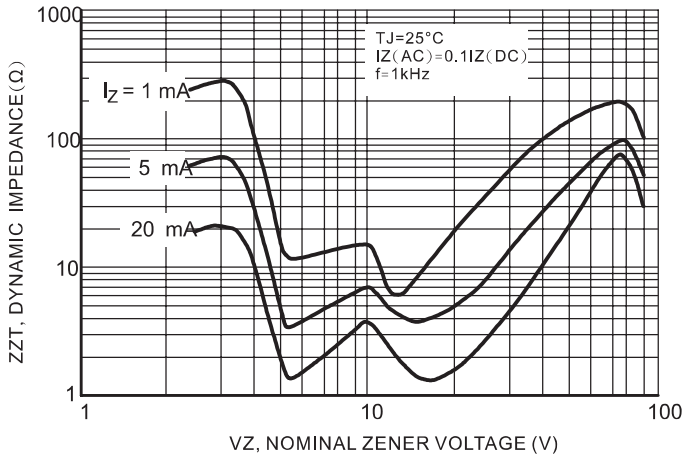


Figure 1. Effect of Zener Voltage on Zener Impedance

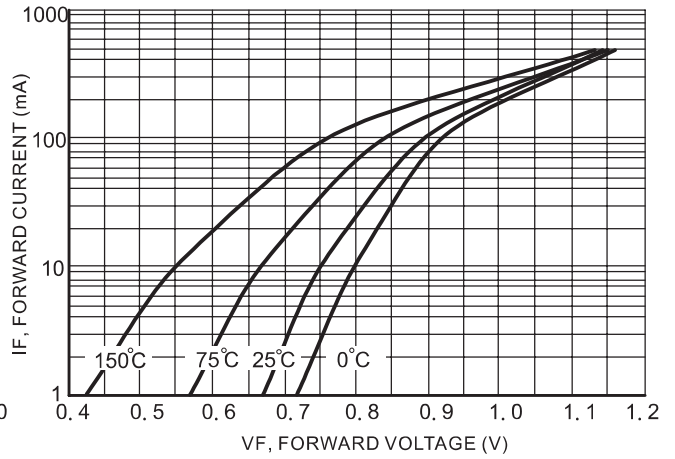


Figure 2. Typical Forward Voltage

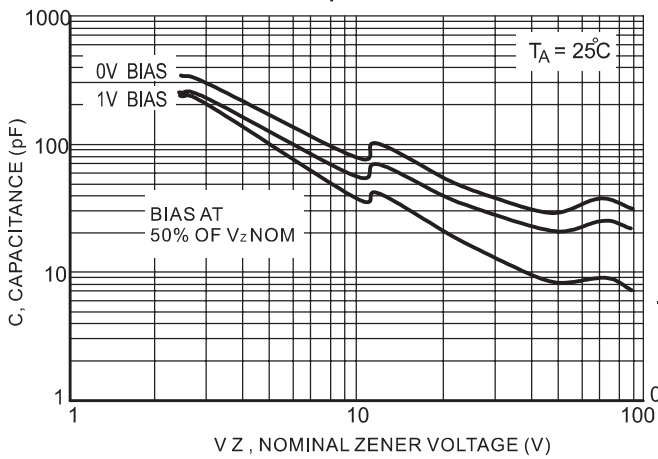


Figure 3. Typical Capacitance

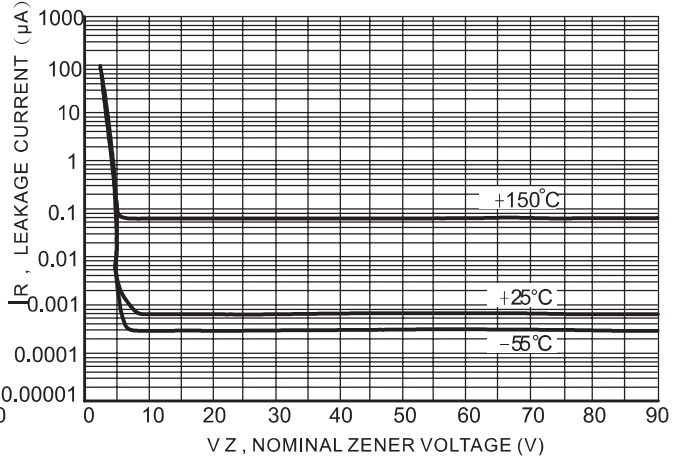


Figure 4. Typical Leakage Current

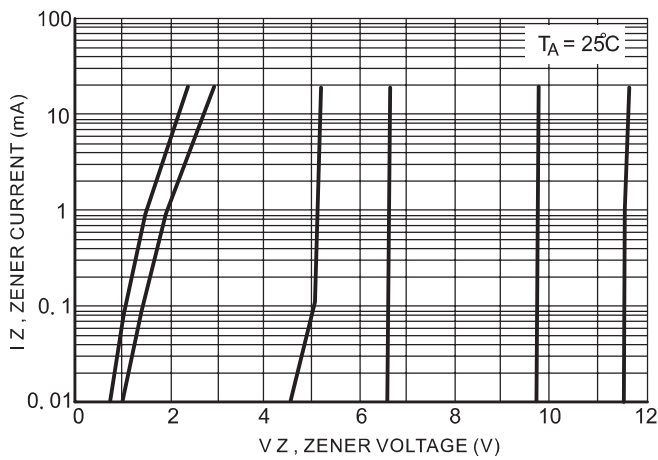


Figure 5. Zener Voltage versus Zener Current (V_Z Up to 12 V)

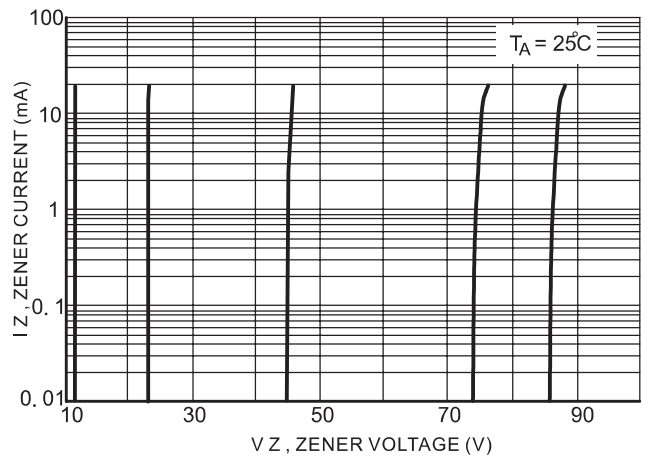
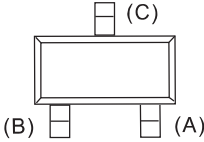
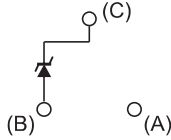


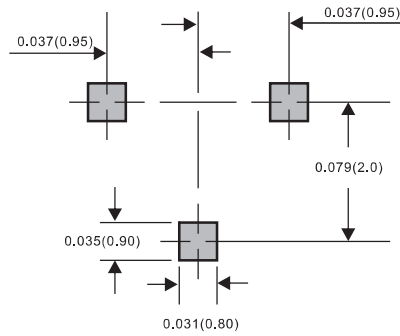
Figure 6. Zener Voltage versus Zener Current (12V to 91V)

Pinning information

Pin	Simplified outline	Symbol
PinA no connection PinB anode PinC cathode		

Suggested solder pad layout

SOT-23



Dimensions in inches and (millimeters)

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