

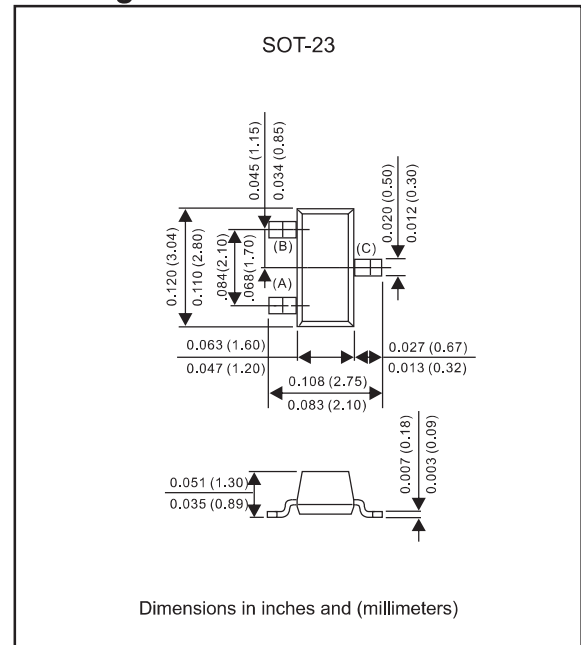
### Features

- Silicon epitaxial planar chip structure.
- Wide zener reverse voltage range 2.4V to 39V.
- 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<sub>A</sub>=25°C unless otherwise noted)

Part No.	Marking code	Zener voltage			Zener impedance				Leakage current	
		V <sub>Z</sub> @ I <sub>ZT</sub> (Volts)			I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub>	V <sub>R</sub>
		Min.	Nom.	Max.	mA	(Ω)Max	(Ω)Max	mA	(uA)Max	Volts
BZX84B2V4	2Z11	2.35	2.4	2.45	5.0	100	275	1	50	1.0
BZX84B2V7	2Z12	2.65	2.7	2.75	5.0	100	600	1	20	1.0
BZX84B3V0	2Z13	2.94	3.0	3.06	5.0	95	600	1	10	1.0
BZX84B3V3	2Z14	3.23	3.3	3.37	5.0	95	600	1	5	1.0
BZX84B3V6	2Z15	3.53	3.6	3.67	5.0	90	600	1	5	1.0
BZX84B3V9	2Z16	3.82	3.9	3.98	5.0	90	600	1	3	1.0
BZX84B4V3	2Z17	4.21	4.3	4.39	5.0	90	600	1	3	1.0
BZX84B4V7	2Z1	4.61	4.7	4.79	5.0	80	500	1	3	2.0
BZX84B5V1	2Z2	5.00	5.1	5.20	5.0	60	480	1	2	2.0
BZX84B5V6	2Z3	5.49	5.6	5.71	5.0	40	400	1	1	2.0
BZX84B6V2	2Z4	6.08	6.2	6.32	5.0	10	150	1	3	4.0
BZX84B6V8	2Z5	6.66	6.8	6.94	5.0	15	80	1	2	4.0
BZX84B7V5	2Z6	7.35	7.5	7.65	5.0	15	80	1	1	5.0
BZX84B8V2	2Z7	8.04	8.2	8.36	5.0	15	80	1	0.7	5.0
BZX84B9V1	2Z8	8.92	9.1	9.28	5.0	15	100	1	0.5	6.0
BZX84B10	2Z9	9.80	10	10.2	5.0	20	150	1	0.2	7.0
BZX84B11	2Y1	10.8	11	11.2	5.0	20	150	1	0.1	8.0
BZX84B12	2Y2	11.8	12	12.2	5.0	25	150	1	0.1	8.0
BZX84B13	2Y3	12.7	13	13.3	5.0	30	170	1	0.1	8.0
BZX84B15	2Y4	14.7	15	15.3	5.0	30	200	1	0.05	10.5
BZX84B16	2Y5	15.7	16	16.3	5.0	40	200	1	0.05	11.2
BZX84B18	2Y6	17.6	18	18.4	5.0	45	225	1	0.05	12.6
BZX84B20	2Y7	19.6	20	20.4	5.0	55	225	1	0.05	14.0
BZX84B22	2Y8	21.6	22	22.4	5.0	55	250	1	0.05	15.4
BZX84B24	2Y9	23.5	24	24.5	5.0	70	250	1	0.05	16.8
BZX84B27	2Y10	26.5	27	27.5	2.0	80	300	0.5	0.05	18.9
BZX84B30	2Y11	29.4	30	30.6	2.0	80	300	0.5	0.05	21.0
BZX84B33	2Y12	32.3	33	33.7	2.0	80	325	0.5	0.05	23.1
BZX84B36	2Y13	35.3	36	36.7	2.0	90	350	0.5	0.05	25.2
BZX84B39	2Y14	38.2	39	39.8	2.0	130	350	0.5	0.05	27.3

Note : 1. 2% tolerance of Zener voltage  
 2. Zener voltage is measured with a pulse test current I<sub>Z</sub> at an ambient temperature of 25°C.

## Rating and characteristic curves (BZX84B2V4 THRU BZX84B39)

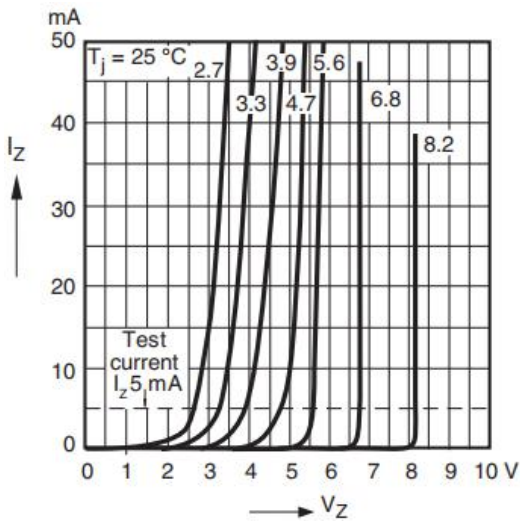


Fig. 1-Zener Characteristic1

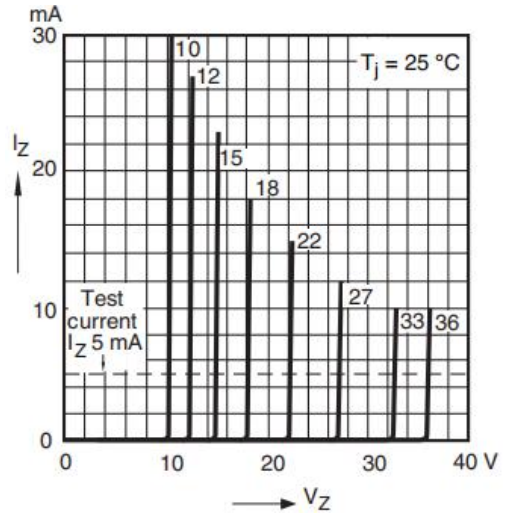


Fig. 2-Zener Characteristic2

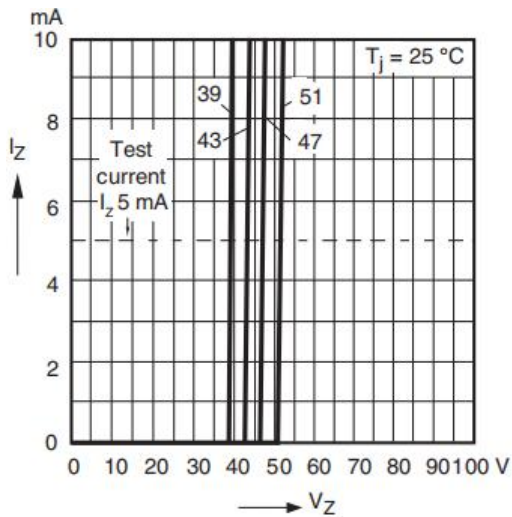


Fig. 3-Zener Characteristic3

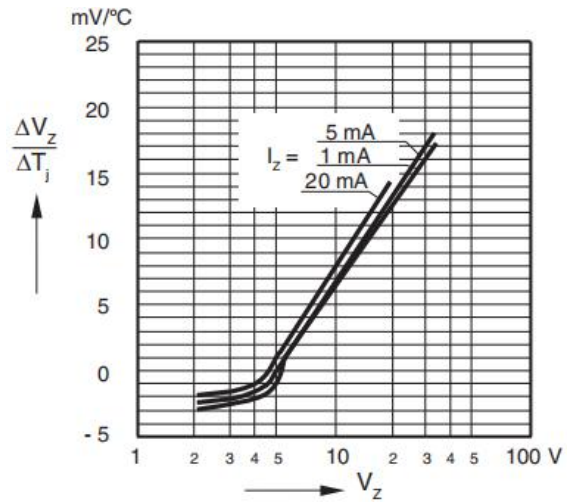


Fig. 4-Temperature Dependence of Zener Voltage vs. Zener Voltage

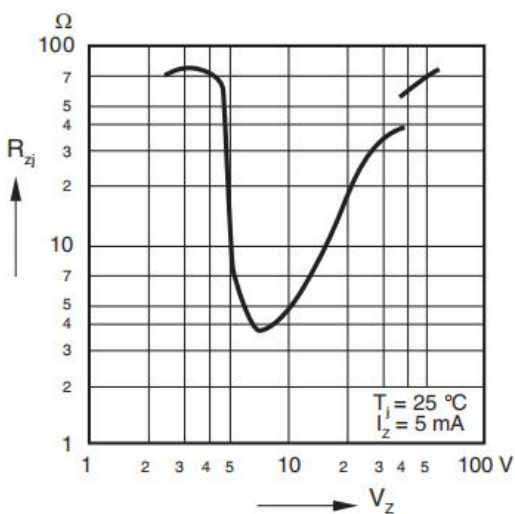


Fig. 5-Dynamic Resistance vs. Zener Voltage

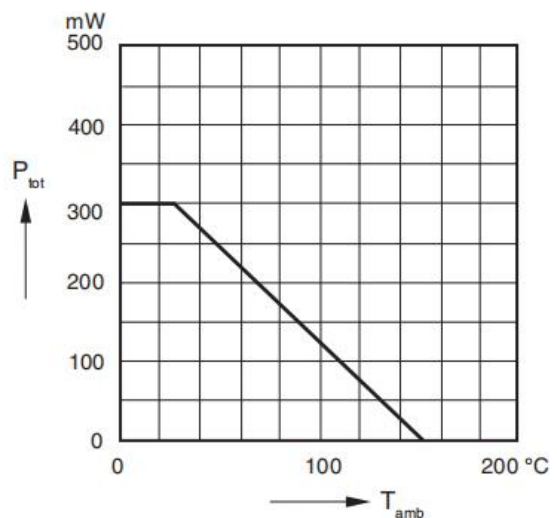
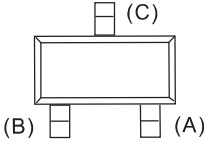
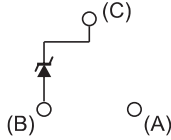


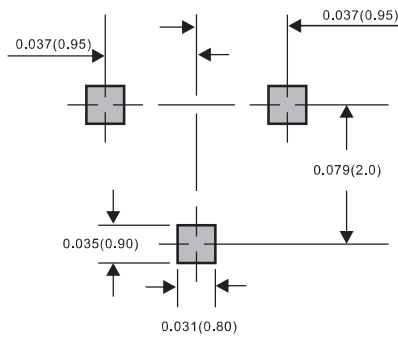
Fig. 6-Power Dissipation vs. Ambient Temperature

### Pinning information

Pin	Simplified outline	Symbol
PinA no connection PinB anode PinC cathode		

### Suggested solder pad layout

#### SOT-23



Dimensions in inches and (millimeters)