



BZX84B Series

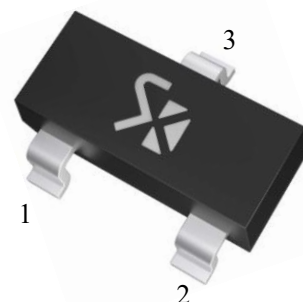
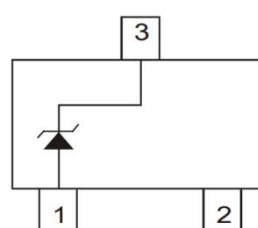
Silicon Planar Zener Diodes

Description

This series of Zener diodes is offered in the convenient, surface mount plastic SOT-23 package. These devices are designed to provide voltage regulation with minimum space requirement. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.

Features

- Zener breakdown voltage range: 2.4V to 75V
- Package designed for optimal automated board assembly
- Small package size for high density applications



1.Anode 3.Cathode
SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	300	mW
Junction and Storage Temperature Range	T_J, T_{STG}	-65~+150	$^{\circ}\text{C}$
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$	417	$^{\circ}\text{C/W}$

Note:(1) Alumina = 0.4 x 0.3 x 0.024 in, 99.5% alumina

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted, $V_F<0.9\text{V}$ @ $I_F=10\text{mA}$)

Type	Marking	Zener Voltage Range ⁽¹⁾				Dynamic Impedance			Reverse Leakage Current	
		V_{ZT}			at I_{ZT}	Z_{ZT}	Z_{ZK}	at I_{ZK}	I_R	at V_R
		Min(V)	Nom(V)	Max(V)	(mA)	Max(Ω)	Max(Ω)	(mA)	Max(uA)	(V)
BZX84B2V4	CR	2.35	2.4	2.45	5	100	600	1	50	1
BZX84B2V7	CX	2.65	2.7	2.75	5	100	600	1	20	1
BZX84B3V0	CY	2.94	3	3.06	5	95	600	1	10	1
BZX84B3V3	CZ	3.23	3.3	3.37	5	95	600	1	5	1
BZX84B3V6	DA	3.53	3.6	3.67	5	90	600	1	5	1
BZX84B3V9	DB	3.82	3.9	3.98	5	90	600	1	3	1
BZX84B4V3	DC	4.21	4.3	4.39	5	90	600	1	3	1
BZX84B4V7	DD	4.61	4.7	4.79	5	80	500	1	3	2



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BZX84B5V1	DE	5	5.1	5.2	5	60	480	1	2	2
BZX84B5V6	DF	5.49	5.6	5.71	5	40	400	1	1	2
BZX84B6V2	DH	6.08	6.2	6.32	5	10	150	1	3	4
BZX84B6V8	DJ	6.66	6.8	6.94	5	15	80	1	2	4
BZX84B7V5	DK	7.35	7.5	7.65	5	15	80	1	1	5
BZX84B8V2	DM	8.04	8.2	8.36	5	15	80	1	0.7	5
BZX84B9V1	DN	8.92	9.1	9.28	5	15	100	1	0.5	6
BZX84B10	DP	9.8	10	10.2	5	20	150	1	0.2	7
BZX84B11	DR	10.8	11	11.2	5	20	150	1	0.1	8
BZX84B12	DX	11.8	12	12.2	5	25	150	1	0.1	8
BZX84B13	DY	12.7	13	13.3	5	30	170	1	0.1	8
BZX84B15	DZ	14.7	15	15.3	5	30	200	1	0.05	10.5
BZX84B16	EA	15.7	16	16.3	5	40	200	1	0.05	11.2
BZX84B18	EB	17.6	18	18.4	5	45	225	1	0.05	12.6
BZX84B20	EC	19.6	20	20.4	5	55	225	1	0.05	14
BZX84B22	ED	21.6	22	22.4	5	55	250	1	0.05	15.4
BZX84B24	EE	23.5	24	24.5	5	70	250	1	0.05	16.8
BZX84B27	EF	26.5	27	27.5	2	80	300	0.5	0.05	18.9
BZX84B30	EH	29.4	30	30.6	2	80	300	0.5	0.05	21
BZX84B33	EJ	32.3	33	33.7	2	80	325	0.5	0.05	23.1
BZX84B36	EK	35.3	36	36.7	2	90	350	0.5	0.05	25.2
BZX84B39	EM	38.2	39	39.8	2	130	350	0.5	0.05	27.3
BZX84B43	EN	42.1	43	43.9	2	150	375	0.5	0.05	30.1
BZX84B47	EP	46.1	47	47.9	2	170	375	0.5	0.05	32.9
BZX84B51	ER	50	51	52	2	180	400	0.5	0.05	35.7
BZX84B56	EX	54.9	56	57.1	2	200	425	0.5	0.05	39.2
BZX84B62	EY	60.8	62	63.2	2	215	450	0.5	0.05	43.4
BZX84B68	EZ	66.6	68	69.4	2	240	475	0.5	0.05	47.6
BZX84B75	FA	73.5	75	76.5	2	255	500	0.5	0.05	52.5

Note:(1)Tested with pulses $t_p = 20\text{ms}$.



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Typical Characteristics

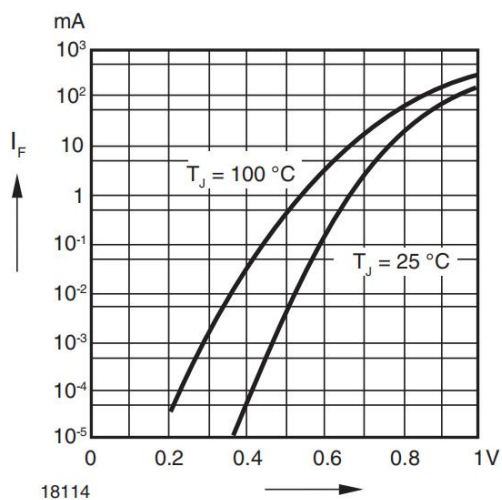


Fig. 1 - Forward Characteristics

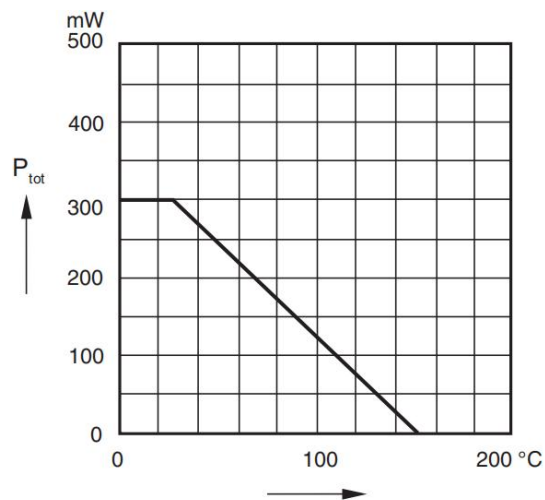


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

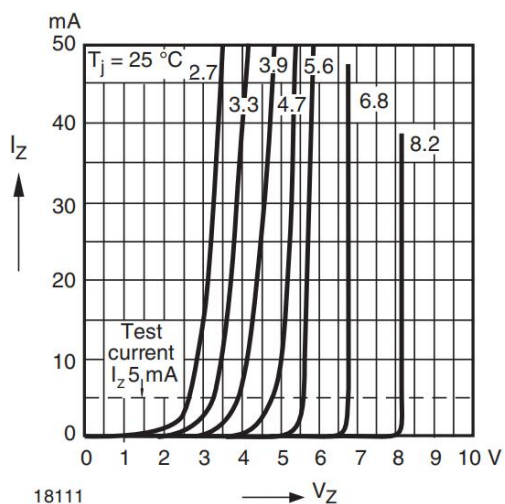


Fig. 3 - Breakdown Characteristics

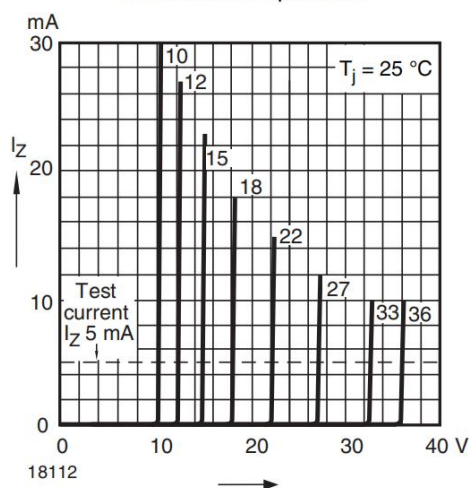


Fig. 4 - Breakdown Characteristics

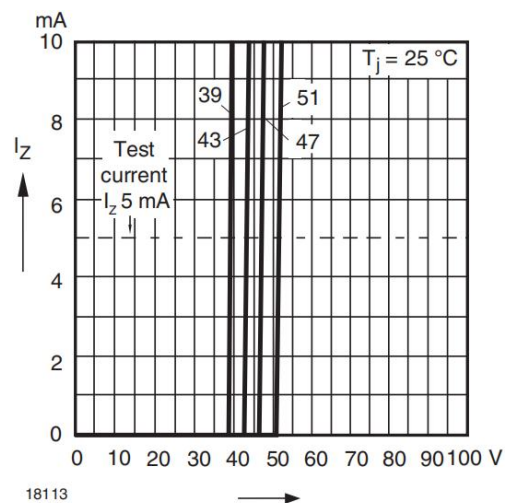
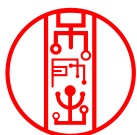


Fig. 5 - Breakdown Characteristics

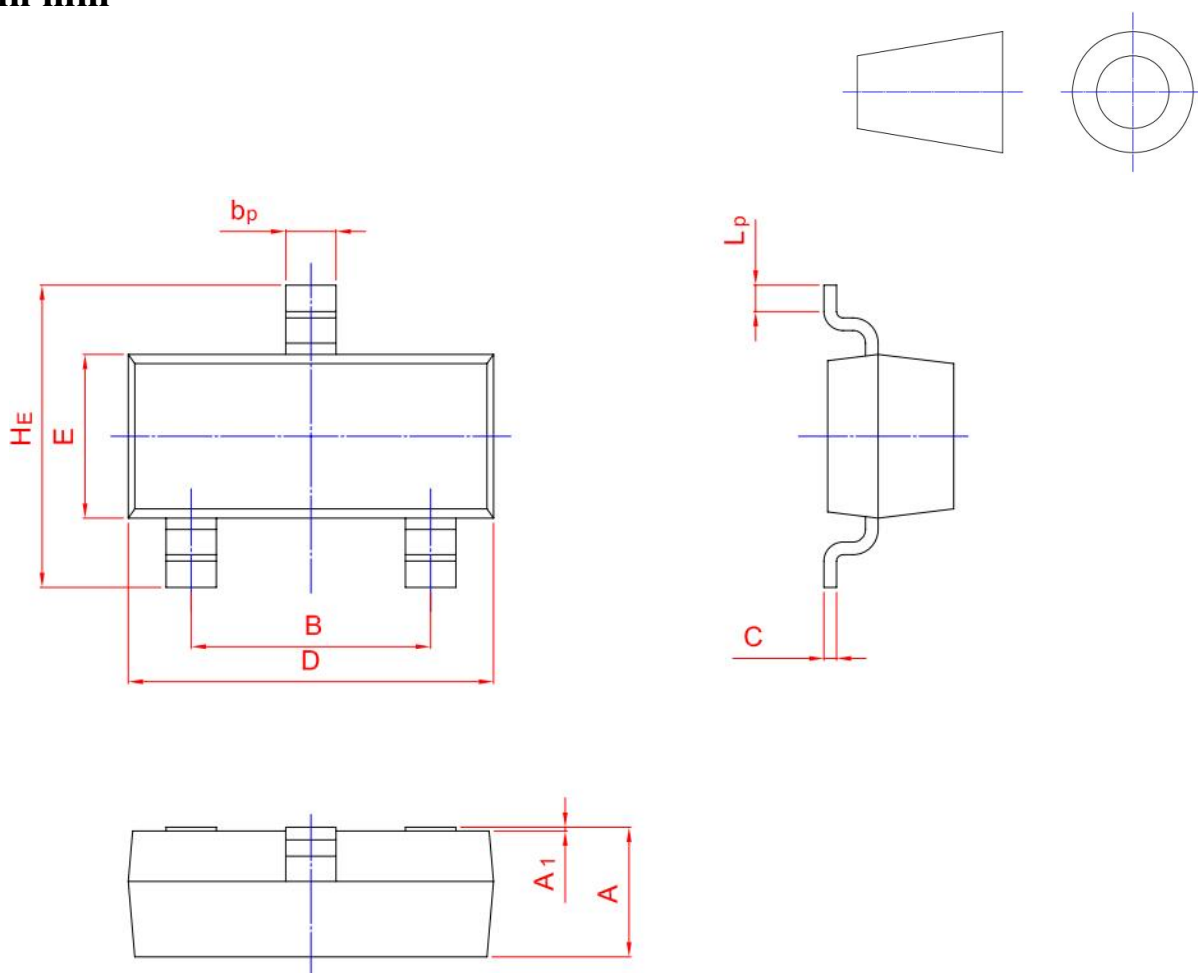


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Package Information

SOT-23

Dimensions in mm



UNIT	A	B	b_p	C	D	E	H _E	A ₁	L _p
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20



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