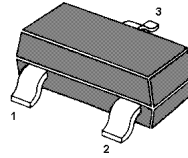


# GW BZX84Bxx-SERIES

## Silicon Planar Zener Diodes

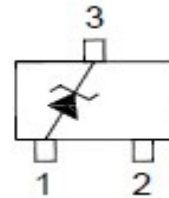
This series of Zener diodes is offered in the convenient, surface mount plastic SOT-23 package. These devices are designed to provide voltage regulation with minimum space requirement. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.



1. Anode 3. Cathode  
SOT-23 Plastic Package

### Features

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



### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Power Dissipation	$P_D$	300	mW
Thermal Resistance, Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage Temperature Range	$T_j, T_{stg}$	- 65 to + 150	$^\circ\text{C}$

<sup>1)</sup> Alumina = 0.4 X 0.3 X 0.024 in, 99.5% alumina

# GW

## BZX84Bxx-SERIES

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

Type	Marking Code	Zener Voltage Range <sup>1)</sup>				Dynamic Impedance				Reverse Leakage Current	
		$V_{ZT}$			at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$	at $V_R$
		Nom. (V)	Min. (V)	Max. (V)	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\mu\text{A}$ )	(V)
BZX84B2V4	CR	2.4	2.35	2.45	5	100	5	600	1	50	1
BZX84B2V7	CX	2.7	2.65	2.75	5	100	5	600	1	20	1
BZX84B3V0	CY	3	2.94	3.06	5	95	5	600	1	10	1
BZX84B3V3	CZ	3.3	3.23	3.37	5	95	5	600	1	5	1
BZX84B3V6	DA	3.6	3.53	3.67	5	90	5	600	1	5	1
BZX84B3V9	DB	3.9	3.82	3.98	5	90	5	600	1	3	1
BZX84B4V3	DC	4.3	4.21	4.39	5	90	5	600	1	3	1
BZX84B4V7	DD	4.7	4.61	4.79	5	80	5	500	1	3	2
BZX84B5V1	DE	5.1	5	5.2	5	60	5	480	1	2	2
BZX84B5V6	DF	5.6	5.49	5.71	5	40	5	400	1	1	2
BZX84B6V2	DH	6.2	6.08	6.32	5	10	5	150	1	3	4
BZX84B6V8	DJ	6.8	6.66	6.94	5	15	5	80	1	2	4
BZX84B7V5	DK	7.5	7.35	7.65	5	15	5	80	1	1	5
BZX84B8V2	DM	8.2	8.04	8.36	5	15	5	80	1	0.7	5
BZX84B9V1	DN	9.1	8.92	9.28	5	15	5	100	1	0.5	6
BZX84B10	DP	10	9.8	10.2	5	20	5	150	1	0.2	7
BZX84B11	DR	11	10.8	11.2	5	20	5	150	1	0.1	8
BZX84B12	DX	12	11.8	12.2	5	25	5	150	1	0.1	8
BZX84B13	DY	13	12.7	13.3	5	30	5	170	1	0.1	8
BZX84B15	DZ	15	14.7	15.3	5	30	5	200	1	0.05	10.5
BZX84B16	EA	16	15.7	16.3	5	40	5	200	1	0.05	11.2
BZX84B18	EB	18	17.6	18.4	5	45	5	225	1	0.05	12.6
BZX84B20	EC	20	19.6	20.4	5	55	5	225	1	0.05	14
BZX84B22	ED	22	21.6	22.4	5	55	5	250	1	0.05	15.4
BZX84B24	EE	24	23.5	24.5	5	70	5	250	1	0.05	16.8
BZX84B27	EF	27	26.5	27.5	2	80	2	300	0.5	0.05	18.9
BZX84B30	EH	30	29.4	30.6	2	80	2	300	0.5	0.05	21
BZX84B33	EJ	33	32.3	33.7	2	80	2	325	0.5	0.05	23.1
BZX84B36	EK	36	35.3	36.7	2	90	2	350	0.5	0.05	25.2
BZX84B39	EM	39	38.2	39.8	2	130	2	350	0.5	0.05	27.3
BZX84B43	EN	43	42.1	43.9	2	150	2	375	0.5	0.05	30.1
BZX84B47	EP	47	46.1	47.9	2	170	2	375	0.5	0.05	32.9
BZX84B51	ER	51	50	52	2	180	2	400	0.5	0.05	35.7
BZX84B56	EX	56	54.9	57.1	2	200	2	425	0.5	0.05	39.2
BZX84B62	EY	62	60.8	63.2	2	215	2	450	0.5	0.05	43.4
BZX84B68	EZ	68	66.6	69.4	2	240	2	475	0.5	0.05	47.6
BZX84B75	FA	75	73.5	76.5	2	255	2	500	0.5	0.05	52.5

<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .

## Typical Characteristics

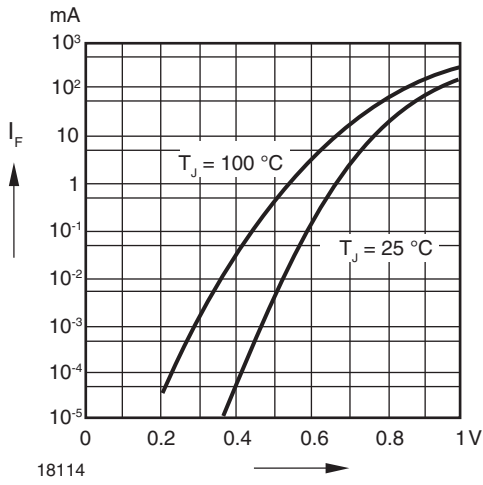


Fig. 1 - Forward Characteristics

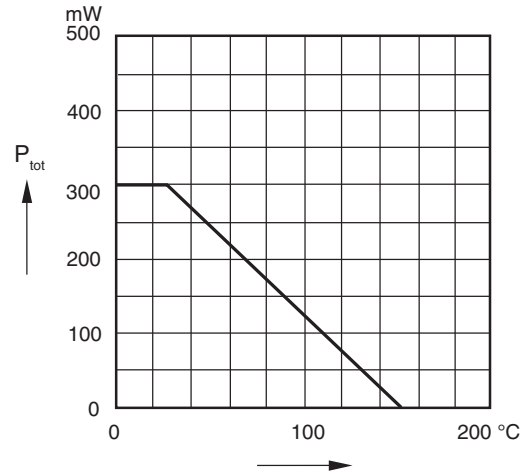


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

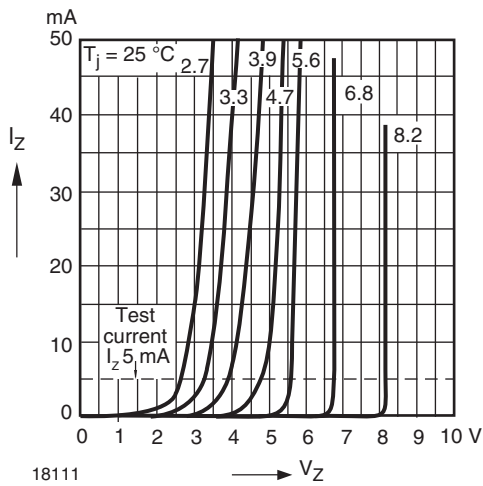


Fig. 3 - Breakdown Characteristics

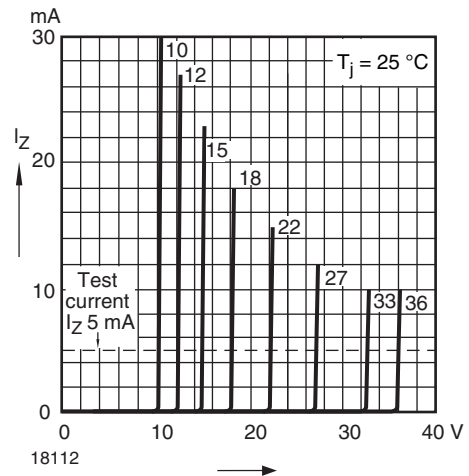


Fig. 4 - Breakdown Characteristics

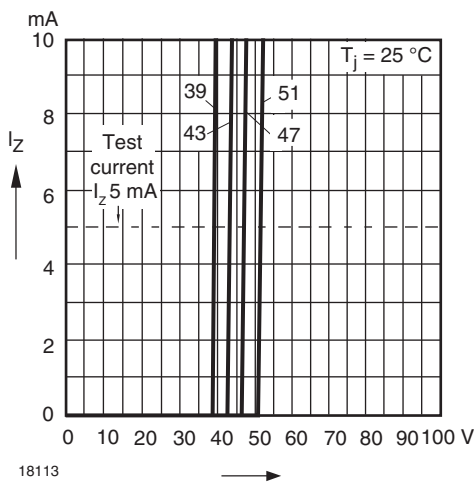
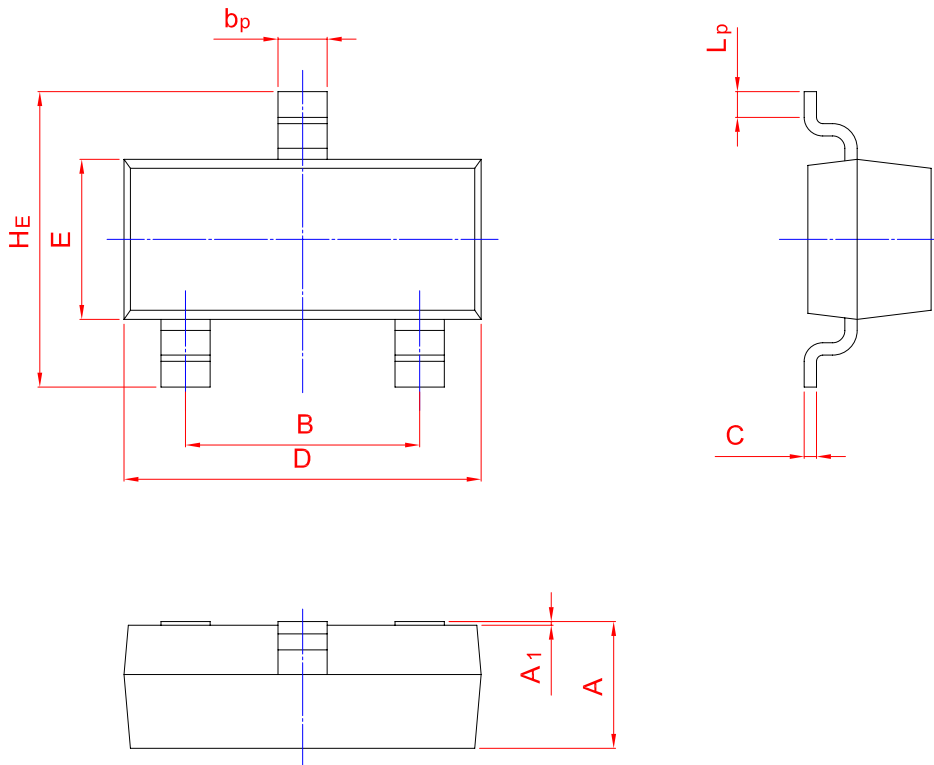
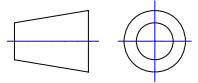


Fig. 5 - Breakdown Characteristics

## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20