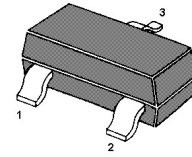
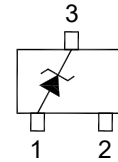


Silicon Planar Zener Diodes

This series of Zener diodes is offered in the convenient, surface mount plastic SOT-23 (TO-236) package. These devices are designed to provide voltage regulation with minimum space requirement. They are well suited for general regulation functions



1. Anode 3. Cathode
SOT-23 Plastic Package

Features

- AEC-Q101 Qualified
- Total power dissipation 350mW (max.)
- Working voltage range nominal 2.0 V to 75 V
- Zener voltage tolerance $\pm 2\%$
- Package designed for optimal automated board assembly
- Small package size for high density applications
- Halogen and Antimony Free(HAF), RoHS compliant

Applications

- General regulation functions

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

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	350	mW
Junction and Storage Temperature Range	T_j, T_{stg}	- 65 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	357	$^\circ\text{C/W}$

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

BZX84B2V4~BZX84B75 Series

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

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

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

Electrical Characteristics Curves

Fig 1. Power Derating Curve

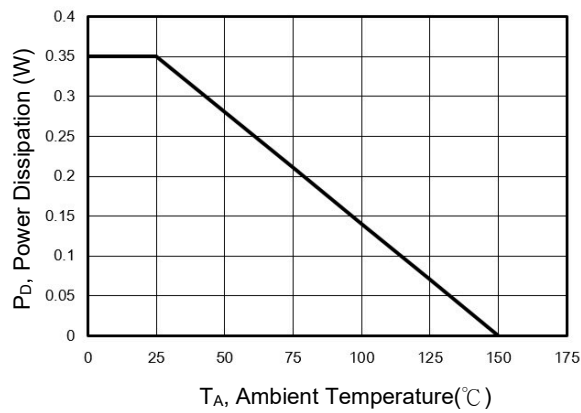


Fig 2. Forward Characteristics Curve

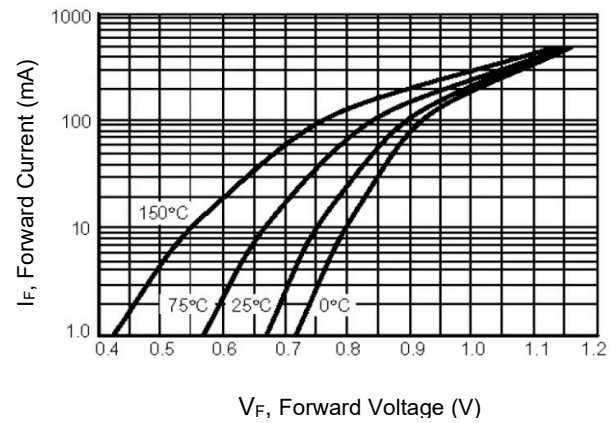


Fig 3. Zener Characteristics Curve

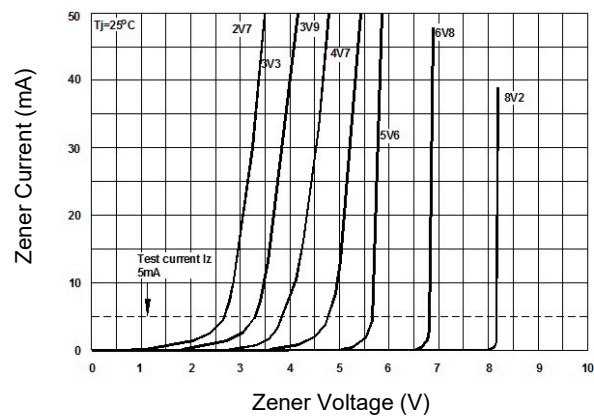
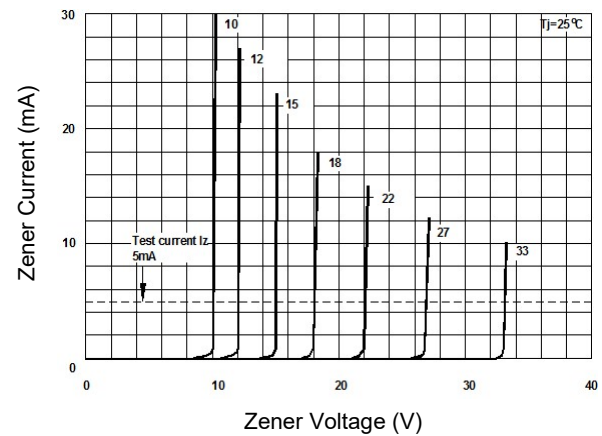
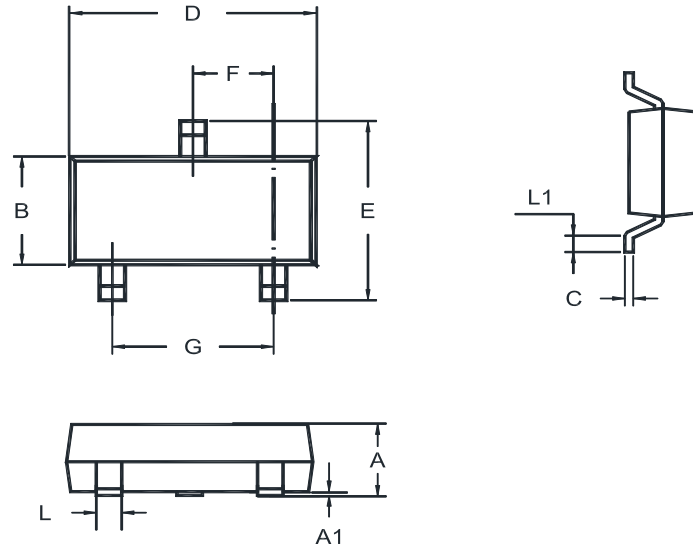


Fig 4. Zener Characteristics Curve



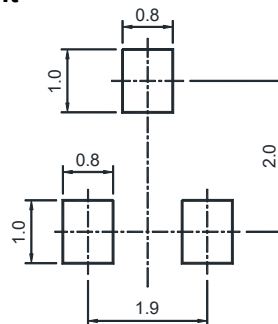
Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20 0.89	0.100 0.013	1.40 1.20	0.19 0.08	3.04 2.80	2.6 2.2	1.02 0.89	2.04 1.78	0.51 0.37	0.2 MIN

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" ** " = Part No. (See Table 1 of Marking code)

" • " = HAF (Halogen and Antimony Free)

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

