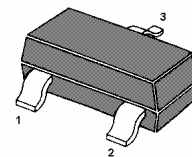
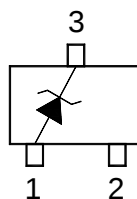


BZX84B...Series

ZENER VOLTAGE REGULATORS

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

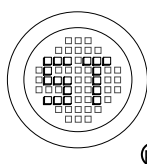
Features

- 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 ($T_a = 25^\circ\text{C}$)

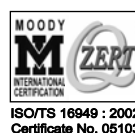
Parameter	Symbol	Value	Unit
Total Power Dissipation	P_D	350	mW
Thermal Resistance, Junction to Ambient ¹⁾	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_j, T_s	- 65 to + 150	$^\circ\text{C}$

¹⁾ Alumina = 0.4 X 0.3 X 0.024 in, 99.5% alumina



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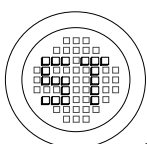
BZX84B...Series

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	$V_{Z1}\text{ (V)}$ @ $I_{ZT1} = 5\text{ mA}$ ¹⁾			Z_{ZT1} (Ohms) @ $I_{ZT1} = 5\text{ mA}$	$V_{Z2}\text{ (V)}$ @ $I_{ZT2} = 1\text{ mA}$ ¹⁾		Z_{ZT2} (Ohms) @ $I_{ZT2} = 1\text{ mA}$ ²⁾	$V_{Z3}\text{ (V)}$ @ $I_{ZT3} = 20\text{ mA}$ ¹⁾		Z_{ZT3} (Ohms) @ $I_{ZT3} = 20\text{ mA}$	Max Reverse Leakage Current		$Y_{VZ}\text{ (mV/k)}$ @ $I_{ZT1} = 5\text{ mA}$		C(pF) @ $V_R = 0$ f=1MHz
		Min	Nom	Max		Min	Max		Min	Max		I_R μA	V_R V	Min	Max	
BZX84B2V4	CR	2.35	2.4	2.45	100	1.7	2.1	600	2.6	3.2	50	50	1	-3.5	0	450
BZX84B2V7	CX	2.64	2.7	2.76	100	1.9	2.4	600	3	3.6	50	20	1	-3.5	0	450
BZX84B3V0	CY	2.94	3	3.06	95	2.1	2.7	600	3.3	3.9	50	10	1	-3.5	0	450
BZX84B3V3	CZ	3.23	3.3	3.37	95	2.3	2.9	600	3.6	4.2	40	5	1	-3.5	0	450
BZX84B3V6	DA	3.52	3.6	3.68	90	2.7	3.3	600	3.9	4.5	40	5	1	-3.5	0	450
BZX84B3V9	DB	3.82	3.9	3.98	90	2.9	3.5	600	4.1	4.7	30	3	1	-3.5	-2.5	450
BZX84B4V3	DC	4.21	4.3	4.39	90	3.3	4	600	4.4	5.1	30	3	1	-3.5	0	450
BZX84B4V7	DD	4.6	4.7	4.8	80	3.7	4.7	500	4.5	5.4	15	3	2	-3.5	0.2	260
BZX84B5V1	DE	4.99	5.1	5.2	60	4.2	5.3	480	5	5.9	15	2	2	-2.7	1.2	225
BZX84B5V6	DF	5.49	5.6	5.71	40	4.8	6	400	5.2	6.3	10	1	2	-2.0	2.5	200
BZX84B6V2	DH	6.07	6.2	6.32	10	5.6	6.6	150	5.8	6.8	6	3	4	0.4	3.7	185
BZX84B6V8	DJ	6.66	6.8	6.94	15	6.3	7.2	80	6.4	7.4	6	2	4	1.2	4.5	155
BZX84B7V5	DK	7.35	7.5	7.65	15	6.9	7.9	80	7	8	6	1	5	2.5	5.3	140
BZX84B8V2	DM	8.04	8.2	8.36	15	7.6	8.7	80	7.7	8.8	6	0.7	5	3.2	6.2	135
BZX84B9V1	DN	8.92	9.1	9.28	15	8.4	9.6	100	8.5	9.7	8	0.5	6	3.8	7.0	130
BZX84B10	DP	9.8	10	10.2	20	9.3	10.6	150	9.4	10.7	10	0.2	7	4.5	8.0	130
BZX84B11	DR	10.8	11	11.2	20	10.2	11.6	150	10.4	11.8	10	0.1	8	5.4	9.0	130
BZX84B12	DX	11.8	12	12.2	25	11.2	12.7	150	11.4	12.9	10	0.1	8	6.0	10.0	130
BZX84B13	DY	12.7	13	13.3	30	12.3	14	170	12.5	14.2	15	0.1	8	7.0	11.0	120
BZX84B15	DZ	14.7	15	15.3	30	13.7	15.5	200	13.9	15.7	20	0.05	10.5	9.2	13.0	110
BZX84B16	EA	15.7	16	16.3	40	15.2	17	200	15.4	17.2	20	0.05	11.2	10.4	14.0	105
BZX84B18	EB	17.6	18	18.4	45	16.7	19	225	16.9	19.2	20	0.05	12.6	12.4	16.0	100
BZX84B20	EC	19.6	20	20.4	55	18.7	21.1	225	18.9	21.4	20	0.05	14	14.4	18.0	85
BZX84B22	ED	21.6	22	22.5	55	20.7	23.2	250	20.9	23.4	25	0.05	15.4	16.4	20.0	85
BZX84B24	EE	23.5	24	24.5	70	22.7	25.5	250	22.9	25.7	25	0.05	16.8	18.4	22.0	80
Type	Marking Code	$V_{Z1}\text{ Below}$ @ $I_{ZT1} = 2\text{ mA}$			$Z_{ZT1}\text{ Below}$ @ $I_{ZT1} = 2\text{ mA}$	$V_{Z2}\text{ Below}$ @ $I_{ZT2} = 0.1\text{ mA}$		$Z_{ZT2}\text{ Below}$ @ $I_{ZT2} = 0.5\text{ mA}$ ²⁾	$V_{Z3}\text{ Below}$ @ $I_{ZT3} = 10\text{ mA}$		$Z_{ZT3}\text{ Below}$ @ $I_{ZT3} = 10\text{ mA}$	Max Reverse Leakage Current		$Y_{VZ}\text{ (mV/k) Below}$ @ $I_{ZT1} = 2\text{ mA}$		C(pF) @ $V_R = 0$ f=1MHz
		Min	Nom	Max		Min	Max		Min	Max		I_R μA	V_R V	Min	Max	
BZX84B27	EF	26.4	27	27.6	80	25	28.9	300	25.2	29.3	45	0.05	18.9	21.4	25.3	70
BZX84B30	EH	29.4	30	30.6	80	27.8	32	300	28.1	32.4	50	0.05	21	24.4	29.4	70
BZX84B33	EJ	32.3	33	33.7	80	30.8	35	325	31.1	35.4	55	0.05	23.1	27.4	33.4	70
BZX84B36	EK	35.2	36	36.8	90	33.8	38	350	34.1	38.4	60	0.05	25.2	30.4	37.4	70
BZX84B39	EM	38.2	39	39.8	130	36.7	41	350	37.1	41.5	70	0.05	27.3	33.4	41.2	45
BZX84B43	EN	42.1	43	43.9	150	39.7	46	375	40.1	46.5	80	0.05	30.1	37.6	46.6	40
BZX84B47	EP	46	47	48	170	43.7	50	375	44.1	50.5	90	0.05	32.9	42.0	51.8	40
BZX84B51	ER	49.9	51	52.1	180	47.6	54	400	48.1	54.6	100	0.05	35.7	46.6	57.2	40
BZX84B56	EX	54.8	56	57.2	200	51.5	60	425	52.1	60.8	110	0.05	39.2	52.2	63.8	40
BZX84B62	EY	60.7	62	63.3	215	57.4	66	450	58.2	67	120	0.05	43.4	58.8	71.6	35
BZX84B68	EZ	66.6	68	69.4	240	63.4	72	475	64.2	73.2	130	0.05	47.6	65.6	79.8	35
BZX84B75	FA	73.5	75	76.5	255	69.4	79	500	70.3	80.2	140	0.05	52.5	73.4	88.6	35

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

²⁾ The Zener impedance, Z_{ZT2} , for the 27 through 75 volt types is tested at 0.5 mA rather than the test current of 0.1 mA used for V_{Z2}



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ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116

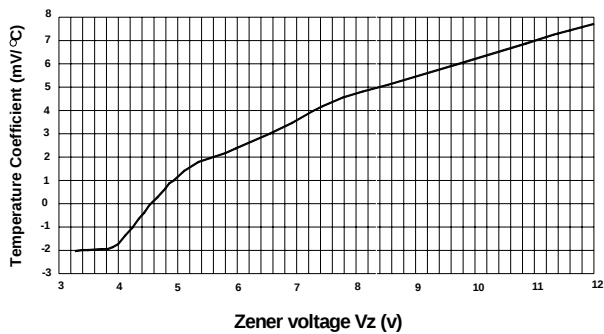


ISO 9001:2000
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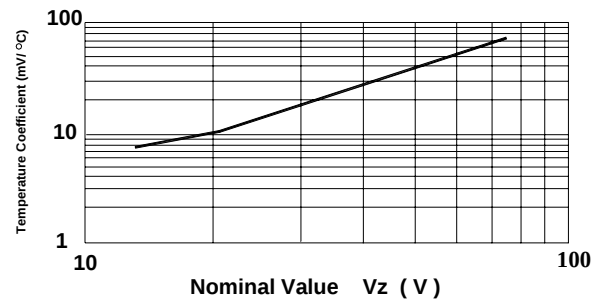
Dated : 21/06/2006

BZX84B...Series

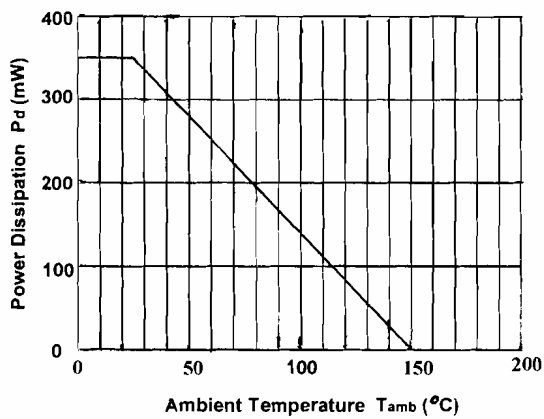
Temperature Coefficient



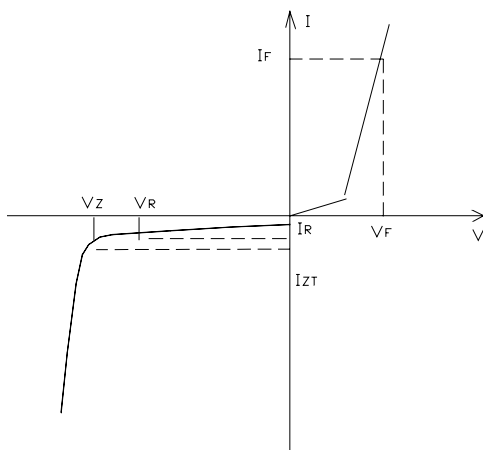
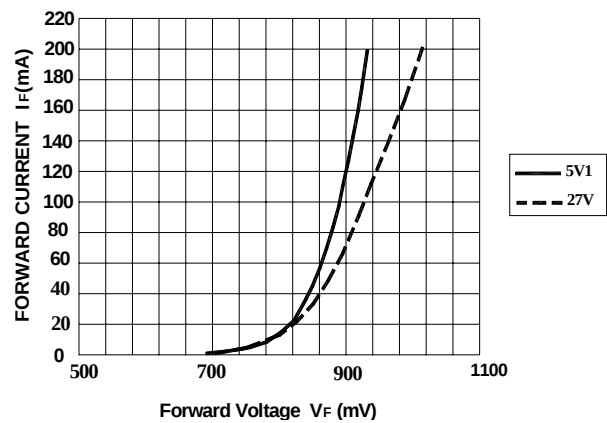
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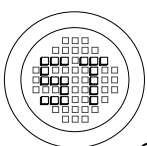
Power Derating Curve



Typical Forward Voltage



Zener Voltage Regulator



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