

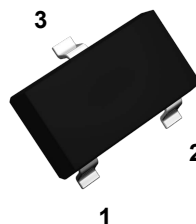
BZX84Bxxx Series

Surface Mount Zener Diodes

V_z Range: 2.4V to 75V Power Dissipation: 350mW

Features

- Total power dissipation: Max. 350mW
- Working voltage range: Nom. 2.4V to 75V
- Zener tolerance: 2%
- Planar die construction



SOT-23



Schematic Diagram

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	350	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	357	°C/W
Storage Temperature Range	T _{STG}	-65 to +150	°C
Junction Temperature Range	T _J	-65 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Part Number	Marking Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Temperature Coefficient (mV/°C)		Non-Repetitive Peak Reverse Current I _{ZPM} (A) ¹
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}		I _R	V _R	@ I _{ZT}		
		Nom(V)	Min(V)	Max(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	Min	Max	
BZX84B2V4	2Z11	2.4	2.35	2.45	5	100	600	1	50	1	-3.5	0	6.0
BZX84B2V7	2Z12	2.7	2.65	2.75	5	100	600	1	20	1	-3.5	0	6.0
BZX84B3V0	2Z13	3.0	2.94	3.06	5	95	600	1	10	1	-3.5	0	6.0
BZX84B3V3	2Z14	3.3	3.23	3.37	5	95	600	1	5	1	-3.5	0	6.0
BZX84B3V6	2Z15	3.6	3.53	3.67	5	90	600	1	5	1	-3.5	0	6.0
BZX84B3V9	2Z16	3.9	3.82	3.98	5	90	600	1	3	1	-3.5	0	6.0
BZX84B4V3	2Z17	4.3	4.21	4.39	5	90	600	1	3	1	-3.5	0	6.0
BZX84B4V7	2Z1	4.7	4.61	4.79	5	80	500	1	3	2	-3.5	0.2	6.0

Electrical Characteristics (T_A=25°C unless otherwise noted)

Part Number	Marking Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Temperature Coefficient (mV/°C)		Non-Repetitive Peak Reverse Current I _{ZPM} (A) ¹
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}		I _R	V _R	@ I _{ZT}		
		Nom(V)	Min(V)	Max(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	Min	Max	
BZX84B5V1	Z22	5.1	5	5.2	5	60	480	1	2	2	-2.7	1.2	6.0
BZX84B5V6	Z23	5.6	5.49	5.71	5	40	400	1	1	2	-2.0	2.5	6.0
BZX84B6V2	Z24	6.2	6.08	6.32	5	10	150	1	3	4	0.4	3.7	6.0
BZX84B6V8	Z25	6.8	6.66	6.94	5	15	80	1	2	4	1.2	4.5	6.0
BZX84B7V5	Z26	7.5	7.35	7.65	5	15	80	1	1	5	2.5	5.3	4.0
BZX84B8V2	Z27	8.2	8.04	8.36	5	15	80	1	0.7	5	3.2	6.2	4.0
BZX84B9V1	Z28	9.1	8.92	9.28	5	15	100	1	0.5	6	3.8	7.0	3.0
BZX84B10	Z29	10	9.8	10.2	5	20	150	1	0.2	7	4.5	8.0	3.0
BZX84B11	2Y1	11	10.8	11.2	5	20	150	1	0.1	8	5.4	9.0	2.5
BZX84B12	2Y2	12	11.8	12.2	5	25	150	1	0.1	8	6.0	10.0	2.5
BZX84B13	Z68	13	12.7	13.3	5	30	170	1	0.1	8	7.0	11.0	2.5
BZX84B15	2Y4	15	14.7	15.3	5	30	200	1	0.05	10.5	9.2	13.0	2.0
BZX84B16	2Y5	16	15.7	16.3	5	40	200	1	0.05	11.2	10.4	14.0	1.5
BZX84B18	2Y6	18	17.6	18.4	5	45	225	1	0.05	12.6	12.4	16.0	1.5
BZX84B20	2Y7	20	19.6	20.4	5	55	225	1	0.05	14	14.4	18.0	1.5
BZX84B22	2Y8	22	21.6	22.4	5	55	250	1	0.05	15.4	16.4	20.0	1.25
BZX84B24	2Y9	24	23.5	24.5	5	70	250	1	0.05	16.8	18.4	22.0	1.25
BZX84B27	2Y10	27	26.5	27.5	2	80	300	0.5	0.05	18.9	21.4	25.3	1.0
BZX84B30	2Y11	30	29.4	30.6	2	80	300	0.5	0.05	21	24.4	29.4	1.0
BZX84B33	2Y12	33	32.3	33.7	2	80	325	0.5	0.05	23.1	27.4	33.4	0.9
BZX84B36	2Y13	36	35.3	36.7	2	90	350	0.5	0.05	25.2	30.4	37.4	0.8
BZX84B39	2Y14	39	38.2	39.8	2	130	350	0.5	0.05	27.3	33.4	41.2	0.7
BZX84B43	2Y15	43	42.1	43.9	2	150	375	0.5	0.05	30.1	37.6	46.6	0.6
BZX84B47	2Y16	47	46.1	47.9	2	170	375	0.5	0.05	32.9	42.0	51.8	0.5
BZX84B51	2Y17	51	50	52	2	180	400	0.5	0.05	35.7	46.6	57.2	0.4
BZX84B56	XB	56	54.6	57.4	2	200	425	0.5	0.05	39.2	52.2	63.8	0.3
BZX84B62	XC	62	60.45	63.55	2	215	450	0.5	0.05	43.4	58.8	71.6	0.3
BZX84B68	XD	68	66.3	69.7	2	240	475	0.5	0.05	47.6	65.6	79.8	0.25
BZX84B75	XE	75	73.13	76.87	2	255	500	0.5	0.05	52.5	73.4	88.6	0.20

Note:

1. I_{ZPM} tested at t_p=100uS, square wave

Typical Electrical Characteristic Curves

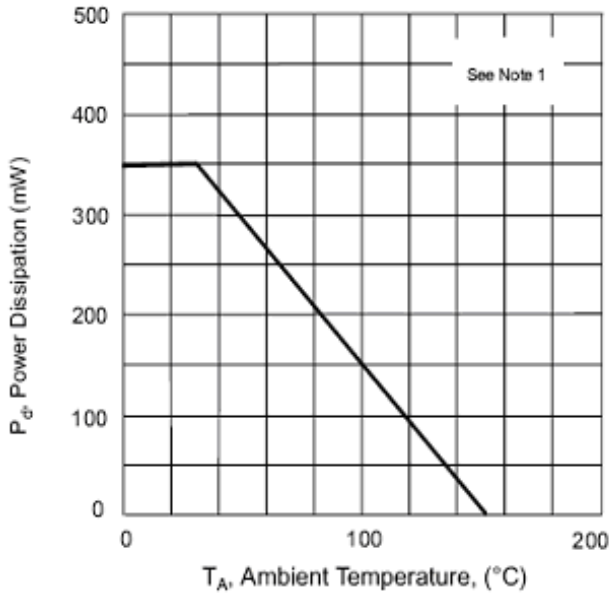


Figure 1. Power Derating Curve

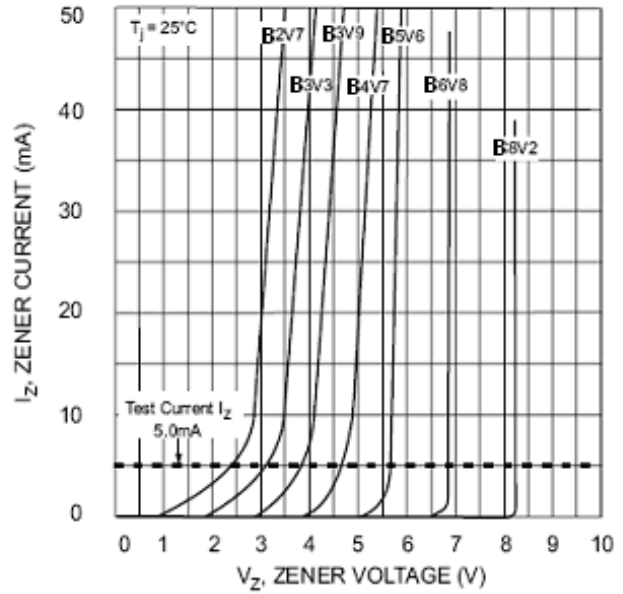


Figure 2. Zener Breakdown Characteristics

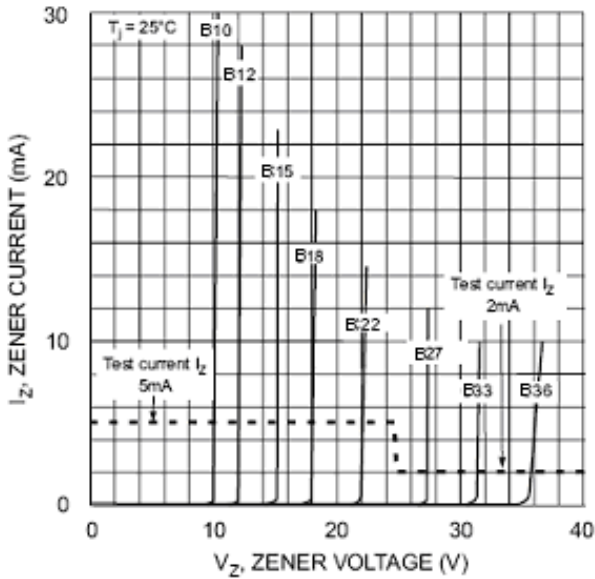


Figure 3. Zener Breakdown Characteristics

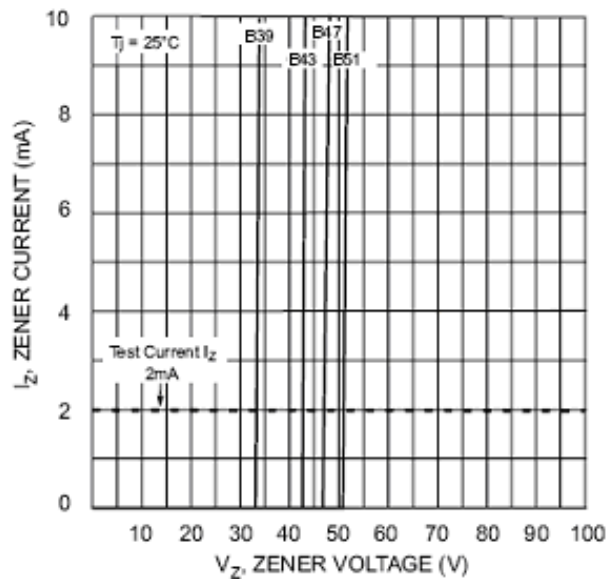


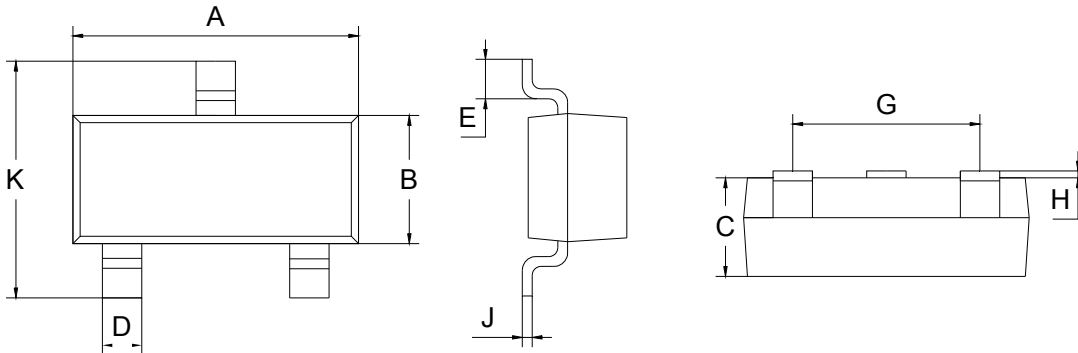
Figure 4. Zener Breakdown Characteristics

BZX84Bxxx Series

Surface Mount Zener Diodes

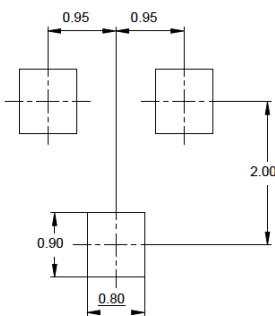
Vz Range: 2.4V to 75V Power Dissipation: 350mW

Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.700	3.100	0.106	0.122
B	1.100	1.500	0.043	0.059
C	1.000 TYP		0.039 TYP	
D	0.400 TYP		0.016 TYP	
E	0.300	0.500	0.012	0.020
G	1.780	2.050	0.070	0.081
H	0.013	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	2.100	2.640	0.083	0.104

Recommended Pad Layout



Unit: mm

Order Information

Device	Package	Packaging	SPQ
BZX84Bxxx	SOT-23	Tape & Reel	3,000 Pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com