TECH PUBLIC
台舟电子

BZX84C Series
350 mWatt Zener Diodes 2.4 to 75 Volts

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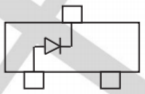
Features

- Planar Die Construction
- Zener Voltages from 2.4V - 75V
- Ideally Suited for Automated Assembly Processes
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Internal Structure



Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance : 357°C/W Junction to Ambient

Parameter	Symbol	Rating	Conditions
Power Dissipation	P_D	350mW	Note 2
Peak Forward Surge Current	I_{FSM}	2.0A	Note 3
Maximum Forward Voltage	V_F	0.9V	I_F=10mA

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. Mounted on 5.0mm² (.013mm thick) Land Areas.
3. Measured on 8.3ms, Single Half Sine-wave or Equivalent Square Wave

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Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Zener Voltage[4,5]			Maximum Zener Impedance[6]				Maximum Reverse Current I_R @ V_R		Marking Code
	V_Z @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	I_{ZK}	Z_{ZK} @ I_{ZK}	I_R	V_R	
	Min.(V)	Nom(V)	Max.(V)	mA	Ω	mA	Ω	μA	V	
BZX84C2V4	2.28	2.40	2.52	5	100	1	600	50	1.0	Z11
BZX84C2V7	2.50	2.70	2.90	5	100	1	600	20	1.0	W2
BZX84C3V0	2.80	3.00	3.20	5	95	1	600	10	1.0	Z13
BZX84C3V3	3.10	3.30	3.50	5	95	1	600	5	1.0	Z14
BZX84C3V6	3.40	3.60	3.80	5	90	1	600	5	1.0	Z15
BZX84C3V9	3.70	3.90	4.10	5	90	1	600	3	1.0	Z16
BZX84C4V3	4.00	4.30	4.60	5	90	1	600	3	1.0	Z17
BZX84C4V7	4.40	4.70	5.00	5	80	1	500	3	2.0	Z1
BZX84C5V1	4.80	5.10	5.40	5	60	1	480	2	2.0	Z2
BZX84C5V6	5.20	5.60	6.00	5	40	1	400	1	2.0	Z3
BZX84C6V2	5.80	6.20	6.60	5	10	1	150	3	4.0	Z4
BZX84C6V8	6.40	6.80	7.20	5	15	1	80	2	4.0	Z5
BZX84C7V5	7.00	7.50	7.90	5	15	1	80	1	5.0	Z6
BZX84C8V2	7.70	8.20	8.70	5	15	1	80	0.7	5.0	Z7
BZX84C9V1	8.50	9.10	9.60	5	15	1	100	0.5	6.0	Z8
BZX84C10	9.40	10.00	10.60	5	20	1	150	0.2	7.0	Z9
BZX84C11	10.40	11.00	11.60	5	20	1	150	0.1	8.0	Y1
BZX84C12	11.40	12.00	12.70	5	25	1	150	0.1	8.0	Y2
BZX84C13	12.40	13.00	14.10	5	30	1	170	0.1	8.0	Y3
BZX84C15	13.80	15.00	15.60	5	30	1	200	0.1	10.5	Y4
BZX84C16	15.30	16.00	17.10	5	40	1	200	0.1	11.2	Y5
BZX84C18	16.80	18.00	19.10	5	45	1	225	0.1	12.6	Y6
BZX84C20	18.80	20.00	21.20	5	55	1	225	0.1	14.0	Y7
BZX84C22	20.80	22.00	23.30	5	55	1	250	0.1	15.4	Y8
BZX84C24	22.80	24.00	25.60	5	70	1	250	0.1	16.8	Y9
BZX84C27	25.10	27.00	28.90	2	80	0.5	300	0.1	18.9	Y10
BZX84C30	28.00	30.00	32.00	2	80	0.5	300	0.1	21.0	Y11
BZX84C33	31.00	33.00	35.00	2	80	0.5	325	0.1	23.1	Y12
BZX84C36	34.00	36.00	38.00	2	90	0.5	350	0.1	25.2	Y13
BZX84C39	37.00	39.00	41.00	2	130	0.5	350	0.1	27.3	Y14
BZX84C43	40.85	43.00	45.15	2	150	0.5	375	0.1	30.1	Y15
BZX84C47	44.65	47.00	49.35	2	170	0.5	375	0.1	32.9	Y16
BZX84C51	48.45	51.00	53.55	2	180	0.5	400	0.1	35.7	Y17
BZX84C56	53.20	56.00	58.80	2	200	0.5	425	0.05	39.2	Y18
BZX84C62	58.90	62.00	65.10	2	215	0.5	450	0.05	43.4	Y19
BZX84C68	64.60	68.00	71.40	2	240	0.5	475	0.05	47.6	Y20
BZX84C75	71.25	75.00	78.75	2	255	0.5	500	0.05	52.5	Y21

Note :

4.Standard zener voltage tolerance is +/- 5% with a 'C' suffix from BZX84C2V4~BZX84C75 , suffix 'B' is +/- 2% tolerance from BZX84B2V4~BZX84B75.

5.Zener Voltage (V_Z) Measurement. Guarantess the Zener Voltage When Measured at 90 Seconds While Maintaining the Lead Temperature (T_L) at 25°C from the Diode Body.

6.Zener Impedance (Z_Z) Derivation. The zener Impedance is Derived from the 60 Cycle AC Voltage, Which Results When an AC Current Having an rms Value Equal to 10% of the DC Zener Current (I_{ZT} or I_{ZK}) is Superimposed on I_{ZT} or I_{ZK}.

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Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Zener Voltage(4,5)			Maximum Zener Impedance(6)				Maximum Reverse Current I_R @ V_R		Marking Code
	V_Z @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	I_{ZK}	Z_{ZK} @ I_{ZK}	I_R	V_R	
	Min.(V)	Nom(V)	Max.(V)	mA	Ω	mA	Ω	μA	V	
BZX84B2V4	2.35	2.40	2.45	5	100	1	600	50	1.0	W1
BZX84B2V7	2.65	2.70	2.75	5	100	1	600	20	1.0	W2
BZX84B3V0	2.94	3.00	3.06	5	95	1	600	10	1.0	W3
BZX84B3V3	3.23	3.30	3.37	5	95	1	600	5	1.0	W4
BZX84B3V6	3.53	3.60	3.67	5	90	1	600	5	1.0	W5
BZX84B3V9	3.82	3.90	3.98	5	90	1	600	3	1.0	W6
BZX84B4V3	4.21	4.30	4.39	5	90	1	600	3	1.0	W7
BZX84B4V7	4.61	4.70	4.79	5	80	1	500	3	2.0	Z1
BZX84B5V1	5.00	5.10	5.20	5	60	1	480	2	2.0	2Z2
BZX84B5V6	5.49	5.60	5.71	5	40	1	400	1	2.0	2Z3
BZX84B6V2	6.08	6.20	6.32	5	10	1	150	3	4.0	2Z4
BZX84B6V8	6.66	6.80	6.94	5	15	1	80	2	4.0	2Z5
BZX84B7V5	7.35	7.50	7.65	5	15	1	80	1	5.0	2Z6
BZX84B8V2	8.04	8.20	8.36	5	15	1	80	0.7	5.0	2Z7
BZX84B9V1	8.92	9.10	9.28	5	15	1	100	0.5	6.0	2Z8
BZX84B10	9.80	10.00	10.20	5	20	1	150	0.2	7.0	2Z9
BZX84B11	10.78	11.00	11.22	5	20	1	150	0.1	8.0	WH
BZX84B12	11.76	12.00	12.24	5	25	1	150	0.1	8.0	2Y2
BZX84B13	12.74	13.00	13.26	5	30	1	170	0.1	8.0	2Y3
BZX84B15	14.70	15.00	15.30	5	30	1	200	0.1	10.5	2Y4
BZX84B16	15.68	16.00	16.32	5	40	1	200	0.1	11.2	2Y5
BZX84B18	17.64	18.00	18.36	5	45	1	225	0.1	12.6	2Y6
BZX84B20	19.60	20.00	20.40	5	55	1	225	0.1	14.0	WO
BZX84B22	21.56	22.00	22.44	5	55	1	250	0.1	15.4	WP
BZX84B24	23.52	24.00	24.48	5	70	1	250	0.1	16.8	Y9
BZX84B27	26.46	27.00	27.54	2	80	0.5	300	0.1	18.9	Y10
BZX84B30	29.40	30.00	30.60	2	80	0.5	300	0.1	21.0	WT
BZX84B33	32.34	33.00	33.66	2	80	0.5	325	0.1	23.1	WU
BZX84B36	35.28	36.00	36.72	2	90	0.5	350	0.1	25.2	Y13
BZX84B39	38.22	39.00	39.78	2	130	0.5	350	0.1	27.3	Y14
BZX84B43	42.14	43.00	43.86	2	150	0.5	375	0.1	30.1	WY
BZX84B47	45.83	47.00	48.17	2	170	0.5	375	0.1	32.9	WZ
BZX84B51	49.73	51.00	52.27	2	180	0.5	400	0.1	35.7	XA
BZX84B56	54.60	56.00	57.40	2	200	0.5	425	0.05	39.2	XB
BZX84B62	60.45	62.00	63.55	2	215	0.5	450	0.05	43.4	XC
BZX84B68	66.30	68.00	69.70	2	240	0.5	475	0.05	47.6	XD
BZX84B75	73.13	75.00	76.87	2	255	0.5	500	0.05	52.5	XE

Note :

4.Standard zener voltage tolerance is +/- 5% with a 'C' suffix, suffix 'B' is +/- 2% tolerance.

5.Zener Voltage (V_Z) Measurement. Guarantess the Zener Voltage When Measured at 90 Seconds While Maintaining the Lead Temperature (T_L) at 25°C from the Diode Body.

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Curve Characteristics

Fig. 1 - Power Derating Curve

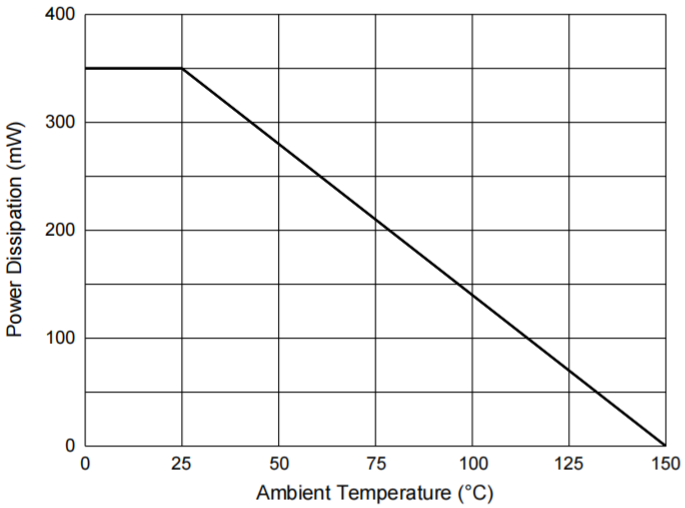


Fig. 2 - Typical Zener Breakdown Characteristics

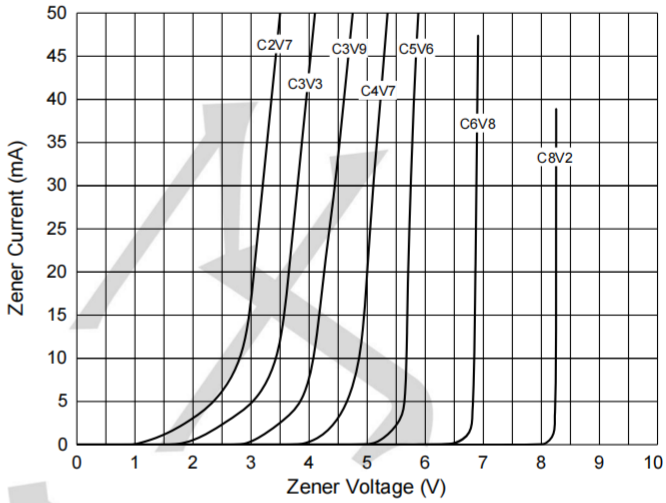
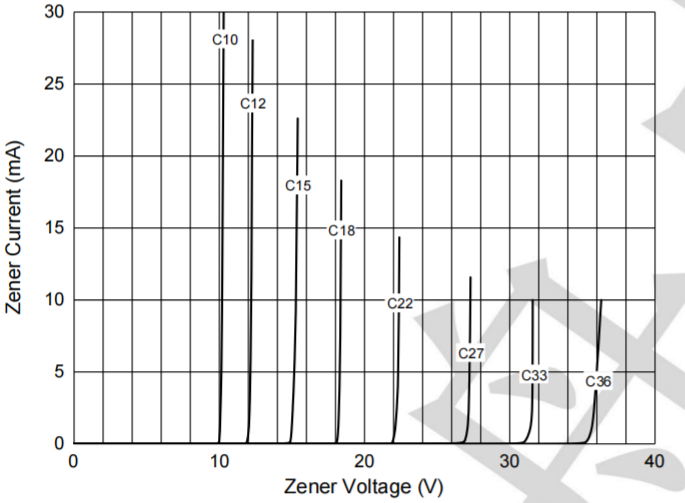


Fig. 3 - Typical Zener Breakdown Characteristics



Package Outline Dimensions (unit: mm)

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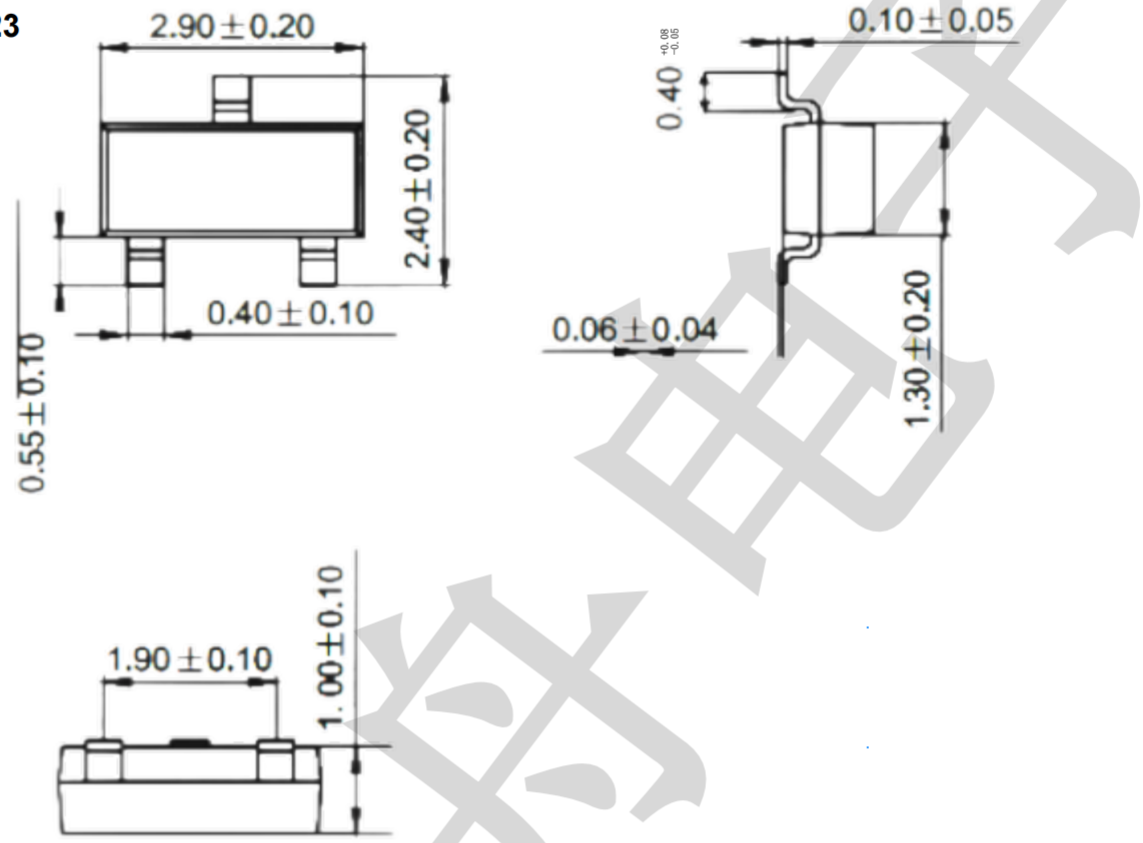
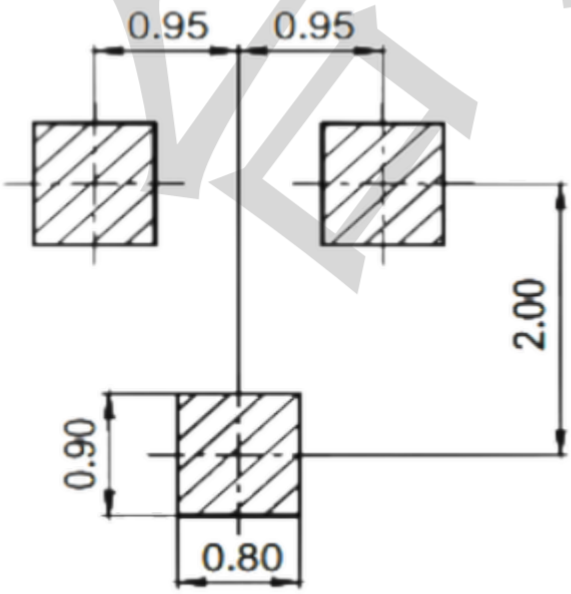
Mounting Pad Layout (unit: mm)