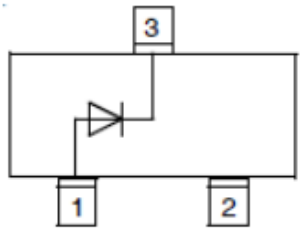
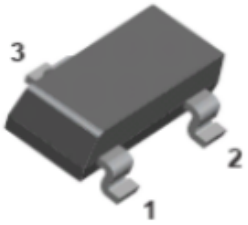
Zener Diodes





Features

- Moisture sensitivity level 1
- Zener voltage 2.4V~75V

Application

- Linear voltage regulator
- DC regulator
- Small-signal surge protection

Mechanical data

- **Package**: SOT-23
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ **Maximum Ratings** (T_a=25℃ Unless otherwise specified)

Characteristic	Symbol	Value	Units
Maximum Forward Voltage@I_F=10mA	V_F	0.9	V
Power Dissipation	P_D	350	mW
Peak Forward Surge Current*	I_{FSM}	2.0	A
Thermal Resistance	R_{thJA}	357	℃ /W
Operation Temperature	T_J	-55~+150	℃
Storage Temperature Range	T_{STG}	-55~+150	℃

■**Ordering Information** (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BZX84B2V4 THRU BZX84B75	F2	Approximate 0.008	3000	30000	120000	7” reel

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

Type number	Device marking	V_Z@ I_{ZT} (V)			Z_{ZT}(Ω)		Z_{ZK}(Ω)		I_R(μA) @V_R		Typical temperature coefficient @ I_{ZTC} mV/℃		Diode capacitance Cd (pF)	Non-repetitive peak reverse current Izsm (A)
		min	typ	max	max	I_{ZT} (mA)	max	I_{ZK} (mA)	max	V_R(V)	min	max	max	max
BZX84B2V4	Z11.	2.34	2.4	2.46	100	5	600	1	45	1	-3.5	0	450	6
BZX84B2V7	Z12.	2.63	2.7	2.77	100	5	600	1	20	1	-3.5	0	450	6
BZX84B3V0	Z13.	2.92	3.0	3.08	100	5	600	1	10	1	-3.5	0	450	6
BZX84B3V3	Z14.	3.21	3.3	3.39	95	5	600	1	15	1	-3.5	0	450	6
BZX84B3V6	Z15.	3.52	3.6	3.67	95	5	600	1	15	1	-3.5	0	450	4.5
BZX84B3V9	Z16.	3.82	3.9	3.98	95	5	600	1	10	1	-3.5	0	450	4.5
BZX84B4V3	Z17.	4.21	4.3	4.39	95	5	600	1	3	1	-3.5	0	450	3.5
BZX84B4V7	Z1.	4.61	4.7	4.79	80	5	500	1	3	2	-3.5	0.2	300	3.5
BZX84B5V1	Z2.	5.0	5.1	5.2	60	5	480	1	2	2	-2.7	1.2	300	3
BZX84B5V6	Z3.	5.49	5.6	5.71	40	5	400	1	1	2	-2.0	2.5	200	3
BZX84B6V2	Z4.	6.08	6.2	6.32	10	5	150	1	3	4	0.4	3.7	200	3
BZX84B6V8	Z5.	6.66	6.8	6.94	15	5	80	1	2	4	1.2	4.5	200	2
BZX84B7V5	Z6.	7.35	7.5	7.65	15	5	80	1	1	5	2.5	5.3	150	2
BZX84B8V2	Z7.	8.04	8.2	8.36	15	5	80	1	0.7	5	3.2	6.2	150	2
BZX84B9V1	Z8.	8.92	9.1	9.28	15	5	100	1	0.5	6	3.8	7.0	150	1.8
BZX84B10	Z9.	9.8	10	10.2	20	5	150	1	0.2	7	4.5	8.0	90	1.8
BZX84B11	Y1.	10.78	11	11.22	20	5	150	1	0.1	8	5.4	9.0	85	1.8
BZX84B12	Y2.	11.76	12	12.24	25	5	150	1	0.1	8	6.0	10.0	85	1.8
BZX84B13	Y3.	12.74	13	13.3	30	5	170	1	0.1	8	7.0	11.0	80	1
BZX84B15	Y4.	14.7	15	15.3	30	5	200	1	0.1	10.5	9.2	13.0	75	1
BZX84B16	Y5.	15.68	16	16.3	40	5	200	1	0.1	11.2	10.4	14.0	75	1
BZX84B18	Y6.	17.6	18	18.4	45	5	225	1	0.1	12.6	12.4	16.0	70	1
BZX84B20	Y7.	19.6	20	20.4	55	5	225	1	0.1	14	14.4	18.0	60	1
BZX84B22	Y8.	21.56	22	22.44	55	5	250	1	0.1	15.4	16.4	20.0	60	0.6
BZX84B24	Y9.	23.52	24	24.5	70	5	250	1	0.1	16.8	18.4	22.0	55	0.6
BZX84B27	Y10.	26.46	27	27.54	80	5	300	1	0.1	18.9	21.4	25.3	50	0.6
BZX84B30	Y11.	29.4	30	30.6	80	5	300	1	0.1	21	24.4	29.4	50	0.6
BZX84B33	Y12.	32.34	33	33.7	80	5	325	1	0.1	23.1	27.4	33.4	45	0.6
BZX84B36	Y13.	35.28	36	36.72	90	5	350	1	0.1	25.2	30.4	37.4	45	0.6
BZX84B39	Y14	38.22	39	39.78	90	5	350	1.0	0.1	29.0	33.4	41.2	45	0.6
BZX84B43	Y15	42.14	43	43.86	100	5	375	1	0.1	32.0	37.6	46.6	40	0.6
BZX84B47	Y16	46.06	47	47.94	110	5	375	1	0.1	35.0	42.0	51.8	40	0.5
BZX84B51	Y17	50.0	51	52.0	180	2	400	0.5	0.05	35.7	46.6	57.2	40	0.4
BZX84B56	Y18	54.9	56	57.1	200	2	425	0.5	0.05	39.2	52.2	63.8	40	0.3

BZX84B62	Y19	60.8	62	63.2	215	2	450	0.5	0.05	43.4	58.8	71.6	35	0.3
BZX84B68	Y20	66.64	68	69.36	240	2	475	0.5	0.05	47.6	65.6	79.8	35	0.25
BZX84B75	Y21	73.5	75	76.5	255	2	500	0.5	0.05	52.5	73.4	88.6	35	0.25

■ Characteristics (Typical)

Fig 1：P_D-Ta Curve

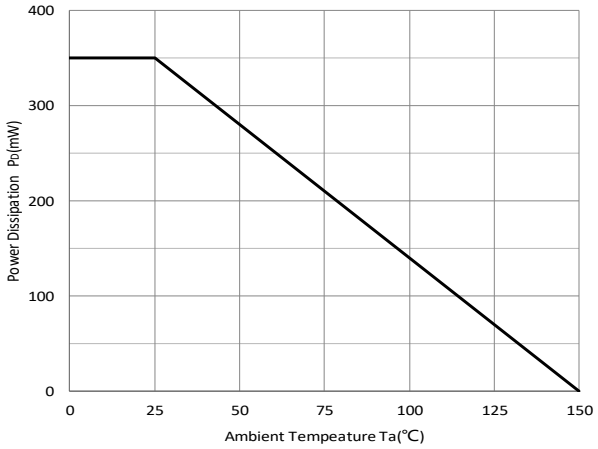


Fig 2：Zener Breakdown Characteristics

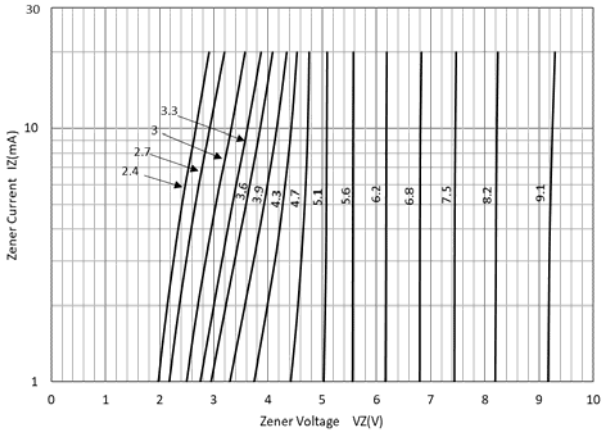


Fig 3：Zener Breakdown Characteristics

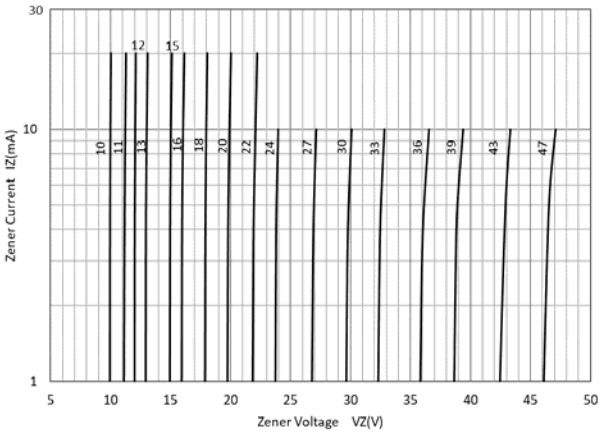


Fig 4：Zener Breakdown Characteristics

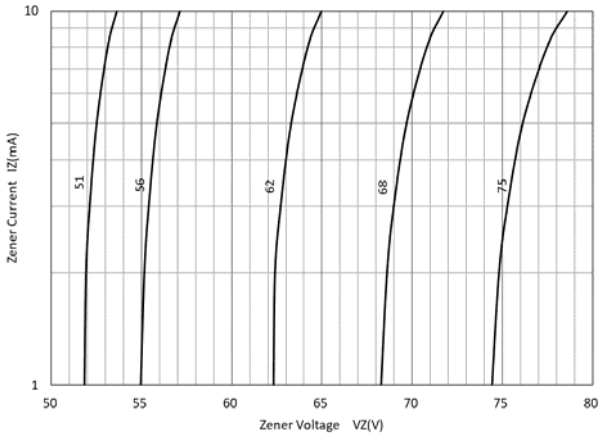


Fig 5：Typical Temperature Coeffient

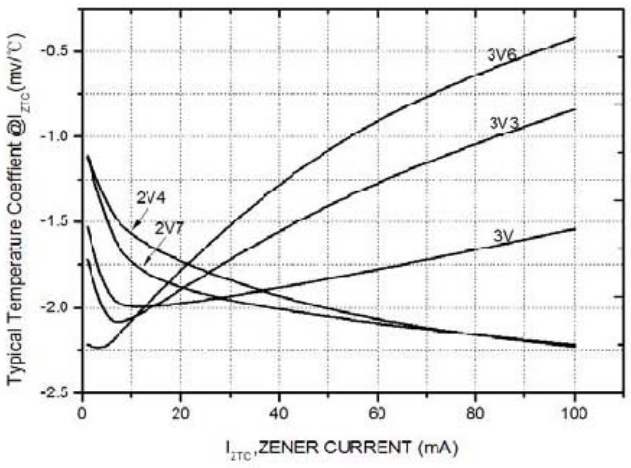


Fig 6：Typical Temperature Coeffient

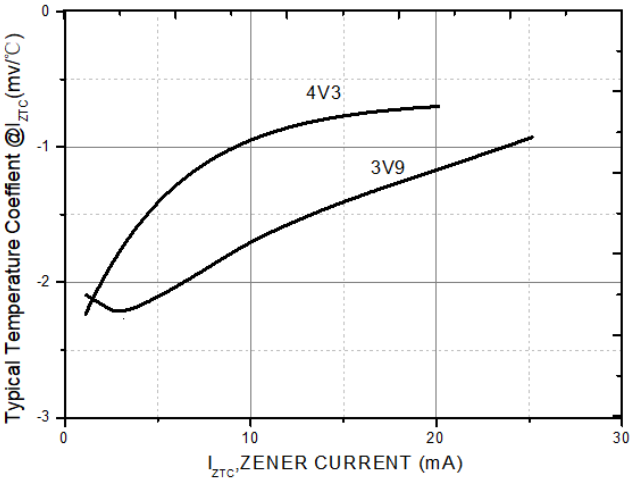


Fig 7：Typical Temperature Coeffient

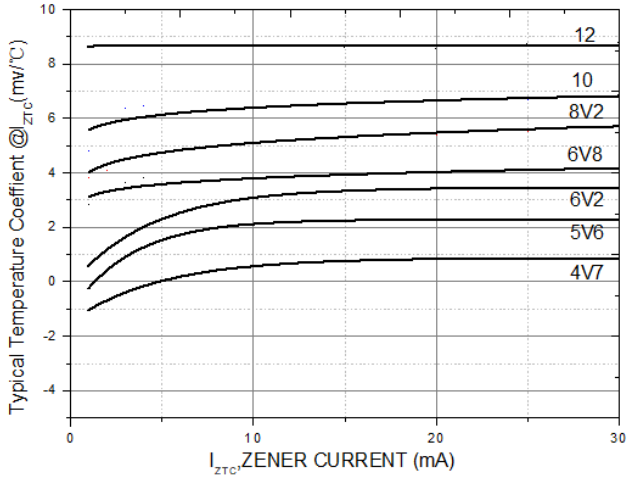


Fig 8：Typical Temperature Coeffient

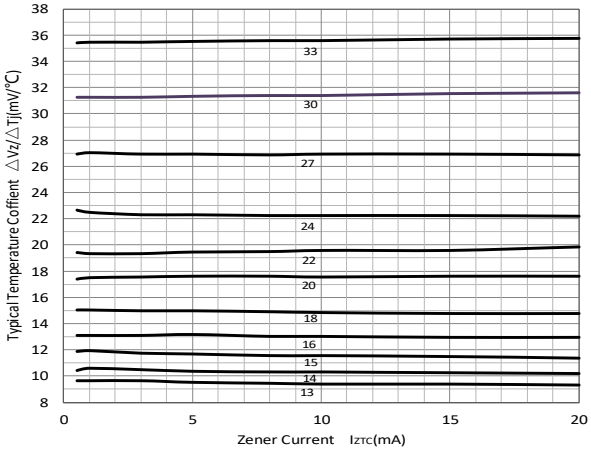


Fig 9：Typical Temperature Coeffient

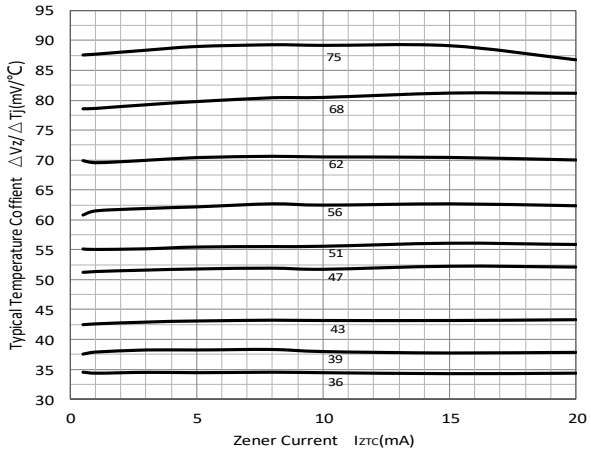


Fig 10：Typical Forward Voltage

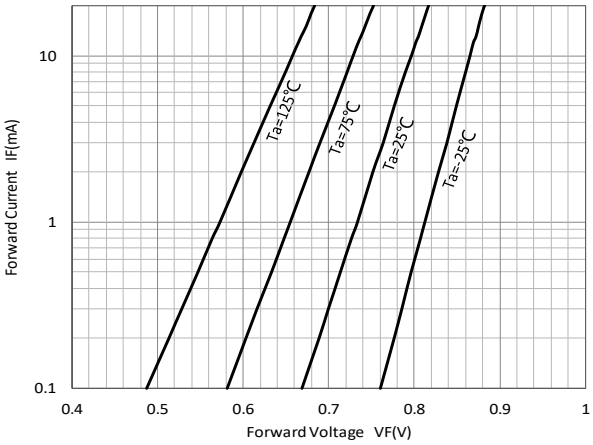


Fig 11：Typical Reverse Current

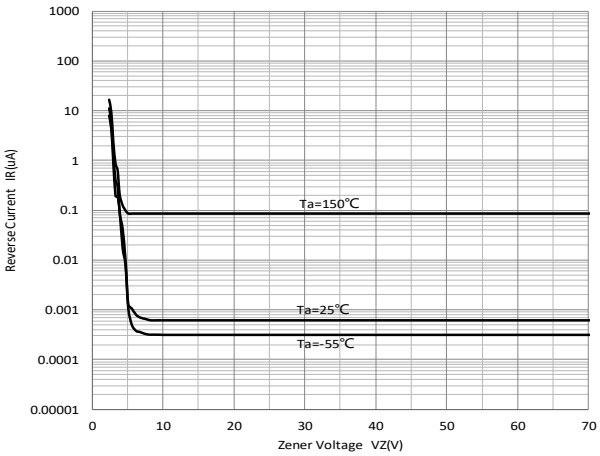
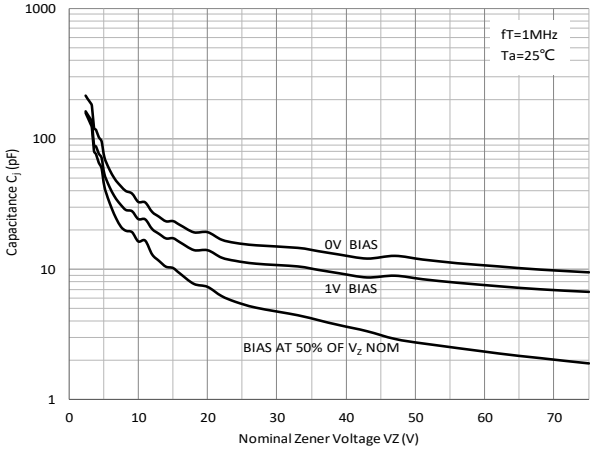
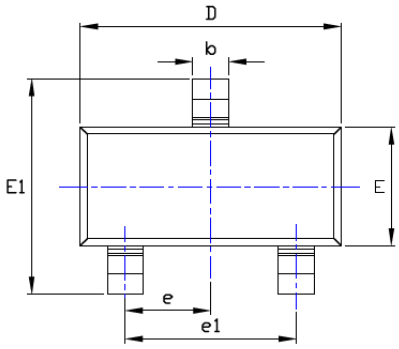


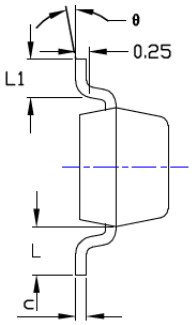
Fig 12：Typical Capacitance



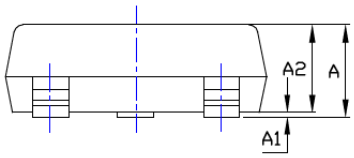
■SOT-23 Package Outline Dimensions



TOP VIEW



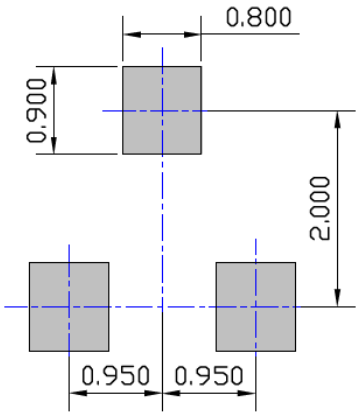
SIDE VIEW



SIDE VIEW

DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.200	0.300	0.500
θ	0°	8°	0°	8°

■SOT-23 Suggested Pad Layout



UNIT：mm

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