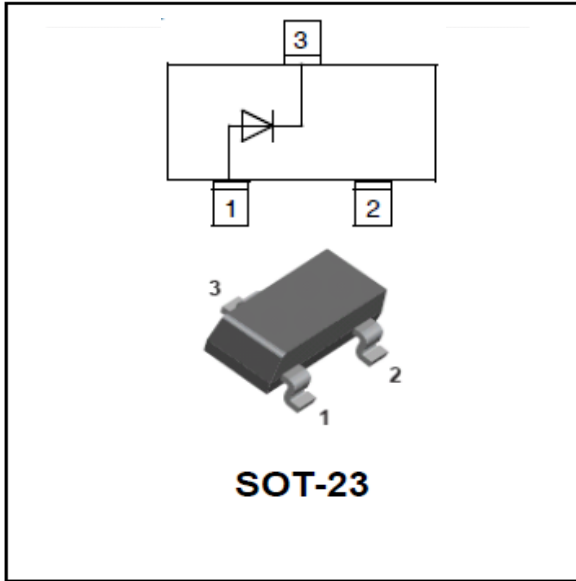


Zener Diodes



Features

- High reliability
- Very sharp reverse characteristic
- Low reverse current level
- Zener Voltage 2.4V~75V

Mechanical Data

- **Package:** SOT-23
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■Limiting Values (Absolute Maximum Rating, Ta=25°C 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	°C /W
Operation Temperature	T _J	-55~+150	°C
Storage Temperature Range	T _{STG}	-55~+150	°C

*Measured on 8.3ms, single half sine-wave

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BZX84C2V4 THRU BZX84C75	F2	Approximate 0.008	3000	30000	120000	7" reel
BZX84C2V4 THRU BZX84C75	F4	Approximate 0.008	10000	/	210000	13" reel



BZX84C2V4 THRU BZX84C75

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

Type Number	Marking Code	Nominal Zener Voltage			Maximum Zener Impedance				Max Reverse Leakage Current		Typical Temperature Coefficient@ IZTC mV/°C	
		Vz at IZT (V)			Z _{ZT} @I _{ZT}		Z _{Zk} @I _{Zk}		I _R (uA)@ V _R			
		Min.	Typ.	Max.	Z _{ZT} (Ω)	I _{ZT} (mA)	Z _{Zk} (Ω)	I _{Zk} (mA)	Max	V _R (V)	Min	Max
BZX84C2V4	Z11.	2.28	2.4	2.52	100	5	600	1	50	1	-3.5	0
BZX84C2V7	Z12.	2.5	2.7	2.9	100	5	600	1	20	1	-3.5	0
BZX84C3V0	Z13.	2.8	3.0	3.2	95	5	600	1	10	1	-3.5	0
BZX84C3V3	Z14.	3.1	3.3	3.5	95	5	600	1	5	1	-3.5	0
BZX84C3V6	Z15.	3.4	3.6	3.8	90	5	600	1	5	1	-3.5	0
BZX84C3V9	Z16.	3.7	3.9	4.1	90	5	600	1	3	1	-3.5	0
BZX84C4V3	Z17.	4.0	4.3	4.6	90	5	600	1	3	1	-3.5	0
BZX84C4V7	Z1.	4.4	4.7	5.0	80	5	500	1	3	2	-3.5	0
BZX84C5V1	Z2.	4.8	5.1	5.4	60	5	480	1	2	2	-2.7	1.2
BZX84C5V6	Z3.	5.2	5.6	6.0	40	5	400	1	1	2	-2	2.5
BZX84C6V2	Z4.	5.8	6.2	6.6	10	5	150	1	3	4	0.4	3.7
BZX84C6V8	Z5.	6.4	6.8	7.2	15	5	80	1	2	4	1.2	4.5
BZX84C7V5	Z6.	7.0	7.5	7.9	15	5	80	1	1	5	2.5	5.3
BZX84C8V2	Z7.	7.7	8.2	8.7	15	5	80	1	0.7	5	3.2	6.2
BZX84C9V1	Z8.	8.5	9.1	9.6	15	5	100	1	0.5	6	3.8	7.0
BZX84C10	Z9.	9.4	10	10.6	20	5	150	1	0.2	7	4.5	8.0
BZX84C11	Y1 .	10.4	11	11.6	20	5	150	1	0.1	8	5.4	9.0
BZX84C12	Y2 .	11.4	12	12.7	25	5	150	1	0.1	8	6.0	10.0
BZX84C13	Y3.	12.4	13	14.1	30	5	170	1	0.1	8	7.0	11.0
BZX84C15	Y4.	14.25	15	15.75	30	5	200	1	0.1	10.5	9.2	13.0
BZX84C16	Y5.	15.3	16	17.1	40	5	200	1	0.1	11.2	10.4	14.0
BZX84C18	Y6 .	16.8	18	19.1	45	5	225	1	0.1	12.6	12.4	16.0
BZX84C20	Y7.	18.8	20	21.2	55	5	225	1	0.1	14	14.4	18.0
BZX84C22	Y8.	20.8	22	23.3	55	5	250	1	0.1	15.4	16.4	20.0
BZX84C24	Y9.	22.8	24	25.6	70	5	250	1	0.1	16.8	18.4	22.0
BZX84C27	Y10.	25.1	27	28.9	80	2	300	1	0.1	18.9	21.4	25.3
BZX84C30	Y11 .	28	30	32	80	2	300	1	0.1	21.0	24.4	29.4
BZX84C33	Y12.	31	33	35	80	2	325	1	0.1	23.1	27.4	33.4
BZX84C36	Y13.	34	36	38	90	2	350	1	0.1	25.2	30.4	37.4
BZX84C39	Y14.	37	39	41	130	2	350	1	0.1	27.3	33.4	41.2
BZX84C43	Y15.	40.85	43	45.15	150	5	375	1	0.1	30.1	37.6	46.6
BZX84C47	Y16.	44.65	47	49.35	170	5	375	1	0.1	32.9	42.0	51.8
BZX84C51	Y17.	48	51	54	180	2	400	0.5	0.05	35.7	46.6	57.2
BZX84C56	Y18.	53	56	59	200	2	425	0.5	0.05	39.2	52.2	63.8
BZX84C62	Y19.	58	62	66	215	2	450	0.5	0.05	43.4	58.8	71.6
BZX84C68	Y20.	64	68	72	240	2	475	0.5	0.05	47.6	65.6	79.8
BZX84C75	Y21.	70	75	79	255	2	500	0.5	0.05	52.5	73.4	88.6



BZX84C2V4 THRU BZX84C75

■ Characteristics (Typical)

Fig 1: Zener Breakdown Characteristics

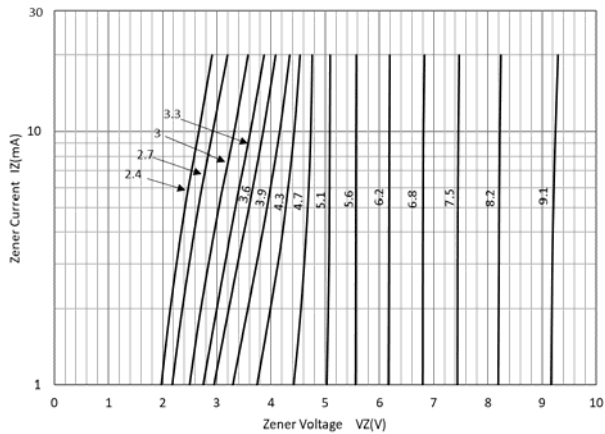


Fig 2: Zener Breakdown Characteristics

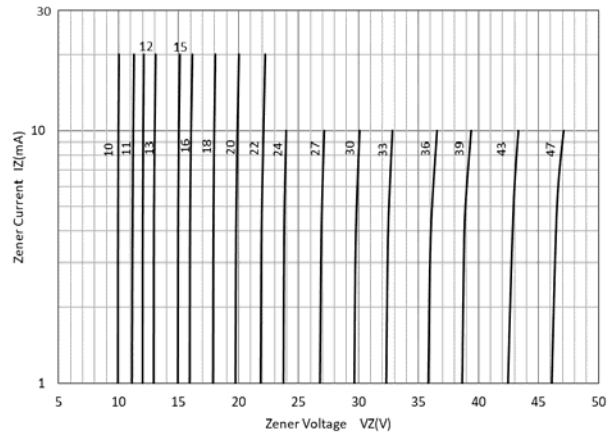


Fig 3: Zener Breakdown Characteristics

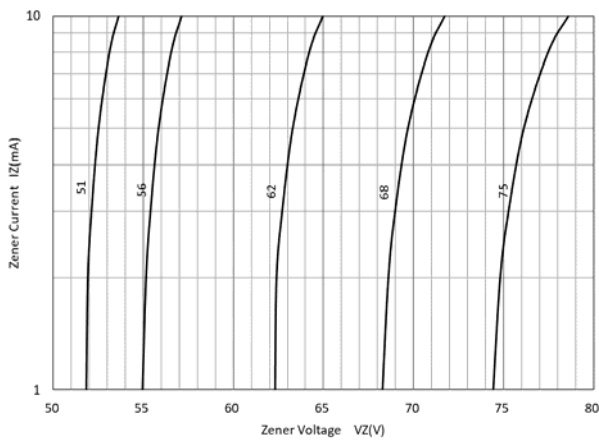
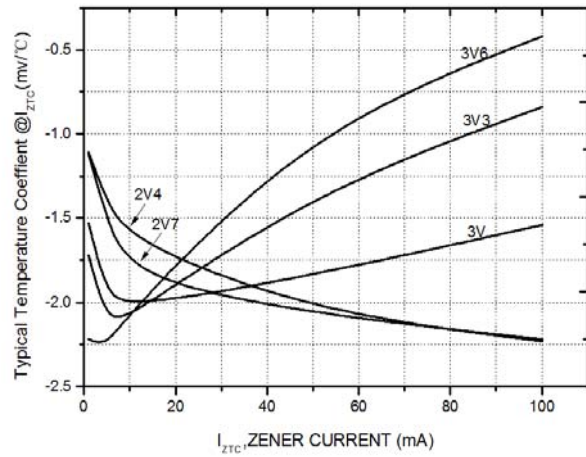


Fig 4: Typical Temperature Coefficient





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Fig 5: Typical Temperature Coefficient

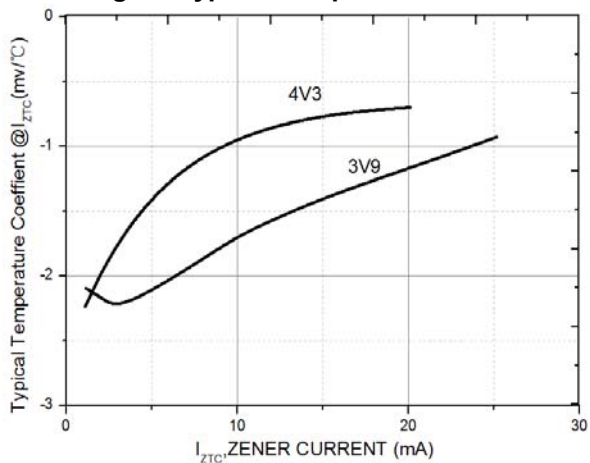


Fig 6: Typical Temperature Coefficient

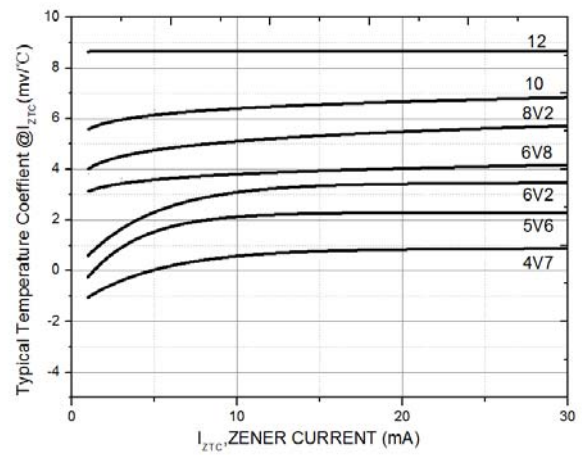
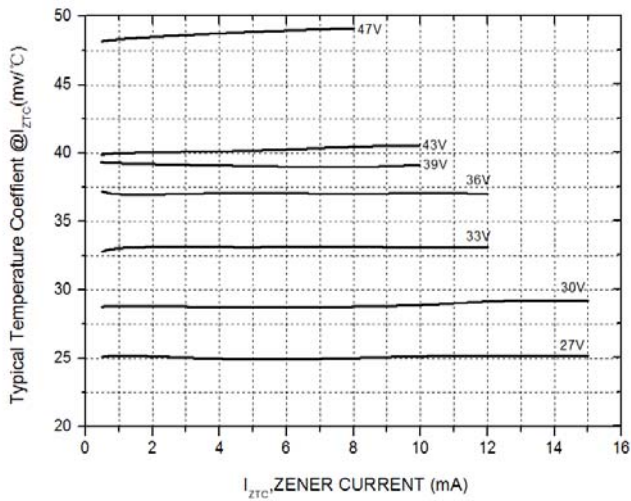


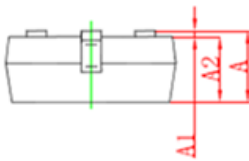
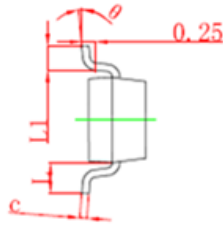
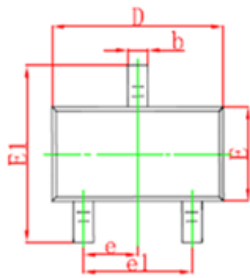
Fig 7: Typical Temperature Coefficient





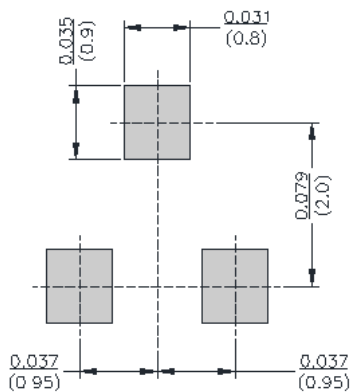
BZX84C2V4 THRU BZX84C75

■SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

■SOT-23 Suggested Pad Layout





BZX84C2V4 THRU BZX84C75

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