

## Zener Diodes



### Features

- High reliability
- Very sharp reverse characteristic
- Low reverse current level
- Zener Voltage 2.4V~47V

### 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 <sub>F</sub> =10mA	V <sub>F</sub>	0.9	V
Power Dissipation	P <sub>D</sub>	350	mW
Peak Forward Surge Current*	I <sub>FSM</sub>	2.0	A
Thermal Resistance	R <sub>thJA</sub>	357	°C /W
Operation Temperature	T <sub>J</sub>	-55~+150	°C
Storage Temperature Range	T <sub>STG</sub>	-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 BZX84C47	F2	Approximate 0.008	3000	30000	120000	7" reel



# BZX84C2V4 THRU BZX84C47

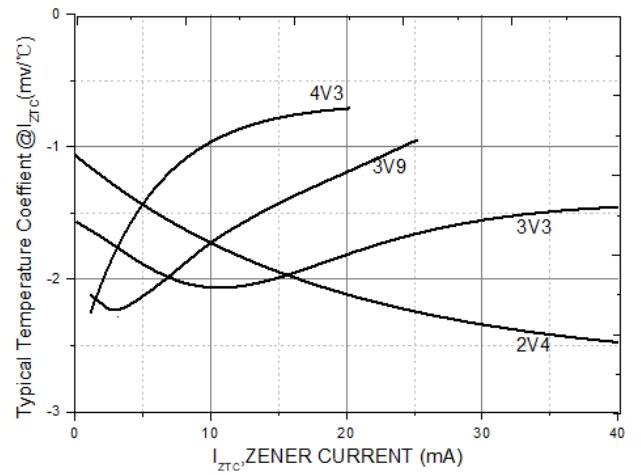
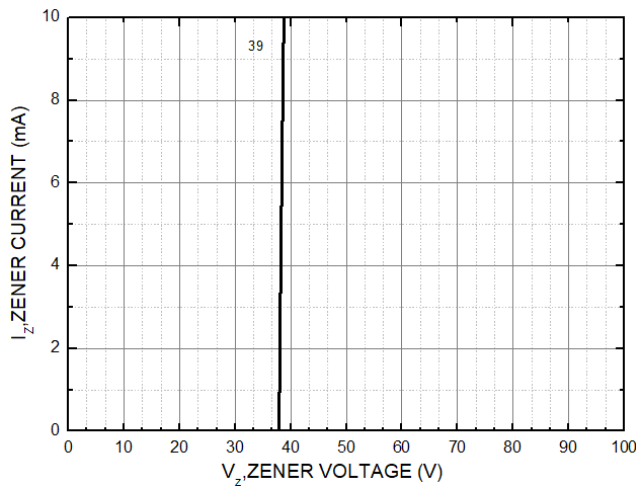
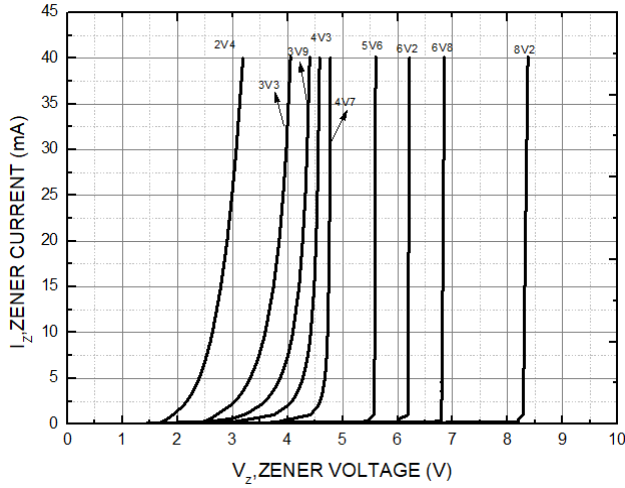
## ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Type Number	Marking Code	Nominal Zener Voltage			Maximum Zener Impedance				Max Reverse Leakage Current	
		V <sub>Z</sub> at I <sub>ZT</sub> (V)			Z <sub>ZT</sub> @I <sub>ZT</sub>		Z <sub>Zk</sub> @I <sub>Zk</sub>		I <sub>R</sub> (uA)@ V <sub>R</sub>	
		Min.	Typ.	Max.	Z <sub>ZT</sub> (Ω)	I <sub>ZT</sub> (mA)	Z <sub>Zk</sub> (Ω)	I <sub>Zk</sub> (mA)	Max	V <sub>R</sub> (V)
BZX84C2V4	Z11	2.28	2.4	2.52	100	5	600	1	50	1
BZX84C2V7	Z12	2.5	2.7	2.9	100	5	600	1	20	1
BZX84C3V0	Z13	2.8	3.0	3.2	95	5	600	1	10	1
BZX84C3V3	Z14	3.1	3.3	3.5	95	5	600	1	5	1
BZX84C3V6	Z15	3.4	3.6	3.8	90	5	600	1	5	1
BZX84C3V9	Z16	3.7	3.9	4.1	90	5	600	1	3	1
BZX84C4V3	Z17	4.0	4.3	4.6	90	5	600	1	3	1
BZX84C4V7	Z1	4.4	4.7	5.0	80	5	500	1	3	2
BZX84C5V1	Z2	4.8	5.1	5.4	60	5	480	1	2	2
BZX84C5V6	Z3	5.2	5.6	6.0	40	5	400	1	1	2
BZX84C6V2	Z4	5.8	6.2	6.6	10	5	150	1	3	4
BZX84C6V8	Z5	6.4	6.8	7.2	15	5	80	1	2	4
BZX84C7V5	Z6	7.0	7.5	7.9	15	5	80	1	1	5
BZX84C8V2	Z7	7.7	8.2	8.7	15	5	80	1	0.7	5
BZX84C9V1	Z8	8.5	9.1	9.6	15	5	100	1	0.5	6
BZX84C10	Z9	9.4	10	10.6	20	5	150	1	0.2	7
BZX84C11	Y1 •	10.4	11	11.6	20	5	150	1	0.1	8
BZX84C12	Y2 •	11.4	12	12.7	25	5	150	1	0.1	8
BZX84C13	Y3	12.4	13	14.1	30	5	170	1	0.1	8
BZX84C15	Y4	14.25	15	15.75	30	5	200	1	0.1	10.5
BZX84C16	Y5	15.3	16	17.1	40	5	200	1	0.1	11.2
BZX84C18	Y6 •	16.8	18	19.1	45	5	225	1	0.1	12.6
BZX84C20	Y7	18.8	20	21.2	55	5	225	1	0.1	14
BZX84C22	Y8	20.8	22	23.3	55	5	250	1	0.1	15.4
BZX84C24	Y9	22.8	24	25.6	70	5	250	1	0.1	16.8
BZX84C27	Y10	25.1	27	28.9	80	2	300	1	0.1	18.9
BZX84C30	Y11 •	28	30	32	80	2	300	1	0.1	21.0
BZX84C33	Y12	31	33	35	80	2	325	1	0.1	23.1
BZX84C36	Y13	34	36	38	90	2	350	1	0.1	25.2
BZX84C39	Y14	37	39	41	130	2	350	1	0.1	27.3
BZX84C43	Y15	40.85	43	45.15	150	5	375	1	0.1	30.1
BZX84C47	Y16	44.65	47	49.35	170	5	375	1	0.1	32.9



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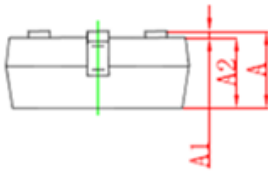
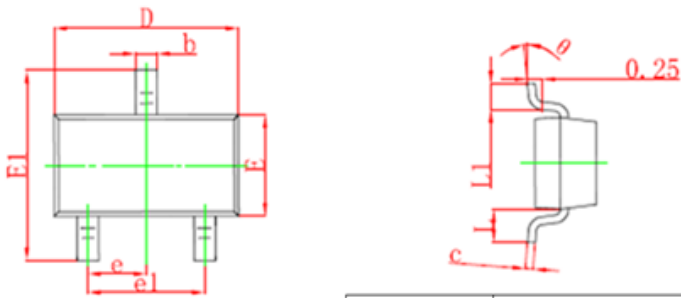
## ■ Characteristics (Typical)





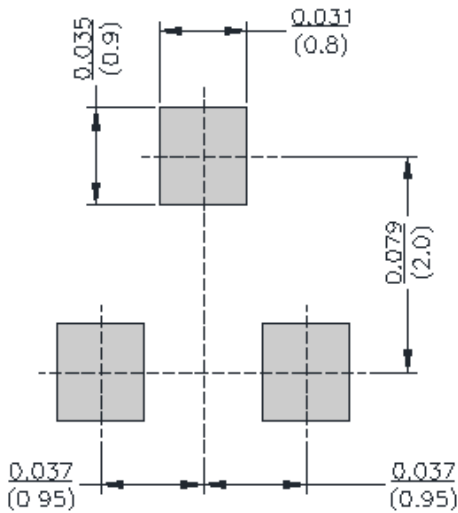
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## ■SOT-23 Package Outline Dimensions



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
φ	0°	8°	0°	8°

## ■SOT-23Suggested Pad Layout





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