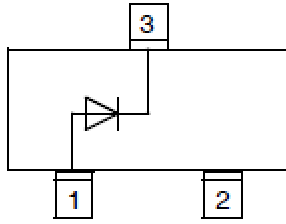


## Small Signal Zener Diodes



**SOT-23**

### Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Zener Voltage 2.4V~47V
- $V_z$ -tolerance  $\pm 5\%$  approximately
- Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

- General regulation functions

### Mechanical Data

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

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Power Dissipation	$P_D$	mW	350
Storage Temperature Range	$T_{stg}$	$^\circ\text{C}$	-55~+150
Junction Temperature	$T_J$	$^\circ\text{C}$	-55~+150
Maximum Regulator Current	$I_{ZM}$	mA	$P_D / V_z$
Maximum Forward Voltage ( $I_F=10\text{mA}$ )	$V_F$	V	0.9
Thermal Resistance Junction to Ambient Air*	$R_{\theta JA}$	$^\circ\text{C} / \text{W}$	357

### ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BZX84C2V4Q THRU BZX84C47Q	F2	Approximate 0.01	3000	30000	120000	7" reel



# BZX84C2V4Q THRU BZX84C47Q

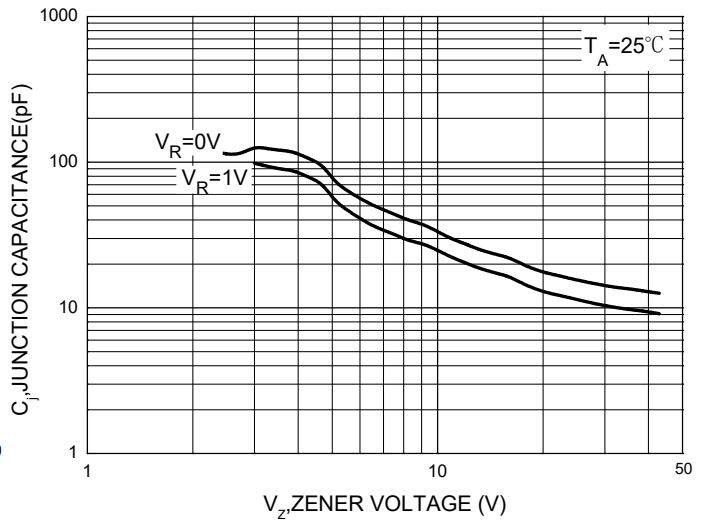
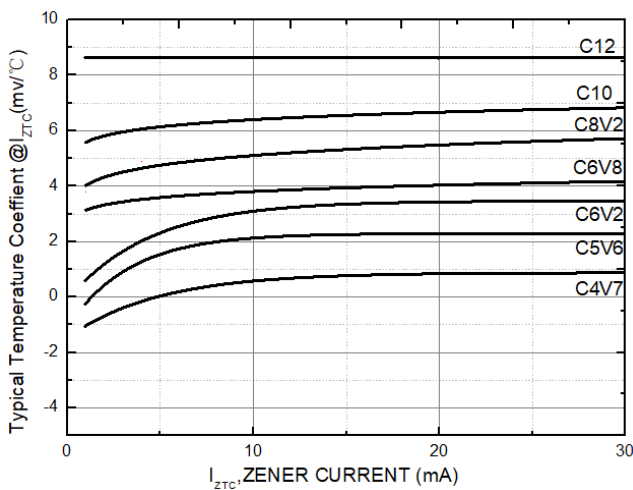
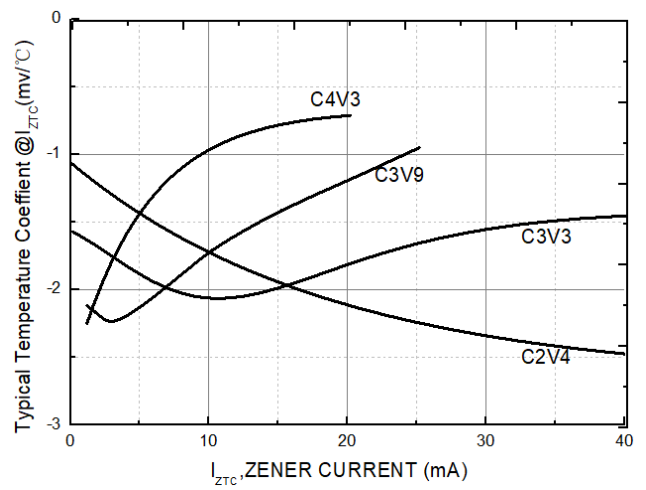
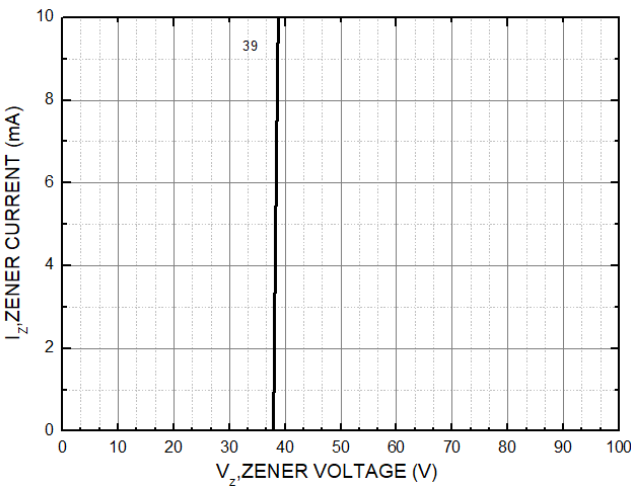
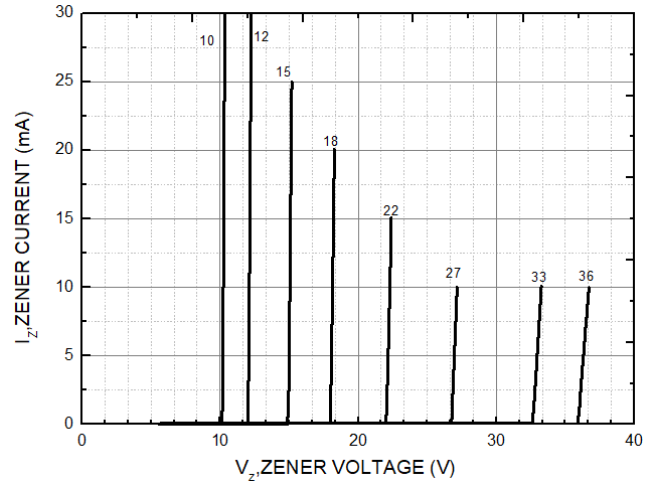
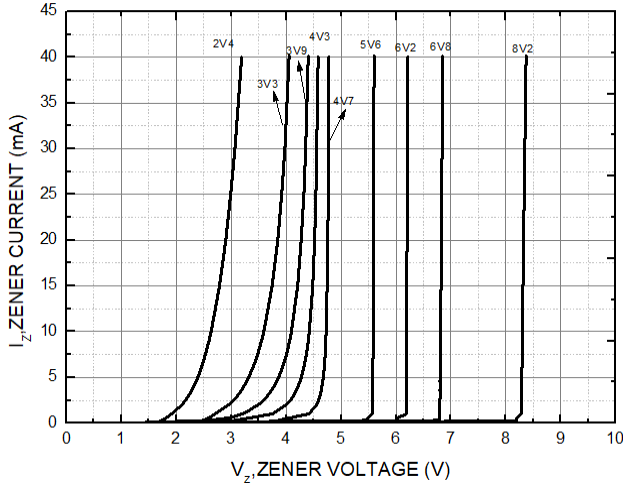
## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Type Number	Device Marking	V <sub>z</sub> at I <sub>zt</sub> (V)			I <sub>zt</sub> mA	Z <sub>zt</sub> (Ω)		Z <sub>zk</sub> (Ω)		I <sub>R</sub> (μA)@V <sub>R</sub>		Typical Temperature Coefficient@ I <sub>ZTC</sub> mV/°C		Test Current I <sub>ZTC</sub> mA
		min.	typ.	max.		I <sub>zt</sub> (mA)	max.	I <sub>zk</sub> (mA)	max.	uA	V <sub>R</sub> (V)	Min	Max	
BZX84C2V4Q	Z11	2.28	2.4	2.56	5	5	100	1.0	600	50	1.0	-3.5	0	5
BZX84C2V7Q	Z12	2.5	2.7	2.9	5	5	100	1.0	600	20	1.0	-3.5	0	5
BZX84C3V0Q	Z13	2.8	3.0	3.2	5	5	95	1.0	600	10	1.0	-3.5	0	5
BZX84C3V3Q	Z14	3.1	3.3	3.5	5	5	95	1.0	600	5	1.0	-3.5	0	5
BZX84C3V6Q	Z15	3.4	3.6	3.8	5	5	90	1.0	600	5	1.0	-3.5	0	5
BZX84C3V9Q	Z16	3.7	3.9	4.1	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZX84C4V3Q	Z17	4.0	4.3	4.6	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZX84C4V7Q	Z1	4.4	4.7	5.0	5	5	80	1.0	500	3	2.0	-3.5	0.2	5
BZX84C5V1Q	Z2	4.8	5.1	5.4	5	5	60	1.0	480	2	2.0	-2.7	1.2	5
BZX84C5V6Q	Z3	5.2	5.6	6.0	5	5	40	1.0	400	1	2.0	-2	2.5	5
BZX84C6V2Q	Z4	5.8	6.2	6.6	5	5	10	1.0	150	3	4.0	0.4	3.7	5
BZX84C6V8Q	Z5	6.4	6.8	7.2	5	5	15	1.0	80	2	4.0	1.2	4.5	5
BZX84C7V5Q	Z6	7.0	7.5	7.9	5	5	15	1.0	80	1	5.0	2.5	5.3	5
BZX84C8V2Q	Z7	7.7	8.2	8.7	5	5	15	1.0	80	0.7	5.0	3.2	6.2	5
BZX84C9V1Q	Z8	8.5	9.1	9.6	5	5	15	1.0	100	0.5	6.0	3.8	7.0	5
BZX84C10Q	Z9	9.4	10	10.6	5	5	20	1.0	150	0.2	7.0	4.5	8.0	5
BZX84C11Q	Y1	10.4	11	11.6	5	5	20	1.0	150	0.1	8.0	5.4	9.0	5
BZX84C12Q	Y2	11.4	12	12.7	5	5	25	1.0	150	0.1	8.0	6.0	10.0	5
BZX84C13Q	Y3	12.4	13	14.1	5	5	30	1.0	170	0.1	8.0	7.0	11.0	5
BZX84C15Q	Y4	13.8	15	15.6	5	5	30	1.0	200	0.1	10.5	9.2	13.0	5
BZX84C16Q	Y5	15.3	16	17.1	5	5	40	1.0	200	0.1	11.2	10.4	14.0	5
BZX84C18Q	Y6	16.8	18	19.1	5	5	45	1.0	225	0.1	12.6	12.4	16.0	5
BZX84C20Q	Y7	18.8	20	21.2	5	5	55	1.0	225	0.1	14.0	14.4	18.0	5
BZX84C22Q	Y8	20.8	22	23.3	5	5	55	1.0	250	0.1	15.4	16.4	20.0	5
BZX84C24Q	Y9	22.8	24	25.6	5	5	70	1.0	250	0.1	16.8	18.4	22.0	5
BZX84C27Q	Y10	25.1	27	28.9	2	2	80	0.5	300	0.1	18.9	21.4	25.3	2
BZX84C30Q	Y11	28	30	32	2	2	80	0.5	300	0.1	21.0	24.4	29.4	2
BZX84C33Q	Y12	31	33	35	2	2	80	0.5	325	0.1	23.1	27.4	33.4	2
BZX84C36Q	Y13	34	36	38	2	2	90	0.5	350	0.1	25.2	30.4	37.4	2
BZX84C39Q	Y14	37	39	41	2	2	130	0.5	350	0.1	27.3	33.4	41.2	2
BZX84C43Q	Y15	40	43	46	2	2	100	0.5	700	0.1	32	37.6	50.6	2
BZX84C47Q	Y16	44	47	50	2	2	100	0.5	750	0.1	35	42.0	55.8	2



# BZX84C2V4Q THRU BZX84C47Q

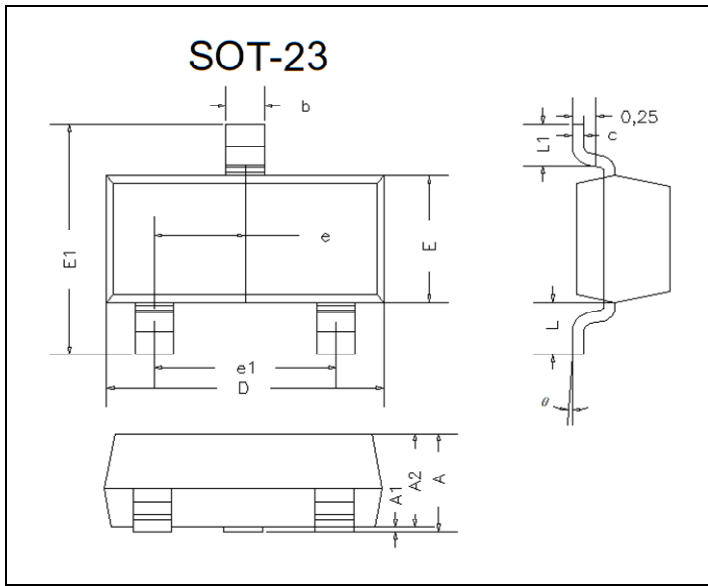
## ■ Characteristics (Typical)





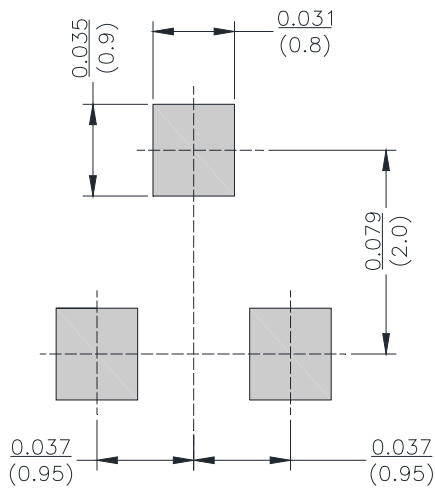
# BZX84C2V4Q THRU BZX84C47Q

## ■ Outline Dimensions



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.035	0.045	0.90	1.15	
A1	0.000	0.004	0.00	0.10	
A2	0.035	0.041	0.90	1.05	
b	0.012	0.020	0.30	0.50	
c	0.004	0.008	0.10	0.20	
D	0.110	0.118	2.80	3.00	
E	0.047	0.055	1.20	1.40	
E1	0.089	0.100	2.25	2.55	
e	0.370TYP		0.95TYP		
e1	0.071	0.079	1.80	2.00	
L	0.220REF		0.55REF		
L1	0.012	0.020	0.30	0.50	
θ	0°	8°	0°	8°	

## ■ Soldering Footprint



Unit:  $\frac{\text{inch}}{\text{mm}}$



## BZX84C2V4Q THRU BZX84C47Q

---

### Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, life-saving, lifesustaining, or military. Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.