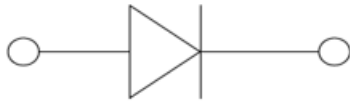


## Small Signal Zener Diodes



**SOD123**

### Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Zener Voltage 3.6V~47V
- $V_z$ -tolerance  $\pm 2\%$  approximately
- Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

- General regulation functions

### Mechanical Data

- **Case:** SOD123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

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

PARAMETER	SYMBOL	UNIT	VALUE
Power Dissipation	$P_D$	mW	500
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*	$R_{\theta JA}$	$^\circ\text{C/W}$	340

### ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BZT52B3V6Q THRU BZT52B47Q	F2	Approximate 0.01	3000	30000	120000	7" reel



# BZT52B3V6Q THRU BZT52B47Q

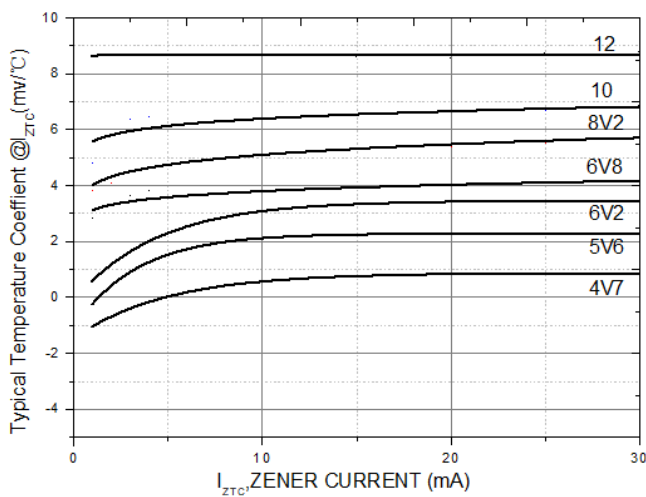
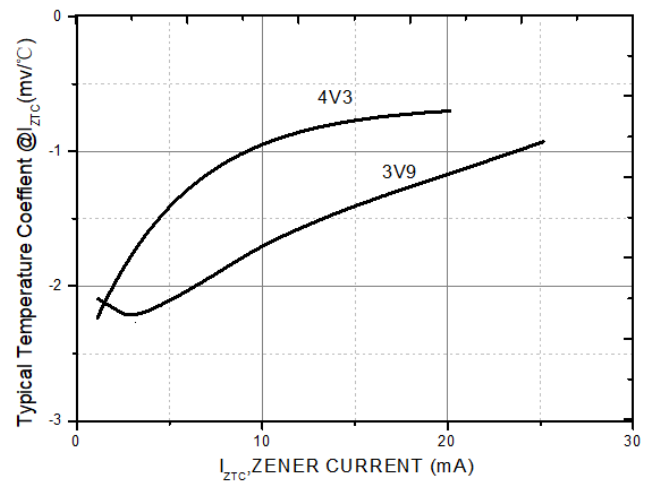
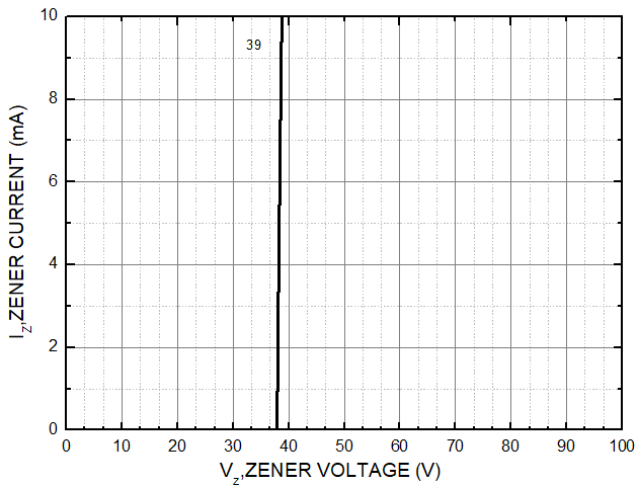
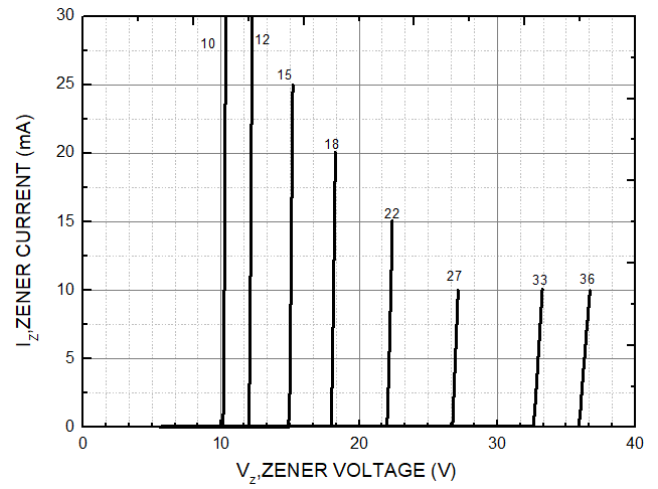
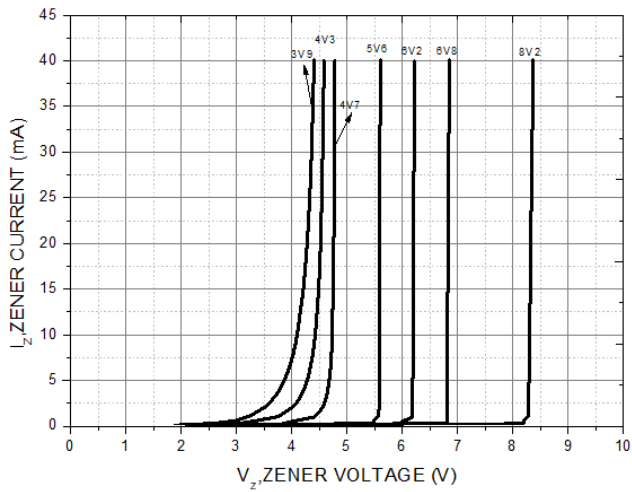
## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Type Number	Device Marking	V <sub>z</sub> at I <sub>z</sub> (V)			I <sub>z</sub> mA	Z <sub>z</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>z</sub> (mA)	max.	I <sub>zk</sub> (mA)	max.	uA	V <sub>R</sub> (V)	Min	Max	
BZT52B3V6Q	2W4	3.53	3.6	3.67	5	5	90	1.0	600	5	1.0	-3.5	0	5
BZT52B3V9Q	2W5	3.82	3.9	3.98	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZT52B4V3Q	2W6	4.21	4.3	4.39	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZT52B4V7Q	2W7	4.61	4.7	4.79	5	5	80	1.0	500	3	2.0	-3.5	0.2	5
BZT52B5V1Q	2W8	5.0	5.1	5.2	5	5	60	1.0	480	2	2.0	-2.7	1.2	5
BZT52B5V6Q	2W9	5.49	5.6	5.71	5	5	40	1.0	400	1	2.0	-2	2.5	5
BZT52B6V2Q	2WA	6.08	6.2	6.32	5	5	10	1.0	150	3	4.0	0.4	3.7	5
BZT52B6V8Q	2WB	6.66	6.8	6.94	5	5	15	1.0	80	2	4.0	1.2	4.5	5
BZT52B7V5Q	2WC	7.35	7.5	7.65	5	5	15	1.0	80	1	5.0	2.5	5.3	5
BZT52B8V2Q	2WD	8.04	8.2	8.36	5	5	15	1.0	80	0.7	5.0	3.2	6.2	5
BZT52B9V1Q	2WE	8.92	9.1	9.28	5	5	15	1.0	100	0.5	6.0	3.8	7.0	5
BZT52B10Q	2WF	9.8	10	10.2	5	5	20	1.0	150	0.2	7.0	4.5	8.0	5
BZT52B11Q	2WG	10.78	11	11.22	5	5	20	1.0	150	0.1	8.0	5.4	9.0	5
BZT52B12Q	2WH	11.76	12	12.24	5	5	25	1.0	150	0.1	8.0	6.0	10.0	5
BZT52B13Q	2WI	12.74	13	13.3	5	5	30	1.0	170	0.1	8.0	7.0	11.0	5
BZT52B15Q	2WJ	14.7	15	15.3	5	5	30	1.0	200	0.1	10.5	9.2	13.0	5
BZT52B16Q	2WK	15.68	16	16.3	5	5	40	1.0	200	0.1	11.2	10.4	14.0	5
BZT52B18Q	2WL	17.6	18	18.4	5	5	45	1.0	225	0.1	12.6	12.4	16.0	5
BZT52B20Q	2WM	19.6	20	20.4	5	5	55	1.0	225	0.1	14.0	14.4	18.0	5
BZT52B22Q	2WN	21.56	22	22.44	5	5	55	1.0	250	0.1	15.4	16.4	20.0	5
BZT52B24Q	2WO	23.52	24	24.5	5	5	70	1.0	250	0.1	16.8	18.4	22.0	5
BZT52B27Q	2WP	26.46	27	27.54	2	2	80	0.5	300	0.1	18.9	21.4	25.3	2
BZT52B30Q	2WQ	29.4	30	30.6	2	2	80	0.5	300	0.1	21.0	24.4	29.4	2
BZT52B33Q	2WR	32.34	33	33.7	2	2	80	0.5	325	0.1	23.1	27.4	33.4	2
BZT52B36Q	2WS	35.28	36	36.72	2	2	90	0.5	350	0.1	25.2	30.4	37.4	2
BZT52B39Q	2WT	38.22	39	39.8	2	2	130	0.5	350	0.1	27.3	33.4	41.2	2
BZT52B43Q	2WU	42.14	43	43.86	2	2	100	0.5	700	0.1	32	37.6	50.6	2
BZT52B47Q	2WV	46.06	47	47.94	2	2	100	0.5	750	0.1	35	42.0	55.8	2



# BZT52B3V6Q THRU BZT52B47Q

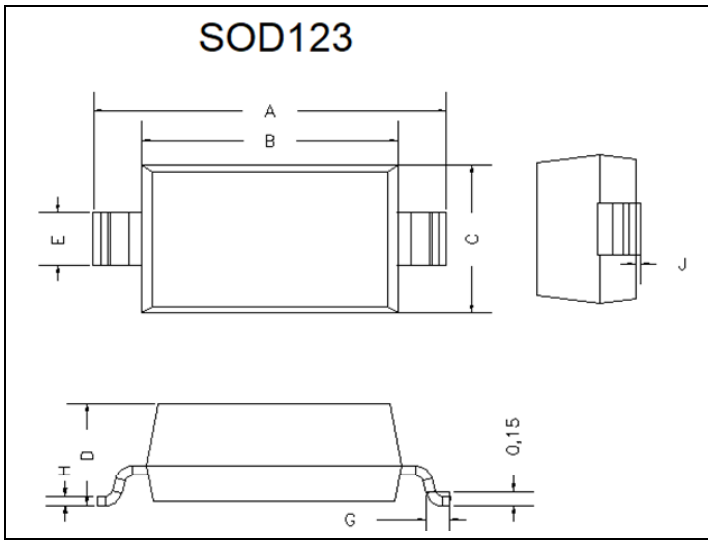
## ■ Characteristics (Typical)





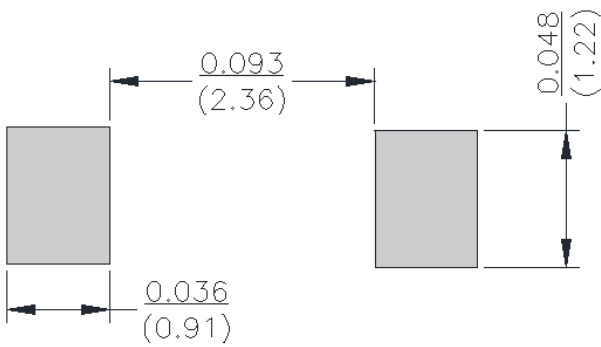
# BZT52B3V6Q THRU BZT52B47Q

## ■ Outline Dimensions



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.071	1.40	1.80	
D	-	0.053	-	1.35	
E	0.012	0.031	0.30	0.78	
G	0.006	-	0.15	-	
H	-	0.010	-	0.25	
J	-	0.006	-	0.15	

## ■ Soldering Footprint



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



## BZT52B3V6Q THRU BZT52B47Q

---

### 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, life-sustaining, 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.