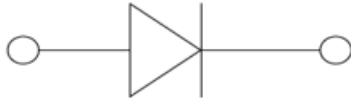


## Small Signal Zener Diodes



**SOD123**

### 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:** 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*	$R_{\theta JA}$	$^\circ\text{C}/\text{W}$	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
BZT52C2V4Q THRU BZT52C47Q	F2	Approximate 0.01	3000	30000	120000	7" reel



## BZT52C2V4Q THRU BZT52C47Q

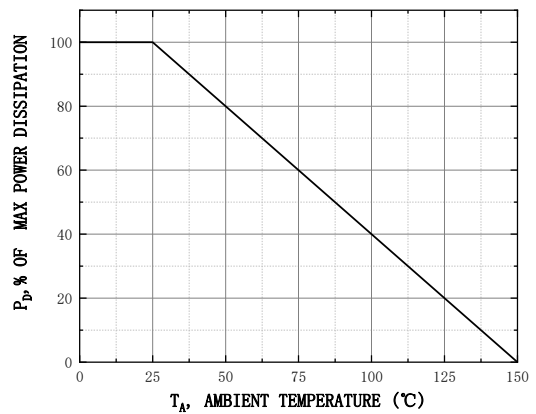
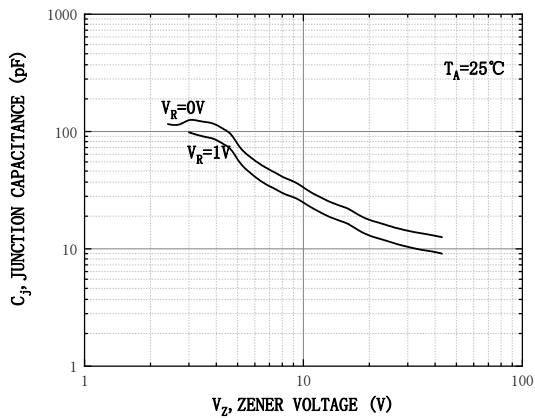
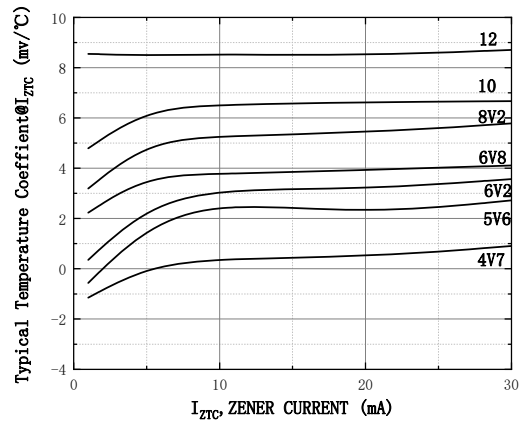
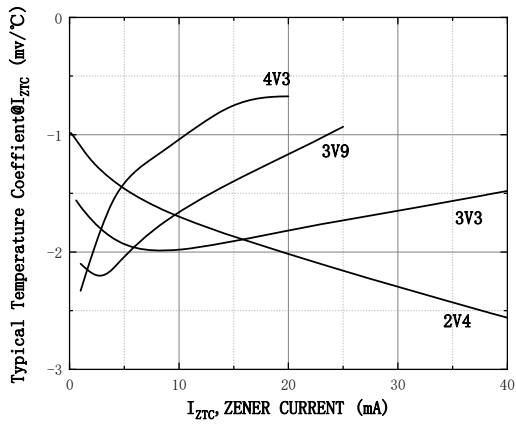
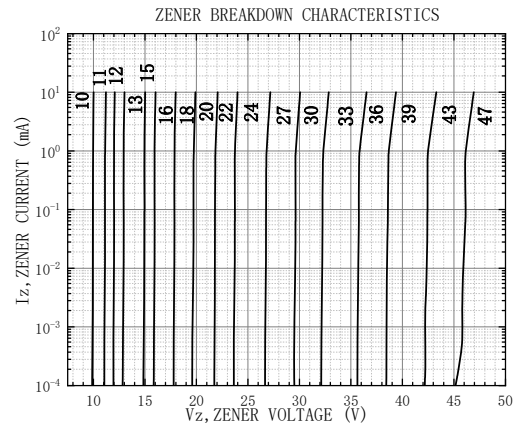
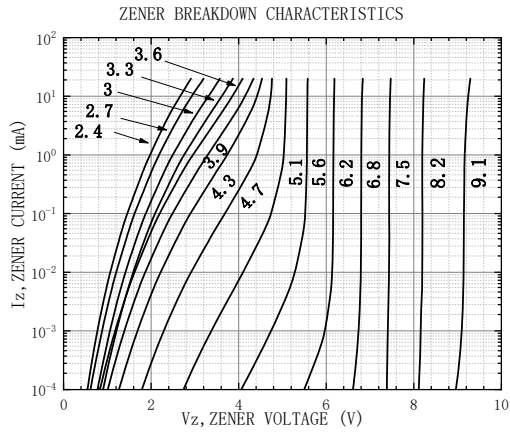
### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

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	
BZT52C2V4Q	WX	2.2	2.4	2.6	5	5	100	1.0	600	50	1.0	-3.5	0	5
BZT52C2V7Q	W1	2.5	2.7	2.9	5	5	100	1.0	600	20	1.0	-3.5	0	5
BZT52C3V0Q	W2	2.8	3.0	3.2	5	5	95	1.0	600	10	1.0	-3.5	0	5
BZT52C3V3Q	W3	3.1	3.3	3.5	5	5	95	1.0	600	5	1.0	-3.5	0	5
BZT52C3V6Q	W4	3.4	3.6	3.8	5	5	90	1.0	600	5	1.0	-3.5	0	5
BZT52C3V9Q	W5	3.7	3.9	4.1	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZT52C4V3Q	W6	4.0	4.3	4.6	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZT52C4V7Q	W7	4.4	4.7	5.0	5	5	80	1.0	500	3	2.0	-3.5	0.2	5
BZT52C5V1Q	W8	4.8	5.1	5.4	5	5	60	1.0	480	2	2.0	-2.7	1.2	5
BZT52C5V6Q	W9	5.32	5.6	5.88	5	5	40	1.0	400	1	2.0	-2	2.5	5
BZT52C6V2Q	WA	5.8	6.2	6.6	5	5	10	1.0	150	3	4.0	0.4	3.7	5
BZT52C6V8Q	WB	6.4	6.8	7.2	5	5	15	1.0	80	2	4.0	1.2	4.5	5
BZT52C7V5Q	WC	7.0	7.5	7.9	5	5	15	1.0	80	1	5.0	2.5	5.3	5
BZT52C8V2Q	WD	7.7	8.2	8.7	5	5	15	1.0	80	0.7	5.0	3.2	6.2	5
BZT52C9V1Q	WE	8.5	9.1	9.6	5	5	15	1.0	100	0.5	6.0	3.8	7.0	5
BZT52C10Q	WF	9.4	10	10.6	5	5	20	1.0	150	0.2	7.0	4.5	8.0	5
BZT52C11Q	WG	10.4	11	11.6	5	5	20	1.0	150	0.1	8.0	5.4	9.0	5
BZT52C12Q	WH	11.4	12	12.7	5	5	25	1.0	150	0.1	8.0	6.0	10.0	5
BZT52C13Q	WI	12.4	13	14.1	5	5	30	1.0	170	0.1	8.0	7.0	11.0	5
BZT52C15Q	WJ	13.8	15	15.6	5	5	30	1.0	170	0.1	10.5	9.2	13.0	5
BZT52C16Q	WK	15.3	16	17.1	5	5	40	1.0	170	0.1	11.2	10.4	14.0	5
BZT52C18Q	WL	16.8	18	19.1	5	5	45	1.0	225	0.1	12.6	12.4	16.0	5
BZT52C20Q	WM	18.8	20	21.2	5	5	55	1.0	225	0.1	14.0	14.4	18.0	5
BZT52C22Q	WN	20.8	22	23.3	5	5	55	1.0	250	0.1	15.4	16.4	20.0	5
BZT52C24Q	WO	22.8	24	25.6	5	5	70	1.0	250	0.1	16.8	18.4	22.0	5
BZT52C27Q	WP	25.1	27	28.9	2	2	80	0.5	300	0.1	18.9	21.4	25.3	2
BZT52C30Q	WQ	28	30	32	2	2	80	0.5	300	0.1	21.0	24.4	29.4	2
BZT52C33Q	WR	31	33	35	2	2	80	0.5	325	0.1	23.1	27.4	33.4	2
BZT52C36Q	WS	34	36	38	2	2	90	0.5	350	0.1	25.2	30.4	37.4	2
BZT52C39Q	WT	37	39	41	2	2	130	0.5	350	0.1	27.3	33.4	41.2	2
BZT52C43Q	WU	40	43	46	2	2	100	0.5	700	0.1	32	37.6	50.6	2
BZT52C47Q	WV	44	47	50	2	2	100	0.5	750	0.1	35	42.0	55.8	2



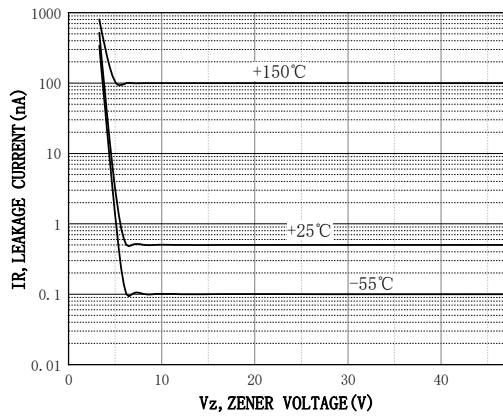
# BZT52C2V4Q THRU BZT52C47Q

## ■ Characteristics (Typical)





# BZT52C2V4Q THRU BZT52C47Q

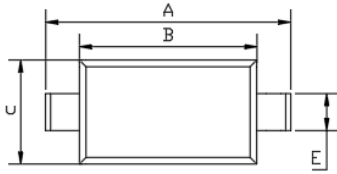




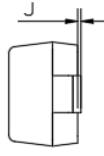
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## ■ Outline Dimensions

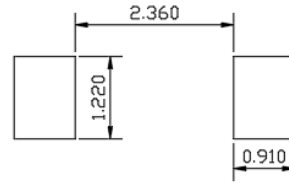
SOD-123



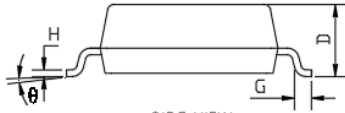
TOP VIEW



SIDE VIEW



UNIT: mm  
SUGGESTED SOLDER PAD LAYOUT



SIDE VIEW

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.140	0.152	3.550	3.850
B	0.100	0.112	2.550	2.850
C	0.055	0.071	1.400	1.800
D	0.037	0.053	0.950	1.350
E	0.020	0.028	0.510	0.710
G	0.006	0.018	0.150	0.450
H	0.003	0.010	0.080	0.250
J	0.000	0.006	0.000	0.150
$\theta$	0	8°	0	8°

## ■ Marking Information



**Note:**

1. All marking is at middle of the product body
2. All marking is in laser marking
3. XX is Marking Code
4. Body color: Black



## BZT52C2V4Q THRU BZT52C47Q

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