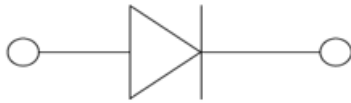


Small Signal Zener Diodes



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)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BZT52C2V4HQ THRU BZT52C47HQ	F2	Approximate 0.01	3000	30000	120000	7" reel



BZT52C2V4HQ THRU BZT52C47HQ

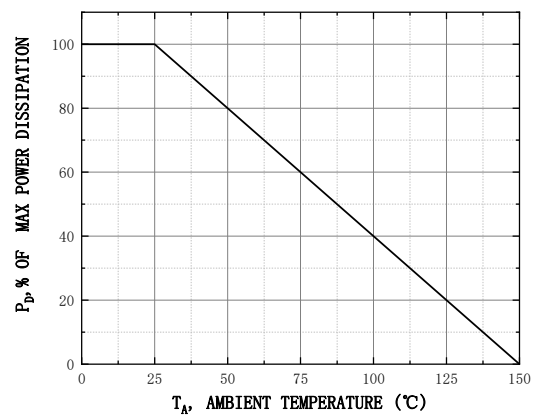
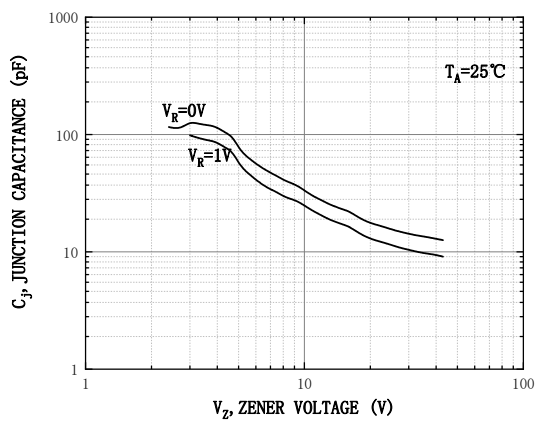
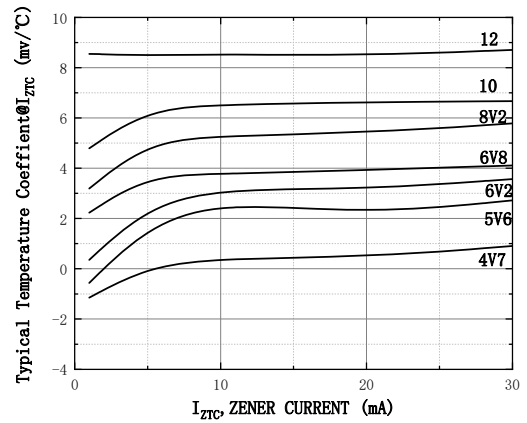
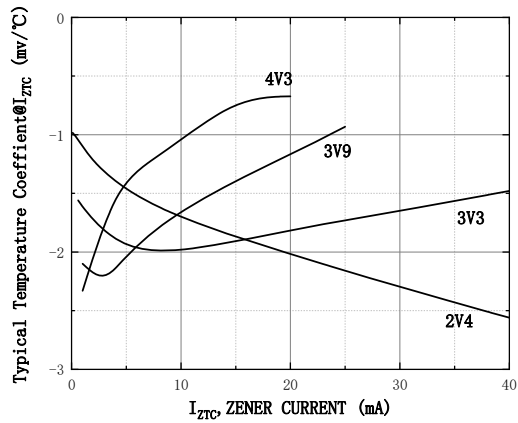
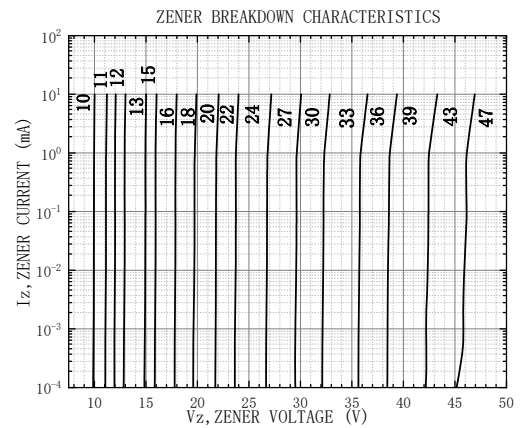
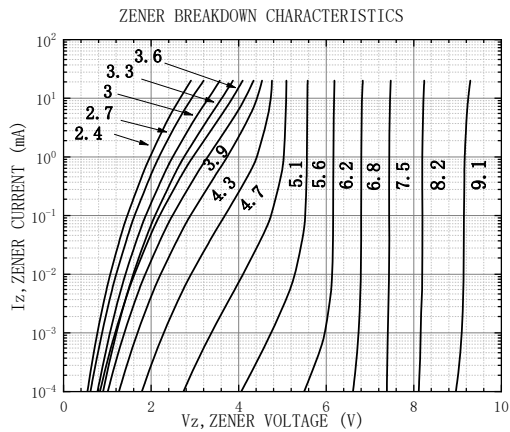
■ Electrical Characteristics (T_a=25℃ Unless otherwise specified)

Type Number	Device Marking	V _z at I _{zt} (V)			I _{zt} mA	Z _{zt} (Ω)		Z _{zk} (Ω)		I _R (μA)@V _R		Typical Temperature Coefficient@ I _{ZTC} mV/℃		Test Current I _{ZTC} mA
		min.	typ.	max.		I _{zt} (mA)	max.	I _{zk} (mA)	max.	uA	V _R (V)	Min	Max	
BZT52C2V4HQ	WX	2.2	2.4	2.6	5	5	100	1.0	600	50	1.0	-3.5	0	5
BZT52C2V7HQ	W1	2.5	2.7	2.9	5	5	100	1.0	600	20	1.0	-3.5	0	5
BZT52C3V0HQ	W2	2.8	3.0	3.2	5	5	95	1.0	600	10	1.0	-3.5	0	5
BZT52C3V3HQ	W3	3.1	3.3	3.5	5	5	95	1.0	600	5	1.0	-3.5	0	5
BZT52C3V6HQ	W4	3.4	3.6	3.8	5	5	90	1.0	600	5	1.0	-3.5	0	5
BZT52C3V9HQ	W5	3.7	3.9	4.1	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZT52C4V3HQ	W6	4.0	4.3	4.6	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZT52C4V7HQ	W7	4.4	4.7	5.0	5	5	80	1.0	500	3	2.0	-3.5	0.2	5
BZT52C5V1HQ	W8	4.8	5.1	5.4	5	5	60	1.0	480	2	2.0	-2.7	1.2	5
BZT52C5V6HQ	W9	5.32	5.6	5.88	5	5	40	1.0	400	1	2.0	-2	2.5	5
BZT52C6V2HQ	WA	5.8	6.2	6.6	5	5	10	1.0	150	3	4.0	0.4	3.7	5
BZT52C6V8HQ	WB	6.4	6.8	7.2	5	5	15	1.0	80	2	4.0	1.2	4.5	5
BZT52C7V5HQ	WC	7.0	7.5	7.9	5	5	15	1.0	80	1	5.0	2.5	5.3	5
BZT52C8V2HQ	WD	7.7	8.2	8.7	5	5	15	1.0	80	0.7	5.0	3.2	6.2	5
BZT52C9V1HQ	WE	8.5	9.1	9.6	5	5	15	1.0	100	0.5	6.0	3.8	7.0	5
BZT52C10HQ	WF	9.4	10	10.6	5	5	20	1.0	150	0.2	7.0	4.5	8.0	5
BZT52C11HQ	WG	10.4	11	11.6	5	5	20	1.0	150	0.1	8.0	5.4	9.0	5
BZT52C12HQ	WH	11.4	12	12.7	5	5	25	1.0	150	0.1	8.0	6.0	10.0	5
BZT52C13HQ	WI	12.4	13	14.1	5	5	30	1.0	170	0.1	8.0	7.0	11.0	5
BZT52C15HQ	WJ	13.8	15	15.6	5	5	30	1.0	170	0.1	10.5	9.2	13.0	5
BZT52C16HQ	WK	15.3	16	17.1	5	5	40	1.0	170	0.1	11.2	10.4	14.0	5
BZT52C18HQ	WL	16.8	18	19.1	5	5	45	1.0	225	0.1	12.6	12.4	16.0	5
BZT52C20HQ	WM	18.8	20	21.2	5	5	55	1.0	225	0.1	14.0	14.4	18.0	5
BZT52C22HQ	WN	20.8	22	23.3	5	5	55	1.0	250	0.1	15.4	16.4	20.0	5
BZT52C24HQ	WO	22.8	24	25.6	5	5	70	1.0	250	0.1	16.8	18.4	22.0	5
BZT52C27HQ	WP	25.1	27	28.9	2	2	80	0.5	300	0.1	18.9	21.4	25.3	2
BZT52C30HQ	WQ	28	30	32	2	2	80	0.5	300	0.1	21.0	24.4	29.4	2
BZT52C33HQ	WR	31	33	35	2	2	80	0.5	325	0.1	23.1	27.4	33.4	2
BZT52C36HQ	WS	34	36	38	2	2	90	0.5	350	0.1	25.2	30.4	37.4	2
BZT52C39HQ	WT	37	39	41	2	2	130	0.5	350	0.1	27.3	33.4	41.2	2
BZT52C43HQ	WU	40	43	46	2	2	100	0.5	700	0.1	32	37.6	50.6	2
BZT52C47HQ	WV	44	47	50	2	2	100	0.5	750	0.1	35	42.0	55.8	2



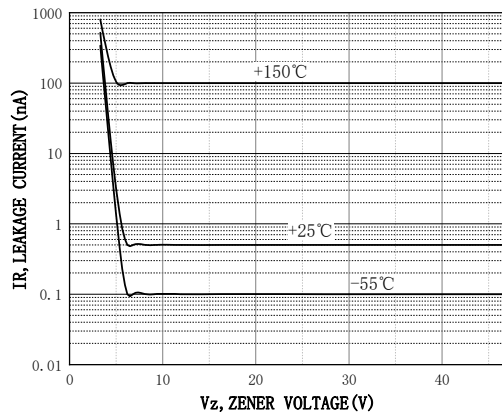
BZT52C2V4HQ THRU BZT52C47HQ

■ Characteristics (Typical)





BZT52C2V4HQ THRU BZT52C47HQ

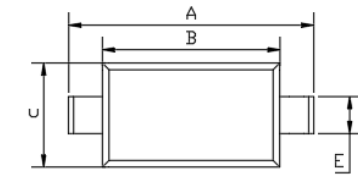




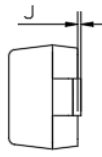
BZT52C2V4HQ THRU BZT52C47HQ

■ Outline Dimensions

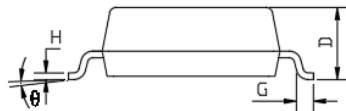
SOD-123



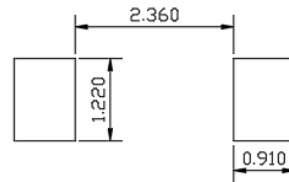
TOP VIEW



SIDE VIEW



SIDE VIEW



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

NOTE:

1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

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
θ	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. Body color: Black
4. XX is Marking code ; % is a date code, rotated 90° counterclockwise

*Date Code vary depending upon production date



BZT52C2V4HQ THRU BZT52C47HQ

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