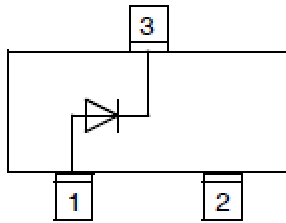




Small Signal Zener Diodes



SOT-323

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-323
- **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	200
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 ($I_F=10\text{mA}_{DC}$)	V_F	V	0.9
Thermal Resistance Junction to Ambient Air*	$R_{\theta JA}$	$^\circ\text{C} / \text{W}$	625

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BZX84C2V4WHQ THRU BZX84C47WHQ	F2	Approximate 0.006	3000	30000	120000	7" reel



BZX84C2V4WHQ THRU BZX84C47WHQ

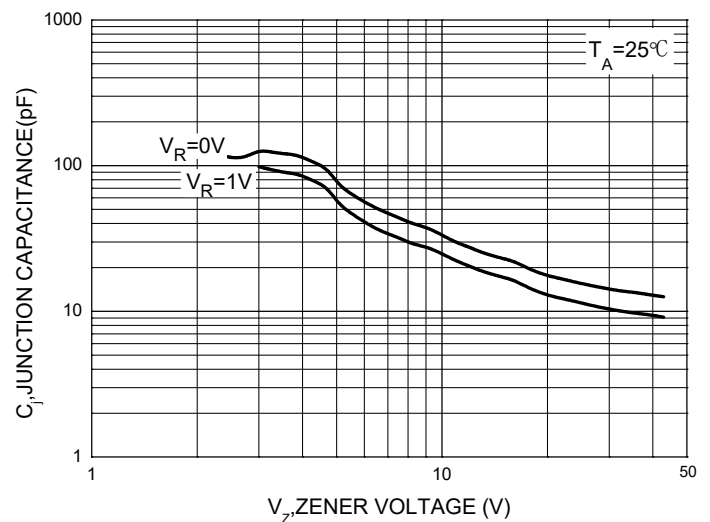
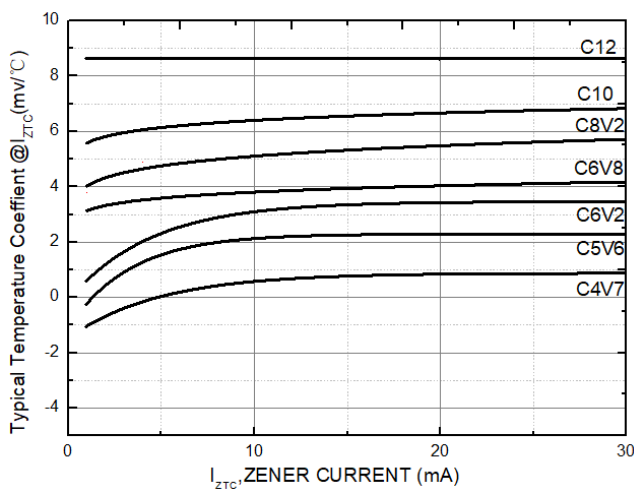
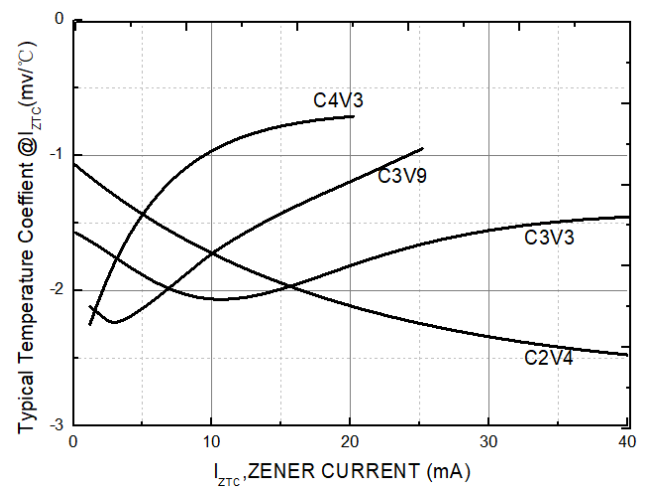
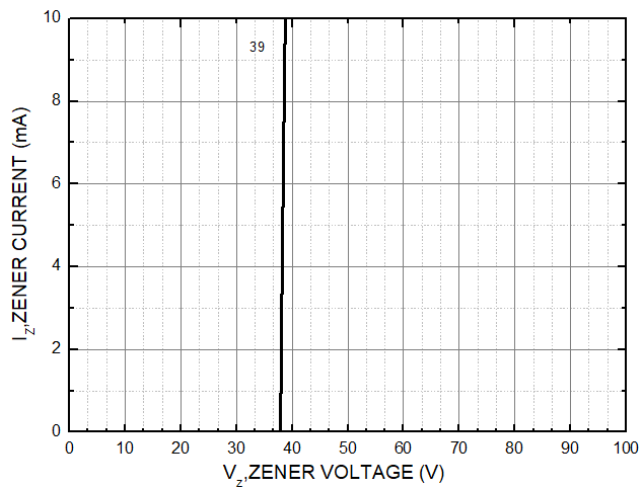
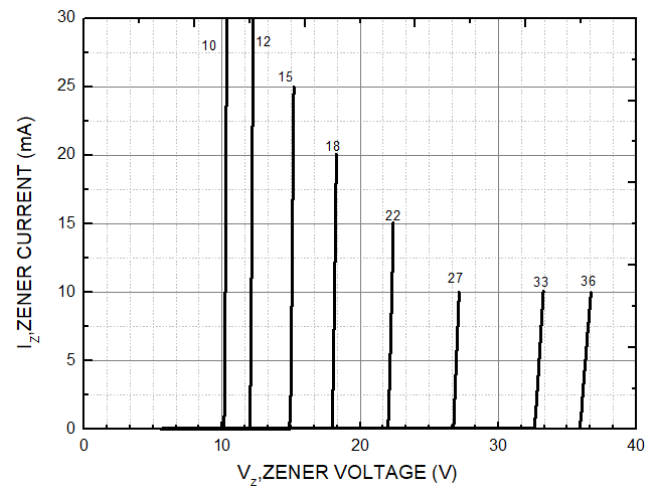
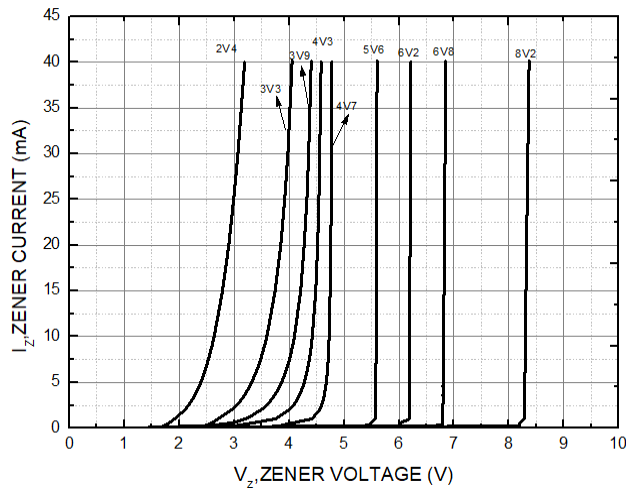
■ Electrical Characteristics (T_a=25℃ Unless otherwise specified)

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}
		min.	typ.	max.		I _{zt} (mA)	max.	I _{zk} (mA)	max.	uA	V _R (V)	Min	Max	mA
BZX84C2V4WHQ	KRB	2.28	2.4	2.56	5	5	100	1.0	600	50	1.0	-3.5	0	5
BZX84C2V7WHQ	KRC	2.5	2.7	2.9	5	5	100	1.0	600	20	1.0	-3.5	0	5
BZX84C3V0WHQ	KRD	2.8	3.0	3.2	5	5	95	1.0	600	10	1.0	-3.5	0	5
BZX84C3V3WHQ	KRE	3.1	3.3	3.5	5	5	95	1.0	600	5	1.0	-3.5	0	5
BZX84C3V6WHQ	KRF	3.4	3.6	3.8	5	5	90	1.0	600	5	1.0	-3.5	0	5
BZX84C3V9WHQ	KRG	3.7	3.9	4.1	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZX84C4V3WHQ	KRH	4.0	4.3	4.6	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZX84C4V7WHQ	KR1	4.4	4.7	5.0	5	5	80	1.0	500	3	2.0	-3.5	0.2	5
BZX84C5V1WHQ	KR2	4.8	5.1	5.4	5	5	60	1.0	480	2	2.0	-2.7	1.2	5
BZX84C5V6WHQ	KR3	5.2	5.6	6.0	5	5	40	1.0	400	1	2.0	-2	2.5	5
BZX84C6V2WHQ	KR4	5.8	6.2	6.6	5	5	10	1.0	150	3	4.0	0.4	3.7	5
BZX84C6V8WHQ	KR5	6.4	6.8	7.2	5	5	15	1.0	80	2	4.0	1.2	4.5	5
BZX84C7V5WHQ	KR6	7.0	7.5	7.9	5	5	15	1.0	80	1	5.0	2.5	5.3	5
BZX84C8V2WHQ	KR7	7.7	8.2	8.7	5	5	15	1.0	80	0.7	5.0	3.2	6.2	5
BZX84C9V1WHQ	KR8	8.5	9.1	9.6	5	5	15	1.0	100	0.5	6.0	3.8	7.0	5
BZX84C10WHQ	KR9	9.4	10	10.6	5	5	20	1.0	150	0.2	7.0	4.5	8.0	5
BZX84C11WHQ	KP1	10.4	11	11.6	5	5	20	1.0	150	0.1	8.0	5.4	9.0	5
BZX84C12WHQ	KP2	11.4	12	12.7	5	5	25	1.0	150	0.1	8.0	6.0	10.0	5
BZX84C13WHQ	KP3	12.4	13	14.1	5	5	30	1.0	170	0.1	8.0	7.0	11.0	5
BZX84C15WHQ	KP4	13.8	15	15.6	5	5	30	1.0	200	0.1	10.5	9.2	13.0	5
BZX84C16WHQ	KP5	15.3	16	17.1	5	5	40	1.0	200	0.1	11.2	10.4	14.0	5
BZX84C18WHQ	KP6	16.8	18	19.1	5	5	45	1.0	225	0.1	12.6	12.4	16.0	5
BZX84C20WHQ	KP7	18.8	20	21.2	5	5	55	1.0	225	0.1	14.0	14.4	18.0	5
BZX84C22WHQ	KP8	20.8	22	23.3	5	5	55	1.0	250	0.1	15.4	16.4	20.0	5
BZX84C24WHQ	KP9	22.8	24	25.6	5	5	70	1.0	250	0.1	16.8	18.4	22.0	5
BZX84C27WHQ	KPA	25.1	27	28.9	2	2	80	0.5	300	0.1	18.9	21.4	25.3	2
BZX84C30WHQ	KPB	28	30	32	2	2	80	0.5	300	0.1	21.0	24.4	29.4	2
BZX84C33WHQ	KPC	31	33	35	2	2	80	0.5	325	0.1	23.1	27.4	33.4	2
BZX84C36WHQ	KPD	34	36	38	2	2	90	0.5	350	0.1	25.2	30.4	37.4	2
BZX84C39WHQ	KPE	37	39	41	2	2	130	0.5	350	0.1	27.3	33.4	41.2	2
BZX84C43WHQ	KPF	40	43	46	2	2	100	0.5	700	0.1	32	37.6	50.6	2
BZX84C47WHQ	KPG	44	47	50	2	2	100	0.5	750	0.1	35	42.0	55.8	2



BZX84C2V4WHQ THRU BZX84C47WHQ

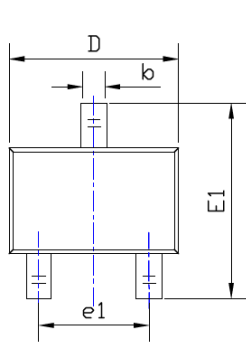
■ Characteristics (Typical)



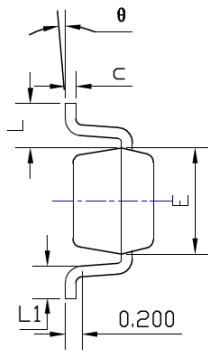


BZX84C2V4WHQ THRU BZX84C47WHQ

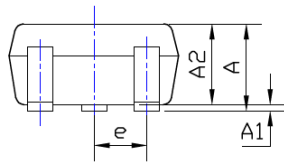
■ Outline Dimensions



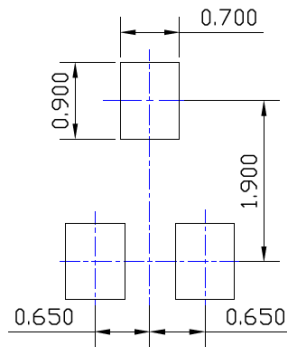
TOP VIEW



SIDE VIEW



SIDE VIEW



UNIT: mm

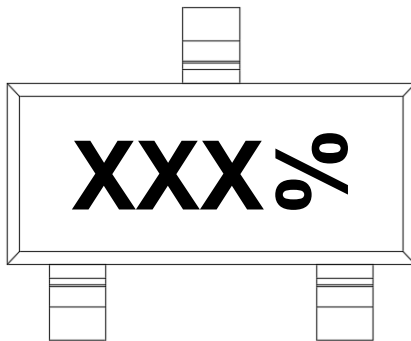
SUGGESTED SOLDER PAD LAYOUT

SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.016	0.150	0.400
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.085	0.096	2.150	2.450
e	0.026 TYP		0.650 TYP	
e1	0.047	0.055	1.200	1.400
L	0.021 REF		0.525 REF	
L1	0.010	0.018	0.260	0.460
theta	0°	8°	0°	8°

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.

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. XXX is Marking Code
4. % is a date code, rotated 90° counterclockwise

*Date Code vary depending upon production date



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