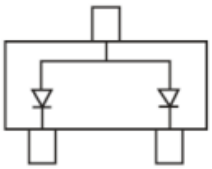
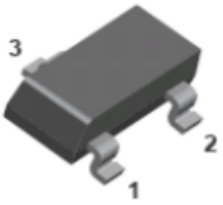
Zener Diode





SOT-23

Features

- Moisture sensitivity level 1
- Zener voltage 2.4V~47V

Application

- Linear voltage regulator
- DC regulator
- Small-signal surge protection

Mechanical data

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

■Limiting Values (Absolute Maximum Rating, T_a=25℃ Unless otherwise specified)

Characteristic	Symbol	Value	Units
Maximum Forward Voltage @I_F=10mA	V_F	0.9	V
Power Dissipation	PD	300	mW
Thermal Resistance from Junction to Ambient	RθJA	417	℃ /W
Maximum junction temperature	Tj	-55~+150	℃
Storage Temperature Range	TSTG	-55~+150	℃

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
AZ23C2V4-AZ23C47	F2	Approximate 0.008	3000	30000	120000	7" reel

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

Type Numbe	Marking Code	V_z at IzT (V)			Z_{zt}(Ω)		Z_{zk}(Ω)		I_R(μA)@V_R		Diode capacitance Cd (pF)	Non-repetitive peak reverse current Izsm (A)
		Min.	Typ.	Max.	Max.	I_{ZT}(mA)	Max.	I_{zk}(mA)	Max	V_R(V)	Max	Max
AZ23C2V4	KD0	2.28	2.4	2.56	100	5	600	1	50	1	450	6
AZ23C2V7	KD1	2.5	2.7	2.9	100	5	600	1	20	1	450	6
AZ23C3V0	KD2	2.8	3.0	3.2	95	5	600	1	10	1	450	6
AZ23C3V3	KD3	3.1	3.3	3.5	95	5	600	1	5	1	450	6
AZ23C3V6	KD4	3.4	3.6	3.8	90	5	600	1	5	1	450	4.5
AZ23C3V9	KD5	3.7	3.9	4.1	90	5	600	1	3	1	450	4.5
AZ23C4V3	KD6	4.0	4.3	4.6	90	5	600	1	3	1	450	3.5
AZ23C4V7	KD7	4.4	4.7	5.0	80	5	500	1	3	2	300	3.5
AZ23C5V1	KD8	4.8	5.1	5.4	60	5	480	1	2	2	300	3
AZ23C5V6	KD9	5.2	5.6	6.0	40	5	400	1	1	2	200	3
AZ23C6V2	KDA	5.8	6.2	6.6	10	5	150	1	3	4	200	3
AZ23C6V8	KDB	6.4	6.8	7.2	15	5	80	1	2	4	200	2
AZ23C7V5	KDC	7.0	7.5	7.9	15	5	80	1	1	5	150	2
AZ23C8V2	KDD	7.7	8.2	8.7	15	5	80	1	0.7	5	150	2
AZ23C9V1	KDE	8.5	9.1	9.6	15	5	100	1	0.5	6	150	1.8
AZ23C10	KDF	9.4	10	10.6	20	5	150	1	0.2	7	90	1.8
AZ23C11	KDG	10.4	11	11.6	20	5	150	1	0.1	8	85	1.8
AZ23C12	KDH	11.4	12	12.7	25	5	150	1	0.1	8	85	1.8
AZ23C13	KDI	12.4	13	14.1	30	5	170	1	0.1	8	80	1
AZ23C15	KDJ	13.8	15	15.6	30	5	200	1	0.1	10.5	75	1
AZ23C16	KDK	15.3	16	17.1	40	5	200	1	0.1	11.2	75	1
AZ23C18	KDL	16.8	18	19.1	45	5	225	1	0.1	12.6	70	1
AZ23C20	KDM	18.8	20	21.2	55	5	225	1	0.1	14	60	1
AZ23C22	KDN	20.8	22	23.3	55	5	250	1	0.1	15.4	60	0.6
AZ23C24	KDO	22.8	24	25.6	70	5	250	1	0.1	16.8	55	0.6
AZ23C27	KDP	25.1	27	28.9	80	2	300	1	0.1	18.9	50	0.6

AZ23C30	KDQ	28	30	32	80	2	300	1	0.1	21.0	50	0.6
AZ23C33	KDR	31	33	35	80	2	325	1	0.1	23.1	45	0.6
AZ23C36	KDS	34	36	38	90	2	350	1	0.1	25.2	45	0.6
AZ23C39	KDT	37	39	41	130	2	350	1	0.1	27.3	45	0.6
AZ23C43	D30	40.85	43	45.15	150	5	375	1	0.1	30.1	40	0.6
AZ23C47	D31	44.65	47	49.35	170	5	375	1	0.1	32.9	40	0.5

■ **Characteristics**(Typical)

Fig 1：P_D-Ta Curve

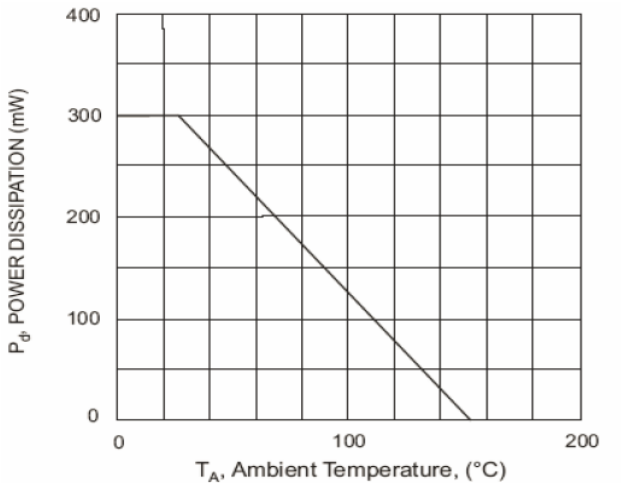


Fig 2：Zener Breakdown Characteristics

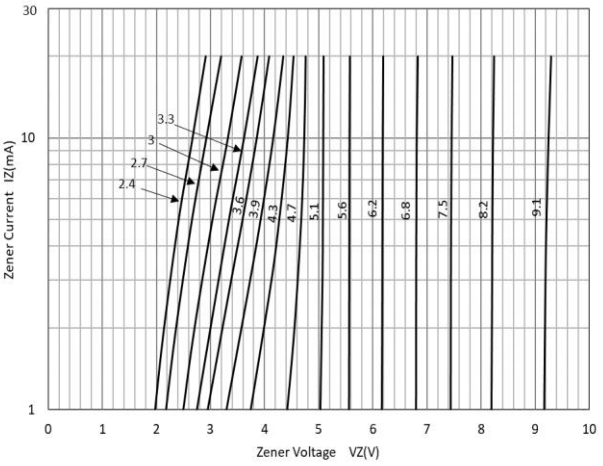


Fig 3：Zener Breakdown Characteristics

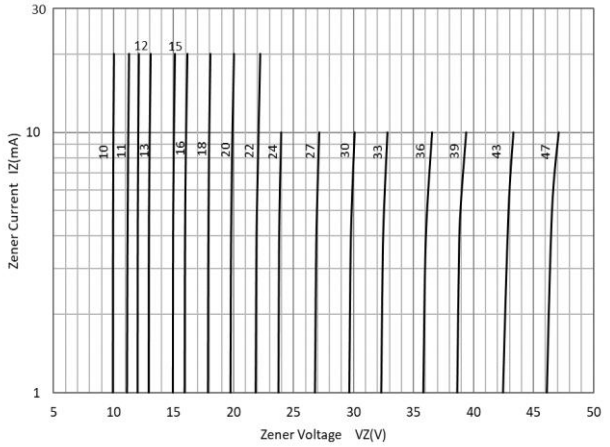


Fig 4 Typical Temperature Coeffient

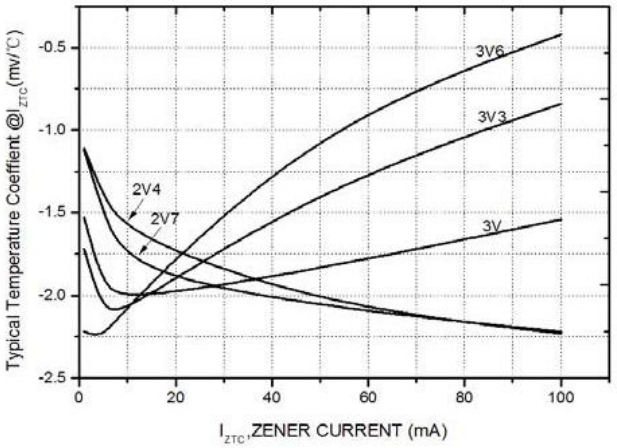


Fig 5 Typical Temperature Coeffient

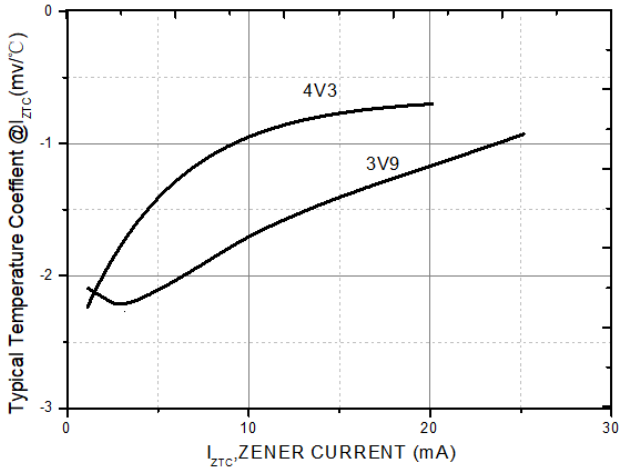


Fig 6：Typical Temperature Coeffient

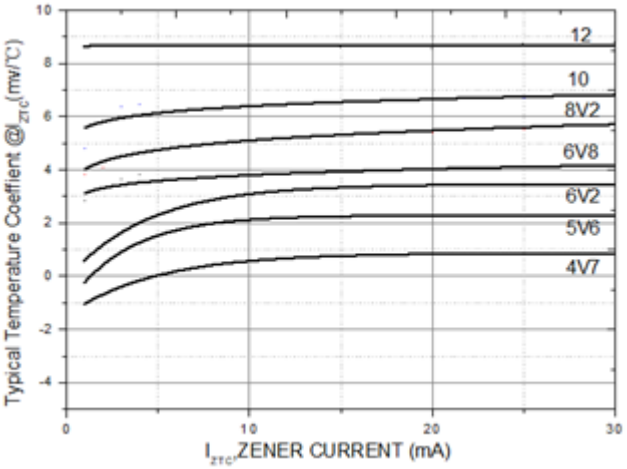


Fig 7：Typical Temperature Coeffient

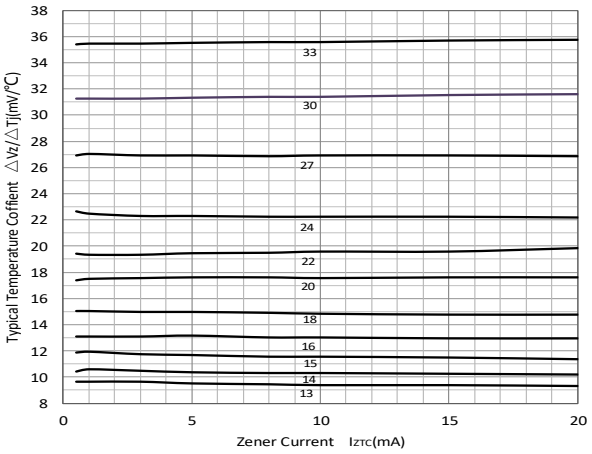


Fig 8：Typical Temperature Coeffient

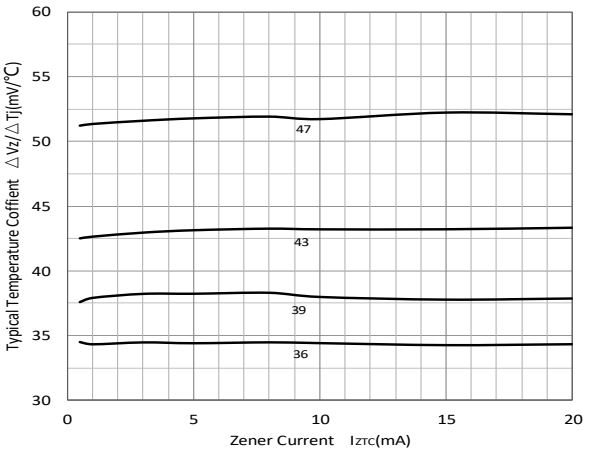


Fig 9：Typical Forward Voltage

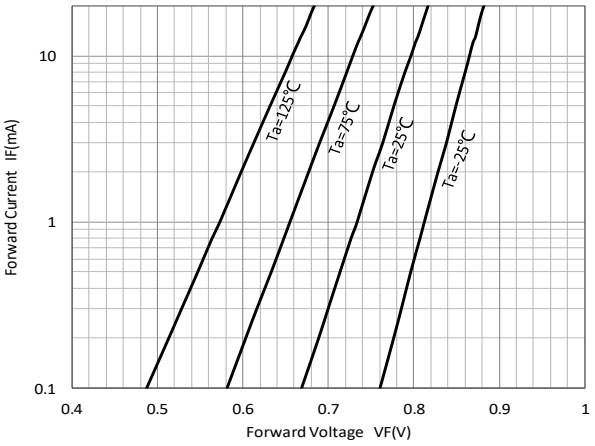


Fig 10：Typical Reverse Current

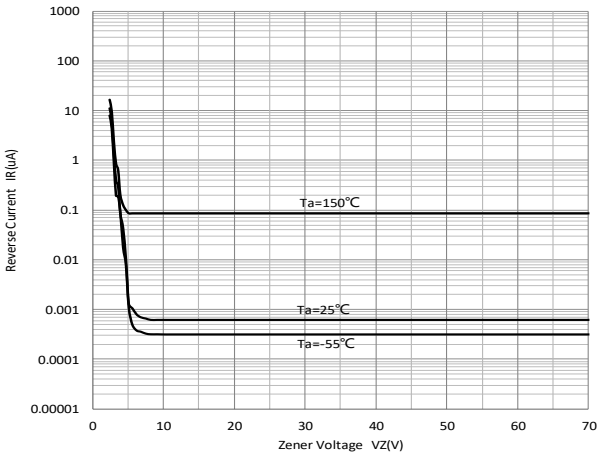
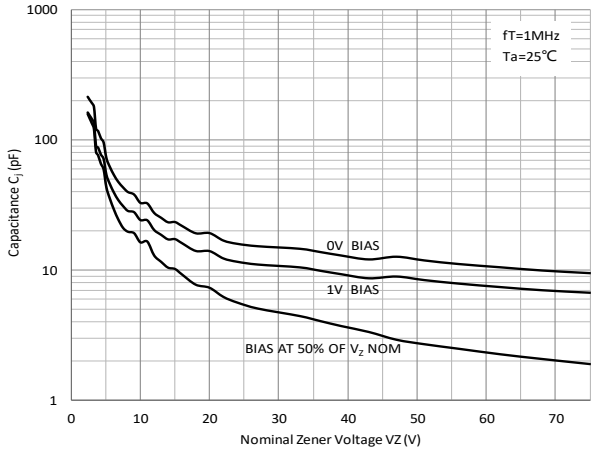
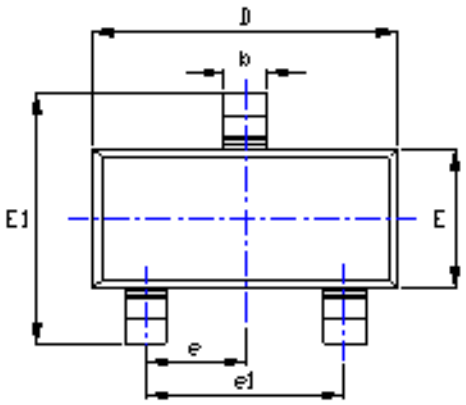


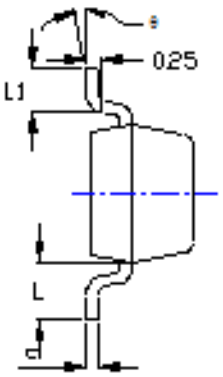
Fig 11：Typical Capacitance



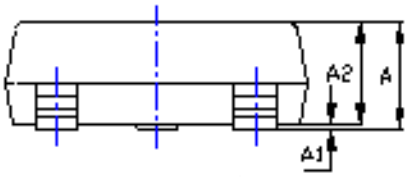
■SOT-23 Package Outline Dimensions



TOP VIEW



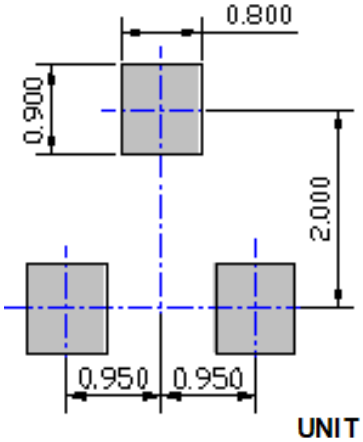
SIDE VIEW



SIDE VIEW

DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

■SOT-23Suggested Pad Layout



UNIT : mm

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