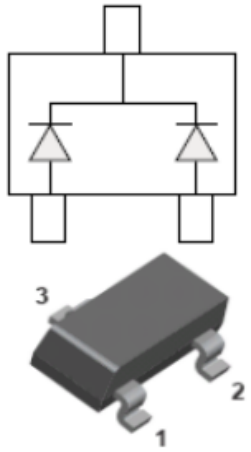
Zener Diode



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
Storage Temperature Range	TSTG	-55~+150	℃
Operation Temperature	TJ	-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
DZ23C2V4-DZ23C47	F2	Approximate 0.009	3000	30000	120000	7” reel

■Electrical Characteristics（T_a=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.	Max	Max	I_{zk}(mA)	Max	V_R(V)	Max	Max
DZ23C2V4	V0	2.28	2.4	2.52	100	5	600	1	100	1	450	6
DZ23C2V7	KV1	2.57	2.7	2.84	100	5	600	1	75	1	450	6
DZ23C3V0	KV2	2.85	3.0	3.15	95	5	600	1	50	1	450	6
DZ23C3V3	KV3	3.14	3.3	3.47	95	5	600	1	25	1	450	6
DZ23C3V6	KV4	3.42	3.6	3.78	95	5	600	1	15	1	450	4.5
DZ23C3V9	KV5	3.71	3.9	4.1	95	5	600	1	10	1	450	4.5
DZ23C4V3	KV6	4.09	4.3	4.52	95	5	600	1	5	1	450	3.5
DZ23C4V7	KV7	4.47	4.7	4.94	78	5	500	1	5	2	300	3.5
DZ23C5V1	KV8	4.85	5.1	5.36	60	5	480	1	0.1	0.8	300	3
DZ23C5V6	KV9	5.32	5.6	5.88	40	5	400	1	0.1	1	200	3
DZ23C6V2	KVA	5.89	6.2	6.51	10	5	150	1	0.1	2	200	3
DZ23C6V8	KVB	6.46	6.8	7.14	8	5	80	1	0.1	3	200	2
DZ23C7V5	KVC	7.13	7.5	7.88	7	5	80	1	0.1	5	150	2
DZ23C8V2	KVD	7.79	8.2	8.61	7	5	80	1	0.1	6	150	2
DZ23C9V1	KVE	8.65	9.1	9.56	10	5	100	1	0.1	7	150	1.8
DZ23C10	KVF	9.50	10	10.50	15	5	150	1	0.1	7.5	90	1.8
DZ23C11	KVG	10.45	11	11.55	20	5	150	1	0.1	8.5	85	1.8
DZ23C12	KVH	11.40	12	12.60	20	5	150	1	0.1	9	85	1.8
DZ23C13	KVI	12.35	13	13.65	25	5	170	1	0.1	10	80	1
DZ23C15	KVJ	14.25	15	15.75	30	5	200	1	0.1	11	75	1
DZ23C16	KVK	15.20	16	16.80	40	5	200	1	0.1	12	75	1
DZ23C18	KVL	17.10	18	18.90	50	5	225	1	0.1	14	70	1
DZ23C20	KVM	19.00	20	21.00	50	5	225	1	0.1	15	60	1
DZ23C22	KVN	20.90	22	23.10	55	5	250	1	0.1	17	60	0.6
DZ23C24	KVO	22.80	24	25.20	80	5	250	1	0.1	18	55	0.6

DZ23C27	KVP	25.65	27	28.35	80	5	300	1	0.1	20	50	0.6
DZ23C30	KVQ	28.50	30	31.50	80	5	300	1	0.1	22.5	50	0.6
DZ23C33	KVR	31.35	33	34.65	80	5	325	1	0.1	25	45	0.6
DZ23C36	KVS	34.20	36	37.80	90	5	350	1	0.1	27	45	0.6
DZ23C39	KVT	37.05	39	40.95	90	5	350	1	0.1	29	45	0.6
DZ23C43	KVU	40.85	43	45.15	100	5	700	1	0.1	32	40	0.6
DZ23C47	KVV	44.65	47	49.35	100	5	750	1	0.1	35	40	0.5

■ **Characteristics**(Typical)

Fig 1：P_D-Ta Curve

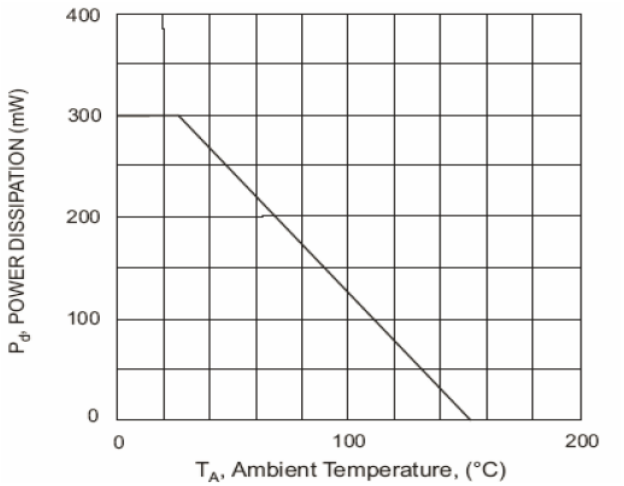


Fig 2：Zener Breakdown Characteristics

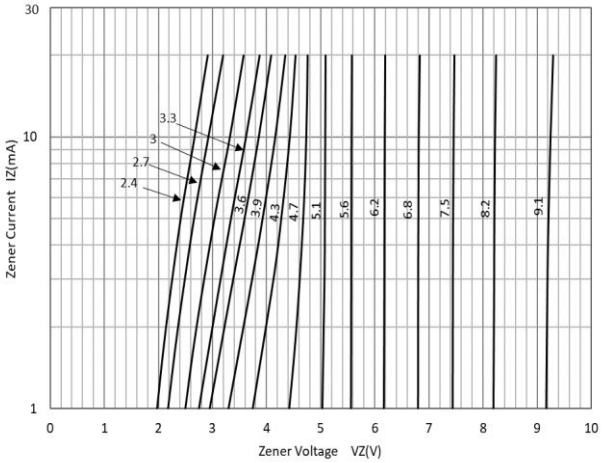


Fig 3：Zener Breakdown Characteristics

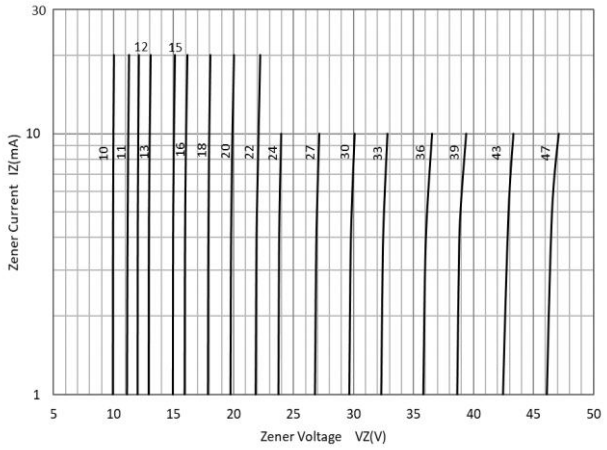


Fig 4 Typical Temperature Coeffient

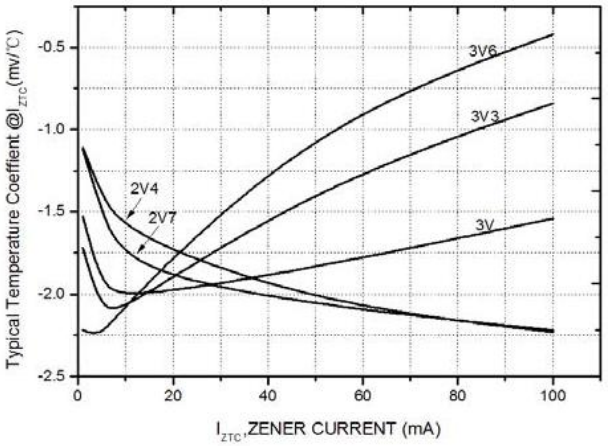


Fig 5 Typical Temperature Coeffient

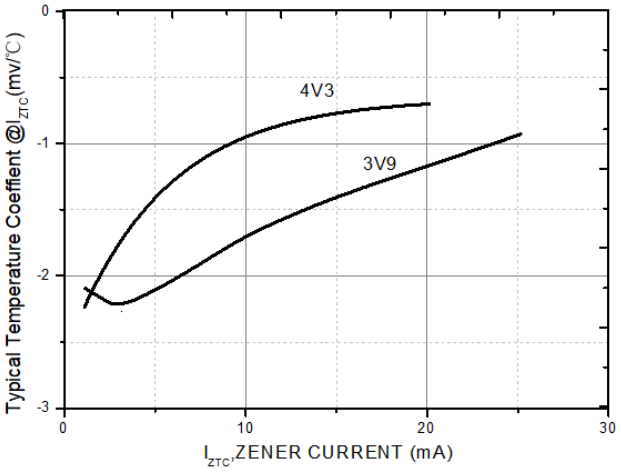


Fig 6：Typical Temperature Coeffient

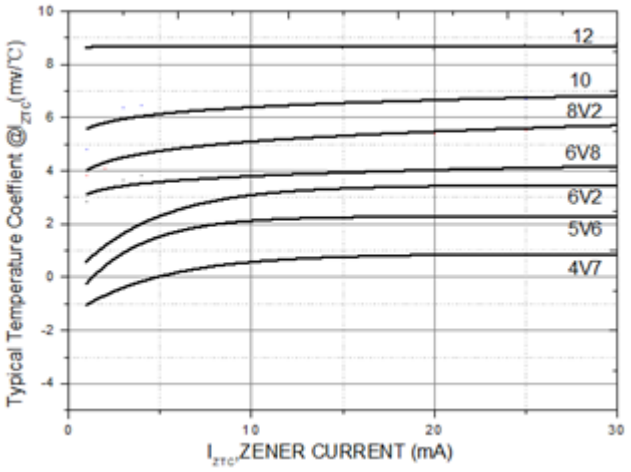


Fig 7：Typical Temperature Coeffient

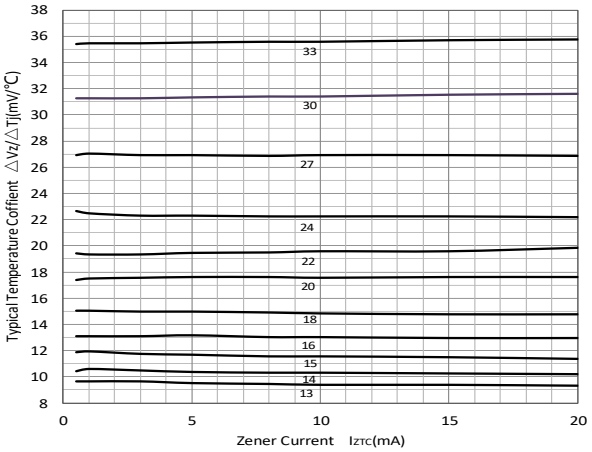


Fig 8：Typical Temperature Coeffient

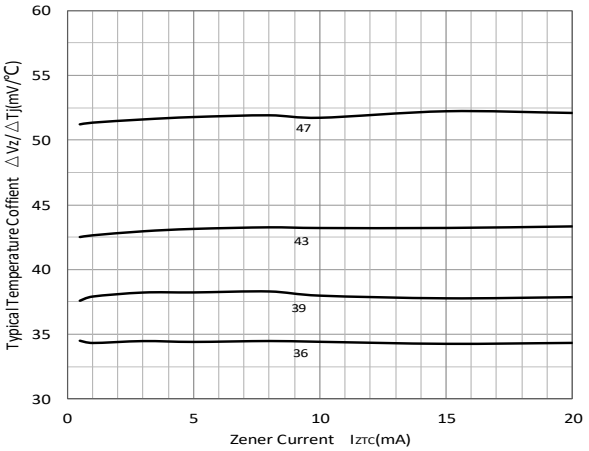


Fig 9：Typical Forward Voltage

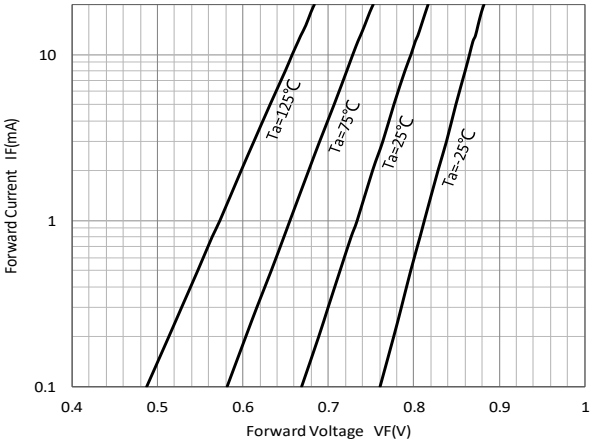


Fig 10：Typical Reverse Current

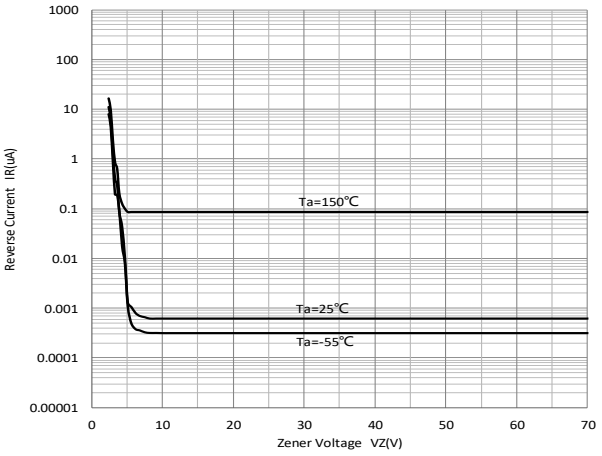
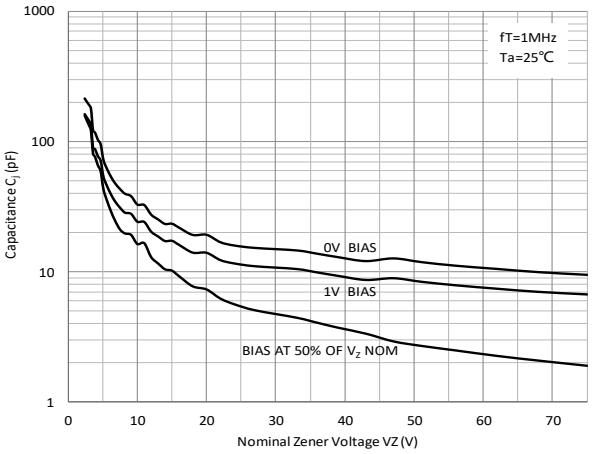
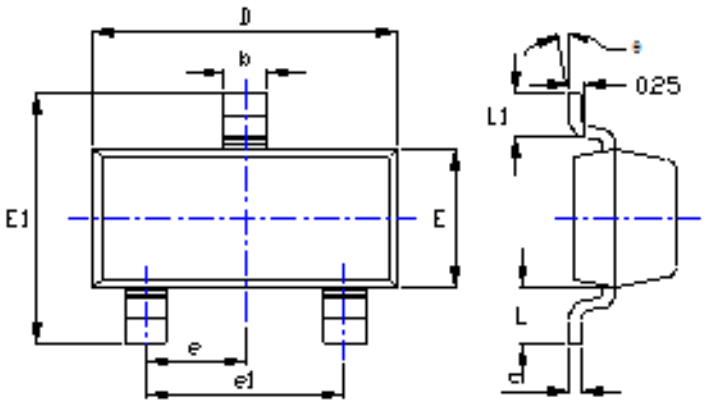
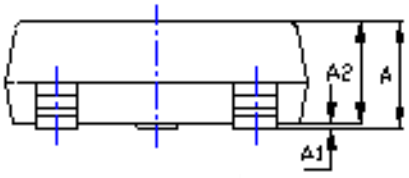


Fig 11：Typical Capacitance



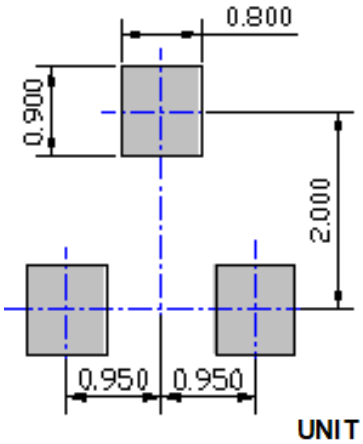
■SOT-23 Package Outline Dimensions





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-23 Suggested Pad Layout



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