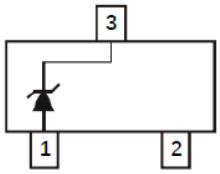
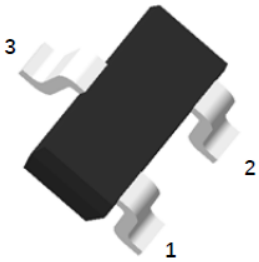
Zener Diode





SOT-523

Features

- Moisture sensitivity level 1
- Zener voltage 2.4V~39V

Application

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

Mechanical data

- **Package**: SOT-523
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■Maximum Ratings (Ta=25℃ Unless otherwise specified)

Characteristic	Symbol	Value	Units
Maximum Forward Voltage @I_F=10mA	V_F	0.9	V
Power Dissipation	P_D	150	mW
Thermal Resistance	R_{thJA}	833	℃ /W
Operation Temperature	T_J	-55~+150	℃
Storage Temperature Range	T_{STG}	-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
BZX84C2V4T THRU BZX84C39T	F2	Approximate 0.0027	3000	30000	120000	7” reel

■**Electrical Characteristics** (Ta=25℃ unless otherwise specified)

Type Number	Marking Code	V_Z@ I_{ZT} (V)			Z_{ZT}(Ω)		Z_{ZK}(Ω)		I_R(μA) @V_R		Typical temperature coefficient @ I_{ZTC} mV/℃		Test Current I_{ZTC}	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)	min	max	mA	max	max
BZX84C2V4T	RB	2.2	2.4	2.6	100	5	600	1	50	1	-3.5	0	5	450	6
BZX84C2V7T	RC	2.5	2.7	2.9	100	5	600	1	20	1	-3.5	0	5	450	6
BZX84C3V0T	RD	2.8	3.0	3.2	95	5	600	1	20	1	-3.5	0	5	450	6
BZX84C3V3T	RE	3.1	3.3	3.5	95	5	600	1	5	1	-3.5	0	5	450	6
BZX84C3V6T	RF	3.4	3.6	3.8	90	5	600	1	5	1	-3.5	0	5	450	4.5
BZX84C3V9T	RG	3.7	3.9	4.1	90	5	600	1	3	1	-3.5	0	5	450	4.5
BZX84C4V3T	RH	4.0	4.3	4.6	90	5	600	1	3	1	-3.5	0	5	450	3.5
BZX84C4V7T	R1	4.4	4.7	5.0	80	5	600	1	3	2	-3.5	0	5	300	3.5
BZX84C5V1T	R2	4.8	5.1	5.4	60	5	500	1	2	2	-2.7	1.2	5	300	3
BZX84C5V6T	R3	5.2	5.6	6.0	40	5	480	1	1	2	-2	2.5	5	200	3
BZX84C6V2T	R4	5.8	6.2	6.6	10	5	400	1	3	4	0.4	3.7	5	200	3
BZX84C6V8T	R5	6.4	6.8	7.2	15	5	150	1	2	4	1.2	4.5	5	200	2
BZX84C7V5T	R6	7.0	7.5	7.9	15	5	80	1	1	5	2.5	5.3	5	150	2
BZX84C8V2T	R7	7.7	8.2	8.7	15	5	80	1	0.7	5	3.2	6.2	5	150	2
BZX84C9V1T	R8	8.5	9.1	9.6	15	5	80	1	0.5	6	3.8	7.0	5	150	1.8
BZX84C10T	R9	9.4	10	10.6	20	5	100	1	0.2	7	4.5	8.0	5	90	1.8
BZX84C11T	P1	10.4	11	11.6	20	5	150	1	0.1	8	5.4	9.0	5	85	1.8
BZX84C12T	P2	11.4	12	12.7	25	5	150	1	0.1	8	6.0	10.0	5	85	1.8
BZX84C13T	P3	12.4	13	14.1	30	5	150	1	0.1	8	7.0	11.0	5	80	1
BZX84C15T	P4	13.8	15	15.6	30	5	170	1	0.1	10.5	9.2	13.0	5	75	1
BZX84C16T	P5	15.3	16	17.1	40	5	200	1	0.1	11.2	10.4	14.0	5	75	1
BZX84C18T	P6	16.8	18	19.1	45	5	200	1	0.1	12.6	12.4	16.0	5	70	1
BZX84C20T	P7	18.8	20	21.2	55	5	225	1	0.1	14	14.4	18.0	5	60	1
BZX84C22T	P8	20.8	22	23.3	55	5	225	1	0.1	15.4	16.4	20.0	5	60	0.6
BZX84C24T	P9	22.8	24	25.6	70	5	250	1	0.1	16.8	18.4	22.0	5	55	0.6
BZX84C27T	PA	25.1	27	28.9	80	2	250	0.5	0.1	18.9	21.4	25.3	2	50	0.6
BZX84C30T	PB	28	30	32	80	2	300	0.5	0.1	21.0	24.4	29.4	2	50	0.6
BZX84C33T	PC	31	33	35	80	2	300	0.5	0.1	23.1	27.4	33.4	2	45	0.6
BZX84C36T	PD	34	36	38	90	2	325	0.5	0.1	25.2	30.4	37.4	2	45	0.6
BZX84C39T	PE	37	39	41	130	2	350	0.5	0.1	27.3	33.4	41.2	2	45	0.6

■ Characteristics (Typical)

Fig 1：P_D-Ta Curve

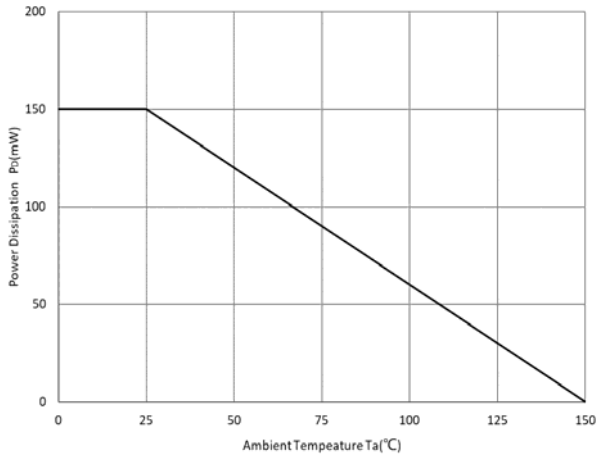


Fig 2：Zener Breakdown Characteristics

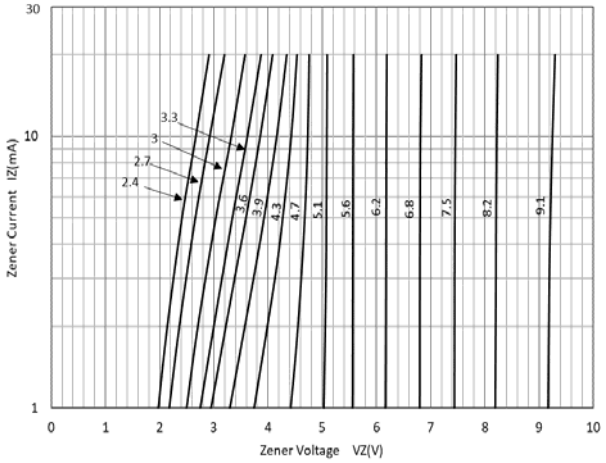


Fig 3：Zener Breakdown Characteristics

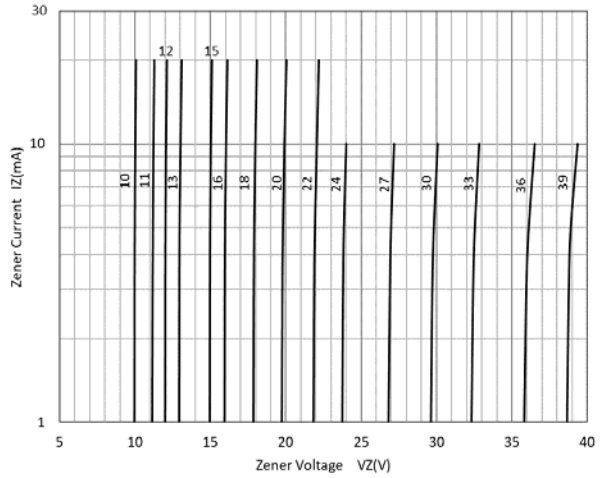


Fig 4 Typical Temperature Coeffient

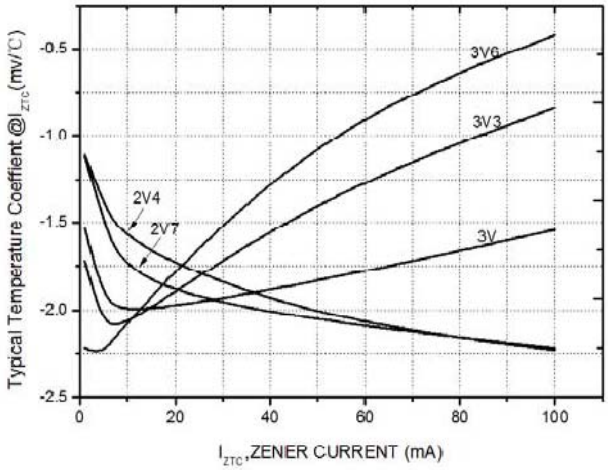


Fig 5 Typical Temperature Coeffient

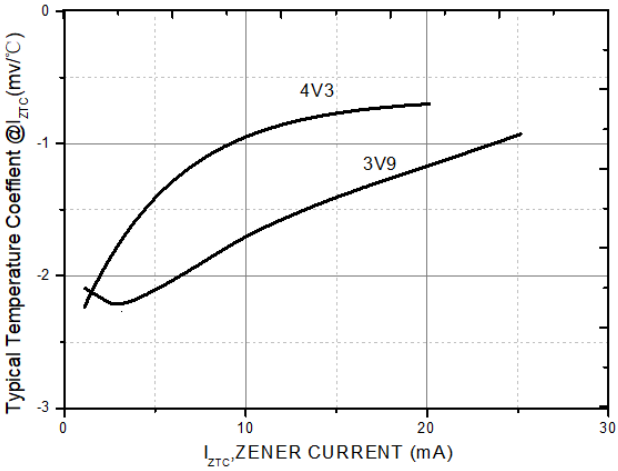


Fig 6：Typical Temperature Coeffient

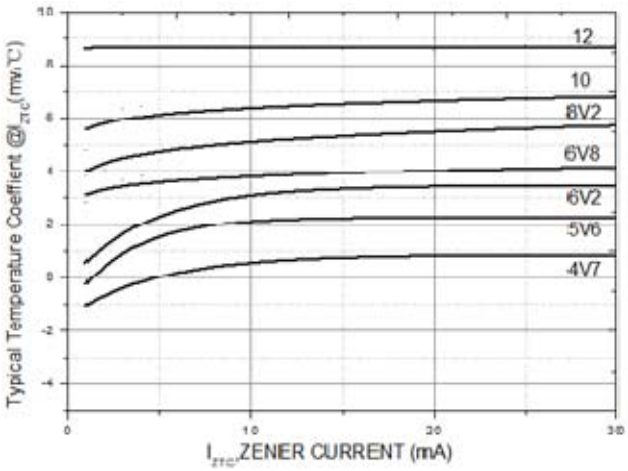


Fig 7 Typical Temperature Coeffient

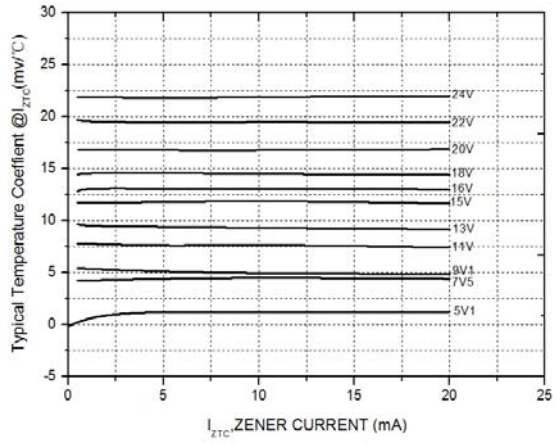


Fig 8：Typical Temperature Coeffient

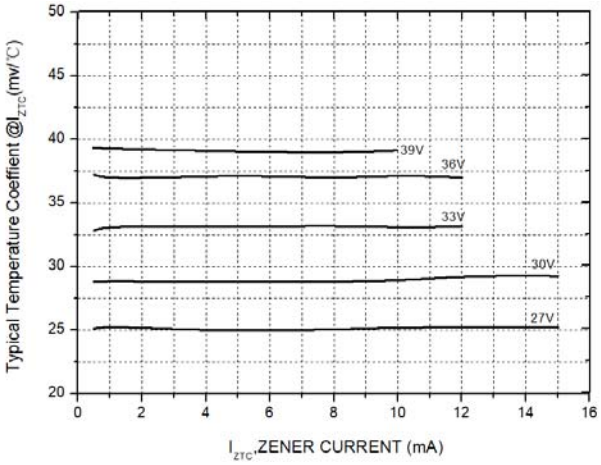


Fig 9：Typical Forward Voltage

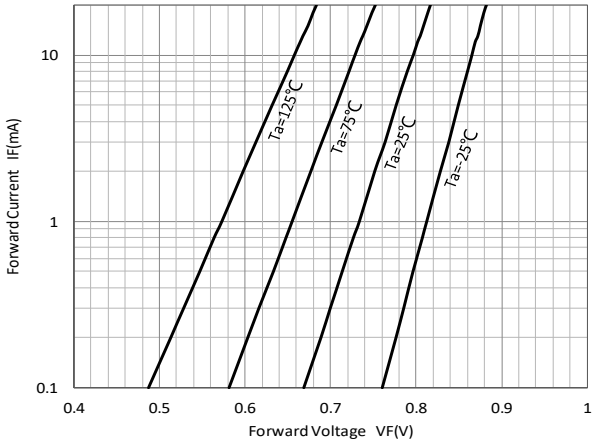


Fig 10：Typical Reverse Current

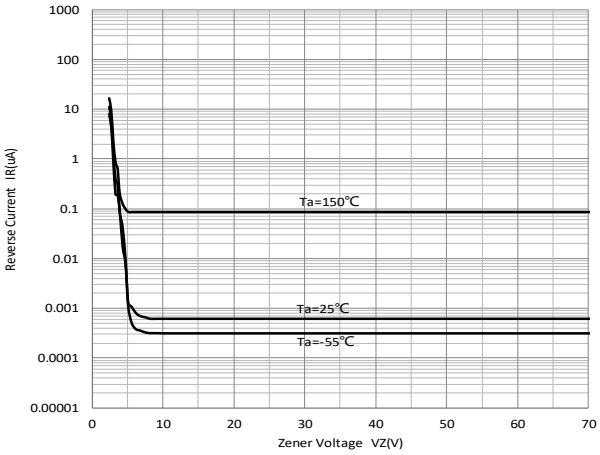
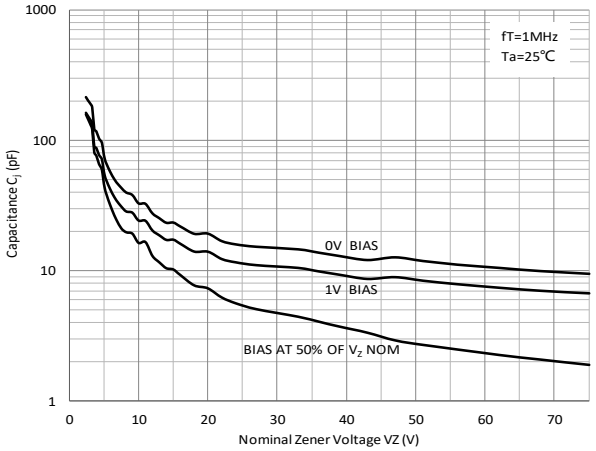
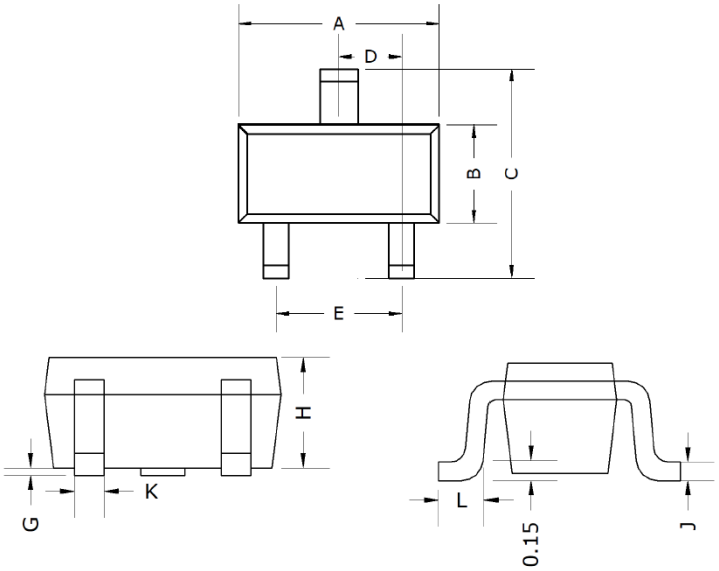


Fig 11：Typical Capacitance

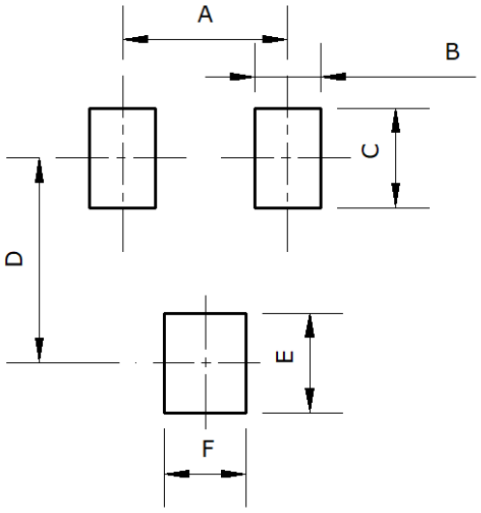


■ SOT-523 Package Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.059	0.067	1.50	1.70
B	0.030	0.033	0.75	0.85
C	0.057	0.069	1.45	1.75
D	0.020TYP		0.50TYP	
E	0.035	0.043	0.90	1.10
G	0.000	0.004	0.00	0.10
H	0.024	0.031	0.60	0.80
J	0.004	0.008	0.10	0.20
K	0.006	0.014	0.15	0.35
L	0.010	0.018	0.26	0.46

■ SOT-523 Suggested Pad Layout



DIMENSIONS	
DIM	MM (TYP)
A	1.00
B	0.40
C	0.60
D	1.24
E	0.60
F	0.50

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