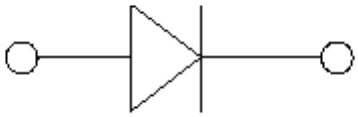
Zener Diodes





Features

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

Application

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

Mechanical data

- **Package**: SOD-323
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

PARAMETER	SYMBOL	UNIT	VALUE
Power Dissipation*(note)	P_D	mW	400
Storage Temperature Range	T_{stg}	°C	-55~+150
Junction Temperature	T_J	°C	-55~+150
Maximum Forward Voltage @I_F=10mA	V_F	V	0.9
Maximum Regulator Current	I_{ZM}	mA	P_D/ V_z
Thermal Resistance Junction to Ambient Air*(note)	$R_{\theta JA}$	°C /W	312

*Note：Device mounted on PCB

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BZT52B2V4BS THRU BZT52B47BS	F2	Approximate 0.0048	3000	30000	120000	7” reel

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

Type Number	Device Marking	V_z at IzT (V)			Z_{zt}(Ω)		Z_{zk}(Ω)		I_R(μA)@V_R		Typical Temperature Coefficient@ IZTC mV/℃		Diode capacitance Cd (pF)	Non-repetitive peak reverse current Izsm (A)
		min.	typ.	max.	I_{ZT}(mA)	max.	I_{zk}(mA)	max.	max	V_R(V)	Min	Max	max	max
BZT52B2V4BS	B0Z	2.34	2.4	2.46	5	100	1	564	45	1	-3.5	0	450	6
BZT52B2V7BS	B1Z	2.63	2.7	2.77	5	100	1	564	20	1	-3.5	0	450	6
BZT52B3V0BS	B2Z	2.94	3	3.06	5	89	1	564	9	1	-3.5	0	450	6

BZT52B3V3BS	B3Z	3.23	3.3	3.37	5	89	1	564	4.5	1	-3.5	0	450	6
BZT52B3V6BS	B4Z	3.53	3.6	3.67	5	84	1	564	4.5	1	-3.5	0	450	4.5
BZT52B3V9BS	B5Z	3.82	3.9	3.98	5	84	1	564	2.7	1	-3.5	0	450	4.5
BZT52B4V3BS	B6Z	4.21	4.3	4.39	5	84	1	564	2.7	1	-3.5	0	450	3.5
BZT52B4V7BS	B7Z	4.61	4.7	4.79	5	75	1	564	2.7	2	-3.5	0.2	300	3.5
BZT52B5V1BS	B8Z	5	5.1	5.2	5	60	1	480	2	2	-2.7	1.2	300	3
BZT52B5V6BS	B9Z	5.49	5.6	5.71	5	40	1	400	1	2	-2	2.5	200	3
BZT52B6V2BS	BAZ	6.08	6.2	6.32	5	10	1	150	3	4	0.4	3.7	200	3
BZT52B6V8BS	BBZ	6.66	6.8	6.94	5	15	1	141	2	4	1.2	4.5	200	2
BZT52B7V5BS	BCZ	7.35	7.5	7.65	5	15	1	80	1	5	2.5	5.3	150	2
BZT52B8V2BS	BDZ	8.04	8.2	8.36	5	15	1	80	0.7	5	3.2	6.2	150	2
BZT52B9V1BS	BEZ	8.92	9.1	9.28	5	15	1	100	0.5	6	3.8	7	150	1.8
BZT52B10BS	BFZ	9.8	10	10.2	5	20	1	150	0.2	7	4.5	8	90	1.8
BZT52B11BS	BGZ	10.78	11	11.22	5	20	1	150	0.1	8	5.4	9	85	1.8
BZT52B12BS	BHZ	11.76	12	12.24	5	25	1	150	0.1	8	6	10	85	1.8
BZT52B13BS	BJZ	12.74	13	13.26	5	30	1	170	0.1	8	7	11	80	1
BZT52B15BS	BKZ	14.7	15	15.3	5	30	1	200	0.1	10.5	9.2	13	75	1
BZT52B16BS	BLZ	15.68	16	16.32	5	40	1	200	0.1	11.2	10.4	14	75	1
BZT52B18BS	BMZ	17.64	18	18.36	5	45	1	225	0.1	12.6	12.4	16	70	1
BZT52B20BS	BNZ	19.6	20	20.4	5	55	1	225	0.1	14	14.4	18	60	1
BZT52B22BS	BPZ	21.56	22	22.44	5	51	1	235	0.045	15.4	16.4	20	60	0.6
BZT52B24BS	BRZ	23.52	24	24.48	5	65	1	235	0.045	16.8	18.4	22	55	0.6
BZT52B27BS	BSZ	26.46	27	27.54	5	75	0.5	282	0.045	18.9	21.4	25.3	50	0.6
BZT52B30BS	BTZ	29.4	30	30.6	5	75	0.5	282	0.045	21	24.4	29.4	50	0.6
BZT52B33BS	BUZ	32.34	33	33.7	5	80	1	325	0.1	25	27.4	33.4	45	0.6
BZT52B36BS	BVZ	35.28	36	36.72	5	84	0.5	329	0.045	25.2	30.4	37.4	45	0.6
BZT52B39BS	BWZ	38.22	39	39.78	5	122	0.5	329	0.045	27.3	33.4	41.2	45	0.6
BZT52B43BS	BXZ	42.14	43	43.86	5	141	0.5	353	0.045	30.1	37.6	46.6	40	0.6
BZT52B47BS	BYZ	46.06	47	48.94	5	160	0.5	353	0.045	33	42	51.8	40	0.5

■ Characteristics (Typical)

Fig 1：P_D-Ta Curve

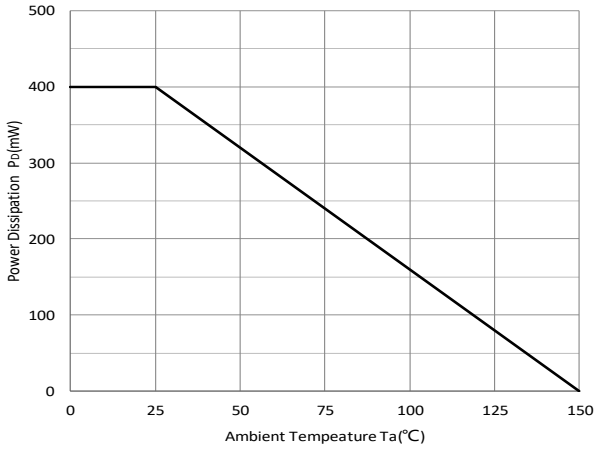


Fig 2：Zener Breakdown Characteristics

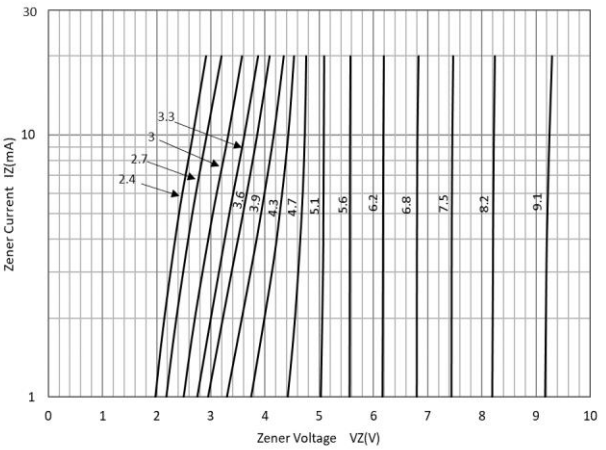


Fig 3：Zener Breakdown Characteristics

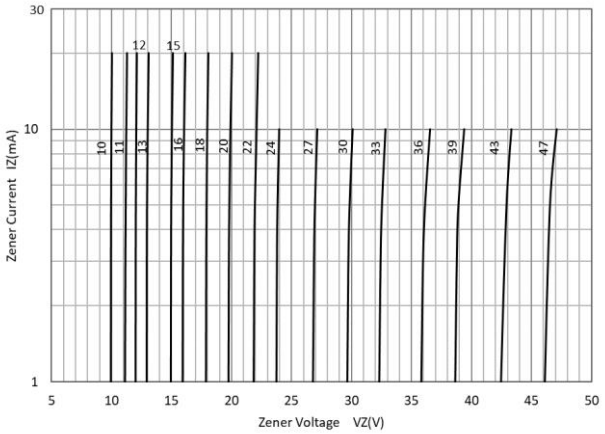


Fig 4：Typical Temperature Coeffient

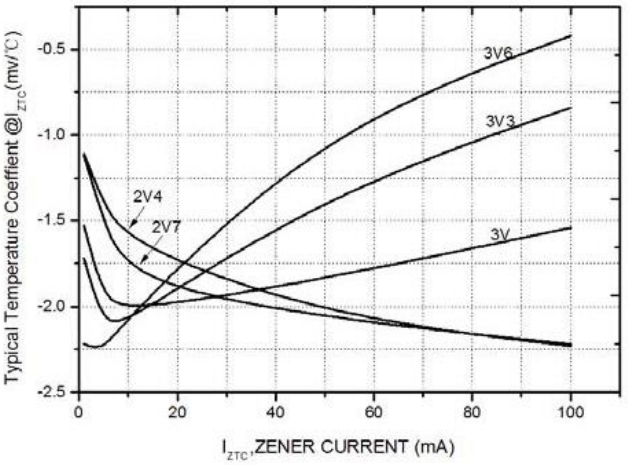


Fig 5：Typical Temperature Coeffient

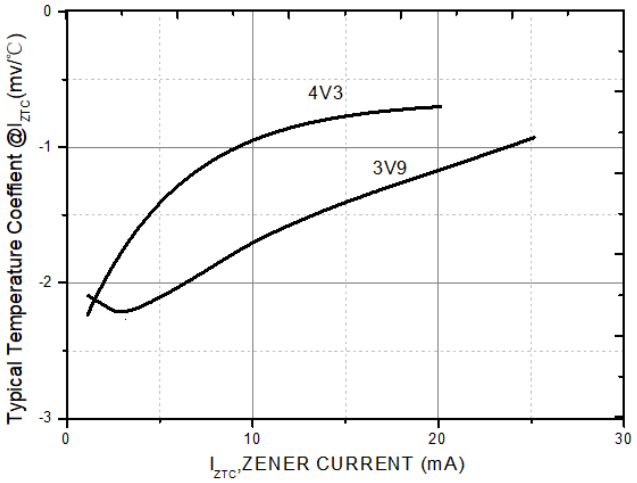


Fig 6：Typical Temperature Coeffient

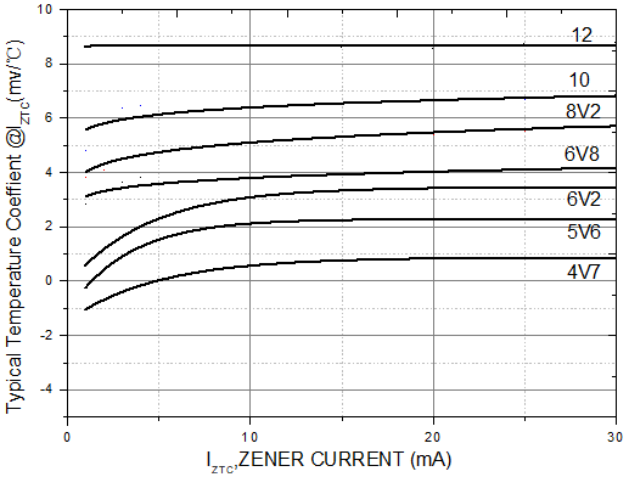


Fig 7：Typical Temperature Coeffient

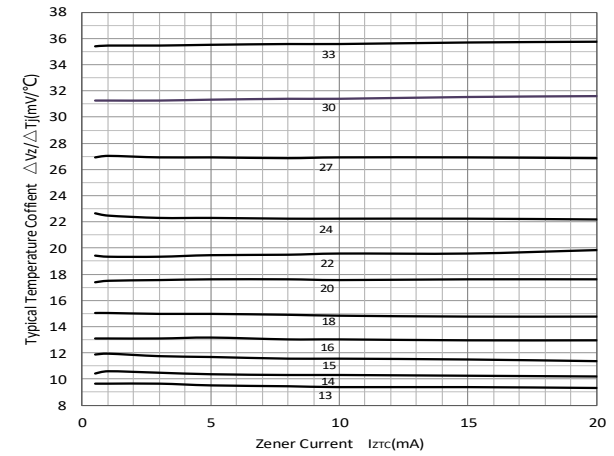


Fig 8：Typical Temperature Coeffient

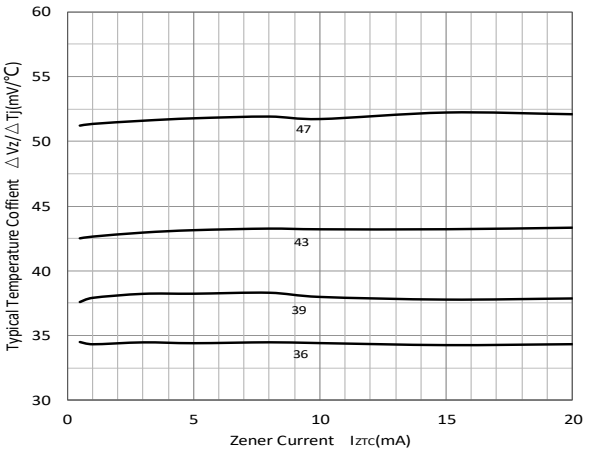


Fig 9：Typical Forward Voltage

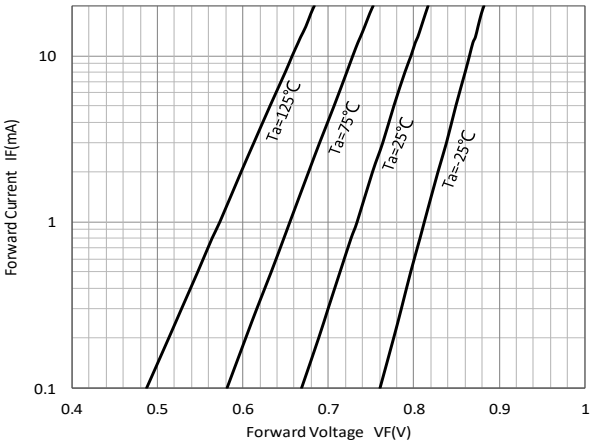


Fig 10：Typical Reverse Current

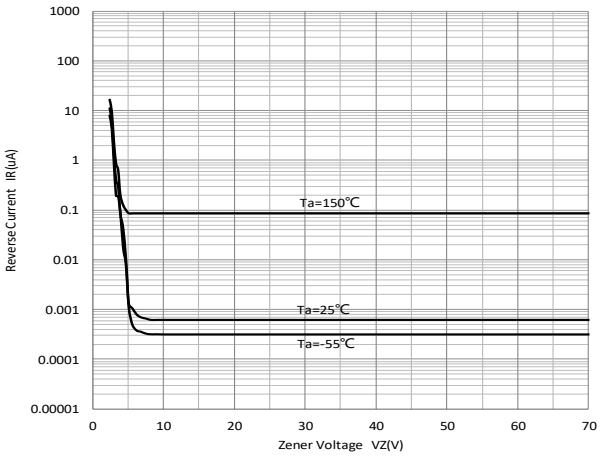
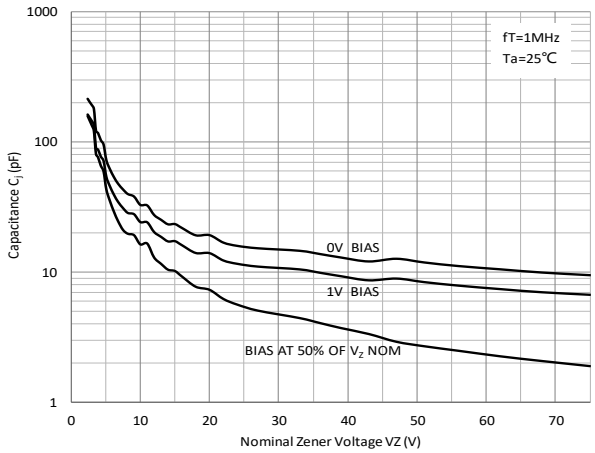
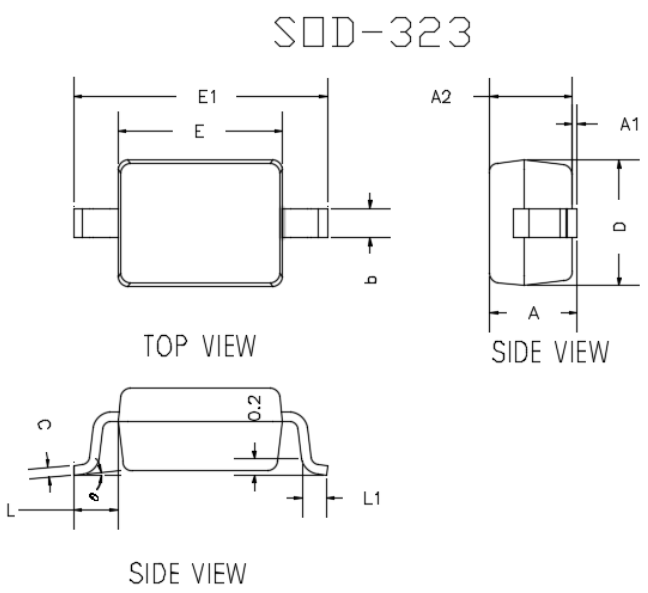


Fig 11：Typical Capacitance

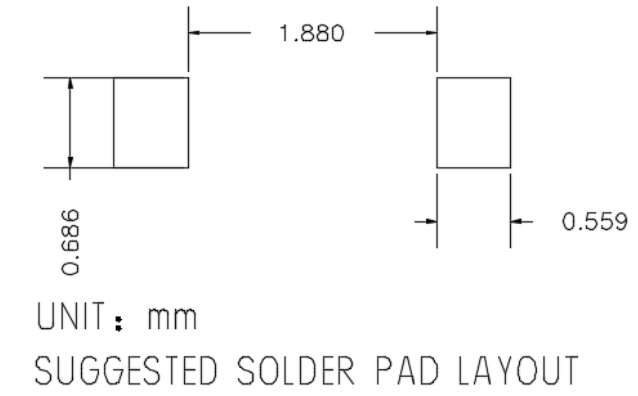


■Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MN	MAX
A	---	0.0393	---	1.0000
A1	0.0000	0.0039	0.0000	0.1000
A2	0.0314	0.0354	0.8000	0.9000
b	0.0098	0.0157	0.2500	0.4000
c	0.0031	0.0059	0.0800	0.1500
D	0.0472	0.0551	1.2000	1.4000
E	0.0629	0.0709	1.6000	1.8000
E1	0.0984	0.1063	2.5000	2.7000
L	0.0187TYP		0.475TYP	
L1	0.0098	0.0157	0.250	0.400
θ	0°	8°	0°	8°

■Soldering Footprint



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