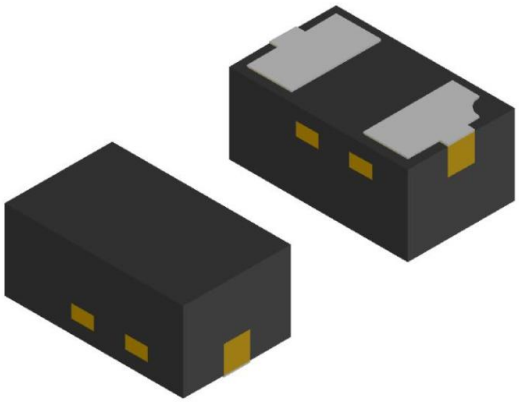
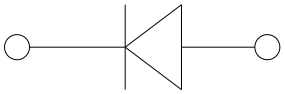
Zener Diodes





Features

- Moisture sensitivity level 3
- Zener voltage 2.4V~39V

Application

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

Mechanical data

- **Package**: DFN1006-2L
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

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

PARAMETER	SYMBOL	UNIT	Conditions	VALUE
Maximum Forward Voltage	V_F	V	I_F=10mA	0.9
Maximum Regulator Current	I_{ZM}	mA		P_D/ V_z
Power dissipation	P_D	mW		100
Junction temperature	T_j	℃		150
Storage temperature range	T_{stg}	℃		-55 ~+150

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(mg)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BZT52C2V4L3P THRU BZT52C39L3P	Approximate 0.9	10K	100K	400K	Tape & Reel

■Electrical Characteristics（T_a=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/℃		Test Current IZTC	Diode capacitance Cd (pF)	Non-repetitive peak reverse current Izsm (A)
		min.	typ.	max.	I_Z(mA)	max.	I_{zk}(mA)	max.	max	V_R(V)	Min	Max	mA	max	max
BZT52C2V4L3P	WX	2.28	2.4	2.56	5	100	1.0	600	50	1.0	-3.5	0	5	450	6
BZT52C2V7L3P	W1	2.5	2.7	2.9	5	100	1.0	600	20	1.0	-3.5	0	5	450	6
BZT52C3V0L3P	W2	2.8	3.0	3.2	5	95	1.0	600	10	1.0	-3.5	0	5	450	6
BZT52C3V3L3P	W3	3.1	3.3	3.5	5	95	1.0	600	5	1.0	-3.5	0	5	450	6
BZT52C3V6L3P	W4	3.4	3.6	3.8	5	90	1.0	600	5	1.0	-3.5	0	5	450	4.5
BZT52C3V9L3P	W5	3.7	3.9	4.1	5	90	1.0	600	3	1.0	-3.5	0	5	450	4.5
BZT52C4V3L3P	W6	4.0	4.3	4.6	5	90	1.0	600	3	1.0	-3.5	0	5	450	3.5
BZT52C4V7L3P	W7	4.4	4.7	5.0	5	80	1.0	500	3	2.0	-3.5	0	5	300	3.5
BZT52C5V1L3P	9Y	4.8	5.1	5.4	5	60	1.0	480	2	2.0	-2.7	1.2	5	300	3
BZT52C5V6L3P	9A	5.2	5.6	6.0	5	40	1.0	400	1	2.0	-2	2.5	5	200	3
BZT52C6V2L3P	9B	5.8	6.2	6.6	5	10	1.0	150	3	4.0	0.4	3.7	5	200	3
BZT52C6V8L3P	9C	6.4	6.8	7.2	5	15	1.0	80	2	4.0	1.2	4.5	5	200	2
BZT52C7V5L3P	9D	7.0	7.5	7.9	5	15	1.0	80	1	5.0	2.5	5.3	5	150	2
BZT52C8V2L3P	9E	7.7	8.2	8.7	5	15	1.0	80	0.7	5.0	3.2	6.2	5	150	2
BZT52C9V1L3P	9F	8.5	9.1	9.6	5	15	1.0	100	0.5	6.0	3.8	7.0	5	150	1.8
BZT52C10L3P	9G	9.4	10	10.6	5	20	1.0	150	0.2	7.0	4.5	8.0	5	90	1.8
BZT52C11L3P	9H	10.4	11	11.6	5	20	1.0	150	0.1	8.0	5.4	9.0	5	85	1.8
BZT52C12L3P	9J	11.4	12	12.7	5	25	1.0	150	0.1	8.0	6.0	10.0	5	85	1.8
BZT52C13L3P	9K	12.4	13	14.1	5	30	1.0	170	0.1	8.0	7.0	11.0	5	80	1
BZT52C15L3P	9L	14.25	15	15.75	5	30	1.0	200	0.1	10.5	9.2	13.0	5	75	1
BZT52C16L3P	9M	15.3	16	17.1	5	40	1.0	200	0.1	11.2	10.4	14.0	5	75	1
BZT52C18L3P	9N	16.8	18	19.1	5	45	1.0	225	0.1	12.6	12.4	16.0	5	70	1
BZT52C20L3P	9P	18.8	20	21.2	5	55	1.0	225	0.1	14.0	14.4	18.0	5	60	1
BZT52C22L3P	9R	20.8	22	23.3	5	55	1.0	250	0.1	15.4	16.4	20.0	5	60	0.6
BZT52C24L3P	9S	22.8	24	25.6	5	70	1.0	250	0.1	16.8	18.4	22.0	5	55	0.6
BZT52C36L3P	9W	34	36	38	2	90	0.5	350	0.1	25.2	30.4	37.4	2	45	0.6
BZT52C39L3P	9X	37	39	41	2	130	0.5	350	0.1	27.3	33.4	41.2	2	45	0.6

■ Characteristics (Typical)

Fig 1：P_D-Ta Curve

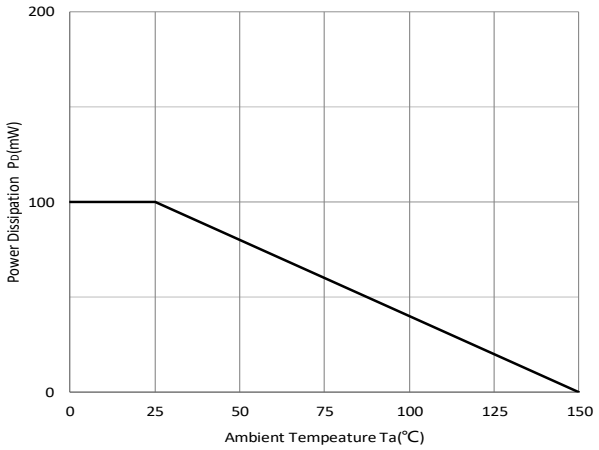


Fig 2：Zener Breakdown Characteristics

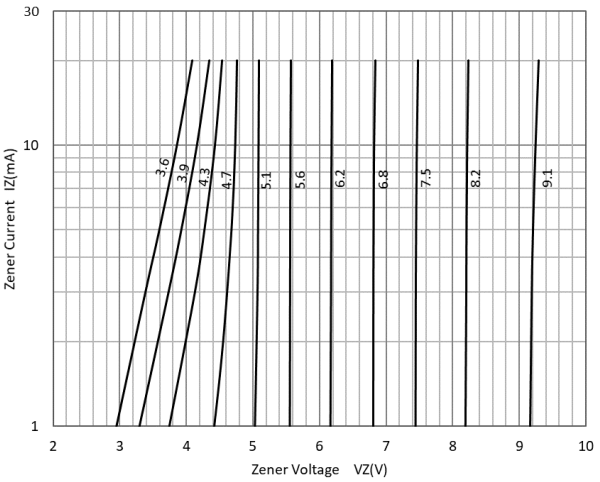


Fig 3：Zener Breakdown Characteristics

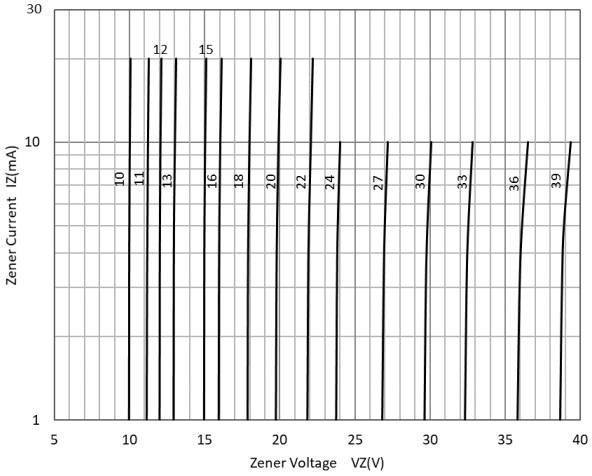


Fig 4 Typical Temperature Coeffient

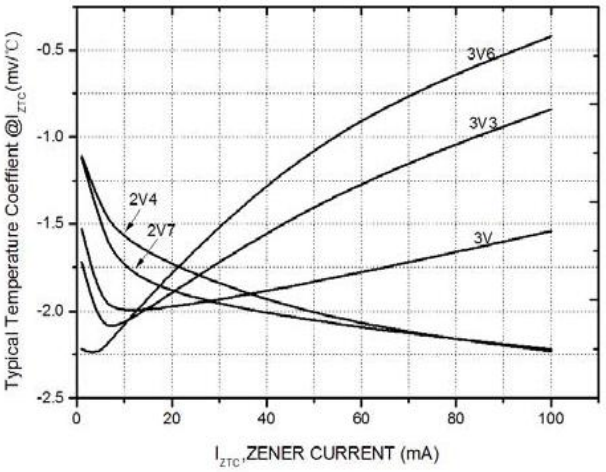


Fig 5 Typical Temperature Coeffient

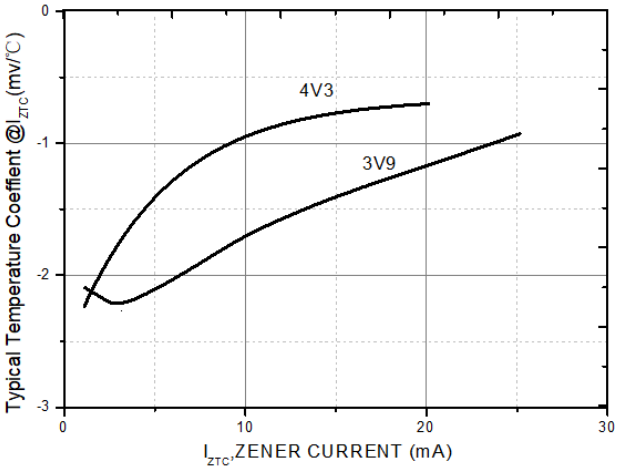


Fig 6：Typical Temperature Coeffient

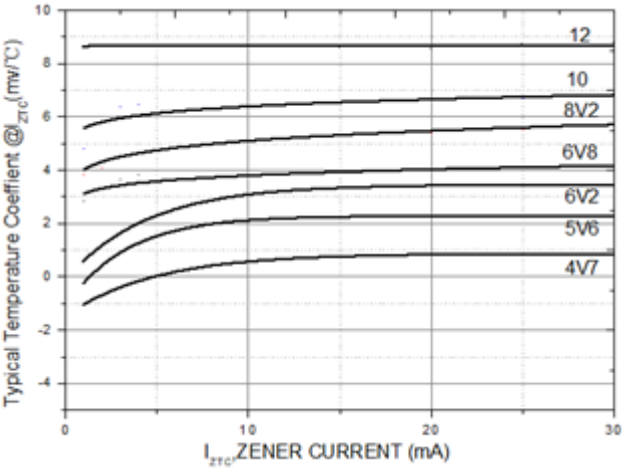


Fig 7 Typical Temperature Coeffient

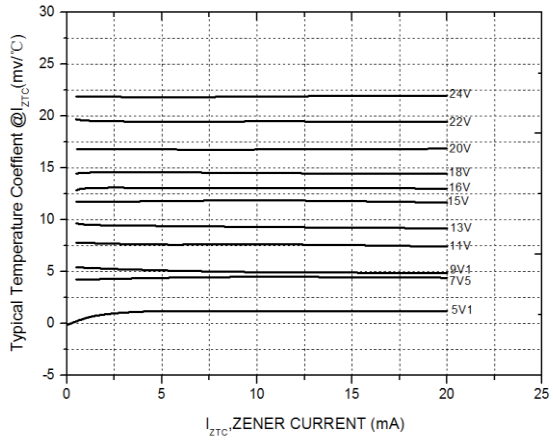


Fig 8：Typical Temperature Coeffient

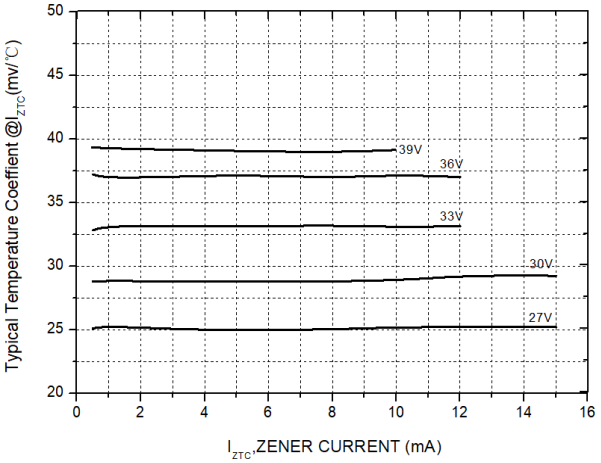


Fig 9：Typical Forward Voltage

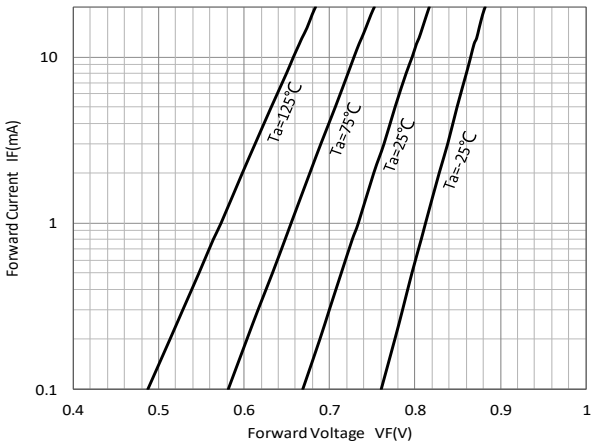


Fig 10：Typical Reverse Current

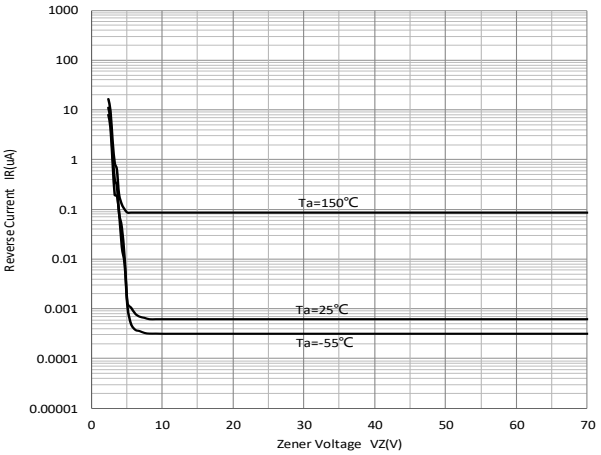
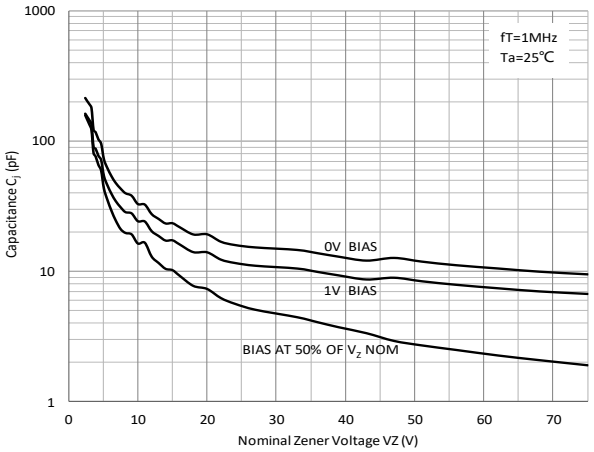
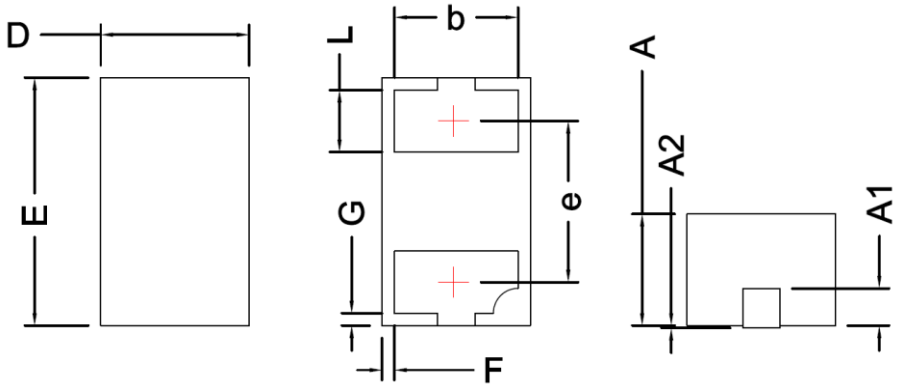


Fig 11：Typical Capacitance

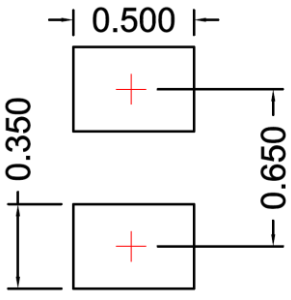


■Outline Dimensions



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
D	0.50	0.60	0.70
E	0.90	1.00	1.10
A	0.35	0.45	0.55
A1		0.15 BSC	
A2			0.10
F	0.005		
G	0.005		
L	0.15	0.25	0.35
b	0.41	0.50	0.59
e		0.65 BSC	

■ Soldering Footprint



Unit：mm

Notice

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise. Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.