

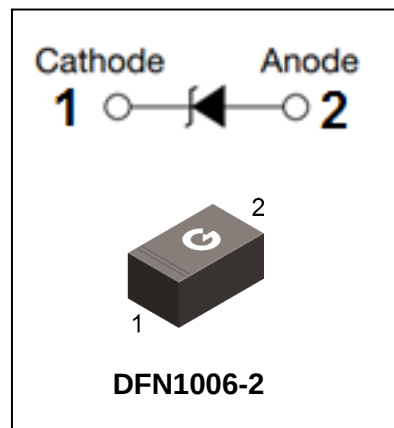
SMT-Type Zener Diode

BZT52B2V0L - BZT52B75L

FEATURES

- Large selection of zener voltages: 2.0V ~ 75V
- Tight voltage tolerance: $\pm 2\%$ for B-series
- Ultra low-profile package well suited for automated assembly
- MSL Class 1 compatible
- RoHS compliant with Halogen-free

HF



APPLICATIONS

- General voltage regulation
- Mobile & handheld systems

ORDERING INFORMATION

Part Number	Marking	Package
BZT52B2V0L – BZT52B75L	See Electrical Characteristics	DFN1006-2

MAXIMUM RATING (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage @ $I_F=10\text{mA}$	V_F	0.9	V
Power Dissipation	P_D	100	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	140	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	90	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	100	$^\circ\text{C/W}$
Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

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ELECTRICAL CHARACTERISTICS (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Part Number	Marking Code	Zener Voltage V_Z (V)			@ I_{ZT} (mA)	Maximum Zener Impedance			Temperature Coefficient @ I_{ZT} T_C (mV/°C)		Maximum Reverse Current I_R (μA)	@ V_R (V)
		Min.	Typ.	Max.		$Z_{ZT} (\Omega)$ @ I_{ZT}	$Z_{ZK} (\Omega)$	@ I_{ZK} (mA)	Min.	Max.		
BZT52B2V0L	V0	1.96	2.00	2.04	5	100	1000	0.5	-3.5	0.0	120.000	0.5
BZT52B2V2L	V1	2.16	2.20	2.24	5	100	1000	0.5	-3.5	0.0	120.000	0.7
BZT52B2V4L	05	2.35	2.40	2.45	5	100	564	1.0	-3.5	0.0	45.000	1.0
BZT52B2V7L	15	2.65	2.70	2.75	5	100	564	1.0	-3.5	0.0	18.000	1.0
BZT52B3V0L	25	2.94	3.00	3.06	5	100	564	1.0	-3.5	0.0	9.000	1.0
BZT52B3V3L	35	3.23	3.30	3.37	5	95	564	1.0	-3.5	0.0	4.500	1.0
BZT52B3V6L	45	3.53	3.60	3.67	5	90	564	1.0	-3.5	0.0	4.500	1.0
BZT52B3V9L	55	3.82	3.90	3.98	5	90	564	1.0	-3.5	0.0	2.700	1.0
BZT52B4V3L	65	4.21	4.30	4.39	5	90	564	1.0	-3.5	0.0	2.700	1.0
BZT52B4V7L	75	4.61	4.70	4.79	5	80	470	1.0	-3.5	0.0	2.700	2.0
BZT52B5V1L	85	5.00	5.10	5.20	5	60	451	1.0	-2.7	1.2	1.800	2.0
BZT52B5V6L	95	5.49	5.60	5.71	5	40	376	1.0	-2.0	2.5	0.900	2.0
BZT52B6V2L	A5	6.08	6.20	6.32	5	10	141	1.0	0.4	3.7	2.700	4.0
BZT52B6V8L	B5	6.66	6.80	6.94	5	15	75	1.0	1.2	4.5	1.800	4.0
BZT52B7V5L	C5	7.35	7.50	7.65	5	15	75	1.0	2.5	5.3	0.900	5.0
BZT52B8V2L	D5	8.04	8.20	8.36	5	15	75	1.0	3.2	6.2	0.630	5.0
BZT52B9V1L	E5	8.92	9.10	9.28	5	15	94	1.0	3.8	7.0	0.450	6.0
BZT52B10L	F5	9.80	10.00	10.20	5	20	141	1.0	4.5	8.0	0.180	7.0
BZT52B11L	G5	10.78	11.00	11.22	5	20	141	1.0	5.4	9.0	0.090	8.0
BZT52B12L	H5	11.76	12.00	12.24	5	25	141	1.0	6.0	10.0	0.090	8.0
BZT52B13L	J5	12.74	13.00	13.26	5	30	160	1.0	7.0	11.0	0.090	8.0
BZT52B15L	K5	14.70	15.00	15.30	5	30	188	1.0	9.2	13.0	0.045	10.5
BZT52B16L	L5	15.68	16.00	16.32	5	40	188	1.0	10.4	14.0	0.045	11.2
BZT52B18L	M5	17.64	18.00	18.36	5	45	212	1.0	12.4	16.0	0.045	12.6
BZT52B20L	N5	19.60	20.00	20.40	5	55	212	1.0	14.4	18.0	0.045	14.0
BZT52B22L	P5	21.56	22.00	22.44	5	55	235	1.0	16.4	20.0	0.045	15.4
BZT52B24L	R5	23.52	24.00	24.48	5	70	235	1.0	18.4	22.0	0.045	16.8
BZT52B27L	S5	26.46	27.00	27.54	2	80	282	0.5	21.4	25.3	0.045	18.9
BZT52B30L	T5	29.40	30.00	30.60	2	80	282	0.5	24.4	29.4	0.045	21.0
BZT52B33L	U5	32.34	33.00	33.66	2	80	306	0.5	27.4	33.4	0.045	23.0
BZT52B36L	V5	35.28	36.00	36.72	2	90	329	0.5	30.4	37.4	0.045	25.2
BZT52B39L	X5	38.22	39.00	39.78	2	130	329	0.5	33.4	41.2	0.045	27.3
BZT52B43L	Y5	42.14	43.00	43.86	2	150	353	0.5	37.6	46.6	0.045	30.1
BZT52B47L	Z5	46.06	47.00	47.94	2	170	353	0.5	42.0	51.8	0.045	33.0
BZT52B51L	-5	49.98	51.00	52.02	2	180	376	0.5	46.6	57.2	0.045	35.7
BZT52B56L	X2•	54.88	56.00	57.12	2	200	400	0.5	52.2	63.8	0.045	39.2
BZT52B62L	X3•	60.76	62.00	63.24	2	215	423	0.5	58.8	71.6	0.045	43.4
BZT52B68L	X4•	66.64	68.00	69.36	2	240	447	0.5	65.6	79.8	0.045	47.6
BZT52B75L	X5•	73.50	75.00	76.50	2	255	470	0.5	73.4	88.6	0.045	52.5

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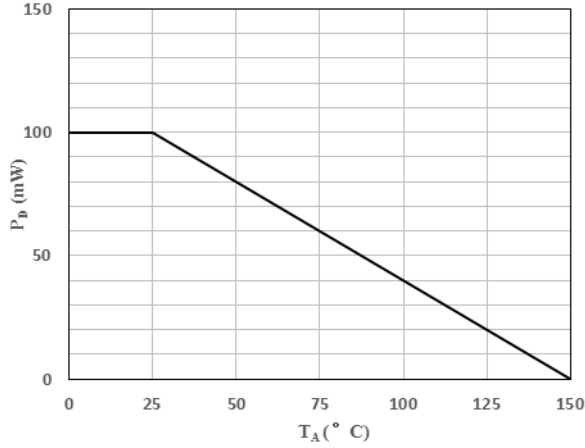


Fig 1 Steady State Power Derating

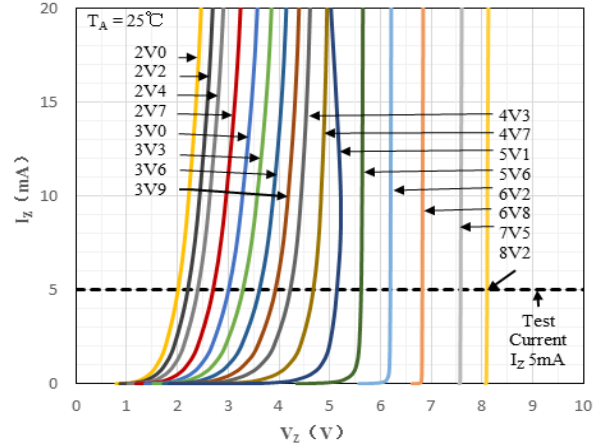


Fig 2 Typical Zener Breakdown Characteristics

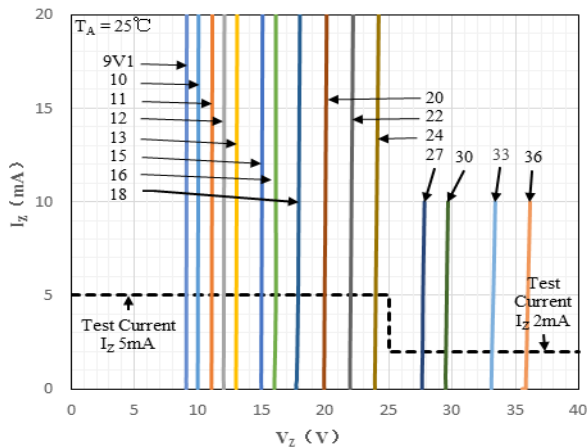


Fig 3 Typical Zener Breakdown Characteristics

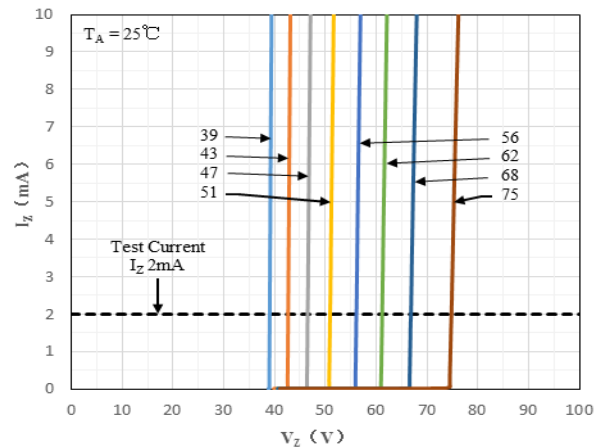


Fig 4 Typical Zener Breakdown Characteristics

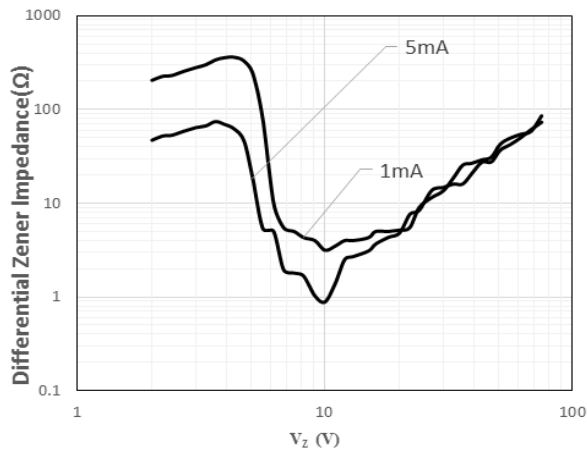


Fig 5 Zener Impedance vs. Zener Current

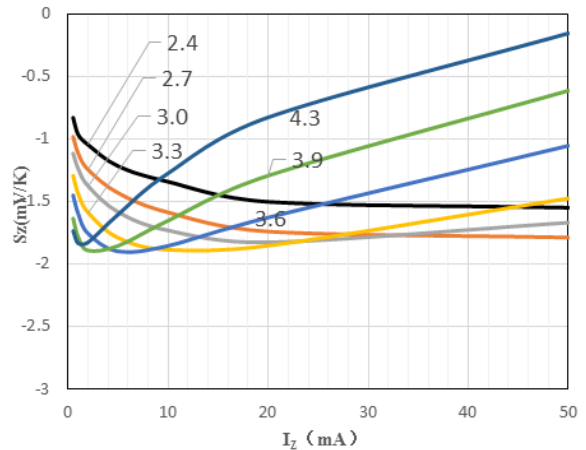


Fig 6 Temperature coefficient as a function of working current; typical values

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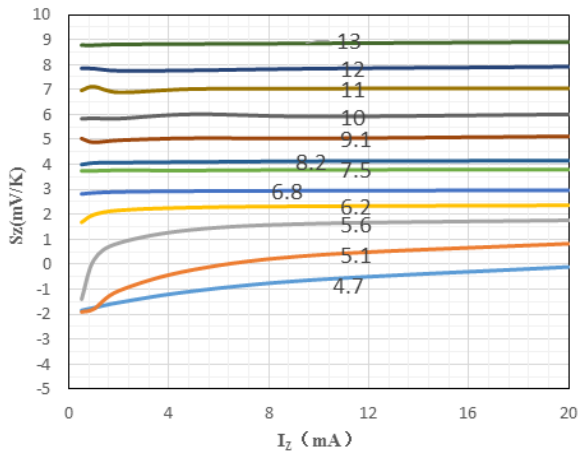


Fig 7 Temperature coefficient as a function of working current; typical values

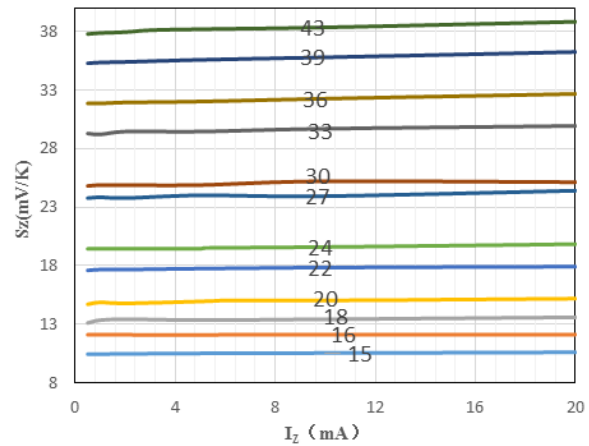


Fig 8 Temperature coefficient as a function of working current; typical values

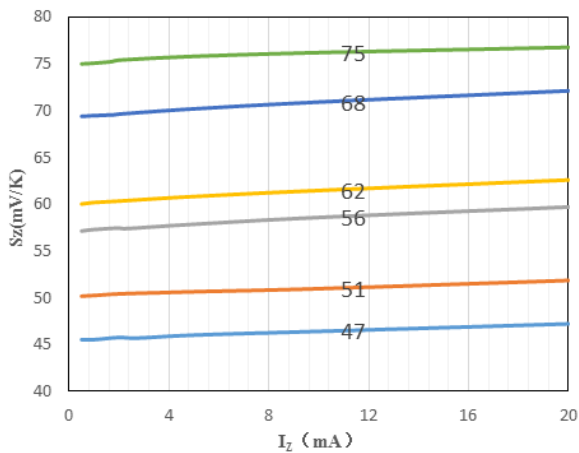


Fig 9 Temperature coefficient as a function of working current; typical values

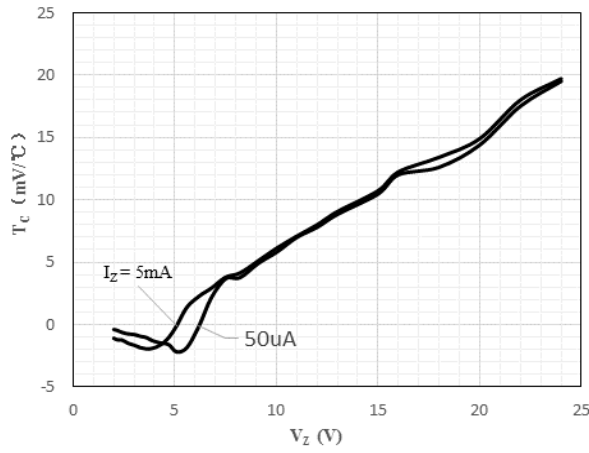


Fig 10 Temperature Dependence of Zener Voltage vs. Zener Voltage

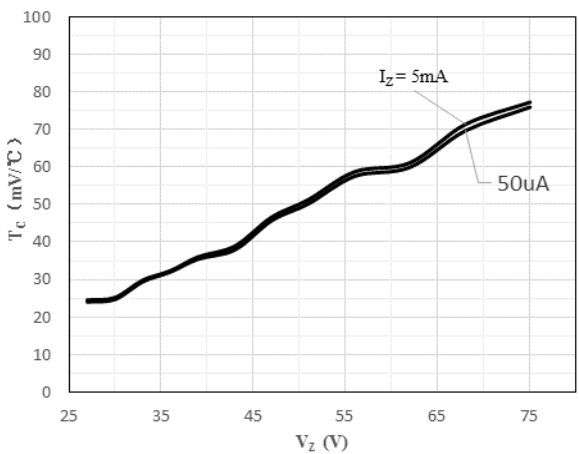


Fig 11 Temperature Dependence of Zener Voltage vs. Zener Voltage

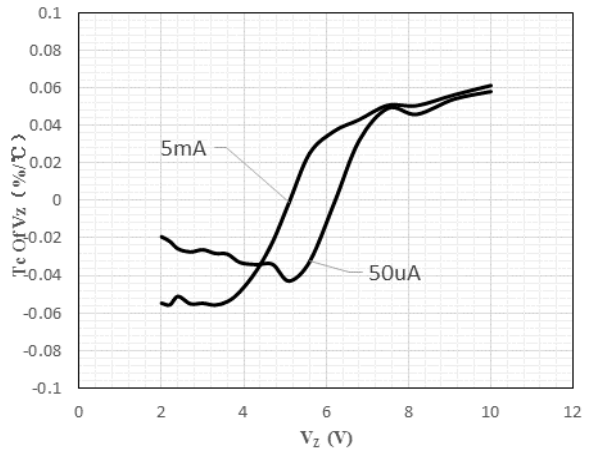


Fig 12 Temperature Dependence of Zener Voltage vs. Zener Voltage

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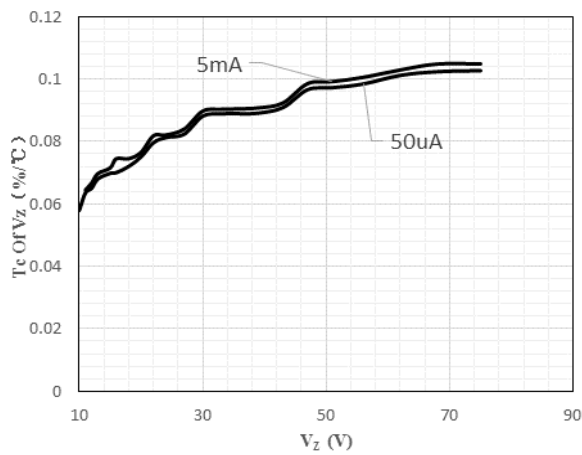


Fig 13 Temperature Dependence of Zener Voltage vs. Zener Voltage

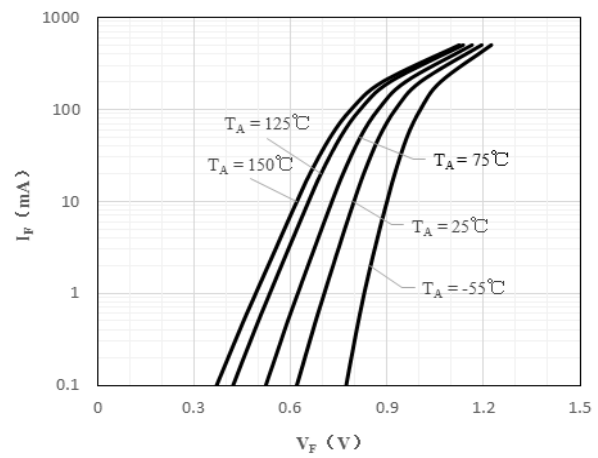


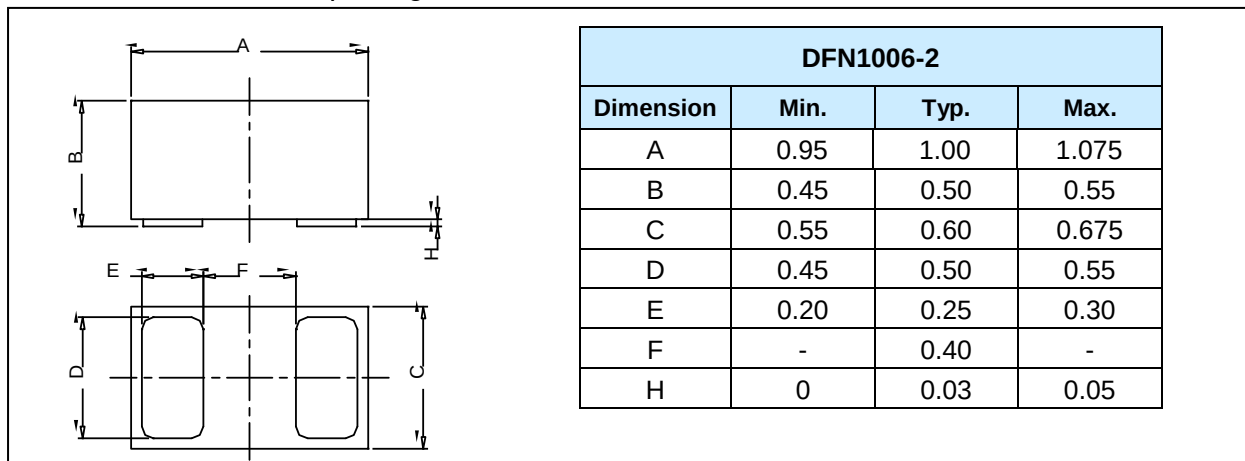
Fig 14 Typical Forward Characteristics

SMT-Type Zener Diode

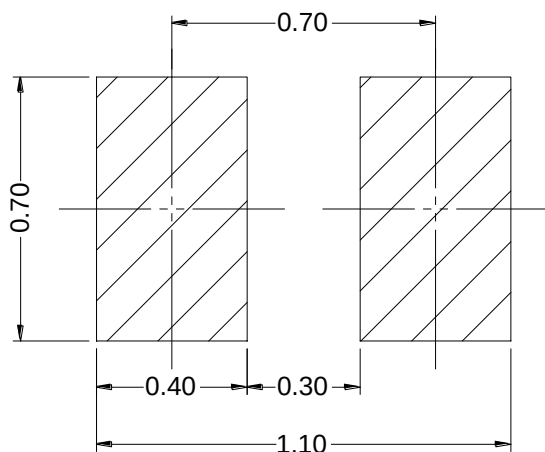
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PACKAGE OUTLINE (Unit: mm)

Plastic surface mounted package



MOUNTING PAD LAYOUT (Unit: mm)



PACKAGE INFORMATION

Part Number	Package	Shipping Quantity
BZT52B2V0L - BZT52B75L	DFN1006-2	10000 pcs / Tape & Reel