

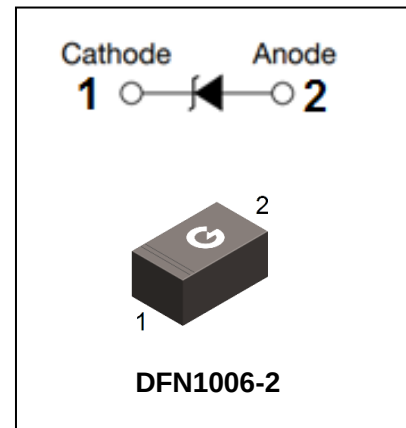
SMT-Type Zener Diode

BZT52C2V0L - BZT52C75L

FEATURES

- Large selection of zener voltages: 2.0V ~ 75V
- Tight voltage tolerance: $\pm 5\%$ for C-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
BZT52C2V0L – BZT52C75L	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 20Z 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.		
BZT52C2V0L	WY	1.90	2.00	2.10	5	100	600	1.0	-3.5	0.0	150.000	1.0
BZT52C2V2L	WZ	2.09	2.20	2.31	5	100	600	1.0	-3.5	0.0	150.000	1.0
BZT52C2V4L	WX	2.28	2.40	2.52	5	100	600	1.0	-3.5	0.0	50.000	1.0
BZT52C2V7L	W1	2.57	2.70	2.84	5	100	600	1.0	-3.5	0.0	20.000	1.0
BZT52C3V0L	W2	2.85	3.00	3.15	5	95	600	1.0	-3.5	0.0	10.000	1.0
BZT52C3V3L	W3	3.14	3.30	3.47	5	95	600	1.0	-3.5	0.0	5.000	1.0
BZT52C3V6L	W4	3.42	3.60	3.78	5	90	600	1.0	-3.5	0.0	5.000	1.0
BZT52C3V9L	W5	3.71	3.90	4.10	5	90	600	1.0	-3.5	0.0	3.000	1.0
BZT52C4V3L	W6	4.09	4.30	4.52	5	90	600	1.0	-3.5	0.0	3.000	1.0
BZT52C4V7L	W7	4.47	4.70	4.94	5	80	500	1.0	-3.5	0.0	3.000	2.0
BZT52C5V1L	W8	4.85	5.10	5.36	5	60	480	1.0	-2.7	1.2	2.000	2.0
BZT52C5V6L	W9	5.32	5.60	5.88	5	40	400	1.0	-2.0	2.5	1.000	2.0
BZT52C6V2L	WA	5.89	6.20	6.51	5	10	150	1.0	0.4	3.7	3.000	4.0
BZT52C6V8L	WB	6.46	6.80	7.14	5	15	80	1.0	1.2	4.5	2.000	4.0
BZT52C7V5L	WC	7.13	7.50	7.88	5	15	80	1.0	2.5	5.3	1.000	5.0
BZT52C8V2L	WD	7.79	8.20	8.61	5	15	80	1.0	3.2	6.2	0.700	5.0
BZT52C9V1L	WE	8.65	9.10	9.56	5	15	100	1.0	3.8	7.0	0.500	6.0
BZT52C10L	WF	9.50	10.00	10.50	5	20	150	1.0	4.5	8.0	0.200	7.0
BZT52C11L	WG	10.45	11.00	11.55	5	20	150	1.0	5.4	9.0	0.100	8.0
BZT52C12L	WH	11.40	12.00	12.60	5	25	150	1.0	6.0	10.0	0.100	8.0
BZT52C13L	WI	12.35	13.00	13.65	5	30	170	1.0	7.0	11.0	0.100	8.0
BZT52C15L	WJ	14.25	15.00	15.75	5	30	200	1.0	9.2	13.0	0.100	10.5
BZT52C16L	WK	15.20	16.00	16.80	5	40	200	1.0	10.4	14.0	0.100	11.2
BZT52C18L	WL	17.10	18.00	18.90	5	45	225	1.0	12.4	16.0	0.100	12.6
BZT52C20L	WM	19.00	20.00	21.00	5	55	225	1.0	14.4	18.0	0.100	14.0
BZT52C22L	WN	20.90	22.00	23.10	5	55	250	1.0	16.4	20.0	0.100	15.4
BZT52C24L	WO	22.80	24.00	25.20	5	70	250	1.0	18.4	22.0	0.100	16.8
BZT52C27L	WP	25.65	27.00	28.35	2	80	300	0.5	21.4	25.3	0.100	18.9
BZT52C30L	WQ	28.50	30.00	31.50	2	80	300	0.5	24.4	29.4	0.100	21.0
BZT52C33L	WR	31.35	33.00	34.65	2	80	325	0.5	27.4	33.4	0.100	23.1
BZT52C36L	WS	34.20	36.00	37.80	2	90	350	0.5	30.4	37.4	0.100	25.2
BZT52C39L	WT	37.05	39.00	40.95	2	130	350	0.5	33.4	41.2	0.100	27.3
BZT52C43L	WU	40.85	43.00	45.15	2	100	700	1.0	37.6	46.6	0.100	32.0
BZT52C47L	WV	44.65	47.00	49.35	2	100	750	1.0	42.0	51.8	0.100	35.0
BZT52C51L	WW	48.45	51.00	53.55	2	100	750	1.0	46.6	57.2	0.100	38.0
BZT52C56L	WX	53.20	56.00	58.80	2	200	400	0.5	52.2	63.8	0.045	39.2
BZT52C62L	6E	58.90	62.00	65.10	2	215	423	0.5	58.8	71.6	0.045	43.4
BZT52C68L	6F	64.60	68.00	71.40	2	240	447	0.5	65.6	79.8	0.045	47.6
BZT52C75L	6H	71.25	75.00	78.75	2	255	470	0.5	73.4	88.6	0.045	52.5

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

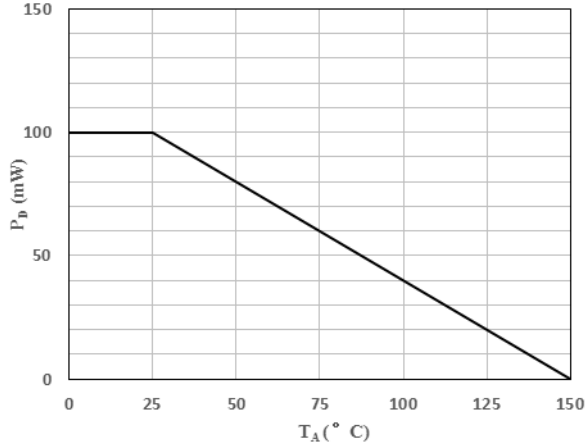


Fig 1 Steady State Power Derating

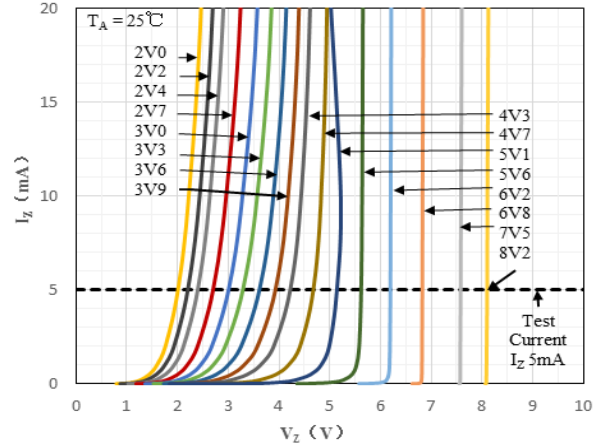


Fig 2 Typical Zener Breakdown Characteristics

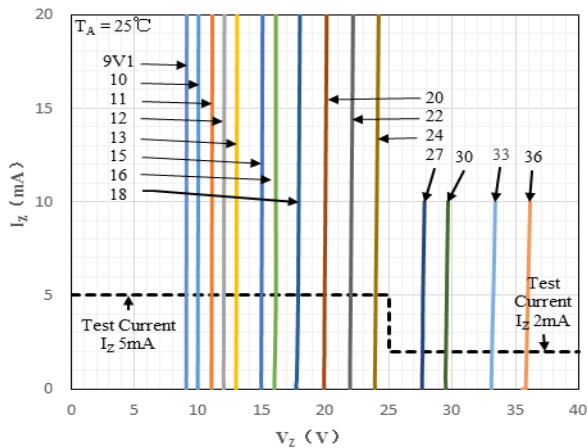


Fig 3 Typical Zener Breakdown Characteristics

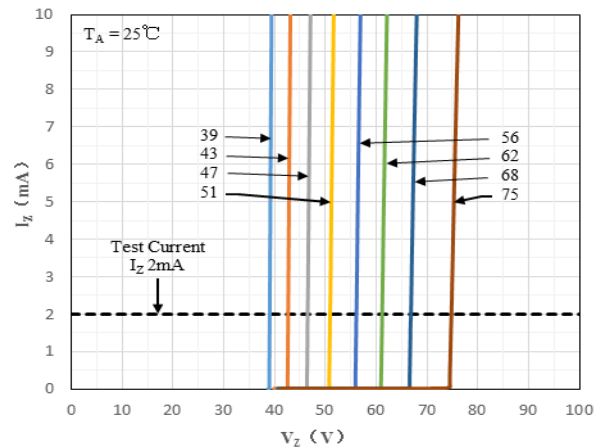


Fig 4 Typical Zener Breakdown Characteristics

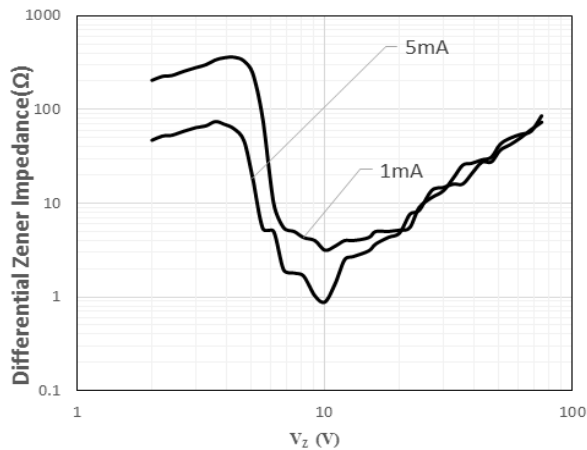


Fig 5 Zener Impedance vs. Zener Current

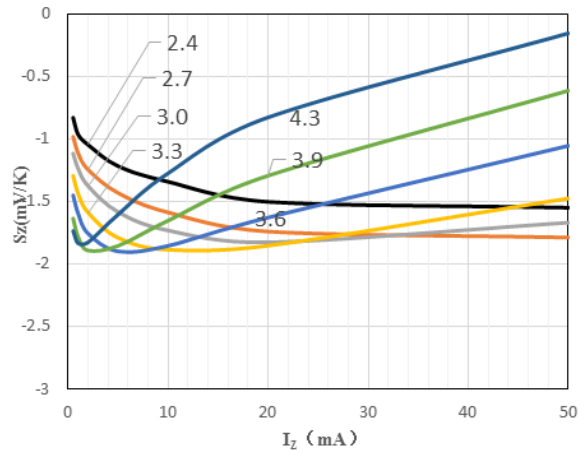


Fig 6 Temperature coefficient as a function of working current; typical values

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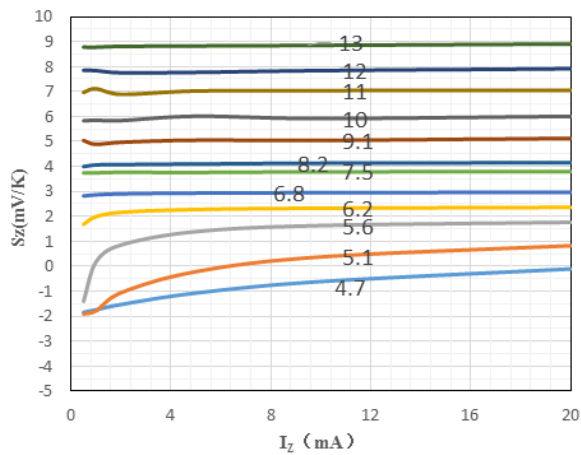


Fig 7 Temperature coefficient as a function of working current; typical values

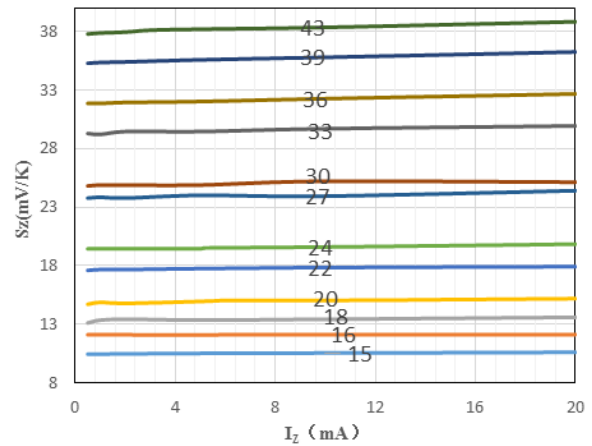


Fig 8 Temperature coefficient as a function of working current; typical values

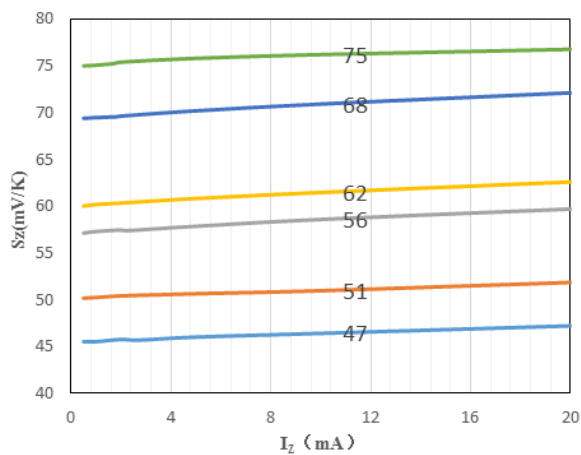


Fig 9 Temperature coefficient as a function of working current; typical values

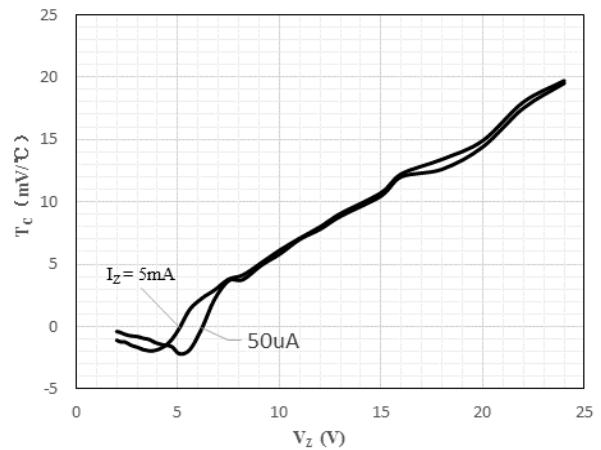


Fig 10 Temperature Dependence of Zener Voltage vs. Zener Voltage

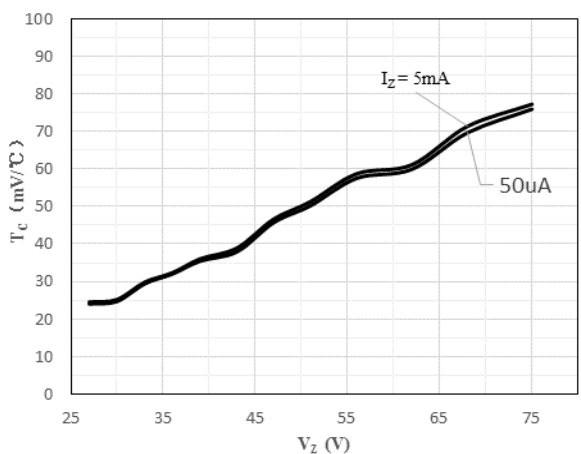


Fig 11 Temperature Dependence of Zener Voltage vs. Zener Voltage

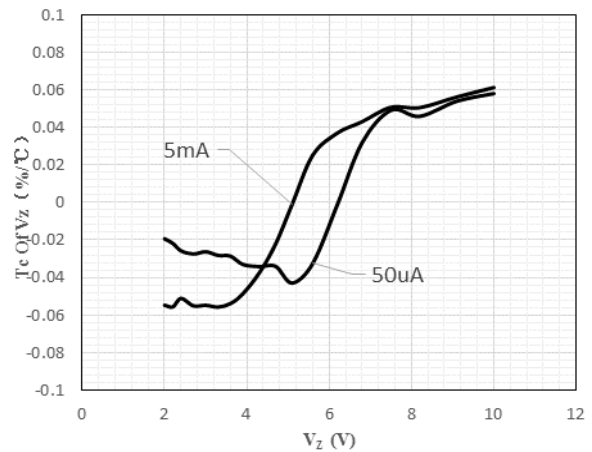


Fig 12 Temperature Dependence of Zener Voltage vs. Zener Voltage

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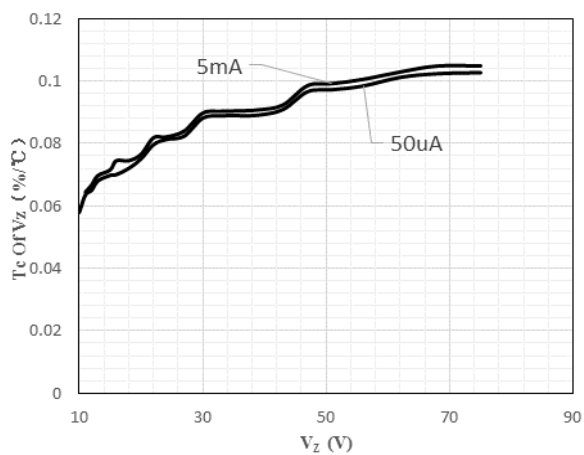


Fig 13 Temperature Dependence of Zener Voltage vs. Zener Voltage

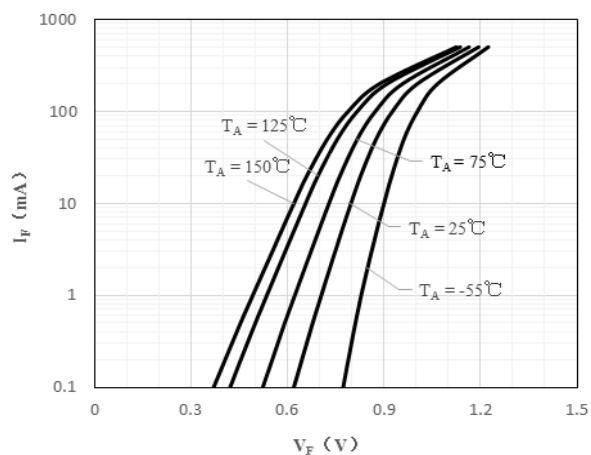


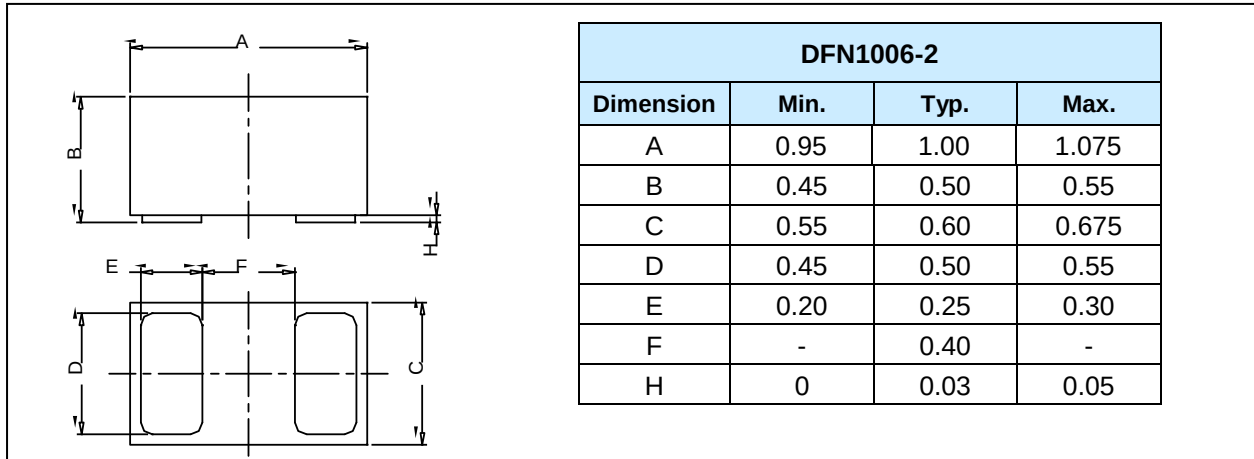
Fig 14 Typical Forward Characteristics

SMT-Type Zener Diode

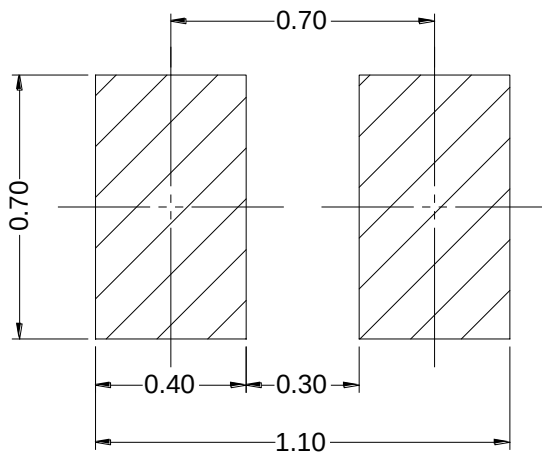
BZT52C2V0L - BZT52C75L

PACKAGE OUTLINE (Unit: mm)

Plastic surface mounted package



MOUNTING PAD LAYOUT (Unit: mm)



PACKAGE INFORMATION

Part Number	Package	Shipping Quantity
BZT52C2V0L - BZT52C75L	DFN1006-2	10000 pcs / Tape & Reel