

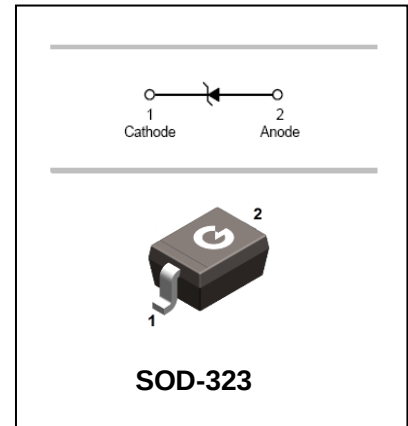
SMT-Type Zener Diode

BZT52B2V0S-BZT52B75S

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
BZT52B2V0S - BZT52B75S	See Electrical Characteristics	SOD-323

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	200	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	426	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	230	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	297	$^\circ\text{C/W}$
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 15mm * 15mm * 1mm FR4-epoxy P.C.B

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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.		
BZT52B2V0S	WX•	1.96	2.00	2.04	5	100	1000	0.5	-3.5	0.0	120.000	0.5
BZT52B2V2S	22	2.16	2.20	2.24	5	100	1000	0.5	-3.5	0.0	120.000	0.7
BZT52B2V4S	0Z	2.35	2.40	2.45	5	94	564	1.0	-3.5	0.0	45.000	1.0
BZT52B2V7S	1Z	2.65	2.70	2.75	5	94	564	1.0	-3.5	0.0	18.000	1.0
BZT52B3V0S	2Z	2.94	3.00	3.06	5	89	564	1.0	-3.5	0.0	9.000	1.0
BZT52B3V3S	3Z	3.23	3.30	3.37	5	89	564	1.0	-3.5	0.0	4.500	1.0
BZT52B3V6S	4Z	3.53	3.60	3.67	5	84	564	1.0	-3.5	0.0	4.500	1.0
BZT52B3V9S	5Z	3.82	3.90	3.98	5	84	564	1.0	-3.5	0.0	2.700	1.0
BZT52B4V3S	6Z	4.21	4.30	4.39	5	84	564	1.0	-3.5	0.0	2.700	1.0
BZT52B4V7S	7Z	4.61	4.70	4.79	5	75	564	1.0	-3.5	0.2	2.700	2.0
BZT52B5V1S	8Z	5.00	5.10	5.20	5	56	470	1.0	-2.7	1.2	1.800	2.0
BZT52B5V6S	9Z	5.49	5.60	5.71	5	37	451	1.0	-2.0	2.5	0.900	2.0
BZT52B6V2S	AZ	6.08	6.20	6.32	5	9	376	1.0	0.4	3.7	2.700	4.0
BZT52B6V8S	BZ	6.66	6.80	6.94	5	14	141	1.0	1.2	4.5	1.800	4.0
BZT52B7V5S	CZ	7.35	7.50	7.65	5	14	75	1.0	2.5	5.3	0.900	5.0
BZT52B8V2S	DZ	8.04	8.20	8.36	5	14	75	1.0	3.2	6.2	0.630	5.0
BZT52B9V1S	EZ	8.92	9.10	9.28	5	14	94	1.0	3.8	7.0	0.450	6.0
BZT52B10S	FZ	9.80	10.00	10.20	5	18	141	1.0	4.5	8.0	0.180	7.0
BZT52B11S	GZ	10.78	11.00	11.22	5	18	141	1.0	5.4	9.0	0.090	8.0
BZT52B12S	HZ	11.76	12.00	12.24	5	23	141	1.0	6.0	10.0	0.090	8.0
BZT52B13S	JZ	12.74	13.00	13.26	5	28	160	1.0	7.0	11.0	0.090	8.0
BZT52B15S	KZ	14.70	15.00	15.30	5	28	188	1.0	9.2	13.0	0.045	10.5
BZT52B16S	LZ	15.68	16.00	16.32	5	37	188	1.0	10.4	14.0	0.045	11.2
BZT52B18S	MZ	17.64	18.00	18.36	5	42	212	1.0	12.4	16.0	0.045	12.6
BZT52B20S	NZ	19.60	20.00	20.40	5	51	212	1.0	14.4	18.0	0.045	14.0
BZT52B22S	PZ	21.56	22.00	22.44	5	51	235	1.0	16.4	20.0	0.045	15.4
BZT52B24S	RZ	23.52	24.00	24.48	5	65	235	1.0	18.4	22.0	0.045	16.8
BZT52B27S	SZ	26.46	27.00	27.54	2	75	282	0.5	21.4	25.3	0.045	18.9
BZT52B30S	TZ	29.40	30.00	30.60	2	75	282	0.5	24.4	29.4	0.045	21.0
BZT52B33S	UZ	32.34	33.00	33.66	2	75	306	0.5	27.4	33.4	0.045	23.0
BZT52B36S	VZ	35.28	36.00	36.72	2	84	329	0.5	30.4	37.4	0.045	25.2
BZT52B39S	WZ•	38.22	39.00	39.78	2	122	329	0.5	33.4	41.2	0.045	27.3
BZT52B43S	XZ	42.14	43.00	43.86	2	141	353	0.5	37.6	46.6	0.045	30.1
BZT52B47S	YZ	46.06	47.00	47.94	2	160	353	0.5	42.0	51.8	0.045	33.0
BZT52B51S	ZZ	49.98	51.00	52.02	2	169	376	0.5	46.6	57.2	0.045	35.7
BZT52B56S	X2•	54.88	56.00	57.12	2	200	400	0.5	52.2	63.8	0.045	39.2
BZT52B62S	X3•	60.76	62.00	63.24	2	215	423	0.5	58.8	71.6	0.045	43.4
BZT52B68S	X4•	66.64	68.00	69.36	2	240	447	0.5	65.6	79.8	0.045	47.6
BZT52B75S	X5•	73.50	75.00	76.50	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)

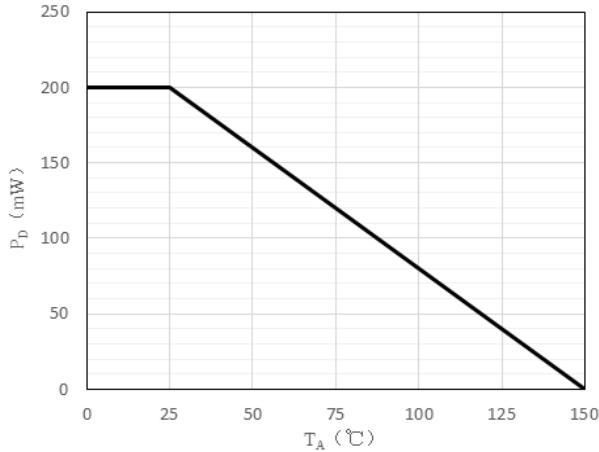


Fig 1 Steady State Power Derating

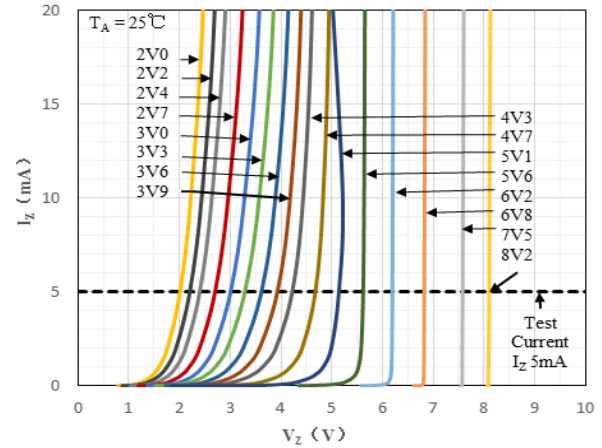


Fig 2 Typical Zener Breakdown Characteristics

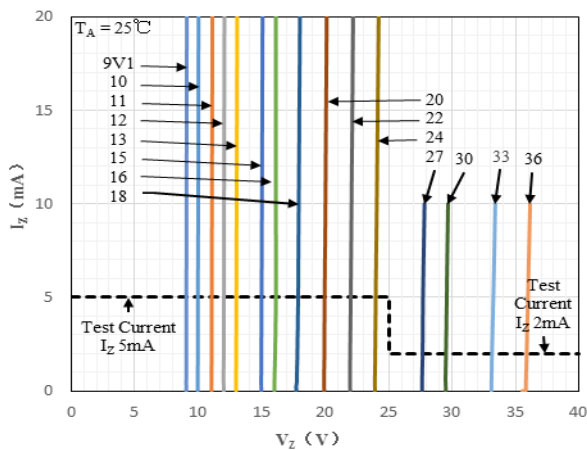


Fig 3 Typical Zener Breakdown Characteristics

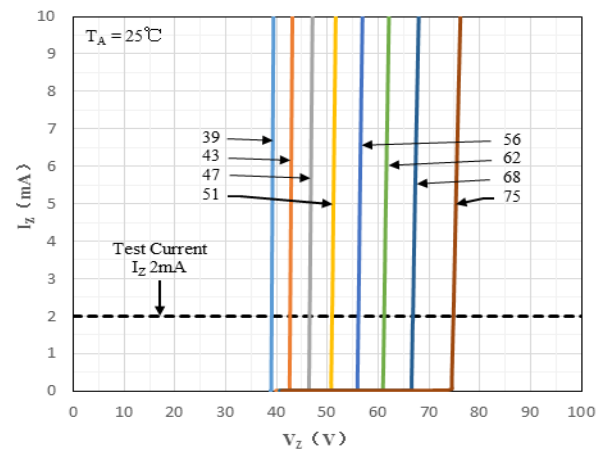


Fig 4 Typical Zener Breakdown Characteristics

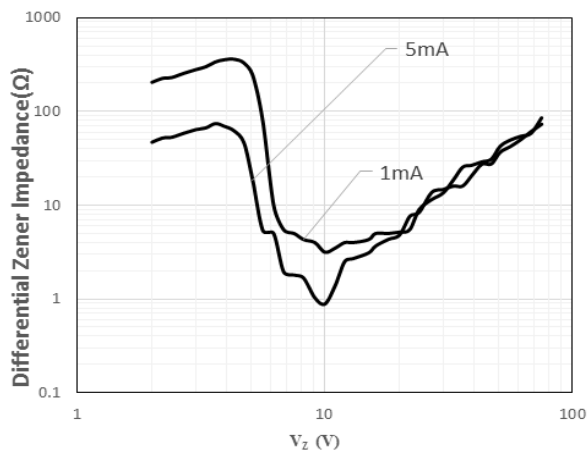


Fig 5 Zener Impedance vs. Zener Current

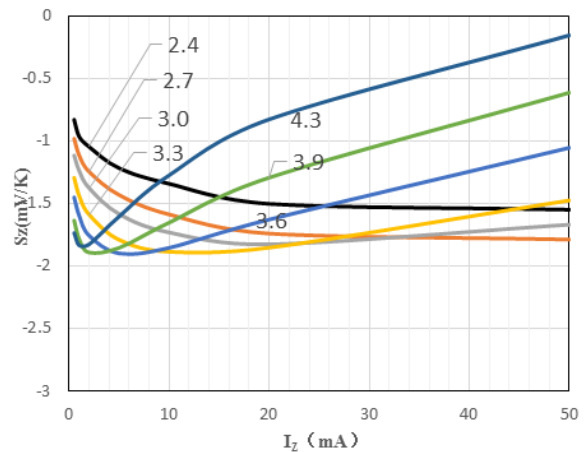


Fig 6 Temperature coefficient as a function of working current; typical values

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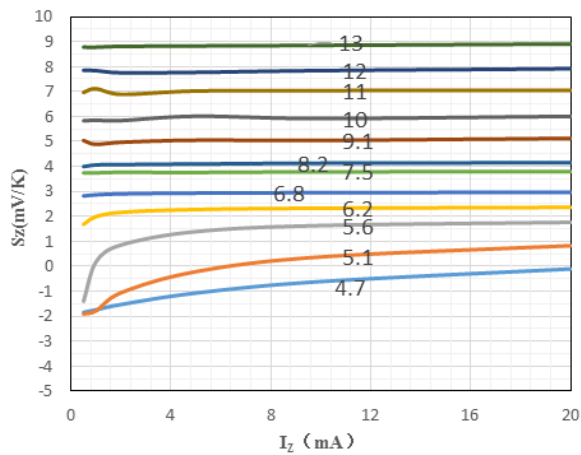


Fig 7 Temperature coefficient as a function of working current; typical values

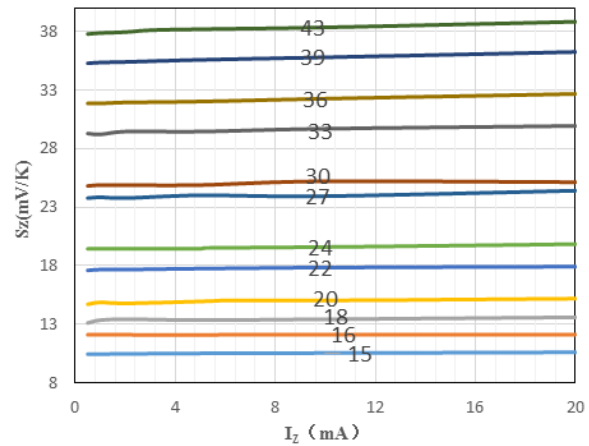


Fig 8 Temperature coefficient as a function of working current; typical values

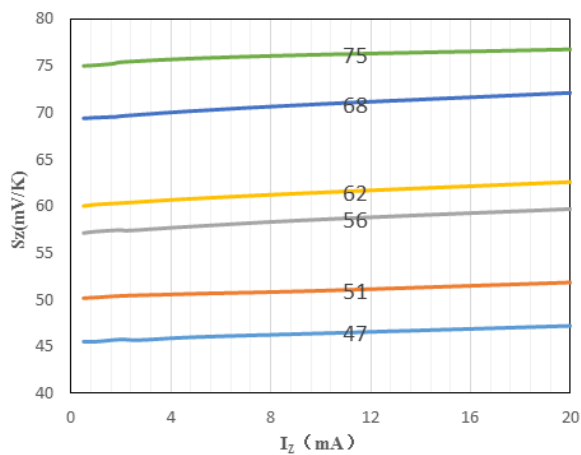


Fig 9 Temperature coefficient as a function of working current; typical values

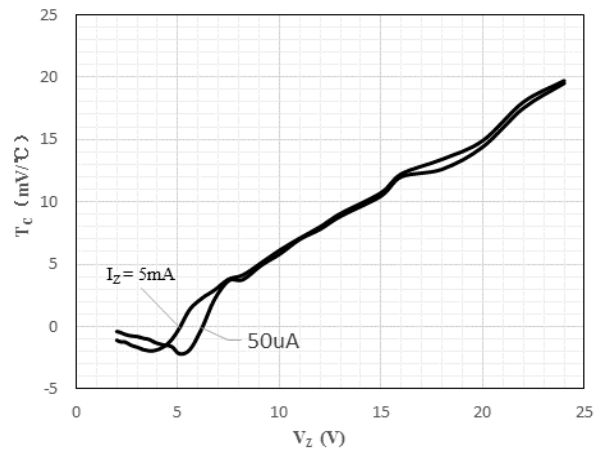


Fig 10 Temperature Dependence of Zener Voltage vs. Zener Voltage

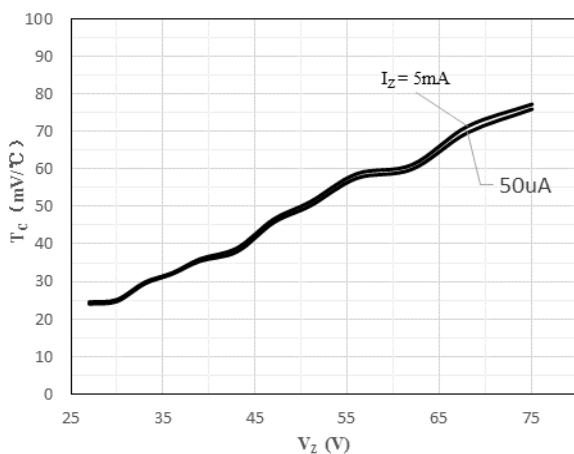


Fig 11 Temperature Dependence of Zener Voltage vs. Zener Voltage

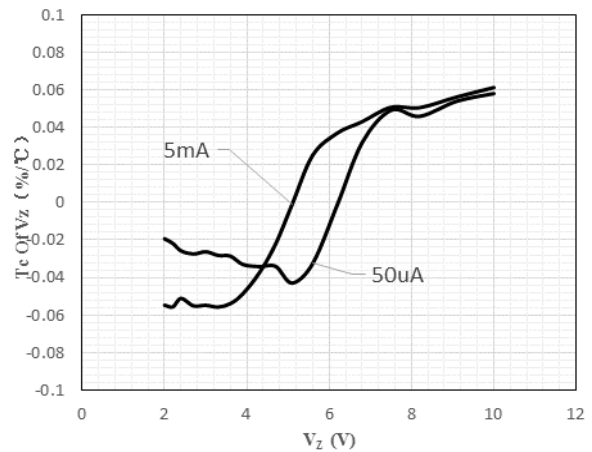


Fig 12 Temperature Dependence of Zener Voltage vs. Zener Voltage

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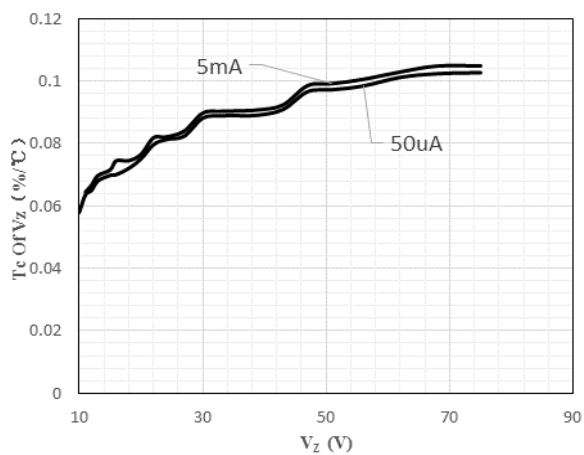


Fig 13 Temperature Dependence of Zener Voltage vs. Zener Voltage

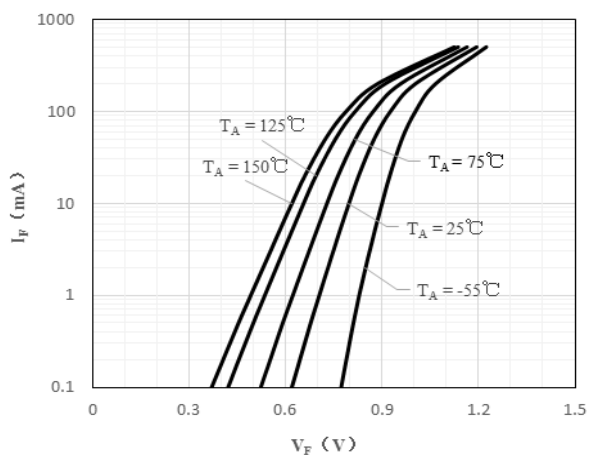


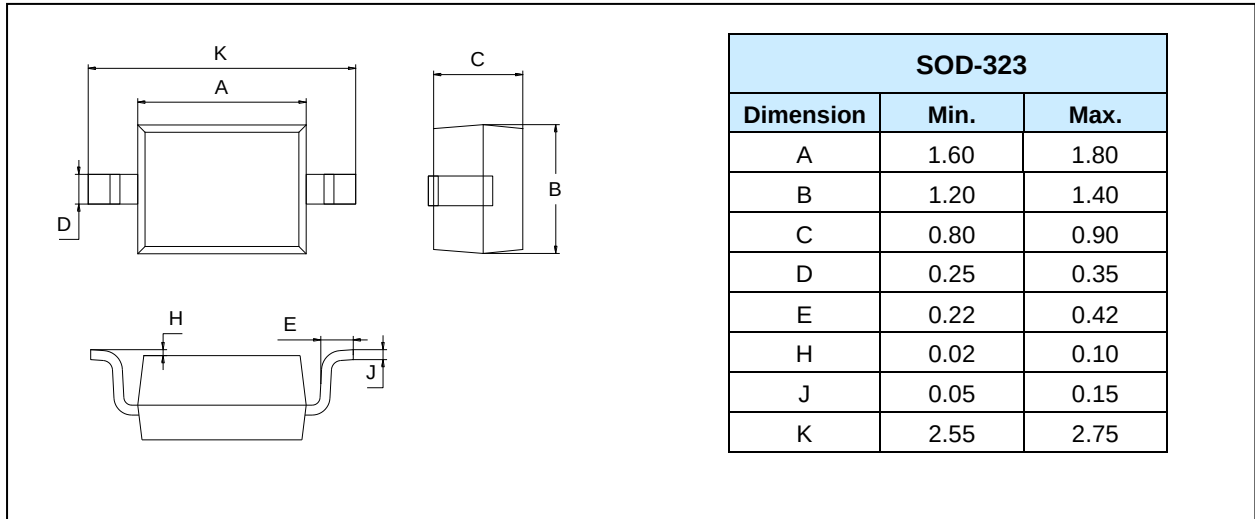
Fig 14 Typical Forward Characteristics

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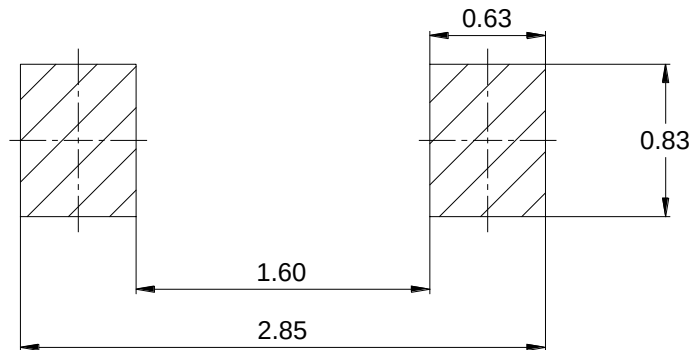
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PACKAGE OUTLINE (Unit: mm)

Plastic surface mounted package



MOUNTING PAD LAYOUT (Unit: mm)



PACKAGE INFORMATION

Part Number	Package	Shipping Quantity
BZT52B2V0S - BZT52B75S	SOD-323	3000 pcs / Tape & Reel