

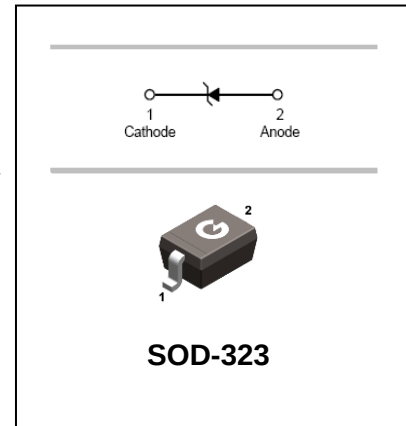
SMT-Type Zener Diode

TBZT52B2V0S-TBZT52B75S

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
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF



APPLICATIONS

- General voltage regulation
- Mobile & handheld systems

ORDERING INFORMATION

Part Number	Marking	Package
TBZT52B2V0S - TBZT52B75S	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-Ambient)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Thermal Resistance (Junction-to-Case)	$R_{\theta JC}$	337	$^\circ\text{C/W}$
Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Note: These ratings are limiting values above which the serviceability of the diodes may be impaired.

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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.		
TBZT52B2V0S	WX•	1.96	2.00	2.04	5	100	1000	0.5	-3.5	0.0	120.000	0.5
TBZT52B2V2S	22	2.16	2.20	2.24	5	100	1000	0.5	-3.5	0.0	120.000	0.7
TBZT52B2V4S	0Z	2.35	2.40	2.45	5	94	564	1.0	-3.5	0.0	45.000	1.0
TBZT52B2V7S	1Z	2.65	2.70	2.75	5	94	564	1.0	-3.5	0.0	18.000	1.0
TBZT52B3V0S	2Z	2.94	3.00	3.06	5	89	564	1.0	-3.5	0.0	9.000	1.0
TBZT52B3V3S	3Z	3.23	3.30	3.37	5	89	564	1.0	-3.5	0.0	4.500	1.0
TBZT52B3V6S	4Z	3.53	3.60	3.67	5	84	564	1.0	-3.5	0.0	4.500	1.0
TBZT52B3V9S	5Z	3.82	3.90	3.98	5	84	564	1.0	-3.5	0.0	2.700	1.0
TBZT52B4V3S	6Z	4.21	4.30	4.39	5	84	564	1.0	-3.5	0.0	2.700	1.0
TBZT52B4V7S	7Z	4.61	4.70	4.79	5	75	564	1.0	-3.5	0.2	2.700	2.0
TBZT52B5V1S	8Z	5.00	5.10	5.20	5	56	470	1.0	-2.7	1.2	1.800	2.0
TBZT52B5V6S	9Z	5.49	5.60	5.71	5	37	451	1.0	-2.0	2.5	0.900	2.0
TBZT52B6V2S	AZ	6.08	6.20	6.32	5	9	376	1.0	0.4	3.7	2.700	4.0
TBZT52B6V8S	BZ	6.66	6.80	6.94	5	14	141	1.0	1.2	4.5	1.800	4.0
TBZT52B7V5S	CZ	7.35	7.50	7.65	5	14	75	1.0	2.5	5.3	0.900	5.0
TBZT52B8V2S	DZ	8.04	8.20	8.36	5	14	75	1.0	3.2	6.2	0.630	5.0
TBZT52B9V1S	EZ	8.92	9.10	9.28	5	14	94	1.0	3.8	7.0	0.450	6.0
TBZT52B10S	FZ	9.80	10.00	10.20	5	18	141	1.0	4.5	8.0	0.180	7.0
TBZT52B11S	GZ	10.78	11.00	11.22	5	18	141	1.0	5.4	9.0	0.090	8.0
TBZT52B12S	HZ	11.76	12.00	12.24	5	23	141	1.0	6.0	10.0	0.090	8.0
TBZT52B13S	JZ	12.74	13.00	13.26	5	28	160	1.0	7.0	11.0	0.090	8.0
TBZT52B15S	KZ	14.70	15.00	15.30	5	28	188	1.0	9.2	13.0	0.045	10.5
TBZT52B16S	LZ	15.68	16.00	16.32	5	37	188	1.0	10.4	14.0	0.045	11.2
TBZT52B18S	MZ	17.64	18.00	18.36	5	42	212	1.0	12.4	16.0	0.045	12.6
TBZT52B20S	NZ	19.60	20.00	20.40	5	51	212	1.0	14.4	18.0	0.045	14.0
TBZT52B22S	PZ	21.56	22.00	22.44	5	51	235	1.0	16.4	20.0	0.045	15.4
TBZT52B24S	RZ	23.52	24.00	24.48	5	65	235	1.0	18.4	22.0	0.045	16.8
TBZT52B27S	SZ	26.46	27.00	27.54	2	75	282	0.5	21.4	25.3	0.045	18.9
TBZT52B30S	TZ	29.40	30.00	30.60	2	75	282	0.5	24.4	29.4	0.045	21.0
TBZT52B33S	UZ	32.34	33.00	33.66	2	75	306	0.5	27.4	33.4	0.045	23.0
TBZT52B36S	VZ	35.28	36.00	36.72	2	84	329	0.5	30.4	37.4	0.045	25.2
TBZT52B39S	WZ•	38.22	39.00	39.78	2	122	329	0.5	33.4	41.2	0.045	27.3
TBZT52B43S	XZ	42.14	43.00	43.86	2	141	353	0.5	37.6	46.6	0.045	30.1
TBZT52B47S	YZ	46.06	47.00	47.94	2	160	353	0.5	42.0	51.8	0.045	33.0
TBZT52B51S	ZZ	49.98	51.00	52.02	2	169	376	0.5	46.6	57.2	0.045	35.7
TBZT52B56S	X2•	54.88	56.00	57.12	2	200	400	0.5	52.2	63.8	0.045	39.2
TBZT52B62S	X3•	60.76	62.00	63.24	2	215	423	0.5	58.8	71.6	0.045	43.4
TBZT52B68S	X4•	66.64	68.00	69.36	2	240	447	0.5	65.6	79.8	0.045	47.6
TBZT52B75S	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)

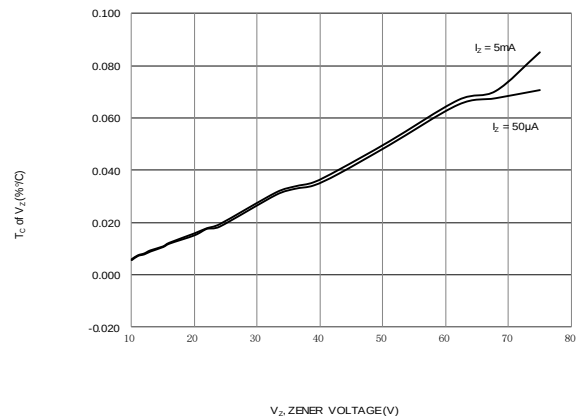
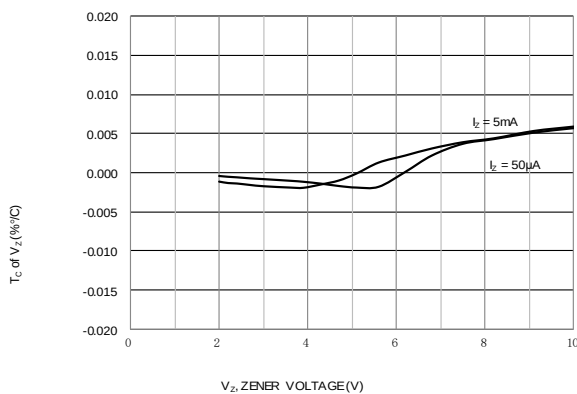
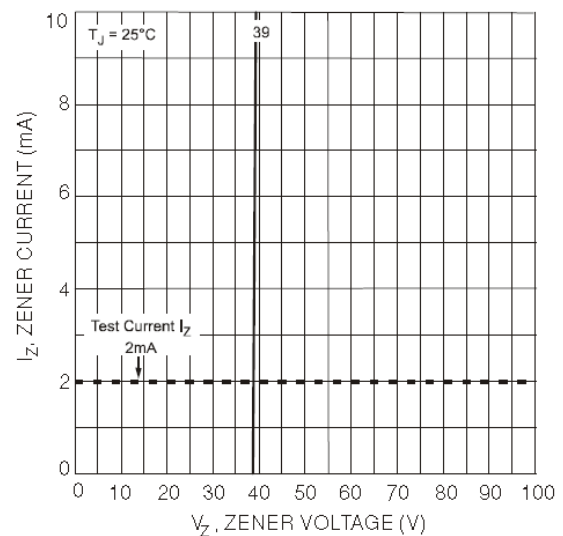
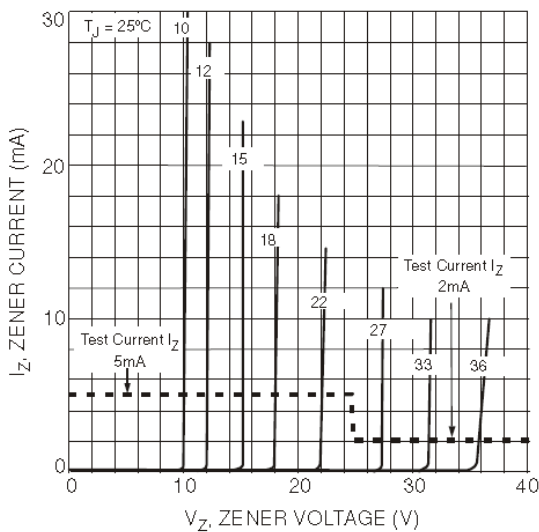
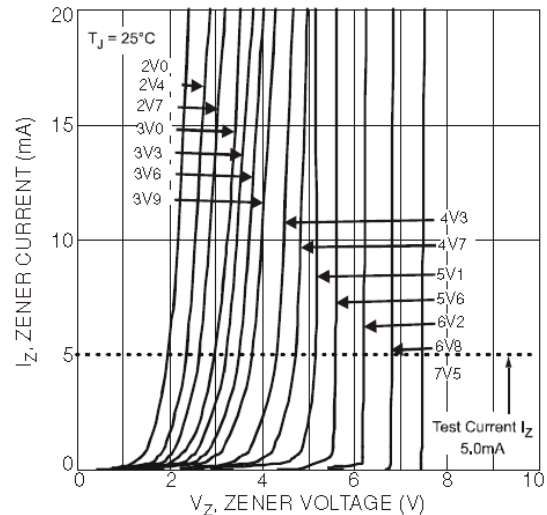
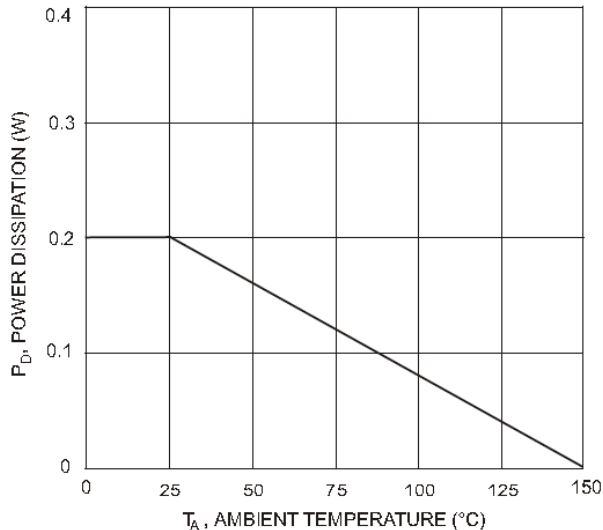


Fig. 5 Typical Temperature Coefficient of Zener Voltage

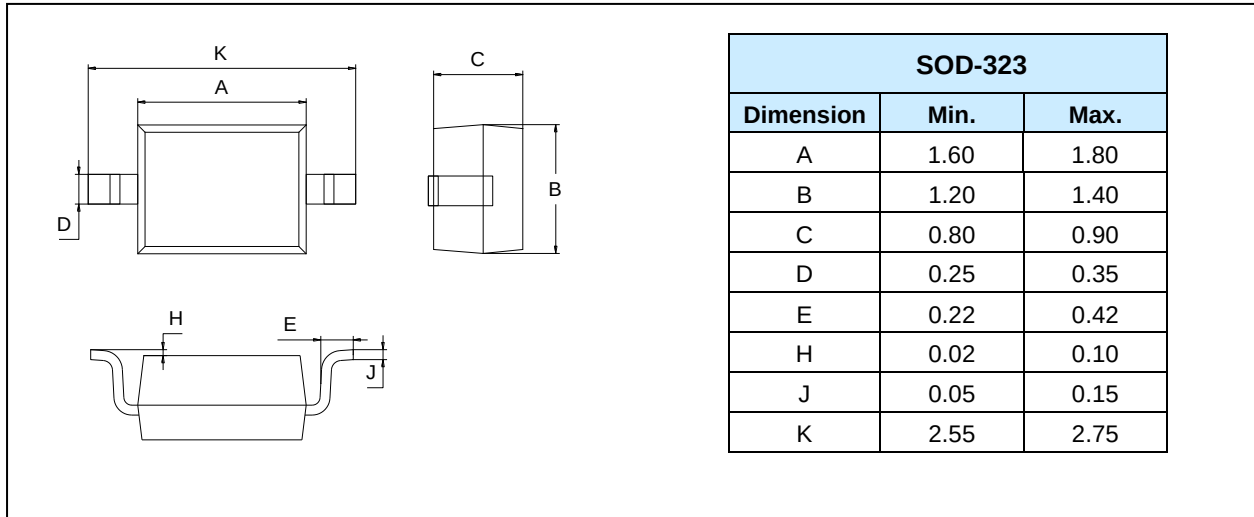
Fig. 6 Typical Temperature Coefficient of Zener Voltage

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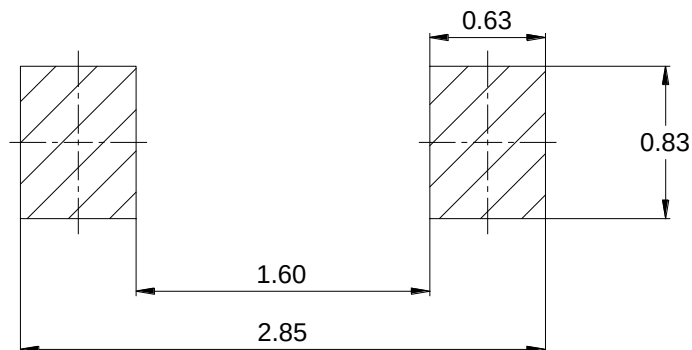
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PACKAGE OUTLINE (Unit: mm)

Plastic surface mounted package



MOUNTING PAD LAYOUT (Unit: mm)



PACKAGE INFORMATION

Part Number	Package	Shipping Quantity
TBZT52B2V0S - TBZT52B75S	SOD-323	3000pcs / Tape & Reel