

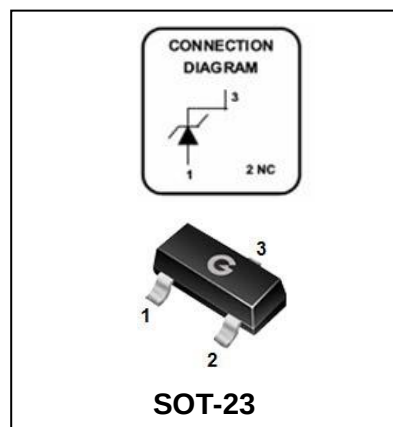
SMT-Type Zener Diode

TBZX84B2V0 - TBZX84B75

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
- Qualified to AEC-Q101 Standards

HF



APPLICATIONS

- General voltage regulation
- Mobile & handheld systems

ORDERING INFORMATION

Part Number	Marking	Package
TBZX84B2V0 - TBZX84B75	See Electrical Characteristics	SOT-23

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	350	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	316	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	172	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	160	$^\circ\text{C/W}$
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°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} (Ω) @ I _{ZT}	Z _{ZK} (Ω)	@ I _{ZK} (mA)	Min.	Max.		
TBZX84B2V0	Z49	1.96	2.00	2.04	5	100	1000	0.5	-3.5	0.0	120.000	0.5
TBZX84B2V2	Z87	2.16	2.20	2.24	5	100	1000	0.5	-3.5	0.0	120.000	0.7
TBZX84B2V4	Z50	2.35	2.40	2.45	5	100	600	1.0	-3.5	0.0	50.000	1.0
TBZX84B2V7	Z51	2.65	2.70	2.75	5	100	600	1.0	-3.5	0.0	20.000	1.0
TBZX84B3V0	Z52	2.94	3.00	3.06	5	95	600	1.0	-3.5	0.0	10.000	1.0
TBZX84B3V3	Z53	3.23	3.30	3.37	5	95	600	1.0	-3.5	0.0	5.000	1.0
TBZX84B3V6	Z54	3.53	3.60	3.67	5	90	600	1.0	-3.5	0.0	5.000	1.0
TBZX84B3V9	Z55	3.82	3.90	3.98	5	90	600	1.0	-3.5	0.0	3.000	1.0
TBZX84B4V3	Z56	4.21	4.30	4.39	5	90	600	1.0	-3.5	0.0	3.000	1.0
TBZX84B4V7	Z57	4.61	4.70	4.79	5	80	500	1.0	-3.5	0.2	3.000	2.0
TBZX84B5V1	Z58	5.00	5.10	5.20	5	60	480	1.0	-2.7	1.2	2.000	2.0
TBZX84B5V6	Z59	5.49	5.60	5.71	5	40	400	1.0	-2.0	2.5	1.000	2.0
TBZX84B6V2	Z60	6.08	6.20	6.32	5	10	150	1.0	0.4	3.7	3.000	4.0
TBZX84B6V8	Z61	6.66	6.80	6.94	5	15	80	1.0	1.2	4.5	2.000	4.0
TBZX84B7V5	Z62	7.35	7.50	7.65	5	15	80	1.0	2.5	5.3	1.000	5.0
TBZX84B8V2	Z63	8.04	8.20	8.36	5	15	80	1.0	3.2	6.2	0.700	5.0
TBZX84B9V1	Z64	8.92	9.10	9.28	5	15	100	1.0	3.8	7.0	0.500	6.0
TBZX84B10	Z65	9.80	10.00	10.20	5	20	150	1.0	4.5	8.0	0.200	7.0
TBZX84B11	Z66	10.78	11.00	11.22	5	20	150	1.0	5.4	9.0	0.100	8.0
TBZX84B12	Z67	11.76	12.00	12.24	5	25	150	1.0	6.0	10.0	0.100	8.0
TBZX84B13	Z68	12.74	13.00	13.26	5	30	170	1.0	7.0	11.0	0.100	8.0
TBZX84B15	Z69	14.70	15.00	15.30	5	30	200	1.0	9.2	13.0	0.050	10.5
TBZX84B16	Z70	15.68	16.00	16.32	5	40	200	1.0	10.4	14.0	0.050	11.2
TBZX84B18	Z71	17.64	18.00	18.36	5	45	225	1.0	12.4	16.0	0.050	12.6
TBZX84B20	Z72	19.60	20.00	20.40	5	55	225	1.0	14.4	18.0	0.050	14.0
TBZX84B22	Z73	21.56	22.00	22.44	5	55	250	1.0	16.4	20.0	0.050	15.4
TBZX84B24	Z74	23.52	24.00	24.48	5	70	250	1.0	18.4	22.0	0.050	16.8
TBZX84B27	Z75	26.46	27.00	27.54	2	80	300	0.5	21.4	25.3	0.050	18.9
TBZX84B30	Z76	29.40	30.00	30.60	2	80	300	0.5	24.4	29.4	0.050	21.0
TBZX84B33	Z77	32.34	33.00	33.66	2	80	325	0.5	27.4	33.4	0.050	23.1
TBZX84B36	Z78	35.28	36.00	36.72	2	90	350	0.5	30.4	37.4	0.050	25.2
TBZX84B39	Z79	38.22	39.00	39.78	2	130	350	0.5	33.4	41.2	0.050	27.3
TBZX84B43	Z80	42.14	43.00	43.86	2	150	375	0.5	37.6	46.6	0.050	30.1
TBZX84B47	Z81	46.06	47.00	47.94	2	170	375	0.5	42.0	51.8	0.050	32.9
TBZX84B51	Z82	49.98	51.00	52.02	2	180	400	0.5	46.6	57.2	0.050	35.7
TBZX84B56	Z83	54.88	56.00	57.12	2	200	400	0.5	52.2	63.8	0.045	39.2
TBZX84B62	Z84	60.76	62.00	63.24	2	215	423	0.5	58.8	71.6	0.045	43.4
TBZX84B68	Z85	66.64	68.00	69.36	2	240	447	0.5	65.6	79.8	0.045	47.6
TBZX84B75	Z86	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)

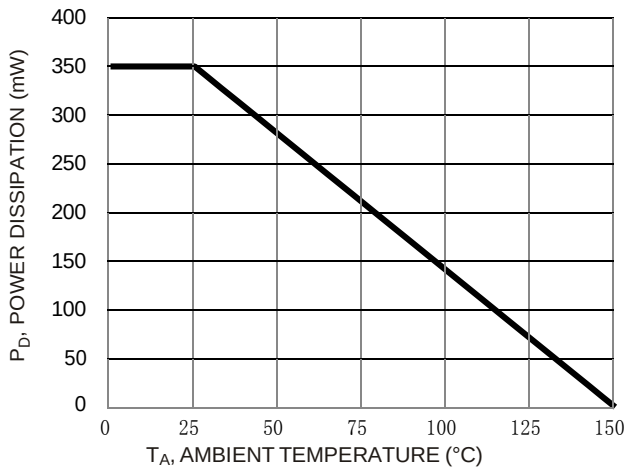


Fig. 1 Power Derating Curve

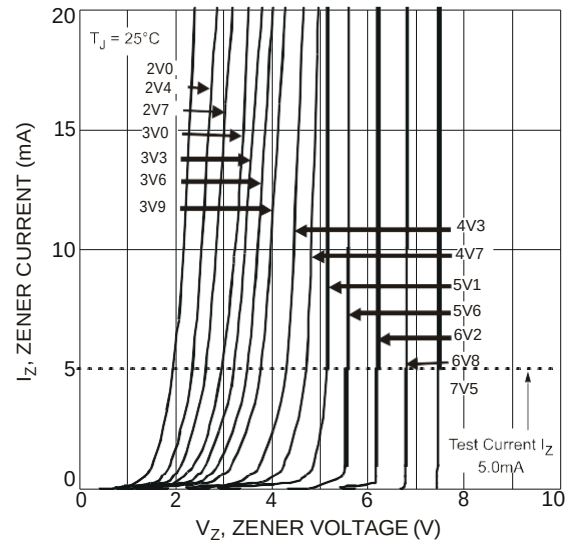


Fig. 2 Typical Zener Breakdown Characteristics

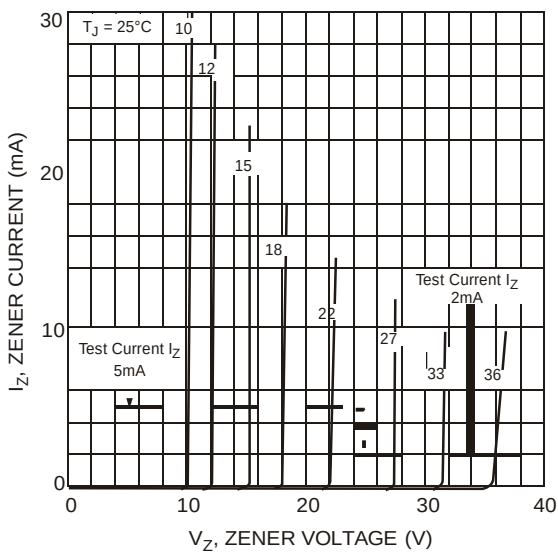


Fig. 3 Typical Zener Breakdown Characteristics

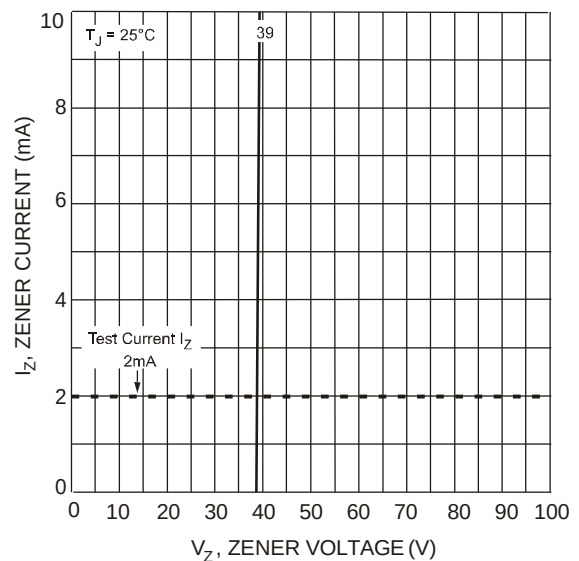


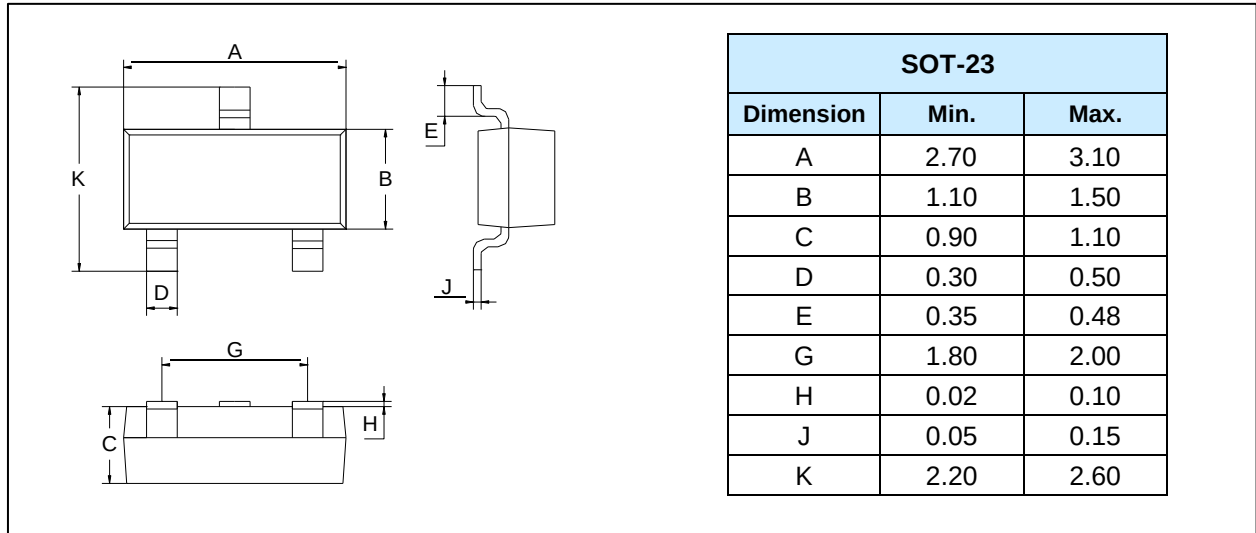
Fig. 4 Typical Zener Breakdown Characteristics

SMT-Type Zener Diode

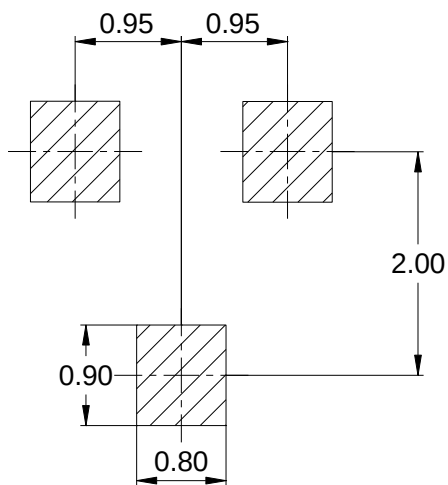
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PACKAGE OUTLINE (Unit: mm)

Plastic surface mounted package



MOUNTING PAD LAYOUT (Unit: mm)



PACKAGE INFORMATION

Part Number	Package	Shipping Quantity
TBZX84B2V0 - TBZX84B75	SOT-23	3000 pcs / Tape & Reel