

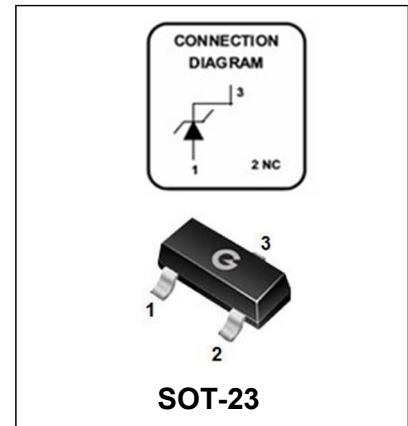
SMT-Type Zener Diode

TBZX84C2V0 - TBZX84C75

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
- Qualified to AEC-Q101 Standards

HF



APPLICATIONS

- General voltage regulation
- Mobile & handheld systems

ORDERING INFORMATION

Part Number	Marking	Package
TBZX84C2V0 - TBZX84C75	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 (@ $T_A = 25^\circ\text{C}$ 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/ $^\circ\text{C}$)		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.		
TBZX84C2V0	Z10	1.90	2.00	2.10	5	100	600	1.0	-3.5	0.0	150.000	1.0
TBZX84C2V2	Z19	2.09	2.20	2.31	5	100	600	1.0	-3.5	0.0	150.000	1.0
TBZX84C2V4	Z11	2.28	2.40	2.52	5	100	600	1.0	-3.5	0.0	50.000	1.0
TBZX84C2V7	Z12	2.57	2.70	2.84	5	100	600	1.0	-3.5	0.0	20.000	1.0
TBZX84C3V0	Z13	2.85	3.00	3.15	5	95	600	1.0	-3.5	0.0	10.000	1.0
TBZX84C3V3	Z14	3.14	3.30	3.47	5	95	600	1.0	-3.5	0.0	5.000	1.0
TBZX84C3V6	Z15	3.42	3.60	3.78	5	90	600	1.0	-3.5	0.0	5.000	1.0
TBZX84C3V9	Z16	3.71	3.90	4.10	5	90	600	1.0	-3.5	0.0	3.000	1.0
TBZX84C4V3	Z17	4.09	4.30	4.52	5	90	600	1.0	-3.5	0.0	3.000	1.0
TBZX84C4V7	Z1	4.47	4.70	4.94	5	80	500	1.0	-3.5	0.2	3.000	2.0
TBZX84C5V1	Z2	4.85	5.10	5.36	5	60	480	1.0	-2.7	1.2	2.000	2.0
TBZX84C5V6	Z3	5.32	5.60	5.88	5	40	400	1.0	-2.0	2.5	1.000	2.0
TBZX84C6V2	Z4	5.89	6.20	6.51	5	10	150	1.0	0.4	3.7	3.000	4.0
TBZX84C6V8	Z5	6.46	6.80	7.14	5	15	80	1.0	1.2	4.5	2.000	4.0
TBZX84C7V5	Z6	7.13	7.50	7.88	5	15	80	1.0	2.5	5.3	1.000	5.0
TBZX84C8V2	Z7	7.79	8.20	8.61	5	15	80	1.0	3.2	6.2	0.700	5.0
TBZX84C9V1	Z8	8.65	9.10	9.56	5	15	100	1.0	3.8	7.0	0.500	6.0
TBZX84C10	Z9	9.50	10.00	10.50	5	20	150	1.0	4.5	8.0	0.200	7.0
TBZX84C11	Y1•	10.45	11.00	11.55	5	20	150	1.0	5.4	9.0	0.100	8.0
TBZX84C12	Y2•	11.40	12.00	12.60	5	25	150	1.0	6.0	10.0	0.100	8.0
TBZX84C13	Y3	12.35	13.00	13.65	5	30	170	1.0	7.0	11.0	0.100	8.0
TBZX84C15	Y4	14.25	15.00	15.75	5	30	200	1.0	9.2	13.0	0.100	10.5
TBZX84C16	Y5	15.20	16.00	16.80	5	40	200	1.0	10.4	14.0	0.100	11.2
TBZX84C18	Y6	17.10	18.00	18.90	5	45	225	1.0	12.4	16.0	0.100	12.6
TBZX84C20	Y7	19.00	20.00	21.00	5	55	225	1.0	14.4	18.0	0.100	14.0
TBZX84C22	Y8	20.90	22.00	23.10	5	55	250	1.0	16.4	20.0	0.100	15.4
TBZX84C24	Y9	22.80	24.00	25.20	5	70	250	1.0	18.4	22.0	0.100	16.8
TBZX84C27	Y10	25.65	27.00	28.35	2	80	300	0.5	21.4	25.3	0.100	18.9
TBZX84C30	Y11	28.50	30.00	31.50	2	80	300	0.5	24.4	29.4	0.100	21.0
TBZX84C33	Y12	31.35	33.00	34.65	2	80	325	0.5	27.4	33.4	0.100	23.1
TBZX84C36	Y13	34.20	36.00	37.80	2	90	350	0.5	30.4	37.4	0.100	25.2
TBZX84C39	Y14	37.05	39.00	40.95	2	130	350	0.5	33.4	41.2	0.100	27.3
TBZX84C43	Y15	40.85	43.00	45.15	2	150	375	0.5	37.6	46.6	0.100	30.1
TBZX84C47	Y16	44.65	47.00	49.35	2	170	375	0.5	42.0	51.8	0.100	32.9
TBZX84C51	Y17	48.45	51.00	53.55	2	180	400	0.5	46.6	57.2	0.100	35.7
TBZX84C56	Y18	53.20	56.00	58.80	2	200	425	0.5	52.2	63.8	0.050	39.2
TBZX84C62	Y19	58.90	62.00	65.10	2	215	450	0.5	58.8	71.6	0.050	43.4
TBZX84C68	Y20	64.60	68.00	71.40	2	240	475	0.5	65.6	79.8	0.050	47.6
TBZX84C75	Y21	71.25	75.00	78.75	2	255	500	0.5	73.4	88.6	0.050	52.5

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

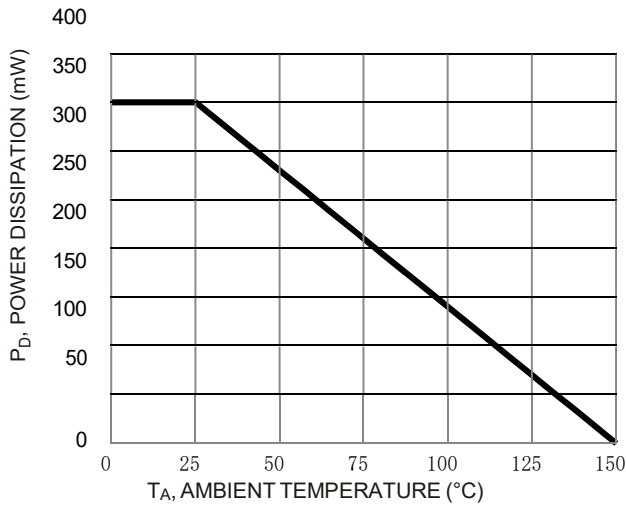


Fig. 1 Power Derating Curve

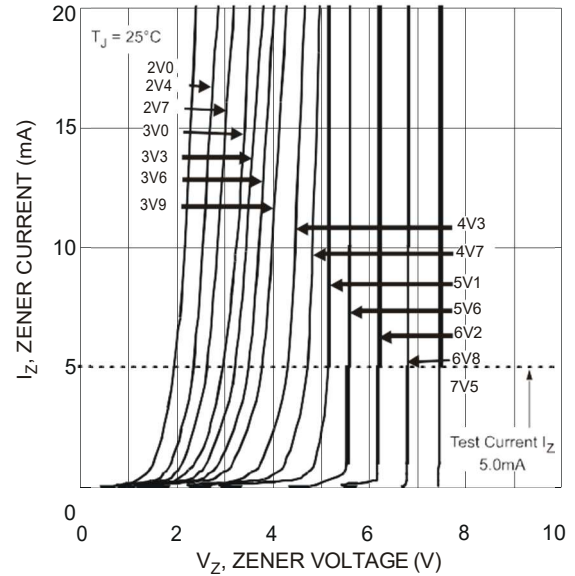


Fig. 2 Typical Zener Breakdown Characteristics

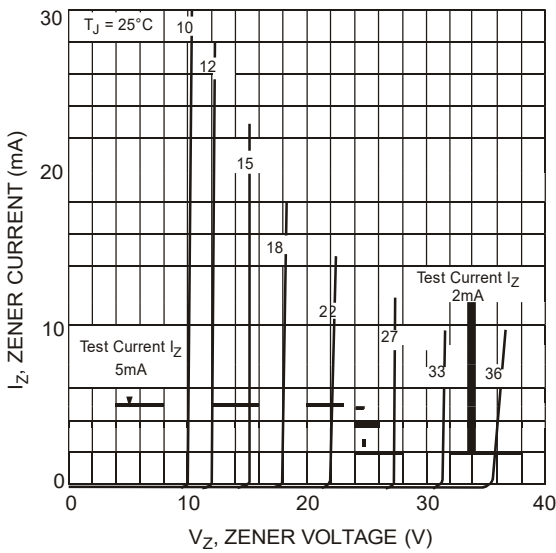


Fig. 3 Typical Zener Breakdown Characteristics

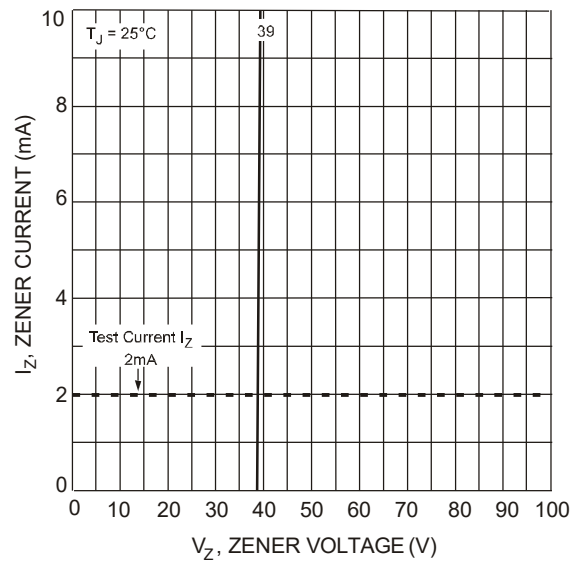


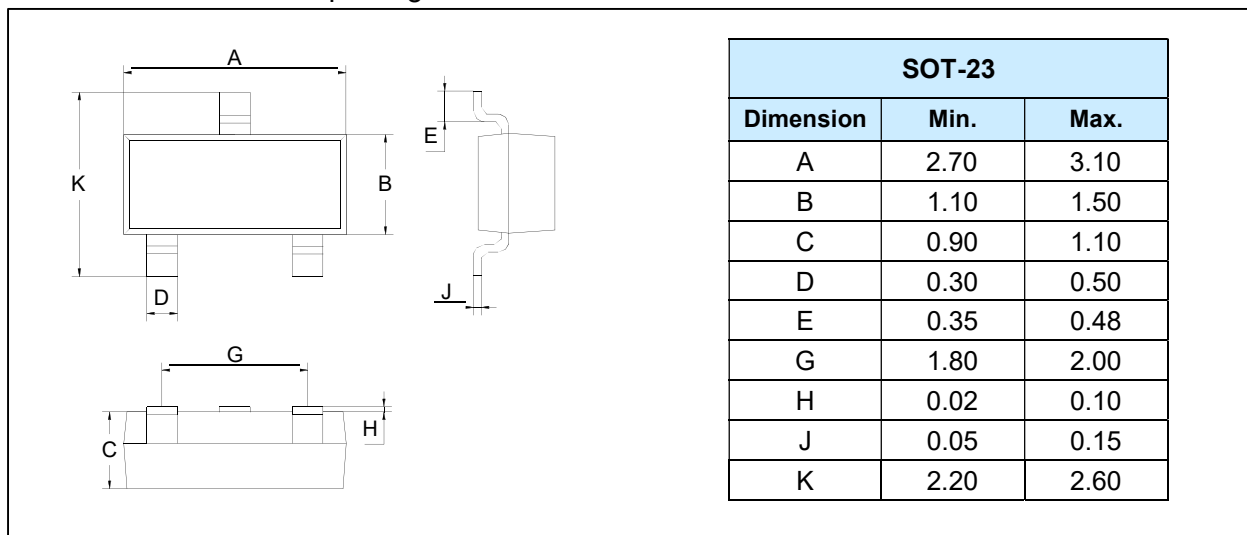
Fig. 4 Typical Zener Breakdown Characteristics

SMT-Type Zener Diode

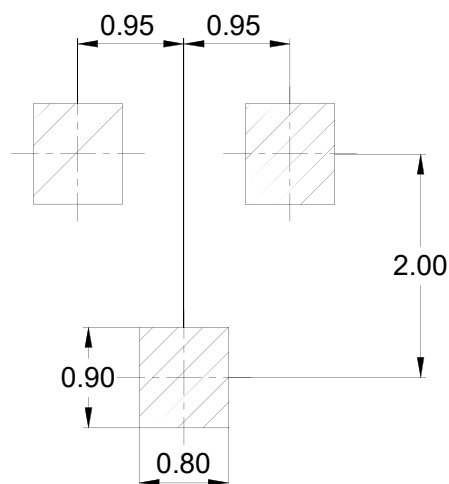
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PACKAGE OUTLINE (Unit: mm)

Plastic surface mounted package



MOUNTING PAD LAYOUT (Unit: mm)



PACKAGE INFORMATION

Part Number	Package	Shipping Quantity
TBZX84C2V0 - TBZX84C75	SOT-23	3000 pcs / Tape & Reel