

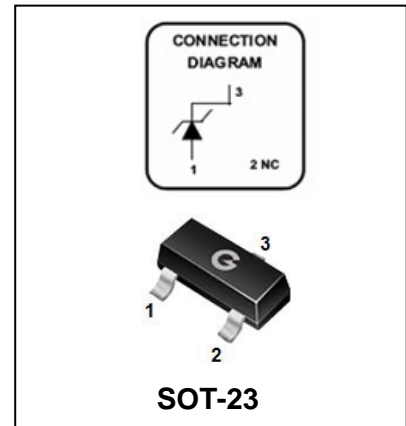
SMT-Type Zener Diode

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

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 (Collector)	P_C	350	mW
Thermal Resistance (Junction-to-Ambient)	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Thermal Resistance (Junction-to-Case)	$R_{\theta JC}$	295	$^\circ\text{C/W}$
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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BZX84C2V0 - BZX84C75

ELECTRICAL CHARACTERISTICS (@ T_A = 25°C unless otherwise specified)

Part Number	Marking Code	Zener Voltage V _Z (V)			@ I _{ZT} (mA)	Maximum Zener Impedance			Maximum Reverse Current I _R (μA)	@ V _R (V)
		Min.	Typ.	Max.		Z _{ZT} (Ω) @ I _{ZT}	Z _{ZK} (Ω)	@ I _{ZK} (mA)		
TBZX84C2V0	Z10	1.90	2.00	2.10	5	100	600	1.0	150.000	1.0
TBZX84C2V2	Z19	2.09	2.20	2.31	5	100	600	1.0	150.000	1.0
TBZX84C2V4	Z11	2.20	2.40	2.60	5	100	600	1.0	50.000	1.0
TBZX84C2V7	Z12	2.50	2.70	2.90	5	100	600	1.0	20.000	1.0
TBZX84C3V0	Z13	2.80	3.00	3.20	5	95	600	1.0	10.000	1.0
TBZX84C3V3	Z14	3.10	3.30	3.50	5	95	600	1.0	5.000	1.0
TBZX84C3V6	Z15	3.40	3.60	3.80	5	90	600	1.0	5.000	1.0
TBZX84C3V9	Z16	3.70	3.90	4.10	5	90	600	1.0	3.000	1.0
TBZX84C4V3	Z17	4.00	4.30	4.60	5	90	600	1.0	3.000	1.0
TBZX84C4V7	Z1	4.40	4.70	5.00	5	80	500	1.0	3.000	2.0
TBZX84C5V1	Z2	4.80	5.10	5.40	5	60	480	1.0	2.000	2.0
TBZX84C5V6	Z3	5.20	5.60	6.00	5	40	400	1.0	1.000	2.0
TBZX84C6V2	Z4	5.80	6.20	6.60	5	10	150	1.0	3.000	4.0
TBZX84C6V8	Z5	6.40	6.80	7.20	5	15	80	1.0	2.000	4.0
TBZX84C7V5	Z6	7.00	7.50	7.90	5	15	80	1.0	1.000	5.0
TBZX84C8V2	Z7	7.70	8.20	8.70	5	15	80	1.0	0.700	5.0
TBZX84C9V1	Z8	8.50	9.10	9.60	5	15	100	1.0	0.500	6.0
TBZX84C10	Z9	9.40	10.00	10.60	5	20	150	1.0	0.200	7.0
TBZX84C11	Y1•	10.40	11.00	11.60	5	20	150	1.0	0.100	8.0
TBZX84C12	Y2•	11.40	12.00	12.70	5	25	150	1.0	0.100	8.0
TBZX84C13	Y3	12.40	13.00	14.10	5	30	170	1.0	0.100	8.0
TBZX84C15	Y4	13.80	15.00	15.60	5	30	200	1.0	0.100	10.5
TBZX84C16	Y5	15.30	16.00	17.10	5	40	200	1.0	0.100	11.2
TBZX84C18	Y6	16.80	18.00	19.10	5	45	225	1.0	0.100	12.6
TBZX84C20	Y7	18.80	20.00	21.20	5	55	225	1.0	0.100	14.0
TBZX84C22	Y8	20.80	22.00	23.30	5	55	250	1.0	0.100	15.4
TBZX84C24	Y9	22.80	24.00	25.60	5	70	250	1.0	0.100	16.8
TBZX84C27	Y10	25.10	27.00	28.90	2	80	300	0.5	0.100	18.9
TBZX84C30	Y11	28.00	30.00	32.00	2	80	300	0.5	0.100	21.0
TBZX84C33	Y12	31.00	33.00	35.00	2	80	325	0.5	0.100	23.1
TBZX84C36	Y13	34.00	36.00	38.00	2	90	350	0.5	0.100	25.2
TBZX84C39	Y14	37.00	39.00	41.00	2	130	350	0.5	0.100	27.3
TBZX84C43	Y15	40.00	43.00	46.00	2	150	375	0.5	0.100	30.1
TBZX84C47	Y16	44.00	47.00	50.00	2	170	375	0.5	0.100	32.9
TBZX84C51	Y17	48.00	51.00	54.00	2	180	400	0.5	0.100	35.7
TBZX84C56	Y18	52.00	56.00	60.00	2	200	425	0.5	0.050	39.2
TBZX84C62	Y19	58.00	62.00	66.00	2	215	450	0.5	0.050	43.4
TBZX84C68	Y20	64.00	68.00	72.00	2	240	475	0.5	0.050	47.6
TBZX84C75	Y21	70.00	75.00	79.00	2	255	500	0.5	0.050	52.5

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

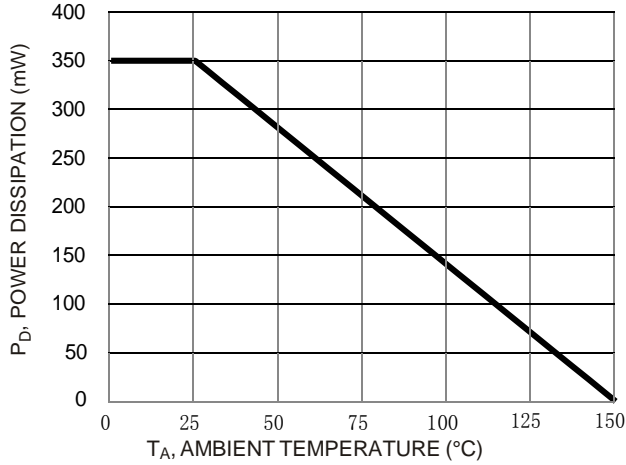


Fig. 1 Power Derating Curve

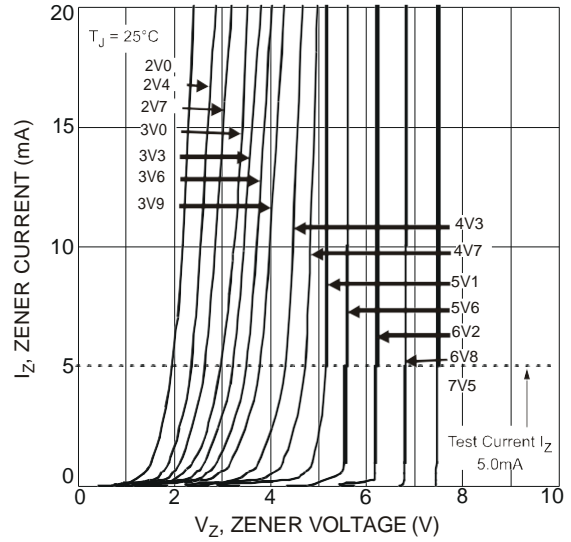


Fig. 2 Typical Zener Breakdown Characteristics

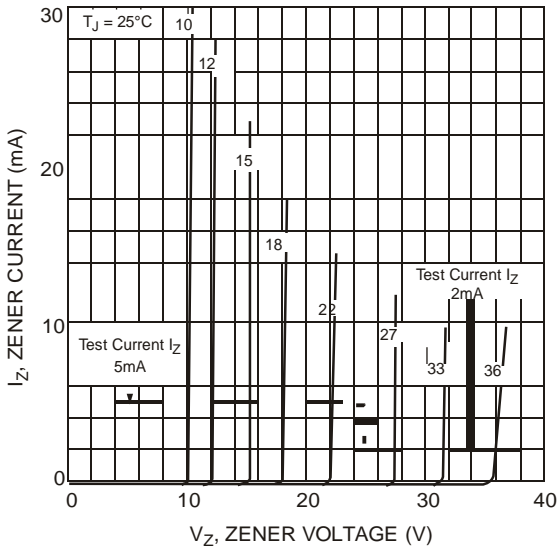


Fig. 3 Typical Zener Breakdown Characteristics

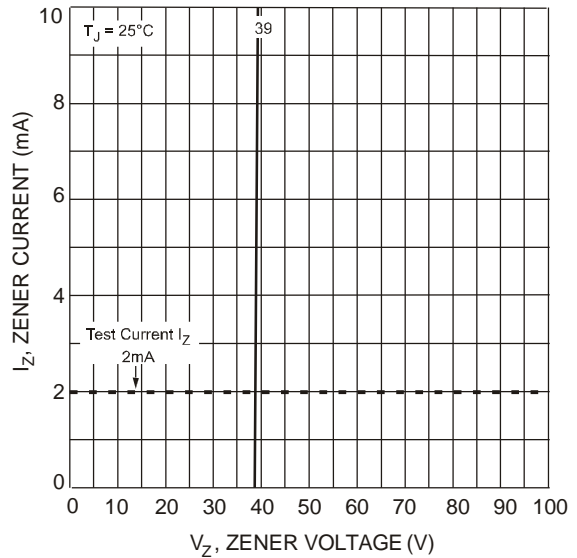


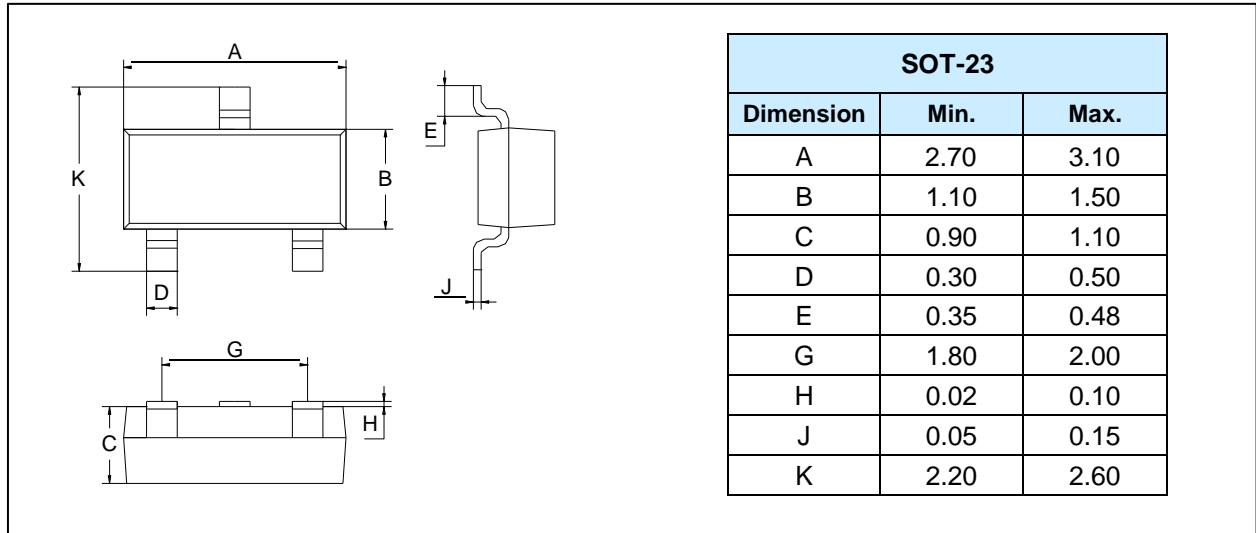
Fig. 4 Typical Zener Breakdown Characteristics

SMT-Type Zener Diode

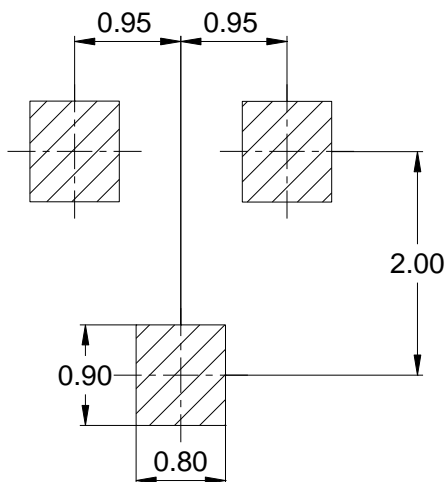
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PACKAGE OUTLINE (Unit: mm)

Plastic surface mounted package



MOUNTING PAD LAYOUT (Unit: mm)



PACKAGE INFORMATION

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

SMT-Type Zener Diode

BZX84C2V0 - BZX84C75

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