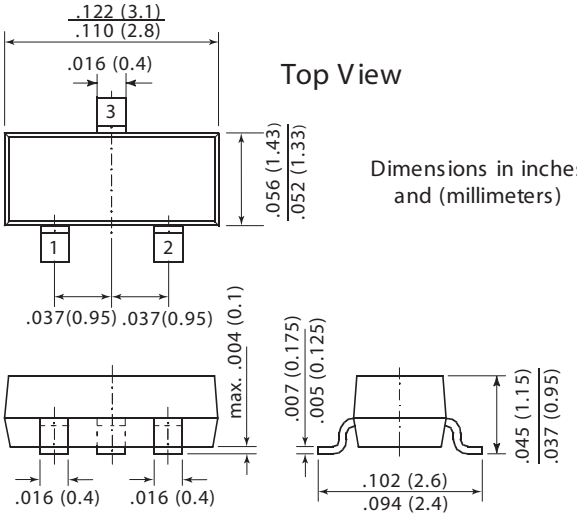
DEC

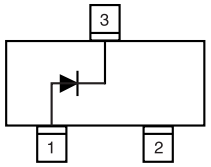
BZX84 SERIES

300mW SOT-23
ZENER DIODES

Features

SOT-23





Top View

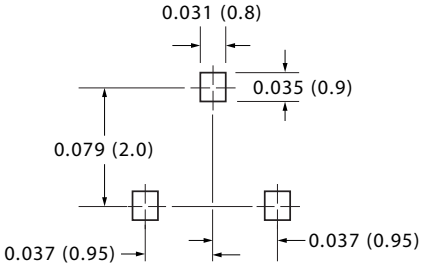
- Silicon Epitaxial Planar Diode
- Fast switching diode in case SOT-23, especially suited for automatic insertion.

Mechanical Data

Case: SOT-23 Plastic Package
Weight: approx. 0.008g

Vz Range 2.4 to 75V
Power Dissipation 300mW

Mounting Pad Layout



Features

- Silicon Planar Power Zener Diodes
- The Zener voltages are graded according to the international E 24 standard. Standard Zener voltage tolerance is ±5%. Replace "C" with "B" for ±2% tolerance. Other voltage tolerances and other Zener voltages are available upon request.

Maximum Ratings and Thermal Characteristics (T_A = 25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Zener Current	I_{ZM}	250	mA
Power Dissipation at T_{amb} = 25℃	P_{tot}	300(1)	mW
Thermal Resistance Junction to Ambient Air	$R_{\square JA}$	420(1)	℃ / W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_S	−65 to +150	℃

Notes: (1) Device on fiberglass substrate, see layout.

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Electrical Characteristics (T_A = 25℃ unless otherwise noted) Maximum V_F = 0.9V at I_F = 10mA

Type ± 5% Tol.	Marking Code	Zener Voltage range[1] at I_{ZT1} V_Z (V) min.	max.	Test Current I_{ZT1} (mA)
BZX84-C1V8	TBD	1.70	2.00	5
BZX84-C2V0	TBD	1.90	2.20	5
BZX84-C2V2	TBD	2.10	2.40	5
BZX84-C2V4	Z11	2.20	2.60	5
BZX84-C2V7	Z12	2.50	2.90	5
BZX84-C3	Z13	2.80	3.20	5
BZX84-C3V3	Z14	3.10	3.50	5
BZX84-C3V6	Z15	3.40	3.80	5
BZX84-C3V9	Z16	3.70	4.10	5
BZX84-C4V3	Z17	4.00	4.60	5
BZX84-C4V7	Z1	4.40	5.00	5
BZX84-C5V1	Z2	4.80	5.40	5
BZX84-C5V6	Z3	5.20	6.00	5
BZX84-C6V2	Z4	5.80	6.60	5
BZX84-C6V8	Z5	6.40	7.20	5
BZX84-C7V5	Z6	7.00	7.90	5
BZX84-C8V2	Z7	7.70	8.70	5
BZX84-C9V1	Z8	8.50	9.60	5
BZX84-C10	Z9	9.4	10.6	5
BZX84-C11	Y1	10.4	11.6	5
BZX84-C12	Y2	11.4	12.7	5
BZX84-C13	Y3	12.4	14.1	5
BZX84-C15	Y4	13.8	15.6	5
BZX84-C16	Y5	15.3	17.1	5
BZX84-C18	Y6	16.8	19.1	5
BZX84-C20	Y7	18.8	21.2	5
BZX84-C22	Y8	20.8	23.3	5
BZX84-C24	Y9	22.8	25.6	5
BZX84-C27	Y10	25.1	28.9	2
BZX84-C30	Y11	28.0	32.0	2
BZX84-C33	Y12	31.0	35.0	2
BZX84-C36	Y13	34.0	38.0	2
BZX84-C39	Y14	37.0	41.0	2
BZX84-C43	Y15	40.0	46.0	2
BZX84-C47	Y16	44.0	50.0	2
BZX84-C51	Y17	48.0	54.0	2
BZX84-C56	Y18	52.0	60.0	2
BZX84-C62	Y19	58.0	66.0	2
BZX84-C68	Y20	64.0	72.0	2
BZX84-C75	Y21	70.0	79.0	2

Type ± 2% Tol.	Marking Code	Zener Voltage range[1] at I_{ZT1} V_Z (V) min.	max.	Test Current I_{ZT1} (mA)
BZX84-B1V8	TBD	1.80	1.90	5
BZX84-B2V0	TBD	2.01	2.09	5
BZX84-B2V2	TBD	2.21	2.30	5
BZX84-B2V4	Z50	2.35	2.45	5
BZX84-B2V7	Z51	2.65	2.75	5
BZX84-B3	Z52	2.94	3.06	5
BZX84-B3V3	Z53	3.23	3.37	5
BZX84-B3V6	Z54	3.53	3.67	5
BZX84-B3V9	Z55	3.82	3.98	5
BZX84-B4V3	Z56	4.21	4.39	5
BZX84-B4V7	Z57	4.61	4.79	5
BZX84-B5V1	Z58	5.00	5.20	5
BZX84-B5V6	Z59	5.49	5.71	5
BZX84-B6V2	Z60	6.08	6.32	5
BZX84-B6V8	Z61	6.66	6.94	5
BZX84-B7V5	Z62	7.35	7.65	5
BZX84-B8V2	Z63	8.04	8.36	5
BZX84-B9V1	Z64	8.92	9.28	5
BZX84-B10	Z65	9.80	10.2	5
BZX84-B11	Z66	10.8	11.2	5
BZX84-B12	Z67	11.8	12.2	5
BZX84-B13	Z68	12.7	13.3	5
BZX84-B15	Z69	14.7	15.3	5
BZX84-B16	Z70	15.7	16.3	5
BZX84-B18	Z71	17.6	18.4	5
BZX84-B20	Z72	19.6	20.4	5
BZX84-B22	Z73	21.6	22.4	5
BZX84-B24	Z74	23.5	24.5	5
BZX84-B27	Z75	26.5	27.5	2
BZX84-B30	Z76	29.4	30.6	2
BZX84-B33	Z77	32.3	33.7	2
BZX84-B36	Z78	35.3	36.7	2
BZX84-B39	Z79	38.2	39.8	2
BZX84-B43	Z80	42.1	43.9	2
BZX84-B47	Z81	46.1	47.9	2
BZX84-B51	Z82	50.0	52.0	2
BZX84-B56	Z83	54.9	57.1	2
BZX84-B62	Z84	60.8	63.2	2
BZX84-B68	Z85	66.6	69.4	2
BZX84-B75	Z86	73.5	76.5	2

Notes: (1) Measured with pulses t_p = 5 ms

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Ratings and Characteristic Curves (TA = 25℃ unless otherwise noted)

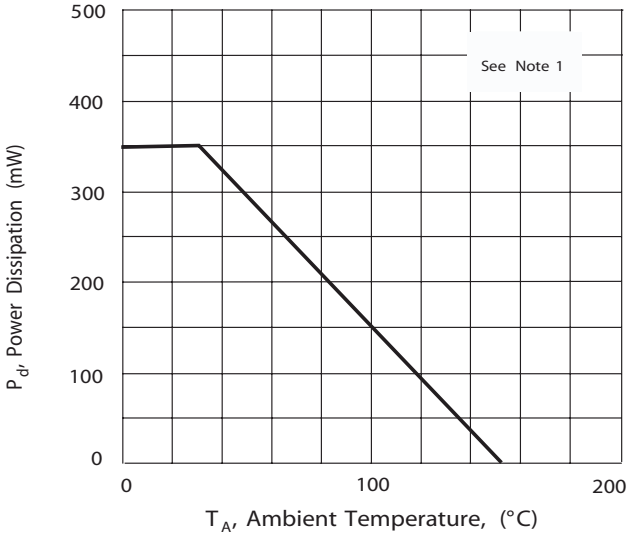

Fig. 1 Power Derating Curve

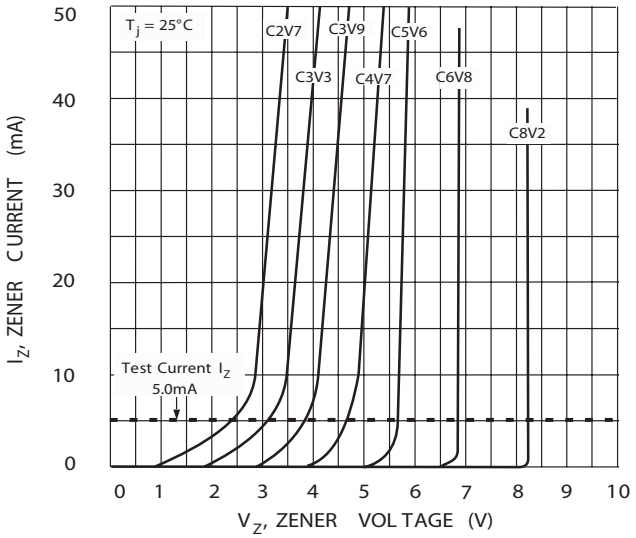

Fig. 2 Zener Breakdown Characteristics

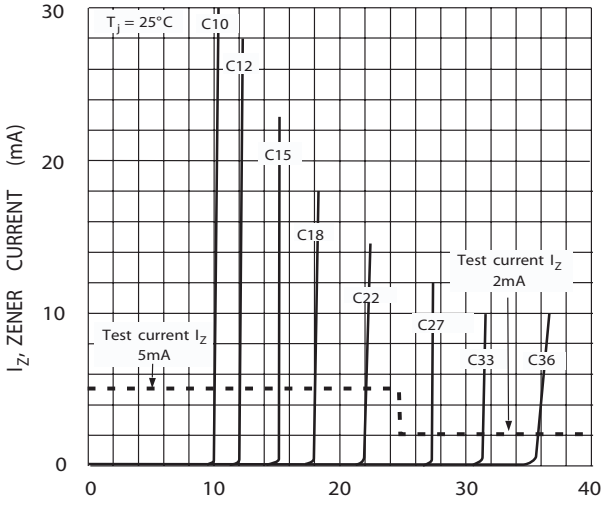

Fig. 3 Zener Breakdown Characteristics

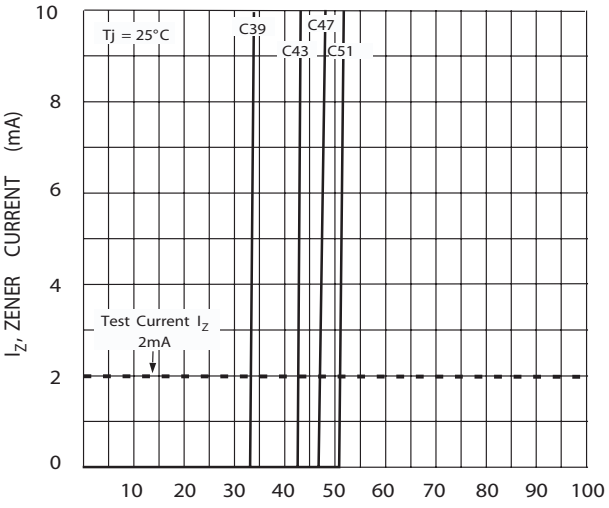

Fig. 4 Zener Breakdown Characteristics

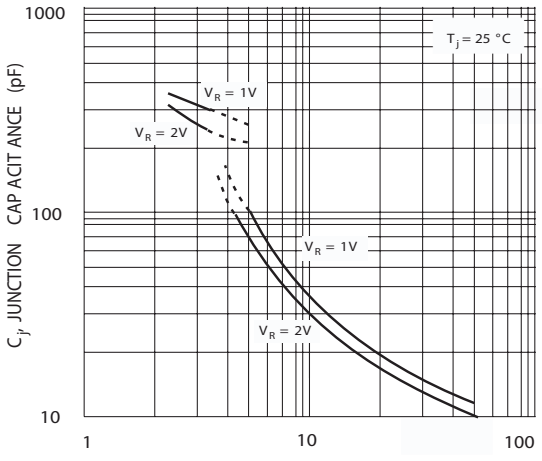

Fig. 5 Junction Capacitance vs Nominal Zener Voltage