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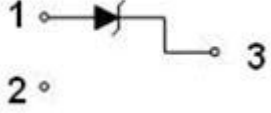
BZX84B2V4-BZX84B39

Product specification

FEATURES

- Planar Die Construction
- 300mW Power Dissipation
- Zener Voltages from 2.4V - 39V
- Ultra-Small Surface Mount Package Power Dissipation

Reference News

PACKAGE OUTLINE	PIN CONFIGURATION
	
SOT-23	

Maximum Ratings(Ta=25 °C unless otherwise specified)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) 10mA @ I _F =	V _F	0.9	V
Power Dissipation(Note 1)	P _d	300	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	417	°C /W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~+150	°C

ELECTRICAL CHARACTERISTICS

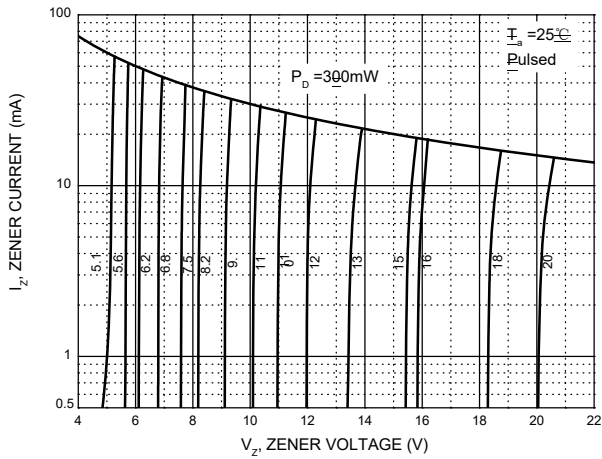
T =25°C unless otherwise specified

P/N	MARK	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Typical Temperature Coefficient @I _{ZT} =5 mA	
		V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R	mV/°C	
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V	Min	Max
BZX84B2V4	2Z11	2.4	2.35	2.45	5	100	600	1.0	50	1.0	-3.5	0
BZX84B2V7	2Z12	2.7	2.65	2.75	5	100	600	1.0	20	1.0	-3.5	0
BZX84B3V0	2Z13	3	2.94	3.06	5	95	600	1.0	10	1.0	-3.5	0
BZX84B3V3	2Z14	3.3	3.23	3.37	5	95	600	1.0	5	1.0	-3.5	0
BZX84B3V6	2Z15	3.6	3.53	3.67	5	90	600	1.0	5	1.0	-3.5	0
BZX84B3V9	2Z16	3.9	3.82	3.98	5	90	600	1.0	3	1.0	-3.5	0
BZX84B4V3	2Z17	4.3	4.21	4.39	5	90	600	1.0	3	1.0	-3.5	0
BZX84B4V7	2Z1	4.7	4.61	4.79	5	80	500	1.0	3	2.0	-3.5	0.2
BZX84B5V1	2Z2	5.1	5.00	5.20	5	60	480	1.0	2	2.0	-2.7	1.2
BZX84B5V6	2Z3	5.6	5.49	5.71	5	40	400	1.0	1	2.0	-2.0	2.5
BZX84B6V2	2Z4	6.2	6.08	6.32	5	10	150	1.0	3	4.0	0.4	3.7
BZX84B6V8	2Z5	6.8	6.66	6.94	5	15	80	1.0	2	4.0	1.2	4.5
BZX84B7V5	2Z6	7.5	7.35	7.65	5	15	80	1.0	1	5.0	2.5	5.3
BZX84B8V2	2Z7	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2
BZX84B9V1	2Z8	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0
BZX84B10	2Z9	10	9.80	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0
BZX84B11	2Y1	11	10.78	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0
BZX84B12	2Y2	12	11.76	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0
BZX84B13	2Y3	13	12.74	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0
BZX84B15	2Y4	15	14.70	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0
BZX84B16	2Y5	16	15.68	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0
BZX84B18	2Y6	18	17.64	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0
BZX84B20	2Y7	20	19.60	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0
BZX84B22	2Y8	22	21.56	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0
BZX84B24	2Y9	24	23.52	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0
BZX84B27	2Y10	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3
BZX84B30	2Y11	30	29.40	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4
BZX84B33	2Y12	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4
BZX84B36	2Y13	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4
BZX84B39	2Y14	39	38.22	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2

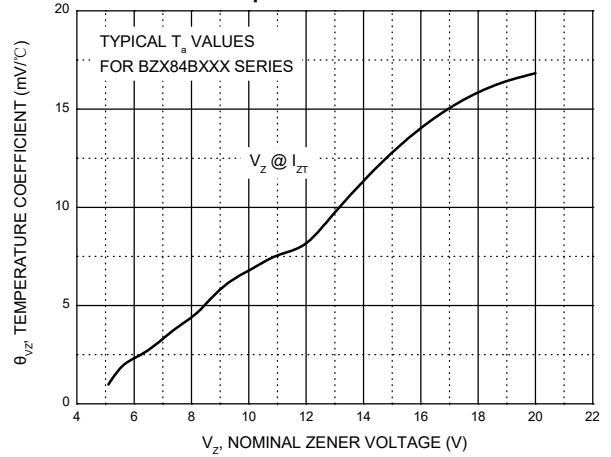
Notes:

1. Valid provided that device terminals are kept at ambient temperature.
2. Tested with pulses, period=5ms,pulse width =300μs.
3. f=1kHz.

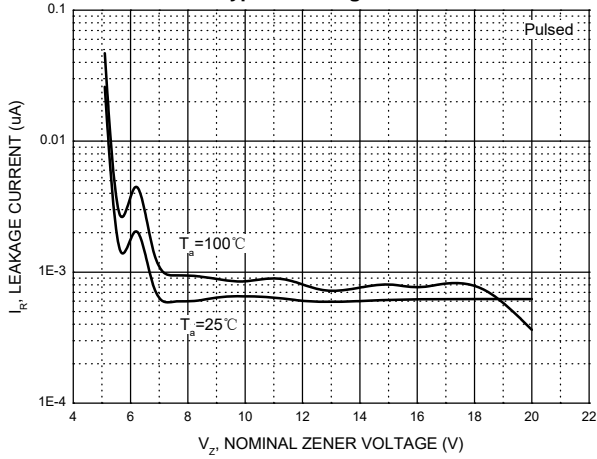
Zener Characteristics (V_z 5.1V to 20 V)



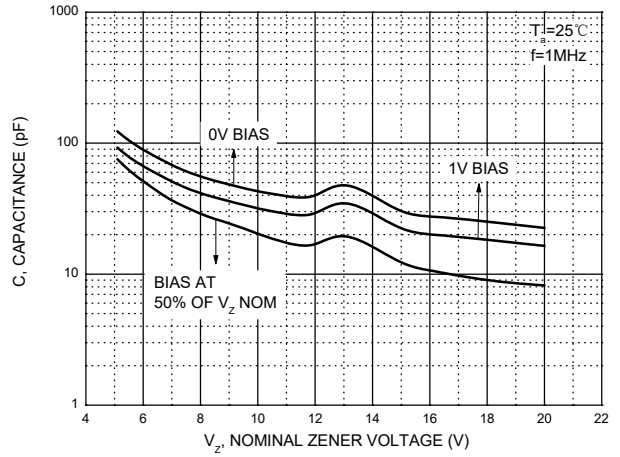
Temperature Coefficients



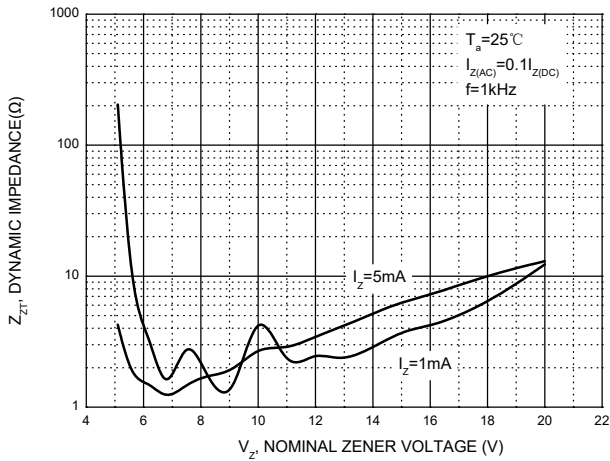
Typical Leakage Current



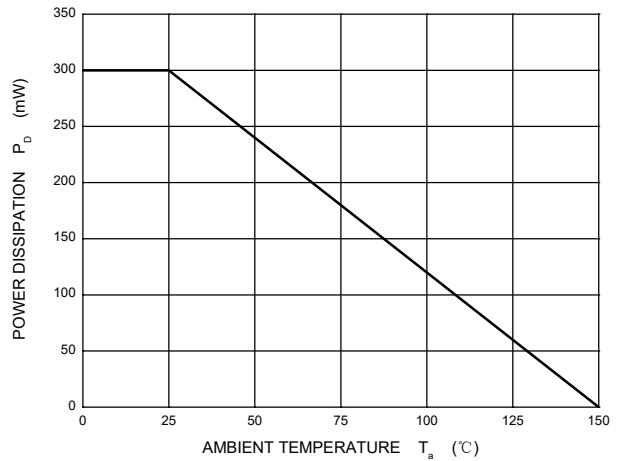
Typical Capacitance



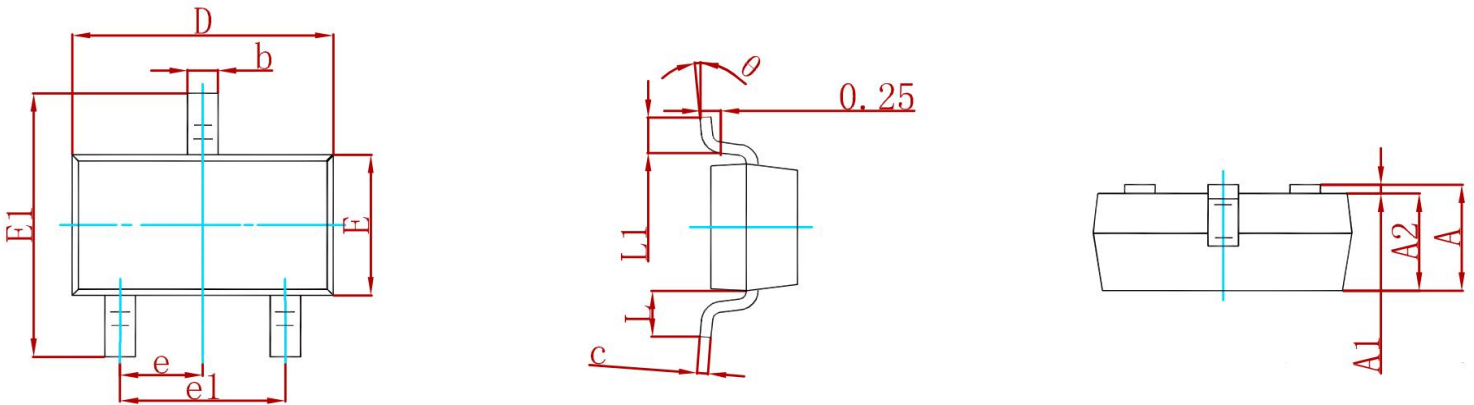
Effect of Zener Voltage on Zener Impedance



Power Derating Curve

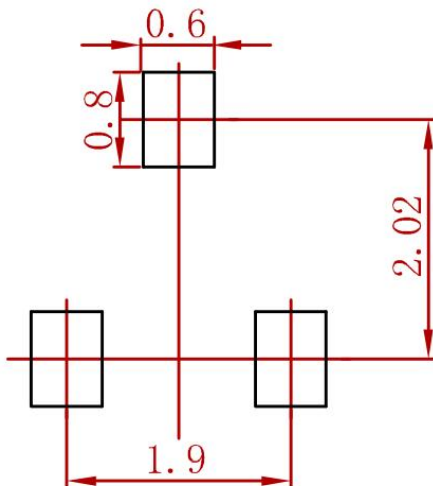


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
BZX84B2V4-BZX84B39	SOT-23	3000

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