

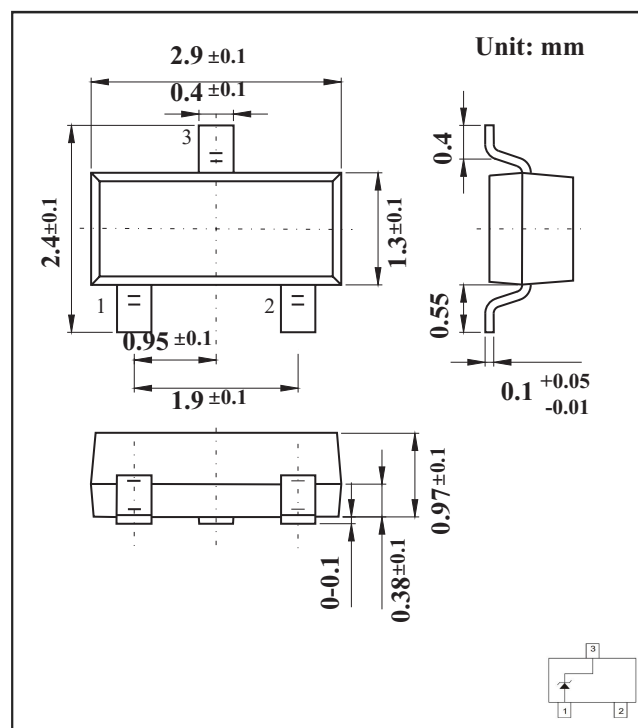
SOT-23 Plastic-Encapsulate Zener Diode

Features

- SOT23 Package
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 3
- High temperature soldering guaranteed
260°C/10seconds at terminals

Application

- Linear voltage regulator
- DC regulator
- Small-signal surge protection



Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbols	Value	Units
Power Dissipation.(Note 1)	Pd	300	mW
Forward Voltage @IF=10mA.(Note 2)	Vf	0.9	V
Storage temperature range	Ts	-65-+150	°C
Thermal resistance junction to ambient air Warmewider stand Sperrschicht - umgebende Luft	RthA	417	K/W

1)Valid provided that device terminals are kept at ambient temperature.

2)Test with pulse, period=5ms, pulse width=300us.

3)f=1KHz

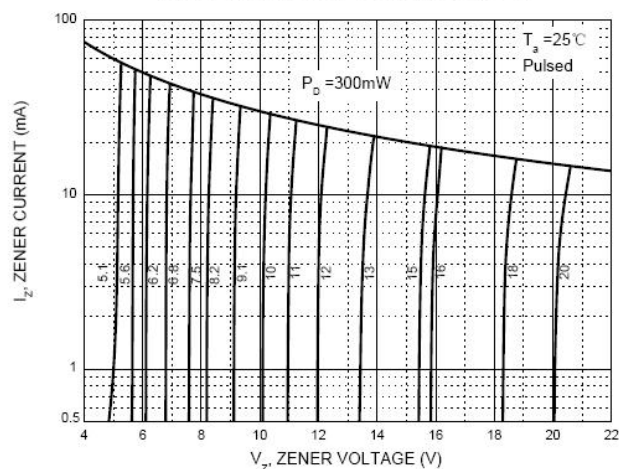
Electrical Characteristics (Ta=25℃, unless otherwise noted)

Device	Marking	Zener Voltage Range				Maximum Zenner Impedance			Maximum Reverse Current		Typical Temperature coefficient @IZTC=mV/℃	
		VZ@Izt			Izt	Zzt@Izt	Zzk@Izk	Izk	IR	VR		
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	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

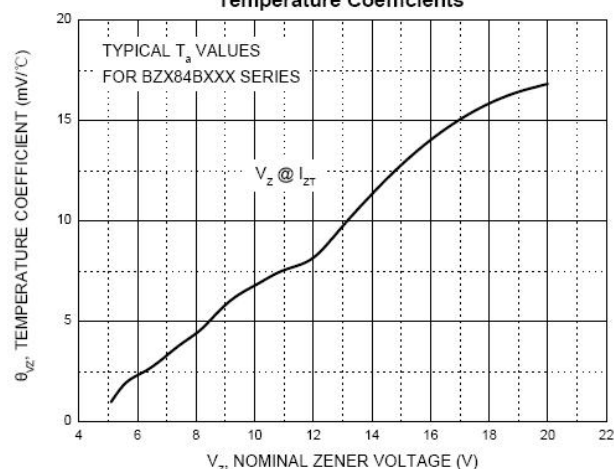
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		VZ@Izt			Izt	Zzt@Izt	Zzk@Izk	Izk	IR	VR		
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V	Min	Max
BZX84B43	2Y15	43	42.14	43.86	2	150	375	0.5	0.05	30.1	37.6	46.6
BZX84B47	2Y16	47	46.06	47.94	2	170	375	0.5	0.05	32.9	42.0	51.8
BZX84B51	2Y17	51	49.98	52.02	2	180	400	0.5	0.05	35.7	46.6	57.2
BZX84B56	2Y18	56	54.88	57.12	2	200	425	0.5	0.05	39.2	52.2	63.8
BZX84B62	2Y19	62	60.76	63.24	2	215	450	0.5	0.05	43.4	58.8	71.6
BZX84B68	2Y20	68	66.64	69.36	2	240	475	0.5	0.05	47.6	65.6	79.8
BZX84B75	2Y21	75	73.50	76.50	2	255	500	0.5	0.05	52.5	73.4	88.6

Ratings And Characteristic Curves

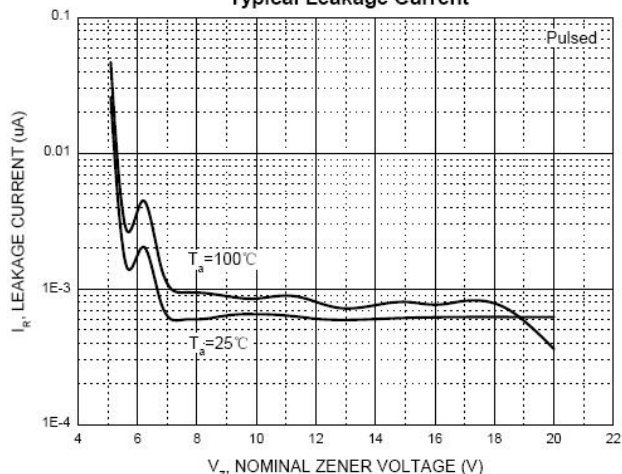
Zener Characteristics (V_z 5.1V to 20 V)



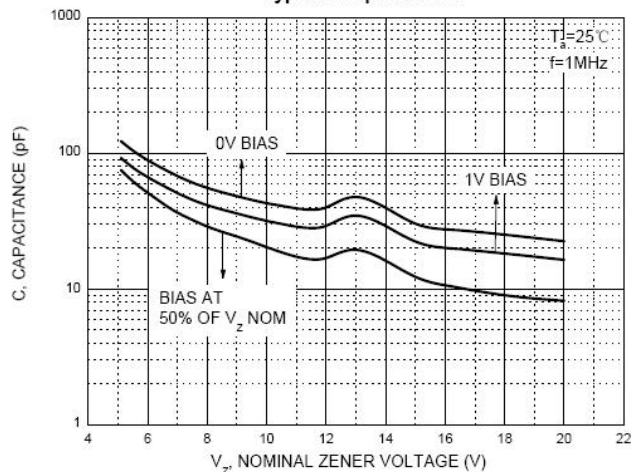
Temperature Coefficients



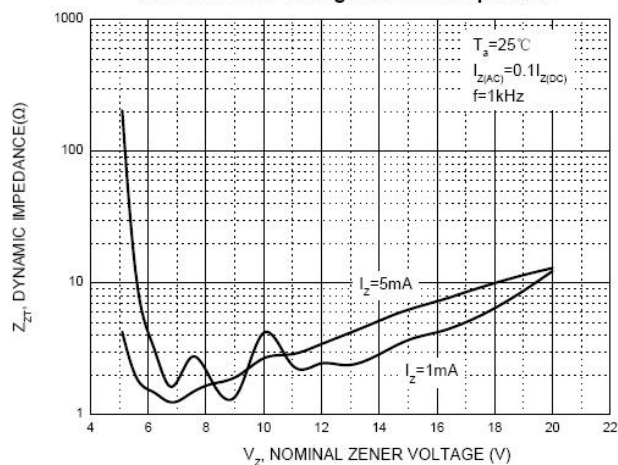
Typical Leakage Current



Typical Capacitance



Effect of Zener Voltage on Zener Impedance



Power Derating Curve

