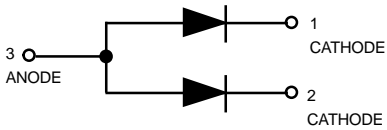
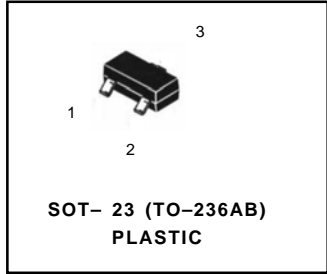


Zener Voltage Regulator Diodes

- We declare that the material of product compliance with RoHS requirements.

BZB84CxxL SERIES



MAXIMUM CASE TEMPERATURE FOR SOLDERING

PURPOSES: 260°C for 10 seconds

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board* T _A = 25°C Derate above 25°C	P _D	225	mW
Thermal Resistance Junction to Ambient	R _{QJA}	556	°C/W
Total Device Dissipation Alumina Substrate,** T _A = 25°C Derate above 25°C	P _D	300	mW
Thermal Resistance Junction to Ambient	R _{QJA}	417	°C/W
Junction and Storage Temperature	T _J , T _{stg}	-55to+125	°C

**FR-5 = 1.0 x 0.75 x 0.62 in.

**Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

Ordering Information

Device	Package	Shipping
BZB84CxxL SERIES	SOT- 23	3000/Tape&Reel



BZB84CxxL — 225mW SOT-23

ELECTRICAL CHARACTERISTICS – BZB84C2V4LT1G SERIES (STANDARD TOLERANCE)

(Pinout: 1-Anode, 2-No Connection, 3-Cathode) ($T_A = 25^{\circ}\text{C}$ unless otherwise noted, $V_F = 0.90\text{ V Max. @ }I_F = 10\text{ mA}$)

Device*	Device Marking	V _{Z1} (Volts) @ I _{ZT1} = 5 mA (Note 3)			Z _{ZT1} (Ω) @ I _{ZT1} = 5 mA	V _{Z2} (V) @ I _{ZT2} = 1 mA (Note 3)		Z _{ZT2} (Ω) @ I _{ZT2} = 1 mA	V _{Z3} (V) @ I _{ZT3} = 20 mA (Note 3)		Z _{ZT3} (Ω) @ I _{ZT3} = 20 mA	Max Reverse Leakage Current		θ _{VZ} (mV/k) @ I _{ZT1} = 5 mA		C (pF) @ V _R = 0 f = 1 MHz
		Min	Nom	Max		Min	Max		Min	Max		I _R μA	V _R Volts	Min	Max	
BZB84C2V4L	U9	2.2	2.4	2.6	100	1.7	2.1	600	2.6	3.2	50	50	1	-3.5	0	450
BZB84C2V7L	UA	2.5	2.7	2.9	100	1.9	2.4	600	3	3.6	50	20	1	-3.5	0	450
BZB84C3V0L	UB	2.8	3	3.2	95	2.1	2.7	600	3.3	3.9	50	10	1	-3.5	0	450
BZB84C3V3L	UC	3.1	3.3	3.5	95	2.3	2.9	600	3.6	4.2	40	5	1	-3.5	0	450
BZB84C3V6L	UD	3.4	3.6	3.8	90	2.7	3.3	600	3.9	4.5	40	5	1	-3.5	0	450
BZB84C3V9L	UE	3.7	3.9	4.1	90	2.9	3.5	600	4.1	4.7	30	3	1	-3.5	-2.5	450
BZB84C4V3L	UF	4	4.3	4.6	90	3.3	4	600	4.4	5.1	30	3	1	-3.5	0	450
BZB84C4V7L	UG	4.4	4.7	5	80	3.7	4.7	500	4.5	5.4	15	3	2	-3.5	0.2	260
BZB84C5V1L	UH	4.8	5.1	5.4	60	4.2	5.3	480	5	5.9	15	2	2	-2.7	1.2	225
BZB84C5V6L	UK	5.2	5.6	6	40	4.8	6	400	5.2	6.3	10	1	2	-2.0	2.5	200
BZB84C6V2L	UL	5.8	6.2	6.6	10	5.6	6.6	150	5.8	6.8	6	3	4	0.4	3.7	185
BZB84C6V8L	UM	6.4	6.8	7.2	15	6.3	7.2	80	6.4	7.4	6	2	4	1.2	4.5	155
BZB84C7V5L	UN	7	7.5	7.9	15	6.9	7.9	80	7	8	6	1	5	2.5	5.3	140
BZB84C8V2L	UP	7.7	8.2	8.7	15	7.6	8.7	80	7.7	8.8	6	0.7	5	3.2	6.2	135
BZB84C9V1L	UR	8.5	9.1	9.6	15	8.4	9.6	100	8.5	9.7	8	0.5	6	3.8	7.0	130
BZB84C10L	US	9.4	10	10.6	20	9.3	10.6	150	9.4	10.7	10	0.2	7	4.5	8.0	130
BZB84C11L	UT	10.4	11	11.6	20	10.2	11.6	150	10.4	11.8	10	0.1	8	5.4	9.0	130
BZB84C12L	UU	11.4	12	12.7	25	11.2	12.7	150	11.4	12.9	10	0.1	8	6.0	10.0	130
BZB84C13L	UV	12.4	13	14.1	30	12.3	14	170	12.5	14.2	15	0.1	8	7.0	11.0	120
BZB84C15L	UW	13.8	15	15.6	30	13.7	15.5	200	13.9	15.7	20	0.05	10.5	9.2	13.0	110
BZB84C16L	PB	15.3	16	17.1	40	15.2	17	200	15.4	17.2	20	0.05	11.2	10.4	14.0	105
BZB84C18L	PC	16.8	18	19.1	45	16.7	19	225	16.9	19.2	20	0.05	12.6	12.4	16.0	100
BZB84C20L	RQ	18.8	20	21.2	55	18.7	21.1	225	18.9	21.4	20	0.05	14	14.4	18.0	85
BZB84C22L	PD	20.8	22	23.3	55	20.7	23.2	250	20.9	23.4	25	0.05	15.4	16.4	20.0	85
BZB84C24L	PE	22.8	24	25.6	70	22.7	25.5	250	22.9	25.7	25	0.05	16.8	18.4	22.0	80
Device	Device Marking	V _{Z1} Below @ I _{ZT1} = 2 mA			Z _{ZT1} Below @ I _{ZT1} = 2 mA	V _{Z2} Below @ I _{ZT2} = 0.1 mA		Z _{ZT2} Below @ I _{ZT4} = 0.5 mA	V _{Z3} Below @ I _{ZT3} = 10 mA		Z _{ZT3} Below @ I _{ZT3} = 10 mA	Max Reverse Leakage Current		θ _{VZ} (mV/k) Below @ I _{ZT1} = 2 mA		C (pF) @ V _R = 0 f = 1 MHz
		Min	Nom	Max		Min	Max		Min	Max		I _R μA	V _R (V)	Min	Max	
BZB84C27L	PF	25.1	27	28.9	80	25	28.9	300	25.2	29.3	45	0.05	18.9	21.4	25.3	70
BZB84C30L	PG	28	30	32	80	27.8	32	300	28.1	32.4	50	0.05	21	24.4	29.4	70
BZB84C33L	PH	31	33	35	80	30.8	35	325	31.1	35.4	55	0.05	23.1	27.4	33.4	70
BZB84C36L	PJ	34	36	38	90	33.8	38	350	34.1	38.4	60	0.05	25.2	30.4	37.4	70
BZB84C39L	PK	37	39	41	130	36.7	41	350	37.1	41.5	70	0.05	27.3	33.4	41.2	45
BZB84C43L	PL	40	43	46	150	39.7	46	375	40.1	46.5	80	0.05	30.1	37.6	46.6	40
BZB84C47L	PM	44	47	50	170	43.7	50	375	44.1	50.5	90	0.05	32.9	42.0	51.8	40
BZB84C51L	PN	48	51	54	180	47.6	54	400	48.1	54.6	100	0.05	35.7	46.6	57.2	40
BZB84C56L	PP	52	56	60	200	51.5	60	425	52.1	60.8	110	0.05	39.2	52.2	63.8	40
BZB84C62L	PQ	58	62	66	215	57.4	66	450	58.2	67	120	0.05	43.4	58.8	71.6	35
BZB84C68L	PR	64	68	72	240	63.4	72	475	64.2	73.2	130	0.05	47.6	65.6	79.8	35
BZB84C75L	PS	70	75	79	255	69.4	79	500	70.3	80.2	140	0.05	52.5	73.4	88.6	35

Zener voltage is measured with a pulse test current I_Z at an ambient temperature of 25°C.



TYPICAL CHARACTERISTICS

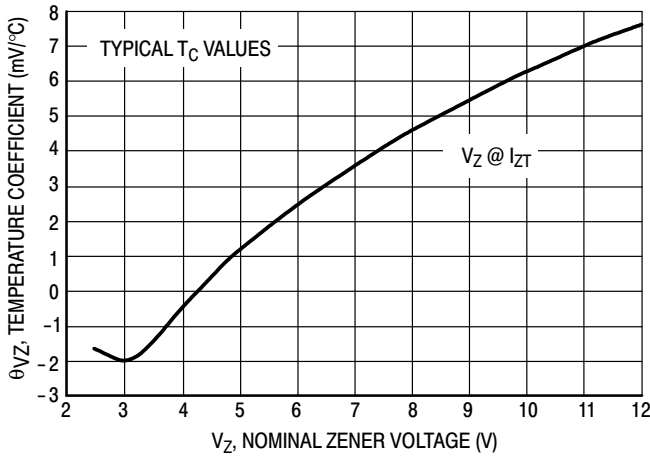


Figure 1. Temperature Coefficients
(Temperature Range -55°C to +150°C)

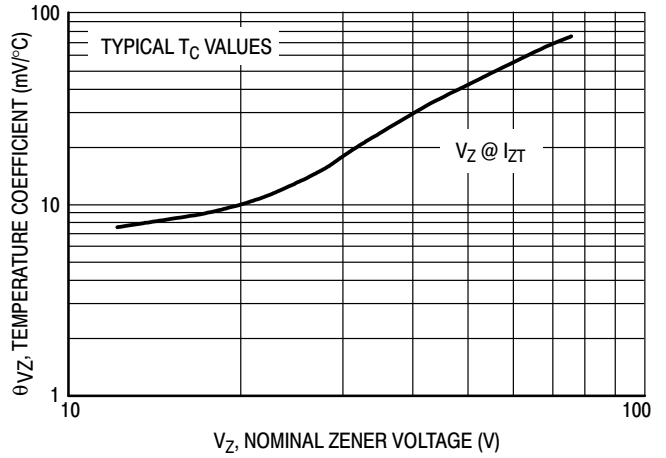


Figure 2. Temperature Coefficients
(Temperature Range -55°C to +150°C)

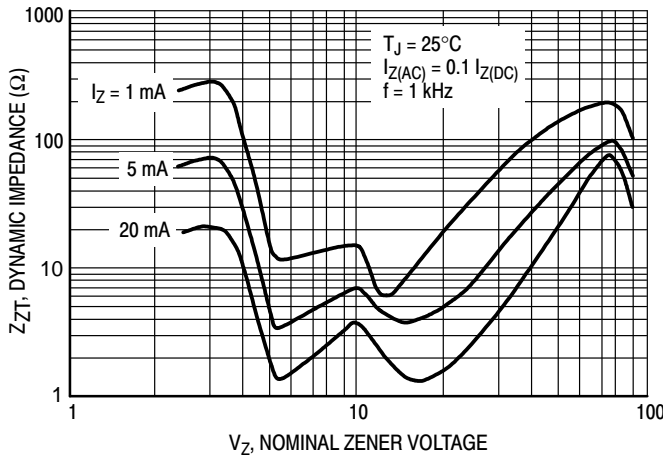


Figure 3. Effect of Zener Voltage on Zener Impedance

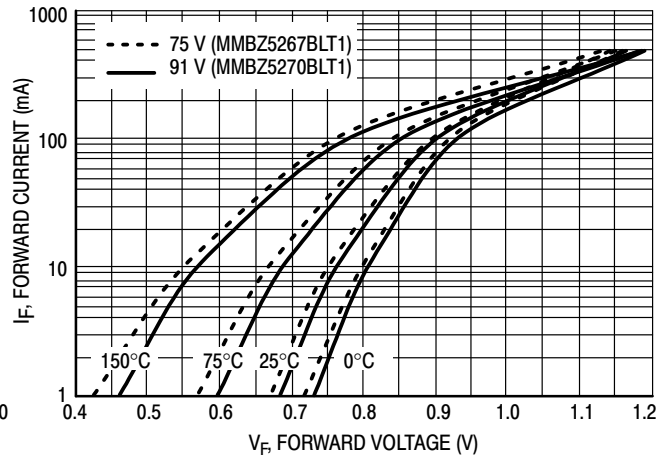


Figure 4. Typical Forward Voltage



TYPICAL CHARACTERISTICS

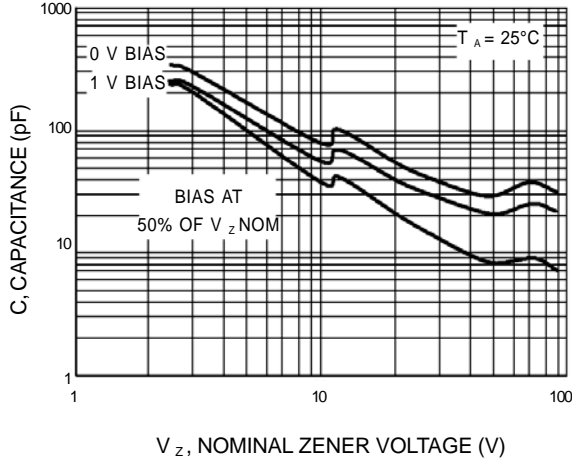


Figure 5. Typical Capacitance

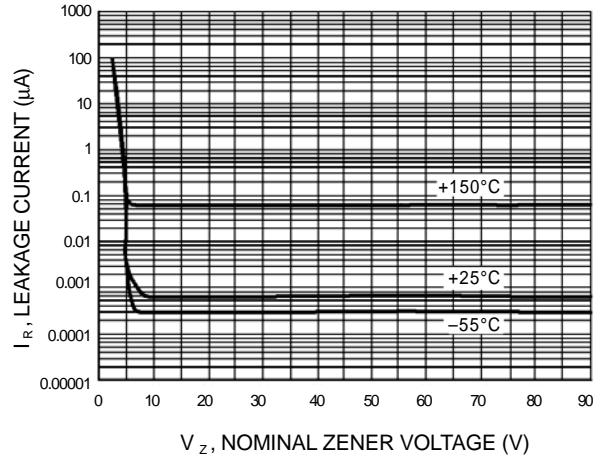


Figure 6. Typical Leakage Current

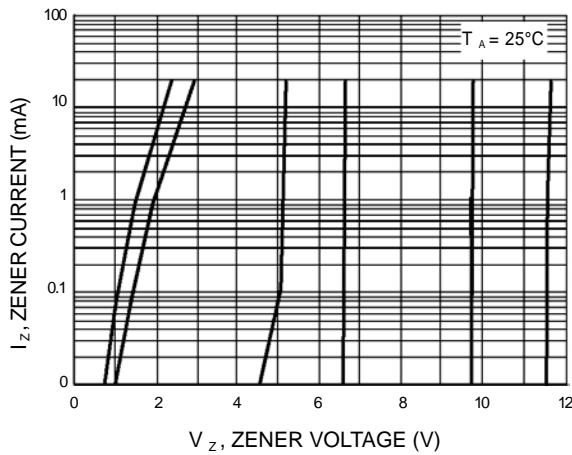


Figure 7. Zener Voltage versus Zener Current (V_z Up to 12 V)

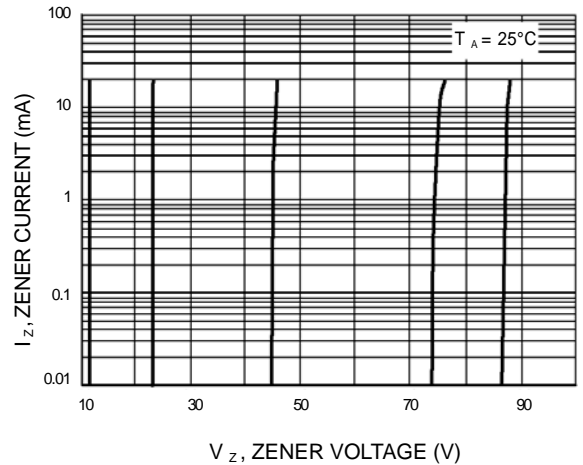


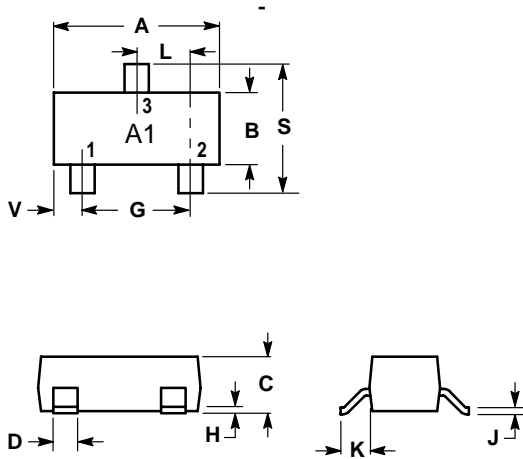
Figure 8. Zener Voltage versus Zener Current (12 V to 91 V)



SOT-23

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

