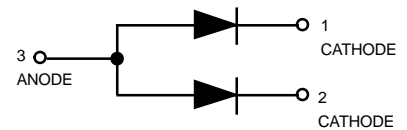
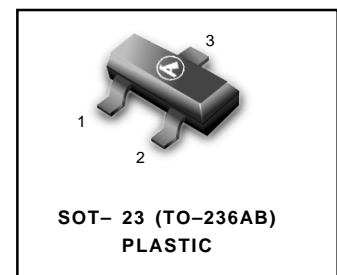


Zener Voltage Regulator Diodes

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

LBZB84C2V4LT1G SERIES



MAXIMUM CASE TEMPERATURE FOR SOLDERING

PURPOSES: 260°C for 10 seconds

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board* $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	225	mW
Thermal Resistance Junction to Ambient	R_{QJA}	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate,** $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	300	mW
Thermal Resistance Junction to Ambient	R_{QJA}	417	$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{stg}	-55to+125	$^\circ\text{C}$

**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
LBZB84C2V4LT1G SERIES	SOT- 23	3000/Tape&Reel
LBZB84C2V4LT3G SERIES	SOT-23	10000/Tape&Reel

GENERAL DATA — 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	
LBZB84C2V4LT1G	U9	2.2	2.4	2.6	100	1.7	2.1	600	2.6	3.2	50	50	1	-3.5	0	450
LBZB84C2V7LT1G	UA	2.5	2.7	2.9	100	1.9	2.4	600	3	3.6	50	20	1	-3.5	0	450
LBZB84C3V0LT1G	UB	2.8	3	3.2	95	2.1	2.7	600	3.3	3.9	50	10	1	-3.5	0	450
LBZB84C3V3LT1G	UC	3.1	3.3	3.5	95	2.3	2.9	600	3.6	4.2	40	5	1	-3.5	0	450
LBZB84C3V6LT1G	UD	3.4	3.6	3.8	90	2.7	3.3	600	3.9	4.5	40	5	1	-3.5	0	450
LBZB84C3V9LT1G	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
LBZB84C4V3LT1G	UF	4	4.3	4.6	90	3.3	4	600	4.4	5.1	30	3	1	-3.5	0	450
LBZB84C4V7LT1G	UG	4.4	4.7	5	80	3.7	4.7	500	4.5	5.4	15	3	2	-3.5	0.2	260
LBZB84C5V1LT1G	UH	4.8	5.1	5.4	60	4.2	5.3	480	5	5.9	15	2	2	-2.7	1.2	225
LBZB84C5V6LT1G	UK	5.2	5.6	6	40	4.8	6	400	5.2	6.3	10	1	2	-2.0	2.5	200
LBZB84C6V2LT1G	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
LBZB84C6V8LT1G	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
LBZB84C7V5LT1G	UN	7	7.5	7.9	15	6.9	7.9	80	7	8	6	1	5	2.5	5.3	140
LBZB84C8V2LT1G	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
LBZB84C9V1LT1G	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
LBZB84C10LT1G	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
LBZB84C11LT1G	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
LBZB84C12LT1G	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
LBZB84C13LT1G	UV	12.4	13	14.1	30	12.3	14	170	12.5	14.2	15	0.1	8	7.0	11.0	120
LBZB84C15LT1G	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
LBZB84C16LT1G	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
LBZB84C18LT1G	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
LBZB84C20LT1G	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
LBZB84C22LT1G	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
LBZB84C24LT1G	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 _{ZT2} = 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	
LBZB84C27LT1G	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
LBZB84C30LT1G	PG	28	30	32	80	27.8	32	300	28.1	32.4	50	0.05	21	24.4	29.4	70
LBZB84C33LT1G	PH	31	33	35	80	30.8	35	325	31.1	35.4	55	0.05	23.1	27.4	33.4	70
LBZB84C36LT1G	PJ	34	36	38	90	33.8	38	350	34.1	38.4	60	0.05	25.2	30.4	37.4	70
LBZB84C39LT1G	PK	37	39	41	130	36.7	41	350	37.1	41.5	70	0.05	27.3	33.4	41.2	45
LBZB84C43LT1G	PL	40	43	46	150	39.7	46	375	40.1	46.5	80	0.05	30.1	37.6	46.6	40
LBZB84C47LT1G	PM	44	47	50	170	43.7	50	375	44.1	50.5	90	0.05	32.9	42.0	51.8	40
LBZB84C51LT1G	PN	48	51	54	180	47.6	54	400	48.1	54.6	100	0.05	35.7	46.6	57.2	40
LBZB84C56LT1G	PP	52	56	60	200	51.5	60	425	52.1	60.8	110	0.05	39.2	52.2	63.8	40
LBZB84C62LT1G	PQ	58	62	66	215	57.4	66	450	58.2	67	120	0.05	43.4	58.8	71.6	35
LBZB84C68LT1G	PR	64	68	72	240	63.4	72	475	64.2	73.2	130	0.05	47.6	65.6	79.8	35
LBZB84C75LT1G	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.

GENERAL DATA — 225mW SOT-23

TYPICAL CHARACTERISTICS

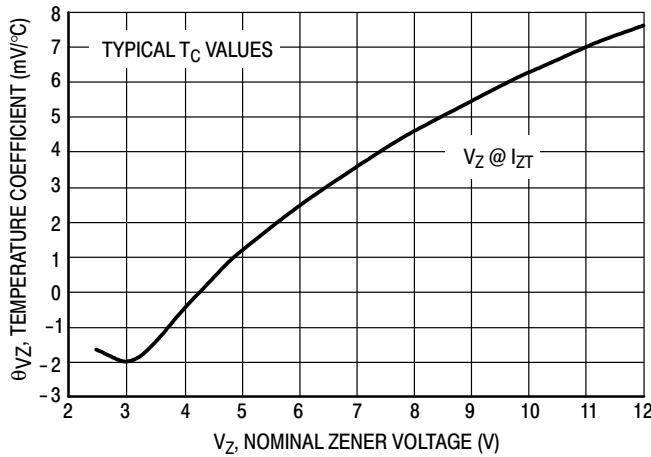


Figure 1. Temperature Coefficients
(Temperature Range -55°C to +150°C)

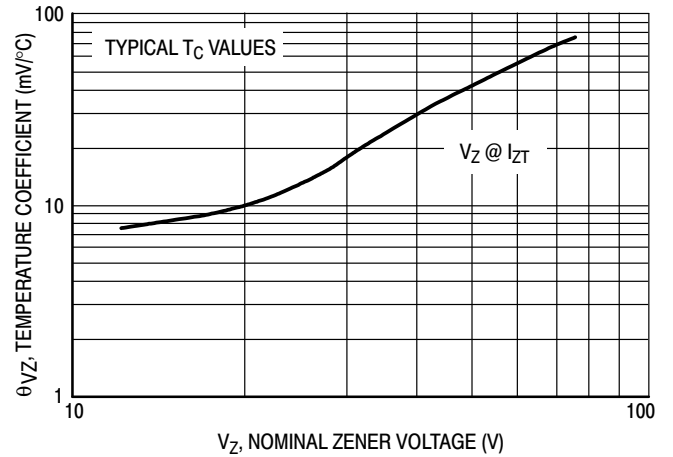


Figure 2. Temperature Coefficients
(Temperature Range -55°C to +150°C)

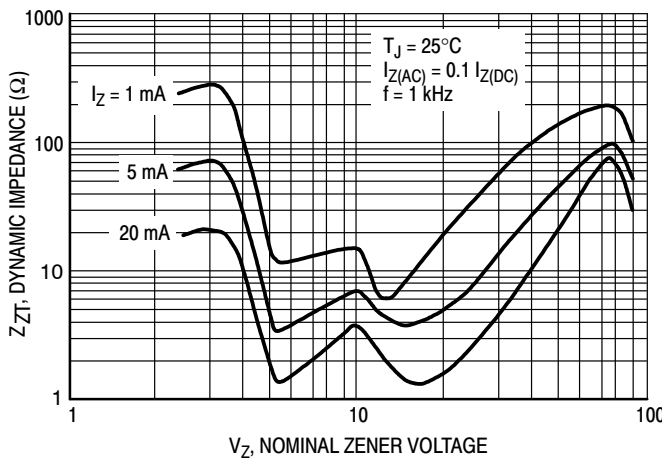


Figure 3. Effect of Zener Voltage on
Zener Impedance

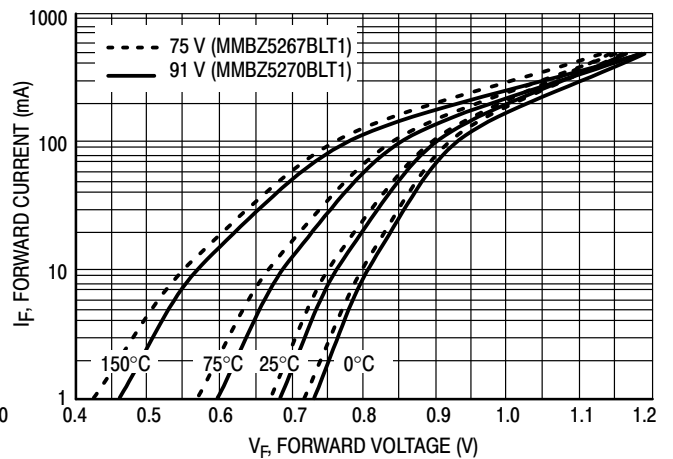
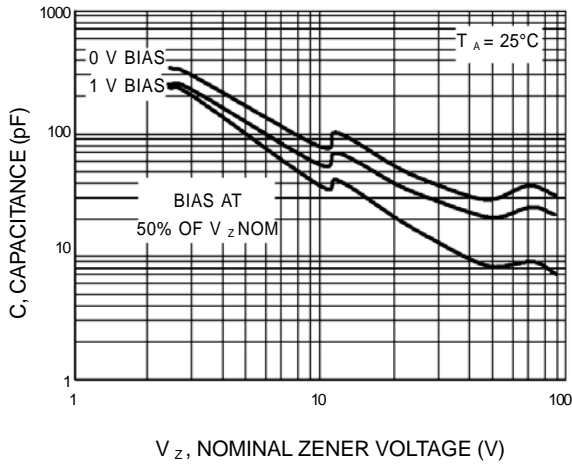
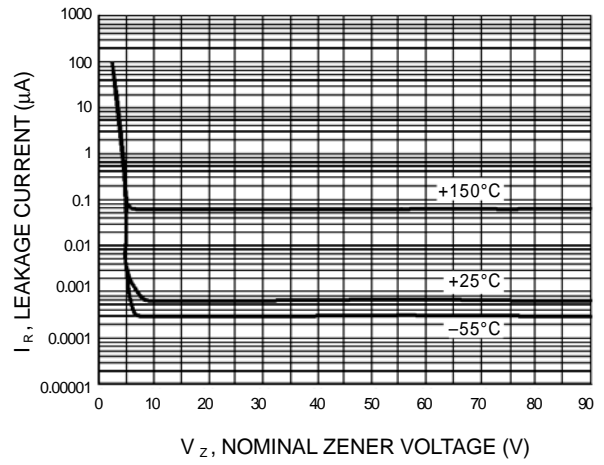
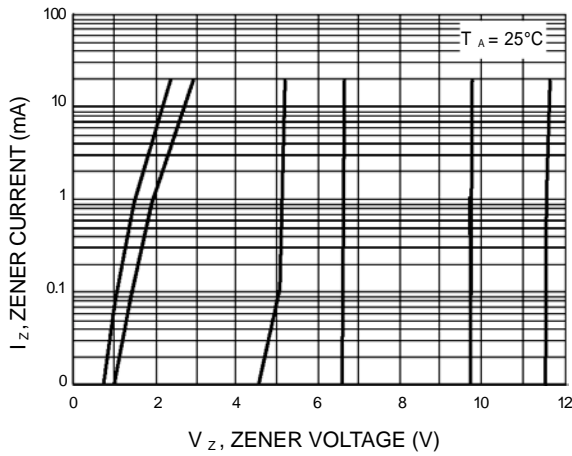
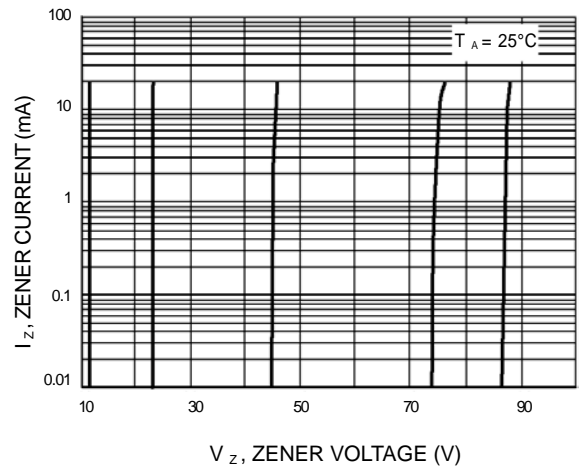
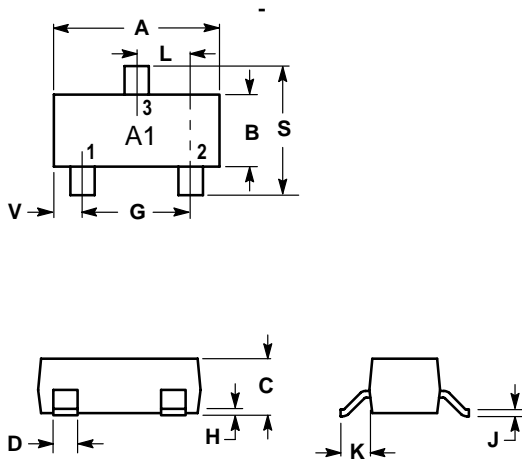


Figure 4. Typical Forward Voltage

GENERAL DATA — 225mW SOT-23
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)**

GENERAL DATA — 225 mW SOT-23
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

