Elektronische Bauelemente

BZX84CXXX

350mW SOT-23 Series

Surface Mount Zener Voltage Regulator Diodes

RoHS Compliant Product

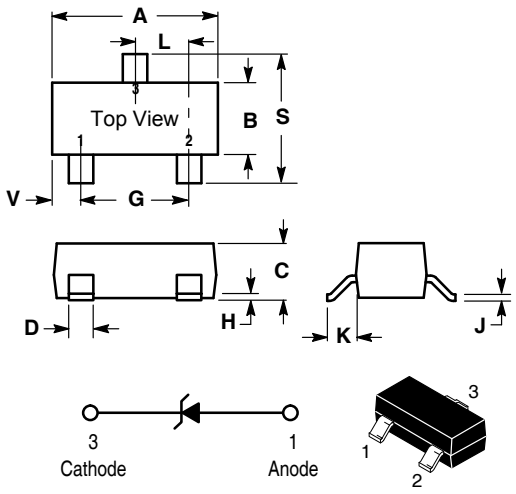
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Planar Die Construction
- 350mW Power Dissipation on FR-5 PCB
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Process

MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202,
- Method 208
- Polarity: See Diagrams
- Weight: 0.008 grams (approx.)
- Marking : Marking Code (See Table On Page 2)



SOT-23		
Dim	**Min**	**Max**
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board,* T_A = 25°C	P_D	350	mW
Derate above 25°C		1.8	mW/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate,** T_A = 25°C	P_D	350	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temeprature	T_J, T_{stg}	150	°C

1. FR–5 = 1.0 X 0.75 X 0.062 in. 2.Alumina = 0.4 X 0.3 X 0.024 in. 99.5% alumina.

GENERAL DATA - 350mW SOT-23

ELECTRICAL CHARACTERISTICS (Pinout : 1-Anode, 2-NC, 3-Cathode) (V_F = 0.9V Max @ I_F = 10mA for all types)

Type Number	Marking Code	Zener Voltage V_{Z1} (Volts) @ I_{ZT1} = 5mA (Note 1)			Max Zener Impedance Z_{ZT1} (Ohms) @ I_{ZT1} = 5mA	Max Reverse Leakage Current		Zener Voltage V_{Z2} (Volts) @ I_{ZT2} = 1mA (Note 1)		Max Zener Impedance Z_{ZT2} (Ohms) @ I_{ZT2} = 1mA	Zener Voltage V_{Z3} (Volts) @ I_{ZT3} = 20mA (Note 1)		Max Zener Impedance Z_{ZT3} (Ohms) @ I_{ZT3} = 20mA	d_{VZ}/dt (mV/k) @ I_{ZT1} = 5mA		C r F Max @ V_R = 0 f = 1MHz
		Nom	Min	Max		I_R μA @	V_R Volts	Min	Max		Min	Max		Min	Max	
BZX84C2V4	Z11/KZB	2.4	2.2	2.6	100	50	1	1.7	2.1	600	2.6	3.2	50	-3.5	0	450
BZX84C2V7	Z12/KZC	2.7	2.5	2.9	100	20	1	1.9	2.4	600	3.0	3.6	50	-3.5	0	450
BZX84C3V0	Z13/KZD	3.0	2.8	3.2	95	10	1	2.1	2.7	600	3.3	3.9	50	-3.5	0	450
BZX84C3V3	Z14/KZE	3.3	3.1	3.5	95	5	1	2.3	2.9	600	3.6	4.2	40	-3.5	0	450
BZX84C3V6	Z15/KZF	3.6	3.4	3.8	90	5	1	2.7	3.3	600	3.9	4.5	40	-3.5	0	450
BZX84C3V9	Z16/KZG	3.9	3.7	4.1	90	3	1	2.9	3.5	600	4.1	4.7	30	-3.5	-2.5	450
BZX84C4V3	Z17/KZH	4.3	4.0	4.6	90	3	1	3.3	4.0	600	4.4	5.1	30	-3.5	0	450
BZX84C4V7	Z1/KZ1	4.7	4.4	5.0	80	3	2	3.7	4.7	500	4.5	5.4	15	-3.5	0.2	260
BZX84C5V1	Z2/KZ2	5.1	4.8	5.4	60	2	2	4.2	5.3	480	5.0	5.9	15	-2.7	1.2	225
BZX84C5V6	Z3/KZ3	5.6	5.2	6.0	40	1	2	4.8	6.0	400	5.2	6.3	10	-2.0	2.5	200
BZX84C6V2	Z4/KZ4	6.2	5.8	6.6	10	3	4	5.6	6.6	150	5.8	6.8	6	0.4	3.7	185
BZX84C6V8	Z5/KZ5	6.8	6.4	7.2	15	2	4	6.3	7.2	80	6.4	7.4	6	1.2	4.5	155
BZX84C7V5	Z6/KZ6	7.5	7.0	7.9	15	1	5	6.9	7.9	80	7.0	8.0	6	2.5	5.3	140
BZX84C8V2	Z7/KZ7	8.2	7.7	8.7	15	0.7	5	7.6	8.7	80	7.7	8.8	6	3.2	6.2	135
BZX84C9V1	Z8/KZ8	9.1	8.5	9.6	15	0.5	6	8.4	9.6	100	8.5	9.7	8	3.8	7.0	130
BZX84C10	Z9/KZ9	10.0	9.4	10.6	20	0.2	7	9.3	10.6	150	9.4	10.7	10	4.5	8.0	130
BZX84C11	Y1/KY1	11.0	10.4	11.6	20	0.1	8	10.2	11.6	150	10.4	11.8	10	5.4	9.0	130
BZX84C12	Y2/KY2	12.0	11.4	12.7	25	0.1	8	11.2	12.7	150	11.4	12.9	10	6.0	10.0	130
BZX84C13	Y3/KY3	13.0	12.4	14.1	30	0.1	8	12.3	14.0	170	12.5	14.2	15	7.0	11.0	120
BZX84C15	Y4/KY4	15.0	13.8	15.6	30	0.1	10.5	13.7	15.5	200	13.9	15.7	20	9.2	13.0	110
BZX84C16	Y5/KY5	16.0	15.3	17.1	40	0.1	11.2	15.2	17.0	200	15.4	17.2	20	10.4	14.0	105
BZX84C18	Y6/KY6	18.0	16.8	19.1	45	0.1	12.6	16.7	19.0	225	16.9	19.2	20	12.4	16.0	100
BZX84C20	Y7/KY7	20.0	18.8	21.2	55	0.1	14	18.7	21.1	225	18.9	21.4	20	14.4	18.0	85
BZX84C22	Y8/KY8	22.0	20.8	23.3	55	0.1	15.4	20.7	23.2	250	20.9	23.4	25	16.4	20.0	85
BZX84C24	Y9/KY9	24.0	22.8	25.6	70	0.1	16.8	22.7	25.5	250	22.9	25.7	25	18.4	22.0	80
BZX84C27	Y10/KYA	27.0	25.1	28.9	80	0.1	18.9	25.0	28.9	300	25.2	29.3	45	21.4	25.3	70
BZX84C30	Y11/KYB	30.0	28.0	32.0	80	0.1	21	27.8	32.0	300	28.1	32.4	50	24.4	29.4	70
BZX84C33	Y12/KYC	33.0	31.0	35.0	80	0.1	23.1	30.8	35.0	325	31.1	35.4	55	27.4	33.4	70
BZX84C36	Y13/KYD	36.0	34.0	38.0	90	0.1	25.2	33.8	38.0	350	34.1	38.4	60	30.4	37.4	70
BZX84C39	Y14/KYE	39.0	37.0	41.0	130	0.1	27.3	36.7	41.0	350	37.1	41.5	70	33.4	41.2	45
BZX84C43	Y15/KYF	43.0	40.0	46.0	150	0.1	30.1	39.7	46.0	375	40.1	46.5	80	37.6	46.6	40
BZX84C47	Y16/KYG	47.0	44.0	50.0	170	0.1	32.9	43.7	50.0	375	44.1	50.5	90	42.0	51.8	40
BZX84C51	Y17/KYH	51.0	48.0	54.0	180	0.1	35.7	47.6	54.0	400	48.1	54.6	100	46.6	57.2	40

NOTES :1.Zener voltage is measured with a pulse test current (I_z) applied at an ambient temperature of 25°C

2.Tasted with pulses,300μs pulse width,2% duty cycle.

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TYPICAL CHARACTERISTICS

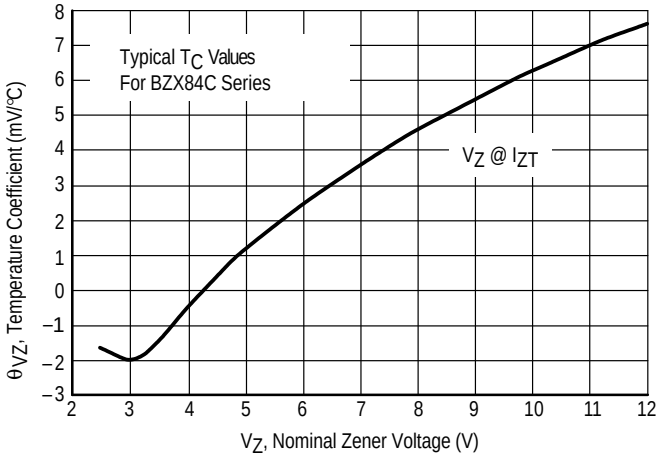

Figure 1. Temperature Coefficients (Temperature Range −55°C to +150°C)

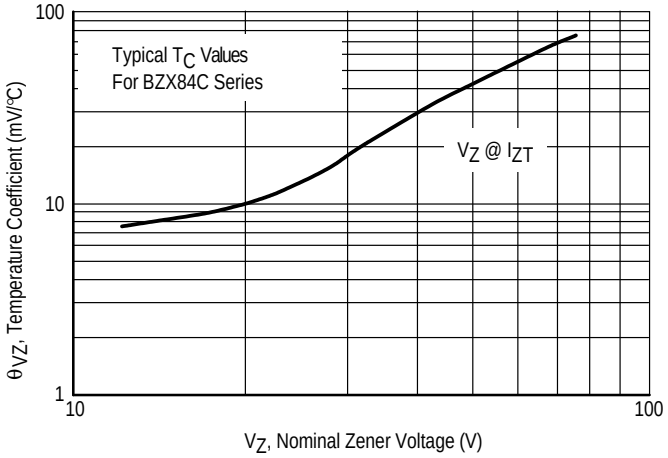

Figure 2. Temperature Coefficients (Temperature Range −55°C to +150°C)

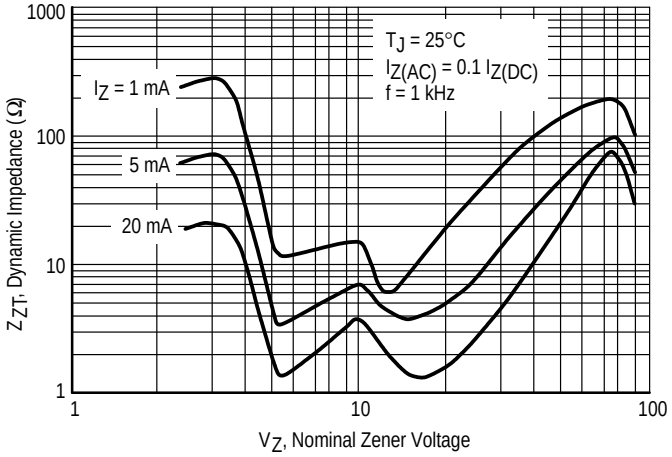

Figure 3. Effect of Zener Voltage on Zener Impedance

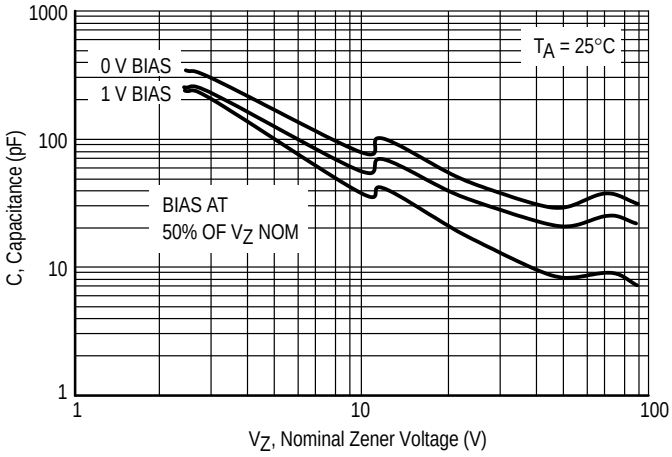

Figure 4. Typical Capacitance

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TYPICAL CHARACTERISTICS

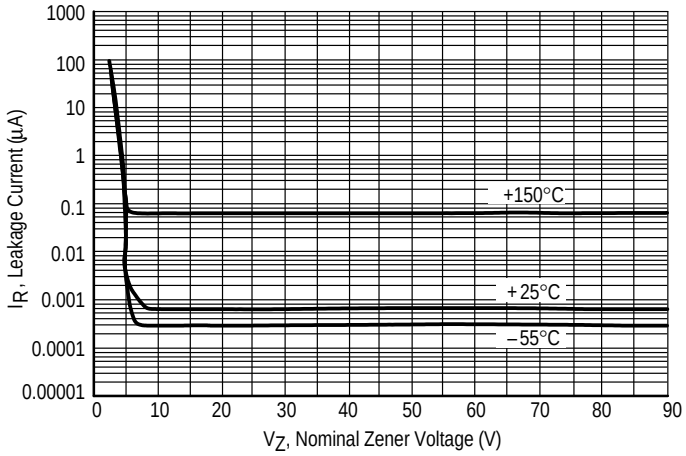

Figure 5. Typical Leakage Current