Elektronische Bauelemente

BZX84Cxxx Series

300 mW SOT-23 Series

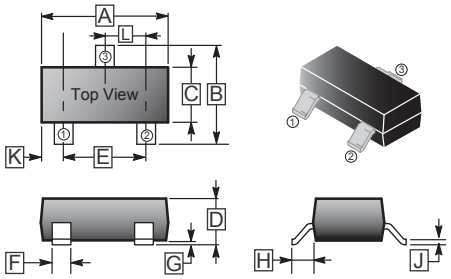
Surface Mount Zener Voltage Regulator Diodes

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Planar Die Construction
- 300 mW Power Dissipation on FR-5 PCB
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Process
- Zener Voltages from 2.4V – 39V
- Ultra-Small Surface Mount Package Power Dissipation

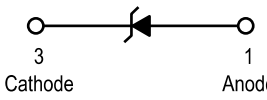
SOT-23



MECHANICAL DATA

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

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.04	G	0.09	0.18
B	2.10	2.55	H	0.45	0.60
C	1.20	1.40	J	0.08	0.177
D	0.89	1.15	K	0.6 REF.	
E	1.80	2.00	L	0.89	1.02
F	0.30	0.50			



THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNITS
Forward Voltage (Note 2) @I_F=10 mA	V_F	0.9	V
Power Dissipation (Note1)	P_D	300	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C / W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	°C

Notes:
1. Valid provided that device terminals are kept at ambient temperature..
2. Test with pulses. Period = 5 ms, pulse width =300 μs

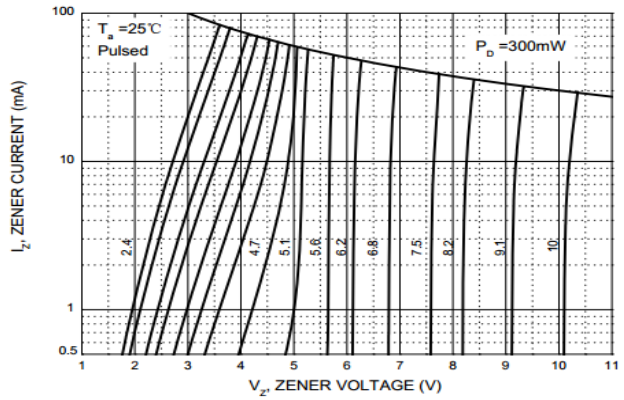
ELECTRICAL RATINGS (Rating 25°C ambient temperature unless otherwise specified)

TYPE NUMBER	MARKING CODE	ZENER VOLTAGE RANGE [1]				MAXIMUM ZENER IMPEDANCE [2]			MAXIMUM REVERSE CURRENT		TEMPERATURE COEFFICENT OF ZENER VOLTAGE @ I_{ZT}=5mA	
		V_Z@I_{ZT}			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R@V_R		Min	Max
		Min	Nom	Max								
		V	V	V	mA	Ω	Ω	mA	μA	V	mV / °C	
BZX84C2V4	Z11/KZB	2.2	2.4	2.6	5	100	600	1.0	50	1	-3.5	0
BZX84C2V7	Z12/KZC	2.5	2.7	2.9	5	100	600	1.0	20	1	-3.5	0
BZX84C3V0	Z13/KZD	2.8	3.0	3.2	5	95	600	1.0	10	1	-3.5	0
BZX84C3V3	Z14/KZE	3.1	3.3	3.5	5	95	600	1.0	5	1	-3.5	0
BZX84C3V6	Z15/KZF	3.4	3.6	3.8	5	90	600	1.0	5	1	-3.5	0
BZX84C3V9	Z16/KZG	3.7	3.9	4.1	5	90	600	1.0	3	1	-3.5	0
BZX84C4V3	Z17/KZH	4.0	4.3	4.6	5	90	600	1.0	3	1	-3.5	0
BZX84C4V7	Z1/KZ1	4.4	4.7	5.0	5	80	500	1.0	3	2	-3.5	0.2
BZX84C5V1	Z2/KZ2	4.8	5.1	5.4	5	60	480	1.0	2	2	-2.7	1.2
BZX84C5V6	Z3/KZ3	5.2	5.6	6.0	5	40	400	1.0	1	2	-2.0	2.5
BZX84C6V2	Z4/KZ4	5.8	6.2	6.6	5	10	150	1.0	3	4	0.4	3.7
BZX84C6V8	Z5/KZ5	6.4	6.8	7.2	5	15	80	1.0	2	4	1.2	4.5
BZX84C7V5	Z6/KZ6	7.0	7.5	7.9	5	15	80	1.0	1	5	2.5	5.3
BZX84C8V2	Z7/KZ7	7.7	8.2	8.7	5	15	80	1.0	0.7	5	3.2	6.2
BZX84C9V1	Z8/KZ8	8.5	9.1	9.6	5	15	100	1.0	0.5	6	3.8	7.0
BZX84C10	Z9/KZ9	9.4	10.0	10.6	5	20	150	1.0	0.2	7	4.5	8.0
BZX84C11	Y1/KY1	10.4	11.0	11.6	5	20	150	1.0	0.1	8	5.4	9.0
BZX84C12	Y2/KY2	11.4	12.0	12.7	5	25	150	1.0	0.1	8	6.0	10.0
BZX84C13	Y3/KY3	12.4	13.0	14.1	5	30	170	1.0	0.1	8	7.0	11.0
BZX84C15	Y4/KY4	13.8	15.0	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0
BZX84C16	Y5/KY5	15.3	16.0	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0
BZX84C18	Y6/KY6	16.8	18.0	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0
BZX84C20	Y7/KY7	18.8	20.0	21.2	5	55	225	1.0	0.1	14	14.4	18.0
BZX84C22	Y8/KY8	20.8	22.0	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0
BZX84C24	Y9/KY9	22.8	24.0	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0
BZX84C27	Y10/KYA	25.1	27.0	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3
BZX84C30	Y11/KYB	28.0	30.0	32.0	2	80	300	0.5	0.1	21	24.4	29.4
BZX84C33	Y12/KYC	31.0	33.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4
BZX84C36	Y13/KYD	34.0	36.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4
BZX84C39	Y14/KYE	37.0	39.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2

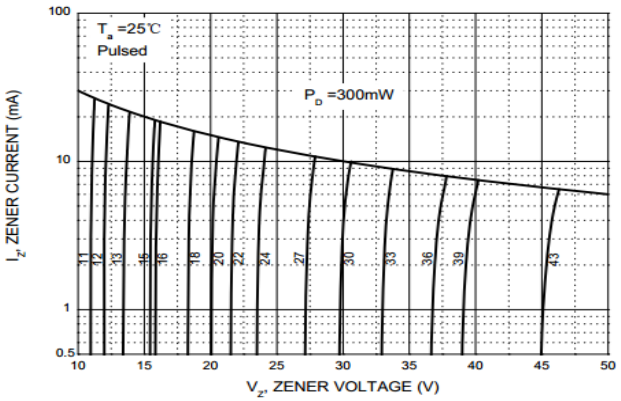
Notes:
1. Test with pulses. Period = 5 ms, pulse width =300 μs
2. f = 1 K Hz

CHARACTERISTIC CURVES

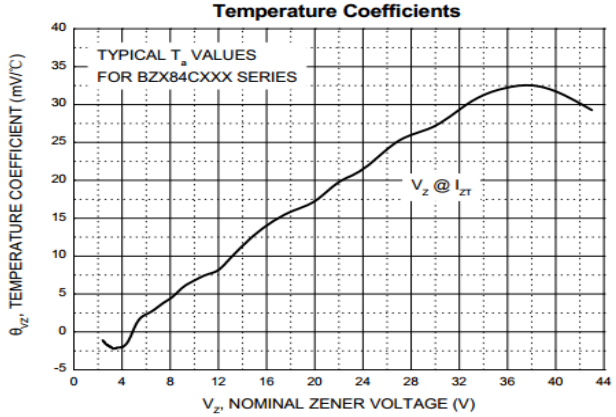
Zener Characteristics (V_Z Up to 10 V)



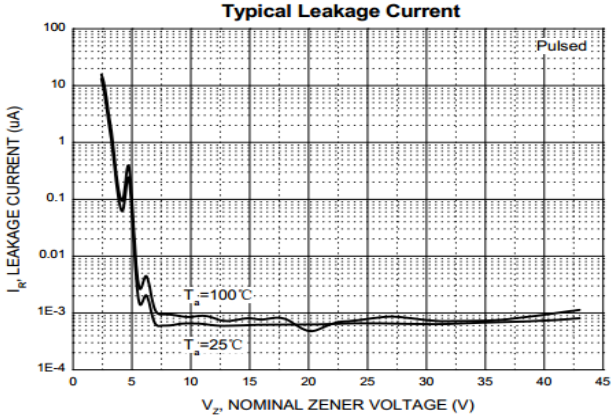
Zener Characteristics (11 V to 43 V)



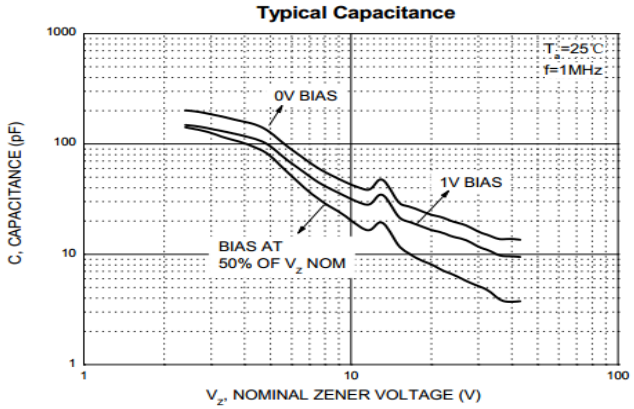
Temperature Coefficients



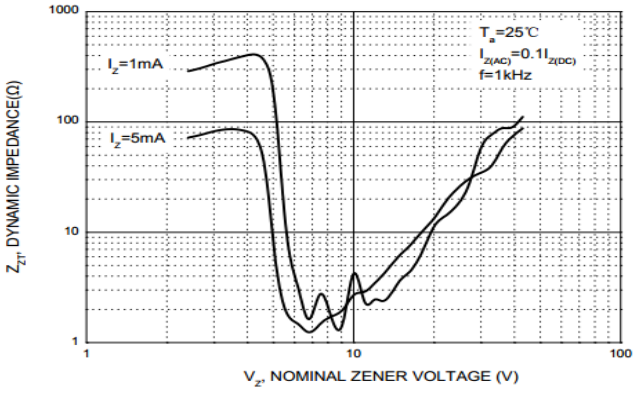
Typical Leakage Current



Typical Capacitance



Effect of Zener Voltage on Zener Impedance



Power Derating Curve