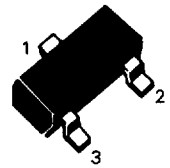
SOT23 SILICON PLANAR VOLTAGE REGULATOR DIODES

BZX84 SERIES
C2V7 - C47

PIN CONFIGURATION



ABSOLUTE MAXIMUM RATINGS

* As per Pro Electron Coding System

PARAMETER	SYMBOL	VALUE	UNIT
Voltage Range	V_Z	2.7 to 47	V
Nominal Tolerance	C*	± 5%	%
Maximum Forward Current	I_F	250	mA
Power Dissipation at $T_{amb} = 25°C$	P_{TOT}	330	mW
Operating and Storage Temperature Range	tj:tstg	−55 to +150	°C

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25°C$ unless otherwise stated)

Type Number	Zener Voltage V_Z at $I_Z = 5mA$			Differential Resistance r_Z at $I_Z = 5mA$ Ohms	Temperature Coeficient S_Z % / 100°C		Reverse Current I_R at V_R μA Volts		Diode Capacitance $C_{d(pf)}$ F = 1mHZ $V_R = 0$
BZX84	Nom.	Min.	Max.	Max	Min	Max.	Max.		Max.
C2V7	2.7	2.5	2.9	100	-3.5	0	20	1	450
C3V0	3.0	2.8	3.2	100	-3.5	0	10	1	450
C3V3	3.3	3.1	3.5	100	-3.5	0	5	1	450
C3V6	3.6	3.4	3.8	100	-3.5	0	5	1	450
C3V9	3.9	3.7	4.1	100	-3.5	0	3	1	450
C4V3	4.3	4.0	4.6	90	-3.5	0	3	1	450
C4V7	4.7	4.4	5.0	80	-3.5	0.2	3	2	180
C5V1	5.1	4.8	5.4	60	-2.7	1.2	2	2	160
C5V6	5.6	5.2	6.0	40	-2.0	2.5	1	2	140
C6V2	6.2	5.8	6.6	10	0.4	3.7	3	4	130
C6V8	6.8	6.4	7.2	15	1.2	4.5	2	4	110
C7V5	7.5	7.0	7.9	15	2.5	5.3	1	5	100
C8V2	8.2	7.7	8.7	15	3.2	6.2	0.7	5	95
C9V1	9.1	8.5	9.6	15	3.8	7.0	0.5	6	90
C10	10	9.4	10.6	20	4.5	8.0	0.2	7	90
C11	11	10.4	11.6	20	5.4	9.0	0.1	8	85
C12	12	11.4	12.7	25	6.0	10.0	0.1	8	85
C13	13	12.4	14.1	30	7.0	11.0	0.1	9	80
C15	15	13.8	15.6	30	9.2	13.0	0.05	10	75
C16	16	15.3	17.1	40	10.4	14.0	0.05	11	75
C18	18	16.8	19.1	45	12.4	16.0	0.05	13	70
C20	20	18.8	21.2	55	14.4	18.0	0.05	14	60
C22	22	20.8	23.3	55	16.4	20.0	0.05	15	60
C24	24	22.8	25.6	70	18.4	22.0	0.05	17	55
	V_Z at $I_Z = 2mA$			r_Z at $I_Z = 2mA$	S_Z at $I_Z = 2mA$				
C27	27	25.1	28.9	80	21.4	25.3	0.05	19	50
C30	30	28	32	80	24.4	29.4	0.05	21	50
C33	33	31	31	80	27.4	33.4	0.05	23	45
C36	36	34	38	90	30.4	37.4	0.05	25	45
C39	39	37	41	130	33.4	41.2	0.05	27	45
C43	43	40	46	150	37.6	46.6	0.05	30	40
C47	47	44	50	170	42.0	51.8	0.05	33	40

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25°C$ unless otherwise stated)

Type Number	Zener Voltage V_Z at $I_Z = 1mA$ Volts	Differential Resistance r_Z at $I_Z = 1$ Ohms
BZX84	Min.	Max.
C2V7	1.9	600
C3V0	2.1	600
C3V3	2.4	600
C3V6	2.7	600
C3V9	3.0	600
C4V3	3.3	600
C4V7	3.7	500
C5V1	4.2	480
C5V6	4.8	400
C6V2	5.6	150
C6V8	6.3	80
C7V5	6.9	80
C8V2	7.6	80
C9V1	8.4	100
C10	9.3	150
C11	10.2	150
C12	11.2	150
C13	12.3	170
C15	13.7	200
C16	15.2	200
C18	16.7	225
C20	18.7	225
C22	20.7	250
C24	22.7	250
C27	V_Z at $I_Z = 0.5mA$	r_Z at $I_Z = 0.5mA$
C30	25.0	300
C33	27.8	300
C36	30.8	325
C39	33.8	350
C43	36.7	350
C47	39.7	375
	43.7	375

Devices are identified by a code on the body of the device

BZX84	C2V7 – W4	C7V5 – Z6	C22 – Y8
	C3V0 – W5	C8V2 – Z7	C24 – Y9
	C3V3 – W6	C9V1 – Z8	C27 – X1
	C3V6 – W7	C10 – Z9	C30 – X2
	C3V9 – W8	C11 – Y1	C33 – X3
	C4V3 – W9	C12 – Y2	C36 – X4
	C4V7 – Z1	C13 – Y3	C39 – X5
	C5V1 – Z2	C15 – Y4	C43 – X6
	C5V6 – Z3	C16 – Y5	C47 – X7
	C6V2 – Z4	C18 – Y6	
	C6V8 – Z5	C20 – Y7	