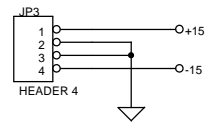
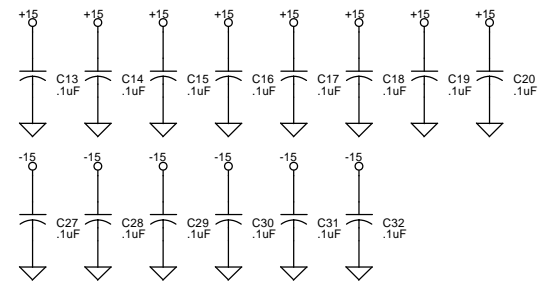
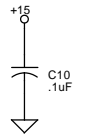
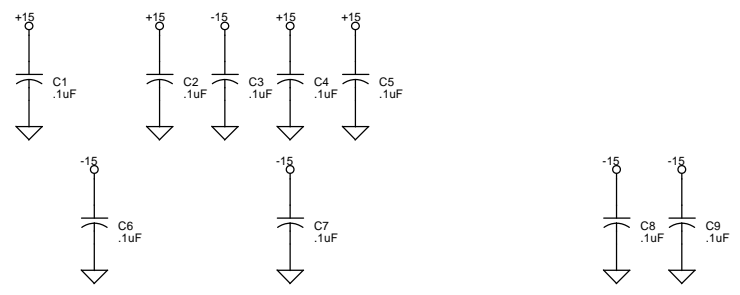
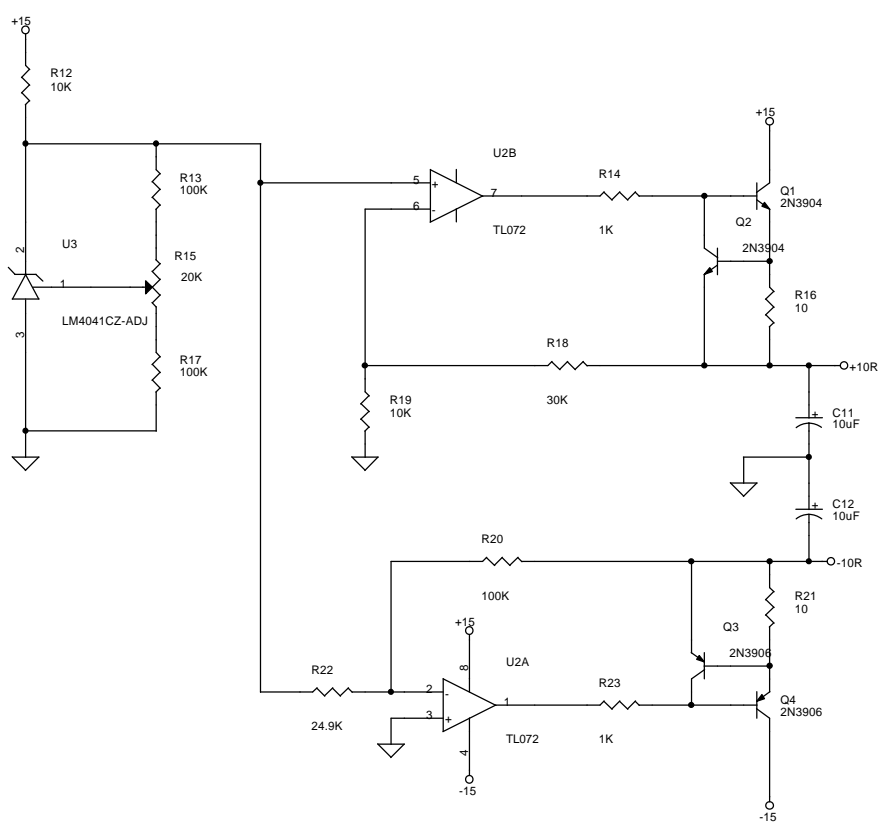
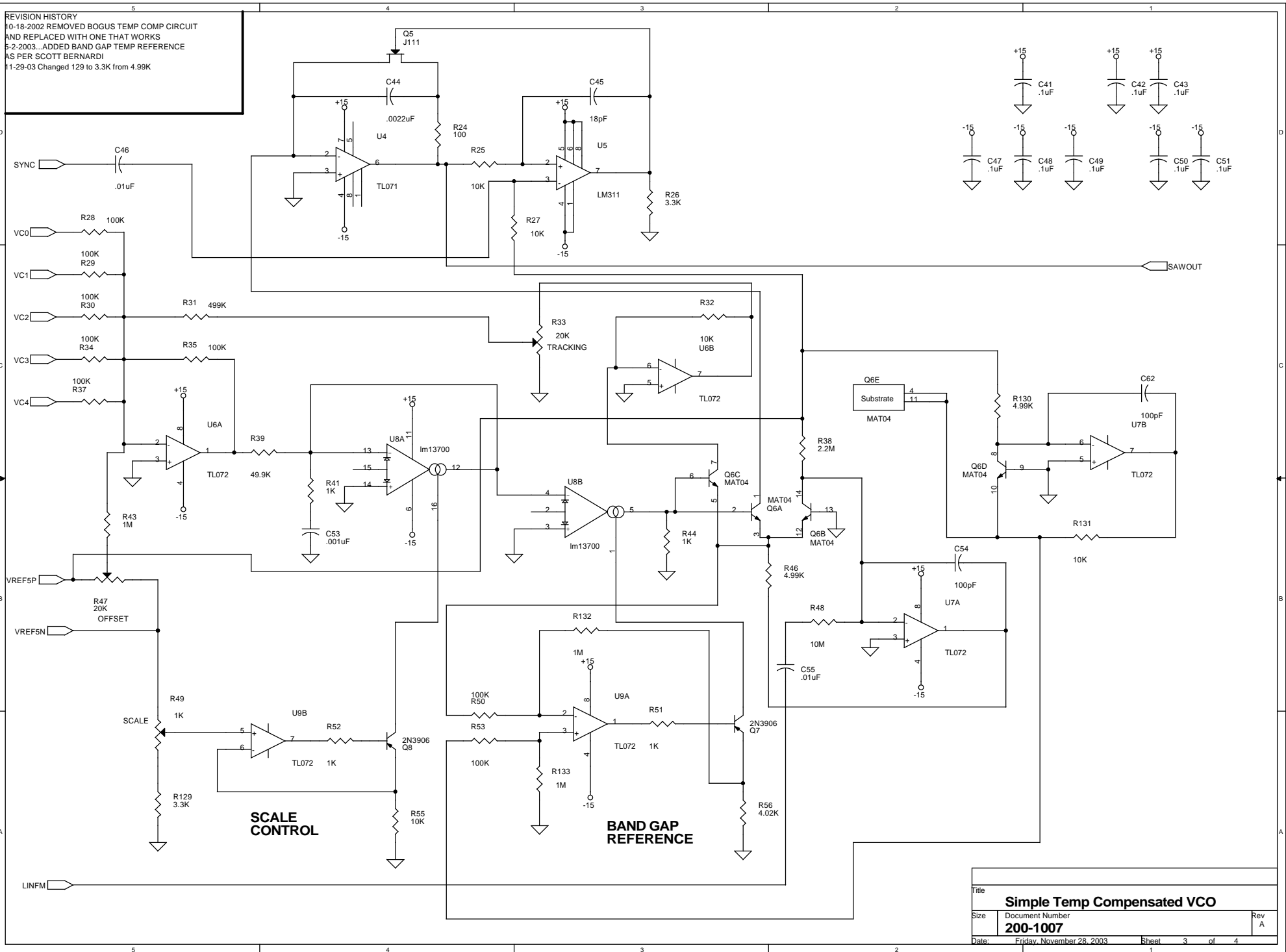


Title		
VOLTAGE CONTROLLED OSCILATOR		
Size	Document Number	Rev
	200-1007	A
Date:	Saturday, September 13, 2003	Sheet 1 of 4



Title		
POWER SUPPLY/REFERENCES		
Size	Document Number	Rev
	200-1007	A
Date:	Tuesday, May 20, 2003	Sheet 2 of 4

REVISION HISTORY
 10-18-2002 REMOVED BOGUS TEMP COMP CIRCUIT
 AND REPLACED WITH ONE THAT WORKS
 5-2-2003...ADDED BAND GAP TEMP REFERENCE
 AS PER SCOTT BERNARDI
 11-29-03 Changed 129 to 3.3K from 4.99K



Title		
Simple Temp Compensated VCO		
Size	Document Number	Rev
	200-1007	A
Date:	Friday, November 28, 2003	Sheet 3 of 4

1: VOLTAGE CONTROLLED OSCILATOR Revised: Monday, August 25, 2003
 2: 200-1007 Revision: A
 3:
 4:
 5:
 6:
 7:
 8:
 9:

10: Bill Of Materials August 25,2003 20:55:42 Page1

11:

12: Item Quantity Reference Part Mouser Part Number

13: _____

14:

15:	1	32	C1,C2,C3,C4,C5,C6,C7,C8,	.1uF	80-C410C104M5U
16:			C9,C10,C13,C14,C15,C16,		
17:			C17,C18,C19,C20,C27,C28,		
18:			C29,C30,C31,C32,C41,C42,		
19:			C43,C47,C48,C49,C50,C51		
20:	2	2	C11,C12 10uF	140-XRL35V10	
21:	3	1	C44 .0022uF	23PS310	
22:	4	1	C45 18pF	140-50N2-180J	
23:	5	1	C46 .01uF	140-PF2A103J	
24:	6	1	C53 .001uF	140-PF2A102J	
25:	7	2	C54,C62 100pF	140-50P2-101K	
26:	8	1	C55 .01uF		
27:	9	1	C59 100pF		
28:	10	1	C61 .1uF		
29:	11	2	D2,D1 1N914		
30:	12	2	D3,D4 1N751		
31:	13	1	JP1 HEADER 5X2		
32:	14	2	JP3,JP2 HEADER 4		
33:	15	1	J1 PITCH1		
34:	16	1	J2 SAW		
35:	17	1	J3 PITCH2		
36:	18	1	J4 SYNC		
37:	19	1	J5 TRI		
38:	20	1	J6 LIMFM		
39:	21	1	J7 PULSE		
40:	22	2	J8,J10 PWM		
41:	23	1	J9 SINE		
42:	24	2	Q1,Q2 2N3904	512-2N3904	
43:	25	4	Q3,Q4,Q7,Q8 2N3906	512-2N3906	
44:	26	1	Q5 J111	J111	
45:	27	1	Q6 MAT04		
46:	28	23	R12,R19,R25,R27,R32,R55,	10K	271-10K
47:			R57,R60,R62,R63,R83,R103,		
48:			R105,R106,R107,R108,R111,		
49:			R112,R113,R114,R115,R119,		
50:			R131		
51:	29	21	R13,R17,R20,R28,R29,R30,	100K	271-100K
52:			R34,R35,R37,R50,R53,R66,		
53:			R70,R71,R72,R73,R74,R77,		
54:			R89,R99,R116		
55:	30	10	R14,R23,R41,R44,R51,R52,	1K	271-1K
56:			R64,R76,R90,R101		
57:	31	1	R15 20K	652-3386P-1-203	
58:	32	2	R21,R16 10	271-10	
59:	33	2	R81,R18 30K	271-30K	
60:	34	1	R22 24.9K	271-24.9K	
61:	35	1	R24 100	271-100	
62:	36	1	R26 3.3K	271-3.3K	
63:	37	1	R31 499K	271-499K	
64:	38	4	R33,R47,R67,R127	20K	594-74W-20K

65:	39	1	R38	2.2M	271-2.2M
66:	40	2	R122,R39	49.9K	271-49.9K
67:	41	10	R43,R87,R98,R123,R124,	1M	271-1M
68:			R125,R126,R128,R132,R133		
69:	42	4	R46,R120,R129,R130	4.99K	271-4.99K
70:	43	1	R48	10M	
71:	44	1	R49	1K	594-74W-1K
72:	45	1	R56	4.02K	271-4.02K
73:	46	1	R61	39K	271-39K
74:	47	1	R65	20K	271-20K
75:	48	1	R68	68K	271-68K
76:	49	3	R75,R85,R100	2K	271-2K
77:	50	1	R88	6.8M	
78:	51	1	R92	51	
79:	52	1	R95	100	594-74W-100
80:	53	2	R121,R97	50K	594-74W-50K
81:	54	1	R102	100K	
82:	55	1	R104	10K	
83:	56	2	R109,R118	15K	271-15K
84:	57	2	R117,R110	10K	594-74W-10K
85:	58	3	U2,U6,U7	TL072	511-TL072
86:	59	1	U3	LM4041CZ-ADJ	511-LM336Z
87:	60	1	U4	TL071	511-TL071
88:	61	1	U5	LM311	511-LM311
89:	62	10	U6,U7,U9,U10,U13,U17,U18,	TL072	
90:			U19,U20,U21		
91:	63	1	U8	lm13700	LM13700N
92:	64	1	U15	CA3280E	
93:	65	1	U16	TL071	
94:					