

Title LSC Photodiode Circuit		LIGO Laboratory California Institute of Technology Massachusetts Institute of Technology	
Size: B	Number: D980454-00-C	Revision: 0	Eng. J. Suiwa D. Ouimette
File: C:\980454A.SCH	Date: 2-Nov-1998	Time: 15:00:32	Sheet 1 of 2



**LIST OF COMPONENT VALUES FOR DETERMINING FREQUENCIES OF THE
PHOTODIODE PCB**

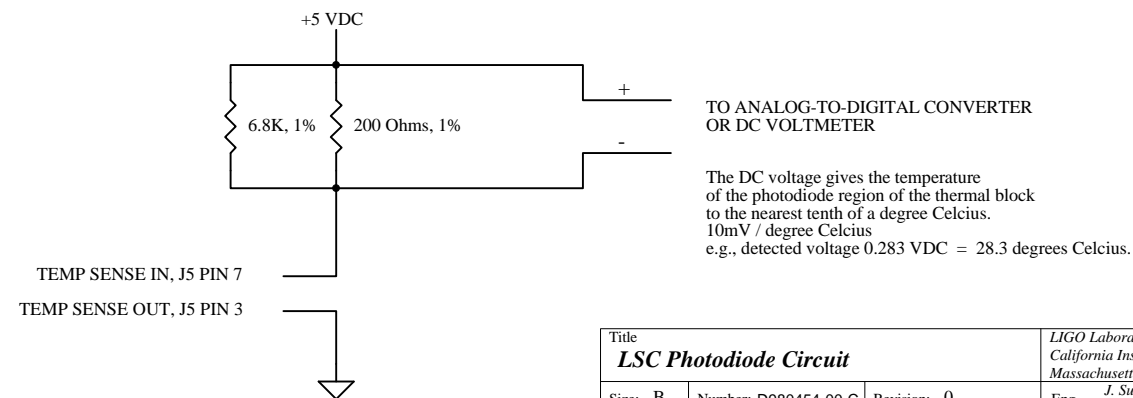
1-omega frequency [MHz]	1-omega bandpass filter Cpd = 85pF		parallel DC bias resistors R4 R5 [Ohms]	2-omega frequency [MHz]	first 2-omega Series Bandstop Filter relatively large L/small C			2-omega Parallel Bandstop Filter relatively intermediate values of C, L			second 2-omega Series Bandstop Filter relatively large L/small C			input/output impedance matching resistor for Bandstop Filters fixed R3 [Ohms]
	variable L1 [nH]	fixed L2 [nH]			fixed C39 [pF]	variable C40 [pF]	fixed L8 [nH]	fixed C1 [pF]	variable C14 [pF]	fixed L3 [nH]	fixed C6 [pF]	variable C13 [pF]	fixed L4 [nH]	
12.330	142 +/-3% tol	10uH + 5.6uH two inductors in series	R4 = 20.0 Ohms R5 = NOT USED	24.660	5.6	1.5-10	2700 + 175 two inductors in series	NOT USED	NOT USED	0 Ohm jumper resistor	NOT USED	NOT USED	NOT USED	NOT USED
14.750	142 +/-3% tol	2700	R4 = 20.0 Ohms R5 = NOT USED	29.500	5.6	1.5-10	1750 + 147 two inductors in series	NOT USED	NOT USED	0 Ohm jumper resistor	NOT USED	NOT USED	NOT USED	NOT USED
21.500	142 +/-3% tol	540 + 17.5 two inductors in series	R4 = 31.6 Ohms R5 = NOT USED	43.000	5.6	1.5-10	860 + 54 two inductors in series	NOT USED	NOT USED	0 Ohm jumper resistor	NOT USED	NOT USED	NOT USED	NOT USED
24.493	73 +/-3% tol	175 + 9.6 two inductors in series	23.2 24.3 = 11.9	48.986	56.0	5-40	115	NOT USED	NOT USED	0 Ohm jumper resistor	NOT USED	NOT USED	NOT USED	NOT USED
26.717	142 +/-3% tol	375	R4 = 30.9 Ohms R5 = NOT USED	53.434	6.8	1.5-10	450+99 two inductors in series	NOT USED	NOT USED	0 Ohm jumper resistor	NOT USED	NOT USED	NOT USED	NOT USED
29.486	142 +/-3% tol	200+9.6 two inductors in series	R4 = 30.9 Ohms R5 = NOT USED	58.972	6.8	1.5-10	450	NOT USED	NOT USED	0 Ohm jumper resistor	NOT USED	NOT USED	NOT USED	NOT USED
35.500	142 +/-3% tol	81	R4 = 20.0 Ohms R5 = NOT USED	71.000	5.6	1.5-10	320	NOT USED	NOT USED	0 Ohm jumper resistor	NOT USED	NOT USED	NOT USED	NOT USED
54.000	112 +/-3% tol	0 Ohm jumper resistor	23.2 24.3 = 11.9	108.000	3.9	1.5-10	175	NOT USED	NOT USED	0 Ohm jumper resistor	NOT USED	NOT USED	NOT USED	NOT USED
81.000	29 +/-1% tol	0 Ohm jumper resistor	R4 = 20.0 Ohms R5 = NOT USED	162.000	NOT USED	1.5-10	3.7	NOT USED	NOT USED	0 Ohm jumper resistor	NOT USED	NOT USED	NOT USED	100pF capacitor (Note: L7= 260nH)

DB-9 MALE BULKHEAD CONNECTOR J5 PINOUT

PIN	SIGNAL
1	+15 VDC
6	NO CONNECTION
2	-15 VDC
7	TEMP SENSE IN
3	TEMP SENSE OUT
8	DISABLE IN (LOGIC HI [TTL] DISABLES U2 OUTPUT)
4	STATUS/OTEMP (LOGIC HI [TTL] DENOTES U2 OUTPUT DISABLED OR OVERTEMP CONDITION)
9	GND
5	GND

SEE CIRCUIT, SAME PAGE, FOR SETUP

TEMPERATURE SENSE INTERFACING CIRCUIT SETUP



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