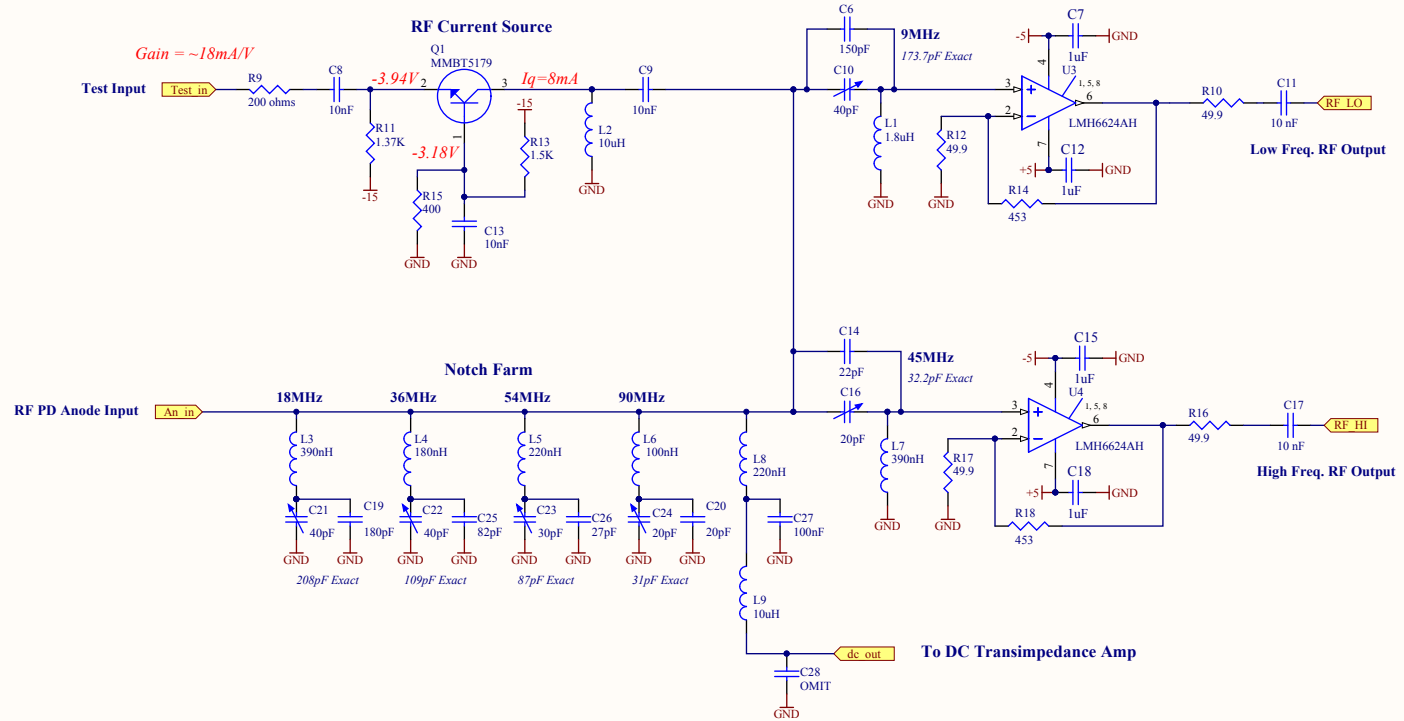


Last Edited: 29 August 2013

Title <b>aLIGO ASC RF Photodetector</b>		LIGO Laboratory California Institute of Technology Massachusetts Institute of Technology		LIGO	
Size: B	DCC Number: D1101614	Revision: v5	Engineer: R. Abbott	Date: 1/14/2014	Time: 2:47:46 PM
File: C:\Rich's Files\Mycadfiles\ISC\AdL_RFPD\2011 aLIGO WFS\alIGO WFS v4\alIGO wfs_top_SchDoc			Sheet 1 of 3		

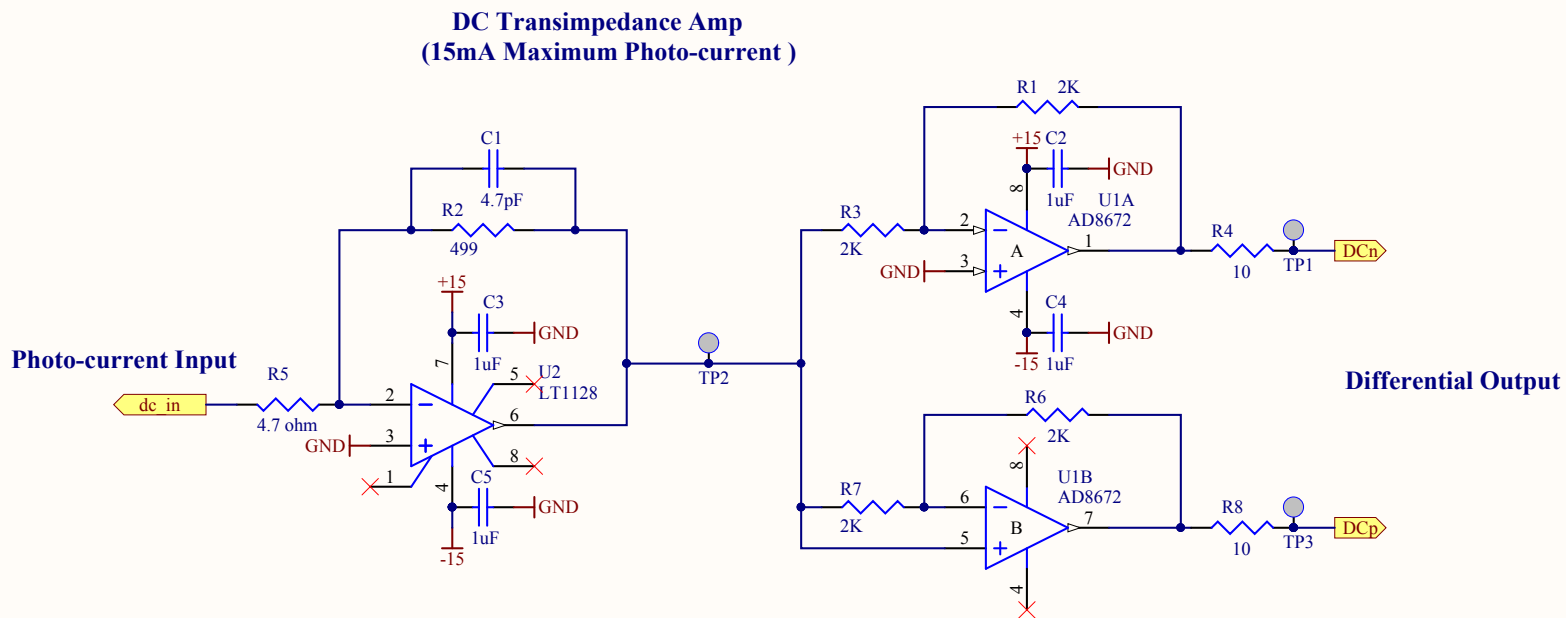
Values shown for 9/45 MHz. For component variations at different operating frequencies, see T1300199



9/45 Design Corresponds to: C:\Rich's Files\LT Spice\PhotodiodeAnalysis\lsc\_rfpd\alIGO\_ASC\_2011\9\_45\_ASC\_v3.asc

Last Edited: 29 August 2013

Title <b>RF Section</b>		LIGO Laboratory California Institute of Technology Massachusetts Institute of Technology		LIGO	
Size: B	DCC Number: D1101614	Revision: v5	Engineer: R. Abbott	Date: 1/14/2014	Time: 2:47:46 PM
File: C:\Rich's Files\Myeasfiles\ISC\AdL_RFPD\2011 alIGO_WFS\alIGO_WFS v4\alIGO_wfs_RF.SchDoc				Sheet 2 of 3	



Last Edited: 29 August 2013

Title

**DC Section**

LIGO Laboratory  
California Institute of Technology  
Massachusetts Institute of Technology

Size: A

DCC Number: D1101614

Revision: v5

Engineer: R. Abbott

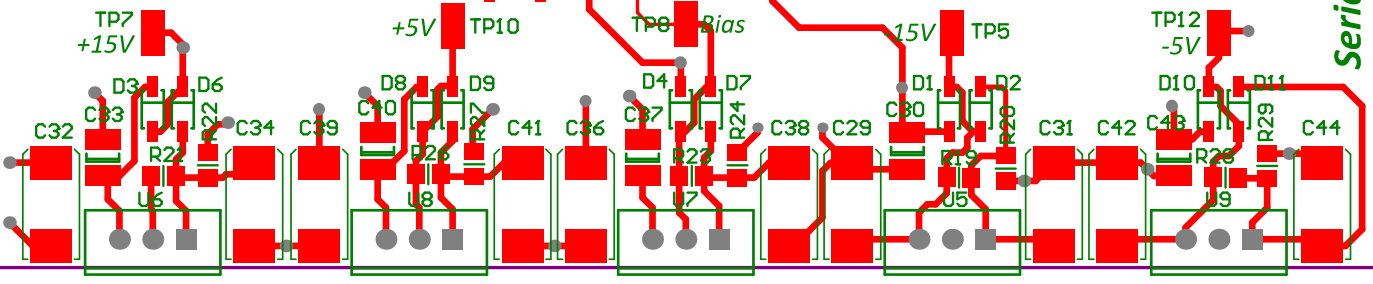
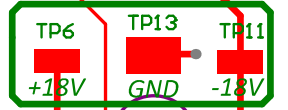
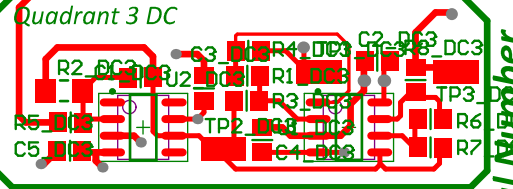
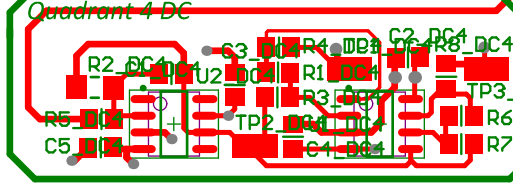
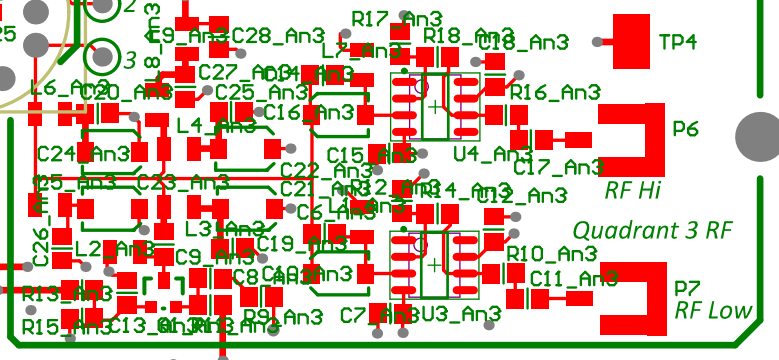
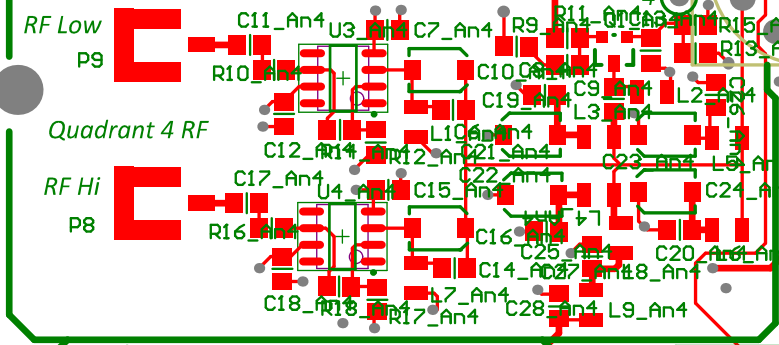
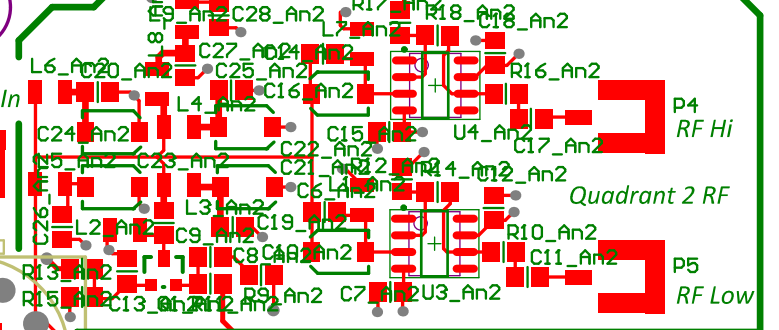
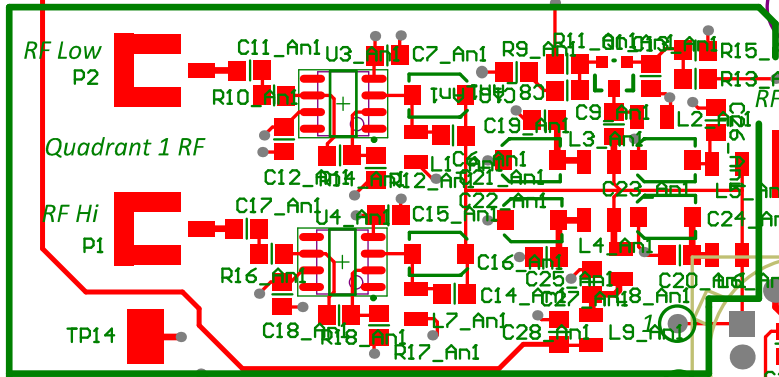
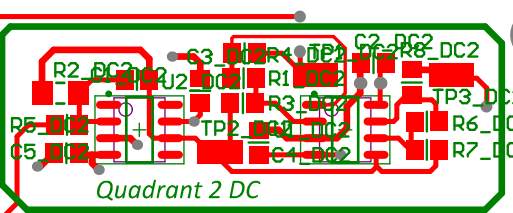
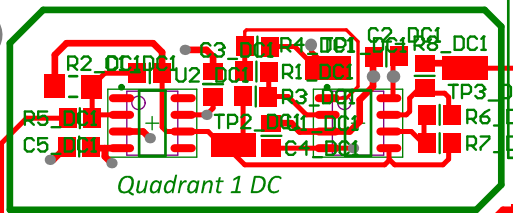
Date: 1/14/2014

Time: 2:47:47 PM

File: C:\Rich's Files\Mycadfiles\ISC\AdL\_RFPD\2011\_aLIGO\_WFS\alIGO\_WFS\_v4\alIGO\_wfs\_DC.SchDoc

Sheet 3 of 3

aLIGO D1101614-v3  
WFS Head



Designator	Comment	Display Part Number	Manufacturer Part Number	Quantity
C1_DCC1,C1_DCC2, C1_DCC3,C1_DCC4	4.7pF	478-1300-1-ND		4
C2_DCC1,C2_DCC2, C2_DCC3,C2_DCC4, C3_DCC1,C3_DCC2, C3_DCC3,C3_DCC4, C4_DCC1,C4_DCC2, C4_DCC3,C4_DCC4, C5_DCC1,C5_DCC2, C5_DCC3,C5_DCC4, C7_A01,C7_A02, C7_A03,C7_A04, C12_A01,C12_A02, C12_A03,C12_A04, C15_A01,C15_A02, C15_A03,C15_A04, C18_A01,C18_A02, C18_A03,C18_A04	1uF	478-1580-1-ND		32
C6_A01,C6_A02, C6_A03,C6_A04	150pF	399-1125-1-ND		4
C8_A01,C8_A02, C8_A03,C8_A04, C9_A01,C9_A02, C9_A03,C9_A04, C11_A01,C11_A02, C11_A03,C11_A04, C13_A01,C13_A02, C13_A03,C13_A04, C17_A01,C17_A02, C17_A03,C17_A04, C18	10 nF, 100pF	399-1158-1-ND		21
C10_A01,C10_A02, C10_A03,C10_A04, C21_A01,C21_A02, C21_A03,C21_A04, C22_A01,C22_A02, C22_A03,C22_A04	40 pF		Voltronics JZ400	12
C14_A01,C14_A02, C14_A03,C14_A04, C16_A01,C16_A02, C16_A03,C16_A04, C24_A01,C24_A02, C24_A03,C24_A04	22pF	490-3020-1-ND		4
C19_A01,C19_A02, C19_A03,C19_A04	20 pF, 200pF		Voltronics JZ200	8
C20_A01,C20_A02, C20_A03,C20_A04	180pF	445-13364-1-ND		4
C23_A01,C23_A02, C23_A03,C23_A04	20pF	490-3007-1-ND		4
C25_A01,C25_A02, C25_A03,C25_A04	80pF		Voltronics JZ300	4
C26_A01,C26_A02, C26_A03,C26_A04	80pF	490-3815-1-ND		4
C27_A01,C27_A02, C27_A03,C27_A04	27pF	490-3009-1-ND		4
C27_A03,C27_A04	1000pF	478-1316-1-ND		4
C28_A01,C28_A02, C28_A03,C28_A04	2M $\Omega$	2M $\Omega$		4
C30_C11,C30_C12, C30_C13,C30_C14, C30_C15,C30_C16, C30_C17,C30_C18, C30_C19,C30_C20, C30_C21,C30_C22, C30_C23,C30_C24, C30_C25,C30_C26, C30_C27,C30_C28, C30_C29,C30_C30, C30_C31,C30_C32, C30_C33,C30_C34, C30_C35,C30_C36, C30_C37,C30_C38, C30_C39,C30_C40, C30_C41, C30_C42,C30_C43, C30_C44	10uF Tantalum, 35V	478-1701-1-ND		10
C31_C01,C31_C02, C31_C03,C31_C04, C31_C05,C31_C06, C31_C07,C31_C08, C31_C09,C31_C10, C31_C11,C31_C12, C31_C13,C31_C14, C31_C15,C31_C16, C31_C17,C31_C18, C31_C19,C31_C20, C31_C21,C31_C22, C31_C23,C31_C24, C31_C25,C31_C26, C31_C27,C31_C28, C31_C29,C31_C30, C31_C31,C31_C32, C31_C33,C31_C34, C31_C35,C31_C36, C31_C37,C31_C38, C31_C39,C31_C40, C31_C41,C31_C42, C31_C43,C31_C44, C31_C45,C31_C46, C31_C47,C31_C48, C31_C49,C31_C50, C31_C51,C31_C52, C31_C53,C31_C54, C31_C55,C31_C56, C31_C57,C31_C58, C31_C59,C31_C60, C31_C61,C31_C62, C31_C63,C31_C64, C31_C65,C31_C66, C31_C67,C31_C68, C31_C69,C31_C70, C31_C71,C31_C72, C31_C73,C31_C74, C31_C75,C31_C76, C31_C77,C31_C78, C31_C79,C31_C80, C31_C81,C31_C82, C31_C83,C31_C84, C31_C85,C31_C86, C31_C87,C31_C88, C31_C89,C31_C90, C31_C91,C31_C92, C31_C93,C31_C94, C31_C95,C31_C96, C31_C97,C31_C98, C31_C99,C31_C100	1uF Tantalum, 50V	478-3075-1-ND		5
D7, D8, D9, D10, D11, D12, D13, D14, D15	80V, 1A Schottky, RB160M60	RB160M 60CT-ND		14
D5	25000	25000		1
D16	010 Male	86170-010P-AJ121-ND		1
L1_A01,L1_A02, L1_A03,L1_A04	1.8uH		Coilcraft 1098CS-182XJLB	4
L2_A01,L2_A02, L2_A03,L2_A04, L3_A01,L3_A02, L3_A03,L3_A04	10uH		Coilcraft 1008L5-103XJLB	8
L4_A01,L4_A02, L4_A03,L4_A04	800nH		Coilcraft 1098CS-801XJGLB	8
L5_A01,L5_A02, L5_A03,L5_A04	180nH		Coilcraft 1098CS-181XJGLB	4
L6_A01,L6_A02, L6_A03,L6_A04	220nH		Coilcraft 1098CS-221XJGLB	8
L7_A01,L7_A02, L7_A03,L7_A04	100nH		Coilcraft 1098CS-101XJGLB	4
L10,L11	10uH	499-1754-1-ND		2
RP_P2,RP_P4,RP_P6, RP_P7,RP_P9	SMP Surface Mount RF Connector	ARF1584-ND		3
R1_A01,R1_A02, R1_A03,R1_A04	MMBT3179	MMBT3179CT-ND		4
R2_DCC1,R2_DCC2, R3_DCC1,R3_DCC2, R3_DCC3,R3_DCC4, R4_DCC1,R4_DCC2, R4_DCC3,R4_DCC4, R5_DCC1,R5_DCC2, R5_DCC3,R5_DCC4, R6_DCC1,R6_DCC2, R6_DCC3,R6_DCC4, R7_DCC1,R7_DCC2, R7_DCC3,R7_DCC4	2K	P2,00KFC1-ND		16
R8_DCC1,R8_DCC2, R8_DCC3,R8_DCC4	499	RNCP0805FD499RCT-ND		4
R9_DCC1,R9_DCC2, R9_DCC3,R9_DCC4	10	RNCP0805FD10R0CT-ND		8
R10_DCC1,R10_DCC2, R10_DCC3,R10_DCC4	4.7 ohm	RNCP0805FD4R70CT-ND		4
R12_A01,R12_A02, R12_A03,R12_A04, R17_A01,R17_A02, R17_A03,R17_A04	49.9 ohms	RNCP0805FD499RCT-ND		12
R10_A01,R10_A02, R10_A03,R10_A04, R16_A01,R16_A02, R16_A03,R16_A04	30 ohms	311-30BCT-ND		8
R11_A01,R11_A02, R11_A03,R11_A04	1.37K	P1,37KDACT-ND		4
R13_A01,R13_A02, R13_A03,R13_A04	1.5K	RNCP0805FD1500CT-ND		4
R14_A01,R14_A02, R14_A03,R14_A04, R18_A01,R18_A02, R18_A03,R18_A04, R20	453, 453 ohms	RQ20P453BCT-ND		8
R15_A01,R15_A02, R15_A03,R15_A04	802 ohms	805-1294-1-ND		4
R19,R28	620	RP,200KCT-ND		2
R20	1.33K	RQ20P1,33K8CT-ND		1
R21,R23,R26	493	RNCP0805FD493RCT-ND		3
R22	2.67K	P2,67KDACT-ND		1
R24	750	RNCP0805FD750RCT-ND		1
R25	0 ohms	RP,000CT-ND		1
R27	600	RNCP0805FD600RCT-ND		1
TP1_DCC1,TP1_DCC2, TP1_DCC3,TP1_DCC4, TP2_DCC1,TP2_DCC2, TP2_DCC3,TP2_DCC4, TP3_DCC1,TP3_DCC2, TP3_DCC3,TP3_DCC4, TP4_T01,TP4_T02, TP4_T03,TP4_T04, TP4_T05,TP4_T06, TP4_T07,TP4_T08, TP4_T09,TP4_T10, TP4_T11,TP4_T12, TP4_T13,TP4_T14	TESTPNT	5016KCT-ND		22
U1_DCC1,U1_DCC2, U1_DCC3,U1_DCC4	AD8672	AD8672ARZ-REEL7CT-ND		4
U2_DCC1,U2_DCC2, U2_DCC3,U2_DCC4	LT1128	LT1128CS88PBF-ND		4
U3_A01,U3_A02, U3_A03,U3_A04	LM85624AH	296-3E334-1-ND		8
U5,U6	LM3378T	LM3378TGS-ND		3
U6,U7,U8	LM317T	LM3178TGS-ND		3