

1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.
2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

Thu Apr 17 17:11:44 2014

REV	ECN	DESCRIPTION OF REVISION	CK APPD	DATE
7	0002727241	ENGINEERING RELEASED		2014-04-18

N61 CARRIER BUILD

N61 BOM CALLOUTS

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54	JUMPER	N61_RADIO_MLB	03/24/2014

NAND BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S0998	1	NAND, 19NM, 16GX8, MLC, PPN1.5	U0604	CRITICAL	NAND_16G
335S0993	1	NAND, 19NM, 32GX8, MLC, PPN1.5	U0604	CRITICAL	NAND_32G
335S0994	1	NAND, 19NM, 64GX8, MLC, PPN1.5	U0604	CRITICAL	NAND_64G
335S00010	1	NAND, 19NM, 128GX8, TLC, PPN1.5	U0604	CRITICAL	NAND_128G
138S0867	1	CAP, X5R, 10UF, 20%, 6.3V, 0.65MM, HRTZ, 0402	C0610, C0611, C0614, C0634	CRITICAL	NAND_16G
138S0867	1	CAP, X5R, 10UF, 20%, 6.3V, 0.65MM, HRTZ, 0402	C0613, C0633, C0610, C0611, C0614, C0634	CRITICAL	NAND_32G & NAND_64G
138S00003	1	CAP, X5R, 15UF, 20%, 6.3V, 0.65MM, HRTZ, 0402	C0613, C0633, C0610, C0611, C0614, C0634	CRITICAL	NAND_128G

ALTERNATE NAND BOM OPTIONS

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S0992	335S0998	ALTERNATE	J0604	TOSHIBA, NAND, 16GB
335S1038	335S0998	ALTERNATE	J0604	HYNIX, NAND, 16GB
335S1040	335S0994	ALTERNATE	J0604	HYNIX, NAND, 64GB
335S00014	335S0994	ALTERNATE	J0604	TOSHIBA, NAND, 64GB
335S00015	335S00010	ALTERNATE	J0604	TOSHIBA, NAND, 128GB
335S00009	335S0994	ALTERNATE	J0604	SANDISK, NAND, 64GB, TLC

SHIELD BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
604-00241	1	SUBASSY, SHIELD, UPPER FRONT, N61	SH2501	CRITICAL	COMMON
604-00242	1	SUBASSY, SHIELD, LOWER FRONT, N61	SH2502	CRITICAL	COMMON
604-00243	1	SUBASSY, SHIELD, LOWER BACK, N61	SH2504	CRITICAL	COMMON
604-00244	1	SUBASSY, SA SHIELD, N61	SH2506	CRITICAL	COMMON

ALTERNATE BOM OPTIONS

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S1844	152S1836	ALTERNATE	L1604	TY ALT INDUCTOR
152S1842	152S1849	ALTERNATE	L1519	TY ALT INDUCTOR
197S0392	197S0369	ALTERNATE	Y1200	ESPN ALT XTAL
197S0399	197S0369	ALTERNATE	Y1200	NDK ALT XTAL
338S1285	338S1202	ALTERNATE	U1601	L21 SPKAMP
152S2034	152S2033	ALTERNATE	L1135	1.2MM 1.0UH, CYNTEC
152S00004	152S2049	ALTERNATE	L1135	1.2MM 0.47UH, CYNTEC
339S00005	339S0246	ALTERNATE	U0201	FIJI, B0, SAMSUNG
339S0247	339S0246	ALTERNATE	U0201	FIJI, B0, HYNIX
339S00006	339S0246	ALTERNATE	U0201	FIJI, B1, E
339S00007	339S0246	ALTERNATE	U0201	FIJI, B1, H
339S00008	339S0246	ALTERNATE	U0201	FIJI, B1, S
155S0773	155S0453	ALTERNATE		TY 1200HM FERRITE
118S0764	118S0717	ALTERNATE	R1309	3.92KOHM, 01005
343S0688	343S0638	ALTERNATE	U2401	CUMULUS C1, FAB4
138S00005	138S00003	ALTERNATE	C1290	15UF, 0402, HRTZL CAP
155S00011	155S00008	ALTERNATE	L1135	CMC, 90OHM, MURATA
377S0168	377S0140	ALTERNATE	DZ1113	SUPPL, TRANS, VARISTOR, MOTEC
155S0895	155S0610	ALTERNATE	FL1802, FL1803	FERR BE, 1500PM, 200PM, 01005
138S0648	138S0652	ALTERNATE	C1018	CAP, 4.7UF, 20%, 6.3V, 0402, R=0.65MM
138S0657	138S0702	ALTERNATE	C1106	CAP, 4.7UF, 20%, 6.3V, 0402
338S00028	338S00017	ALTERNATE	J2203	CARBON, BOSCH, BMS142BC
338S00029	338S00017	ALTERNATE	J2203	CARBON, ST, AP60S2AA
335S00013	335S0894	ALTERNATE	J0301	BT BK REFRON

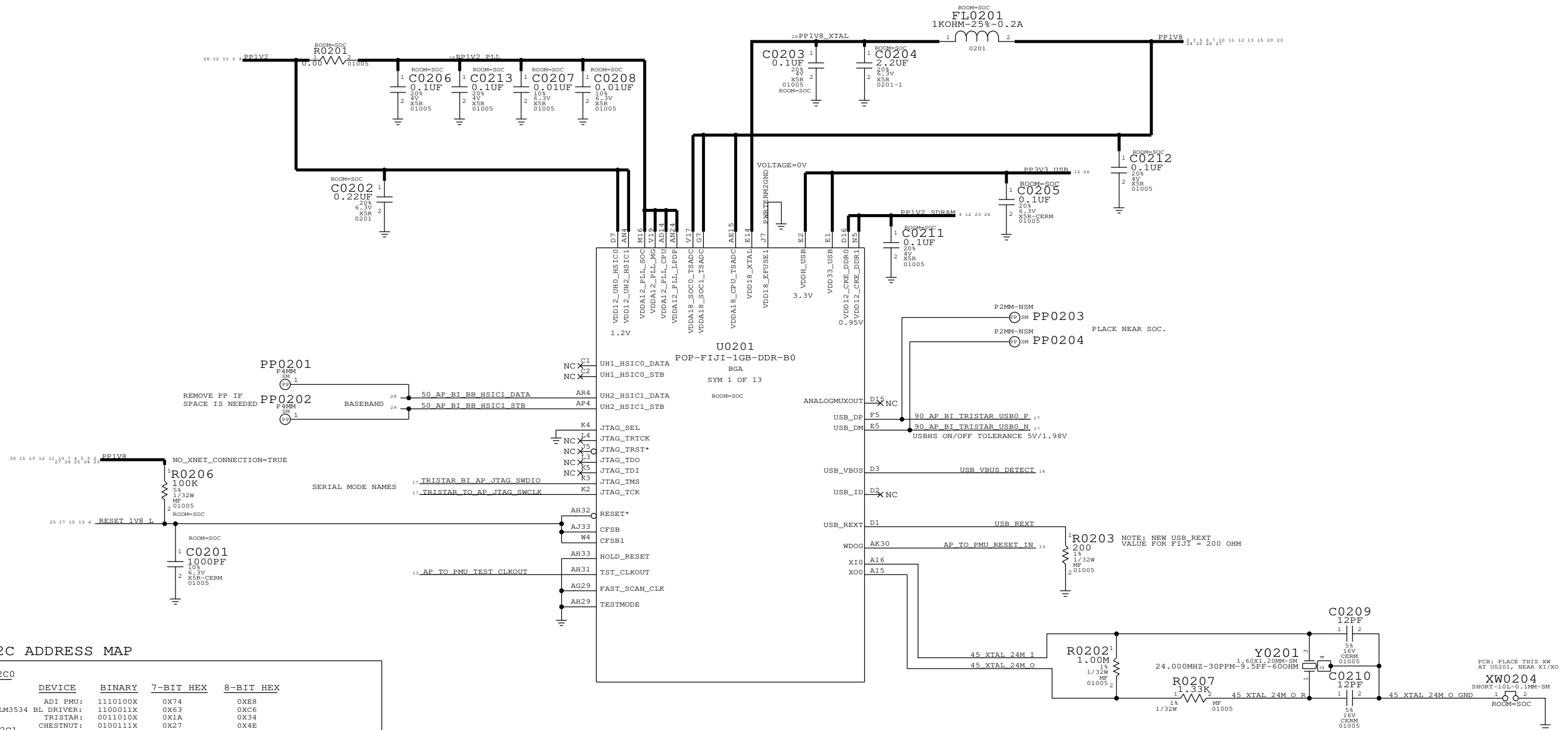
SCH 051-9903
BRD 820-3486
MCO 056-6825

BOM 639-4237 (16GB, BETTER) BOM 639-00208 (16GB, BETTER, DTD)
 BOM 639-5838 (32GB, BEST) BOM 639-00209 (32GB, BEST, DTD)
 BOM 639-5839 (64GB, ULTRA) BOM 639-00210 (64GB, ULTRA, DTD)

BOM 639-00025 (128GB, SUPREME, TLC) BOM 639-00212 (128GB, SUPREME, TLC, DTD)

DRAWING TITLE		SCHEM, MLB, N61	
Apple Inc.	DRAWING NUMBER	051-9903	SIZE D
	REVISION	7.0.0	
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FIJI: JTAG, USB, HSIC, XTAL



I2C ADDRESS MAP

I2C0	DEVICE	BINARY	7-BIT HEX	8-BIT HEX
I2C0	ADI PMU:	1110100X	0X74	0XE8
	LM3534 BL DRIVER:	1100011X	0X63	0XC6
	TRISTAR:	0011010X	0X1A	0X34
I2C1	CHESTNUT:	0100111X	0X27	0X4E
	TIGRIS CHARGER:	1110101X	0X75	0XE9
	LINEAR VIBE:	1011010X	0X5A	0XB4
	CS35L19B AMP:	1000000X	0X40	0X80
MESA EEPROM (MEMORY):	MESA EEPROM (MEMORY):	1010110X	0X56	0XAC
	MESA EEPROM (ID):	1011110X	0X5E	0XBC
I2C2	CT814 ALS:	0101001X	0X29	0X52
	DISPLAY EEPROM:	1010001X	0X51	0XA2
	RCAM I2C			
RCAM I2C	OPEL STROBE DRIVER:	1100011X	0X63	0XC6
	REAR FACING CAM:	0010000X	0X10	0X20
	VCM AF DRIVER:	0001100X	0X0C	0X18
FCAM I2C	FRONT FACING CAM:	0010000X	0X10	0X20

NOTE: ACCEL, GYRO, COMPASS ALL USING SPI (VIA OSCAR) FOR AP COMMUNICATION.

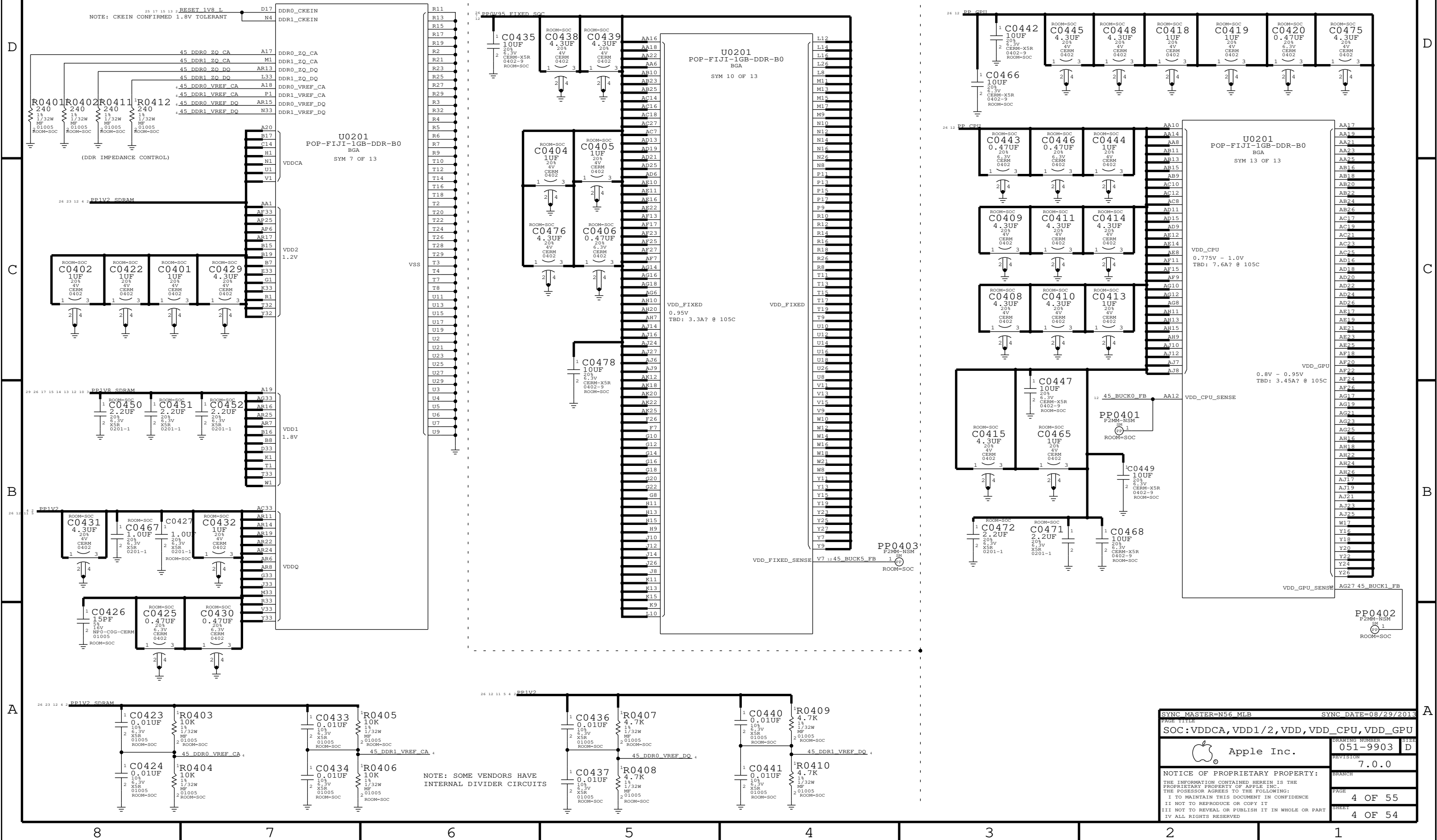
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SOC:MAIN			
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FIJI: VDDCA, VDD1/2, VDDQ, VDD, VDD_FIXED, VDD_CPU, VDD_GPU

VDDCA, VDD1/2, VDDQ

VDD

VDD_CPU, VDD_GPU

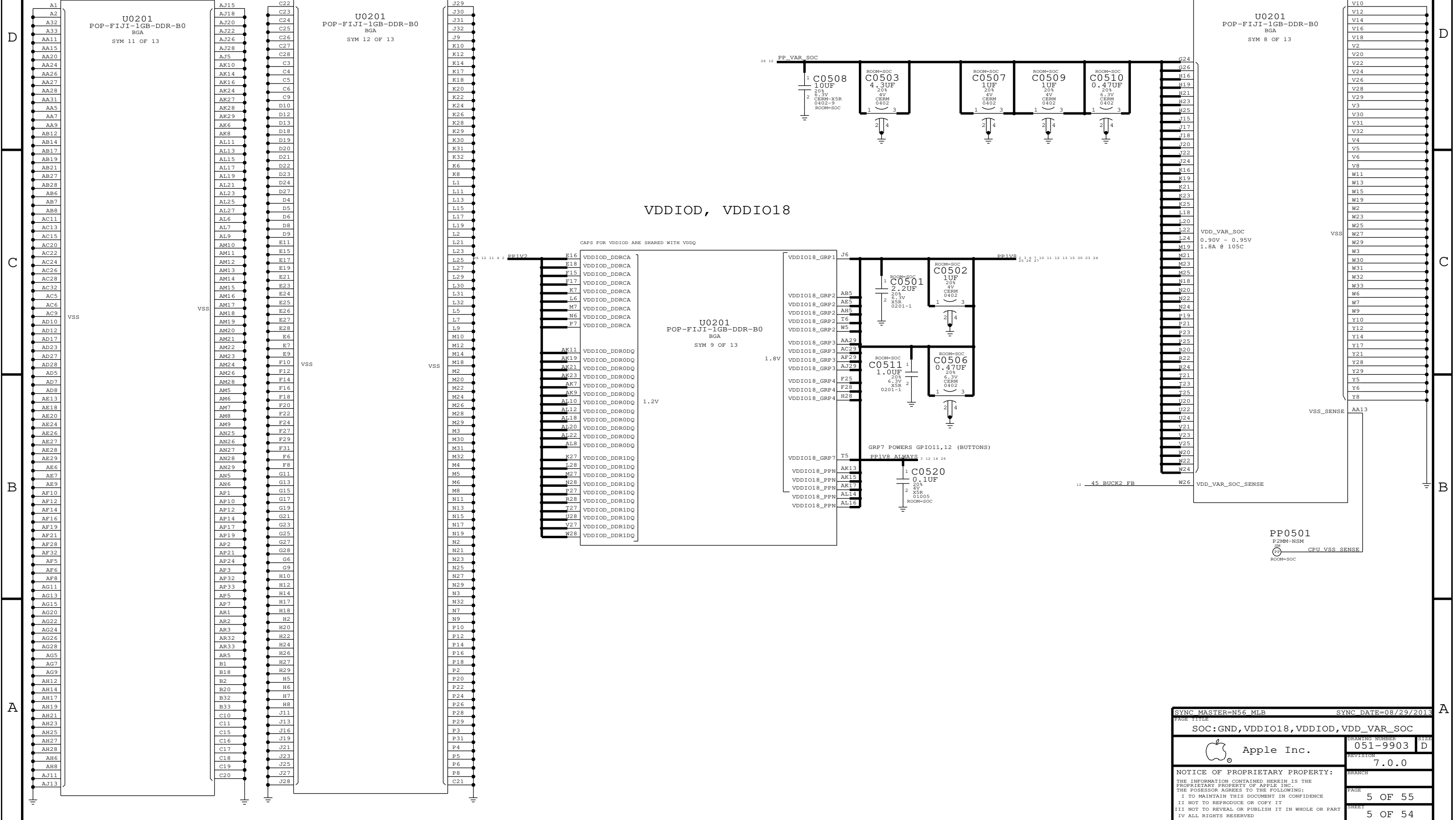


SYNC MASTER=N56 MLB		SYNC DATE=08/29/2013	
PAGE TITLE			
SOC:VDDCA, VDD1/2, VDD, VDD_CPU, VDD_GPU			
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FIJI: VDDIOD, VDDIO18, VDD_VAR_SOC

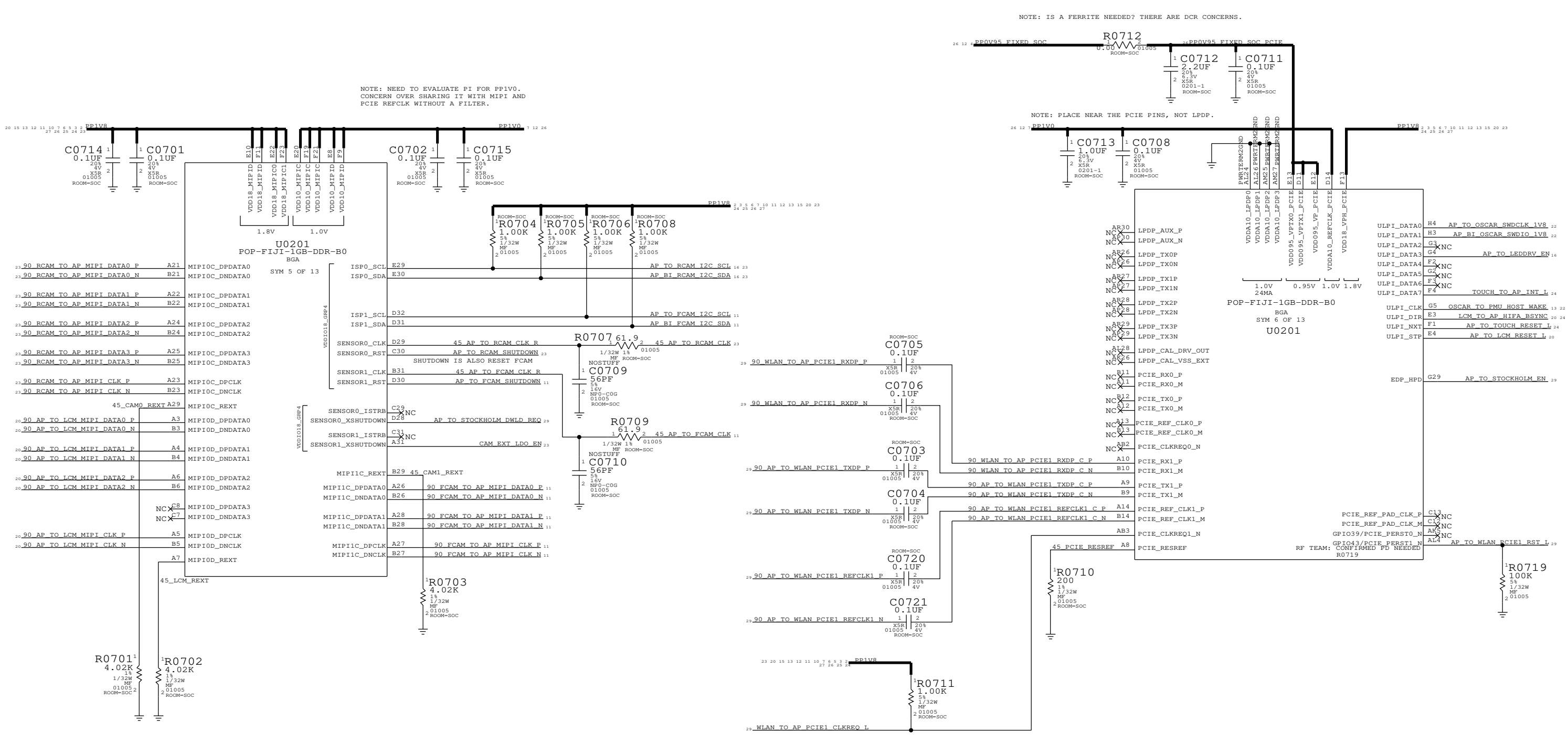
JUST A FEW GNDS

VDD_SRAM, VDD_SOC



SYNC MASTER=N56 MLB		SYNC DATE=08/29/2013	
PAGE TITLE SOC:GND, VDDIO18, VDDIOD, VDD_VAR_SOC			
DRAWING NUMBER 051-9903		SIZE D	
REVISION 7.0.0		BRANCH	
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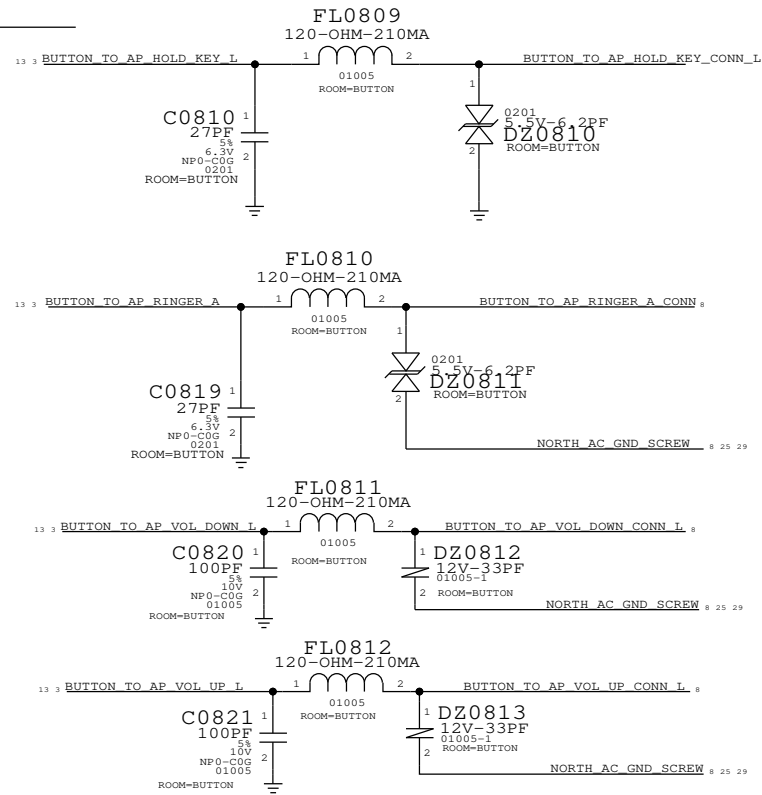
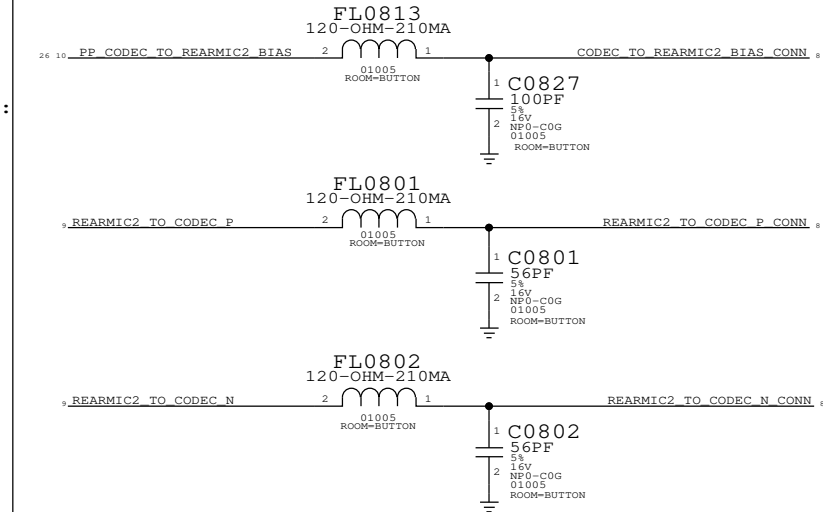
FIJI: HIGH SPEED DIG (CAM, LCD, LPDP, PCIE)



SYNC MASTER=N56 MLB		SYNC DATE=08/29/2013	
PAGE TITLE			
SOC:CAM, LCD, LPDP, PCIE			
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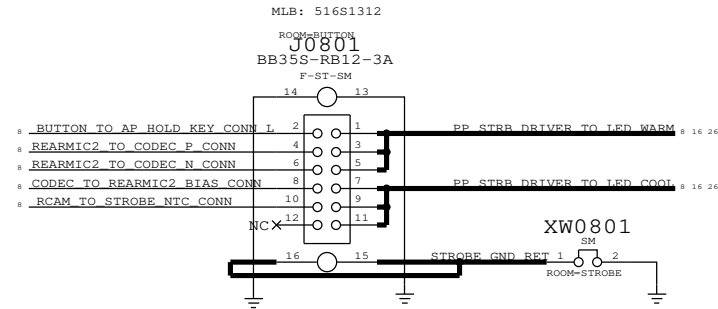
BUTTON FLEX (BUTTONS, ANC REF MIC, STROBE, STROBE_NTC, WIFI FLEX PAC)

MIC2 (ANC REF MIC):
MIC2_4 BIAS,
MIC2_P,_N

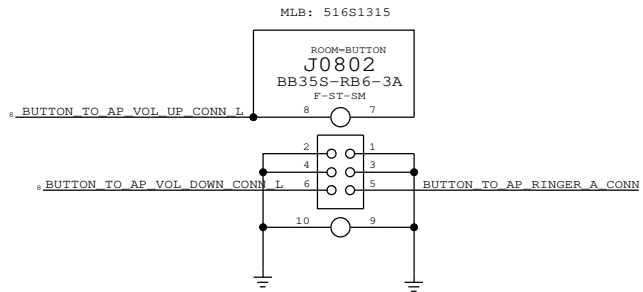


BUTTONS:
RINGER, HOLD,
VOL_UP/DOWN,

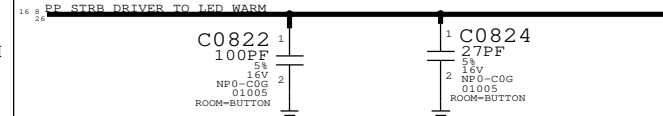
RIGHT BUTTON B2B



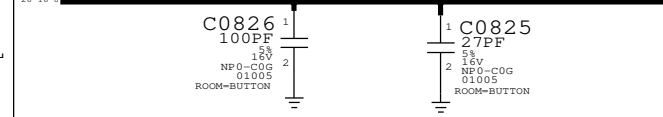
LEFT BUTTON B2B



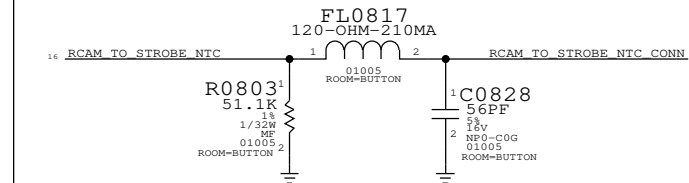
STROBE:
LED WARM



STROBE:
LED COOL



STROBE:
NTC

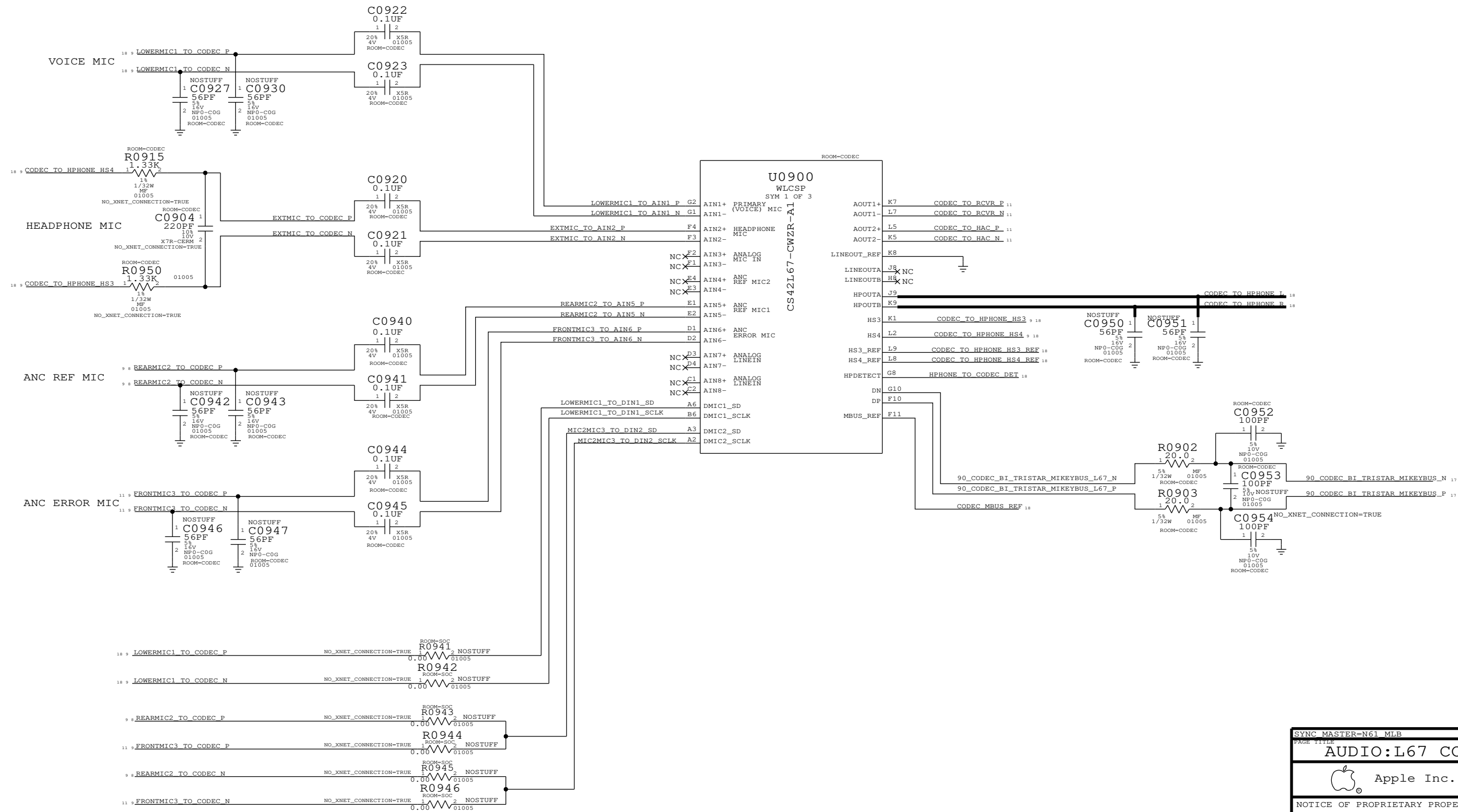


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L67 AUDIO CODEC

AUDIO I/O

(ANALOG MIC IN, DIG MIC IN, HPOUT, LINEOUT, RECEIVER OUT, MIKEYBUS)

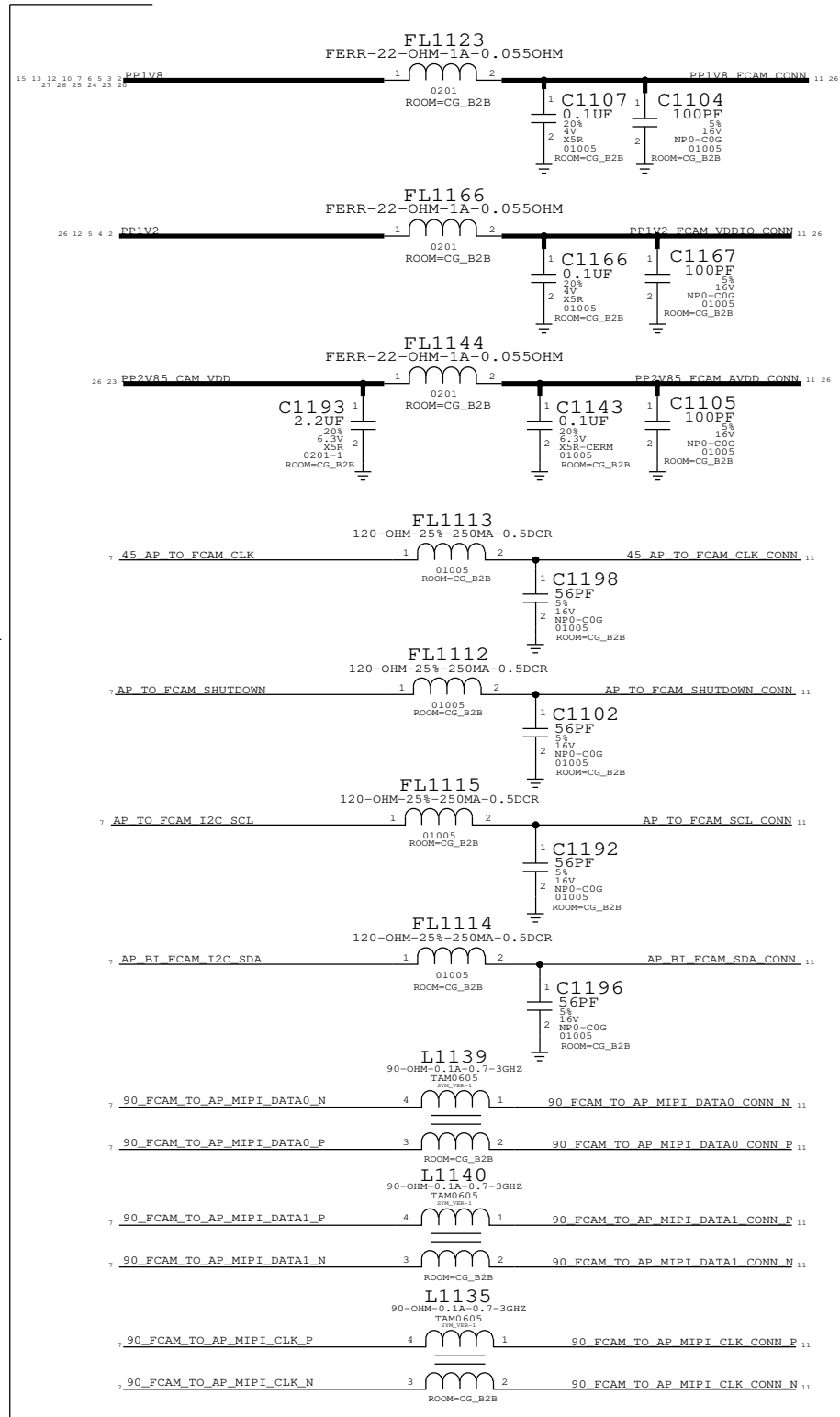
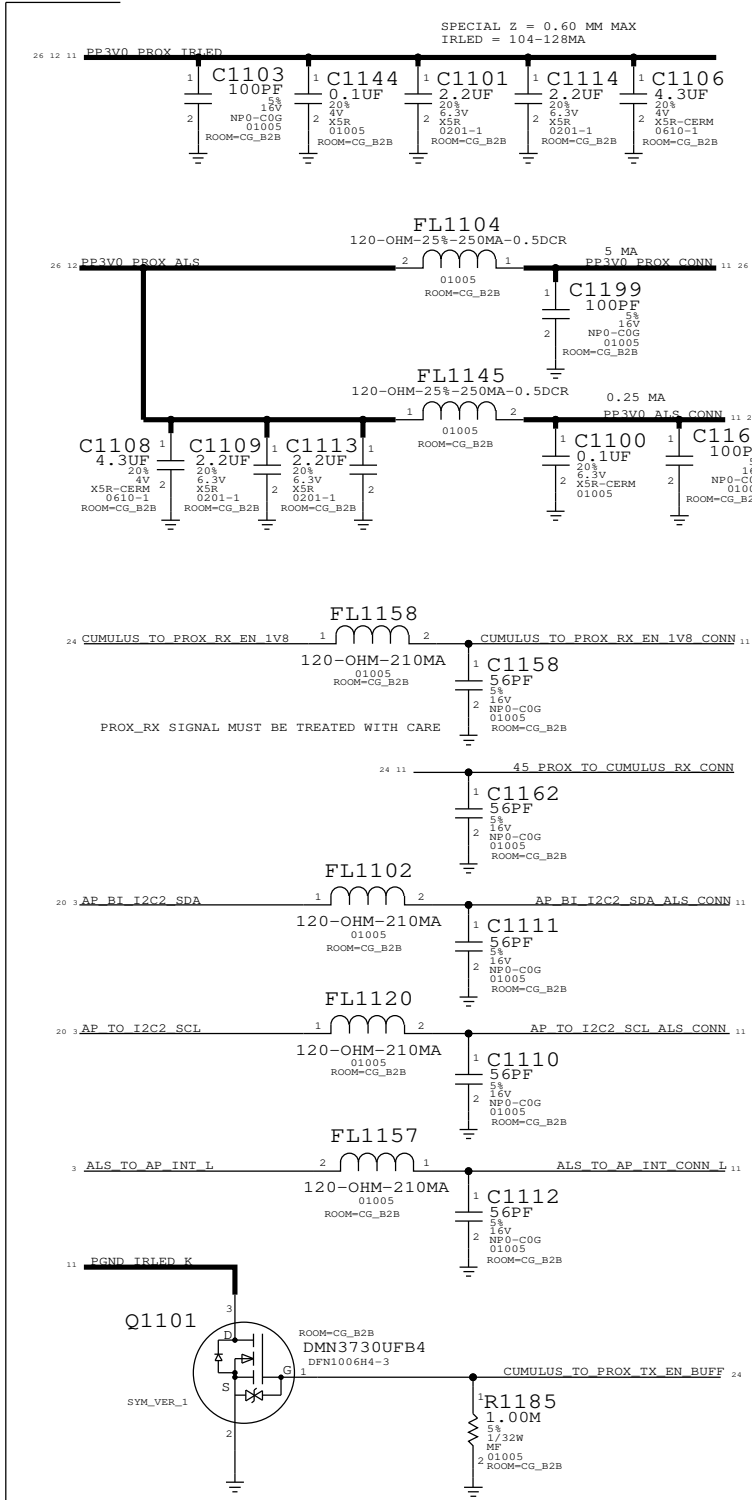
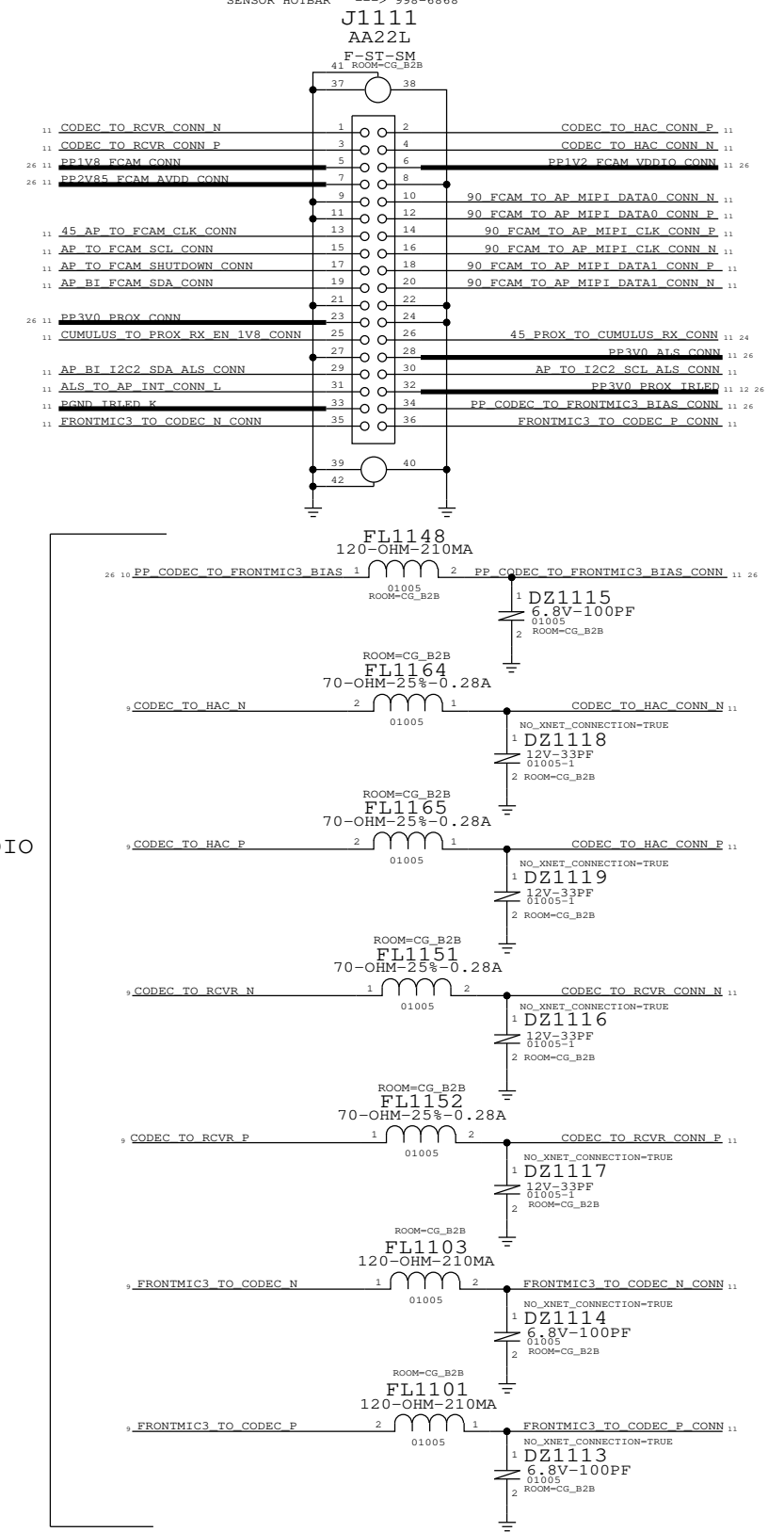


SYNC MASTER=N61 MLB		SYNC DATE=08/26/2013	
PAGE TITLE AUDIO:L67 CODEC (1/2)			
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FRONT CAM FLEX B2B

(FCAM, PROX, ALS, RECEIVER, ANC ERROR MIC)

THIS ON ONE MLB ---> 516S1081 RECEPTACLE
SENSOR HOTBAR ---> 998-6868

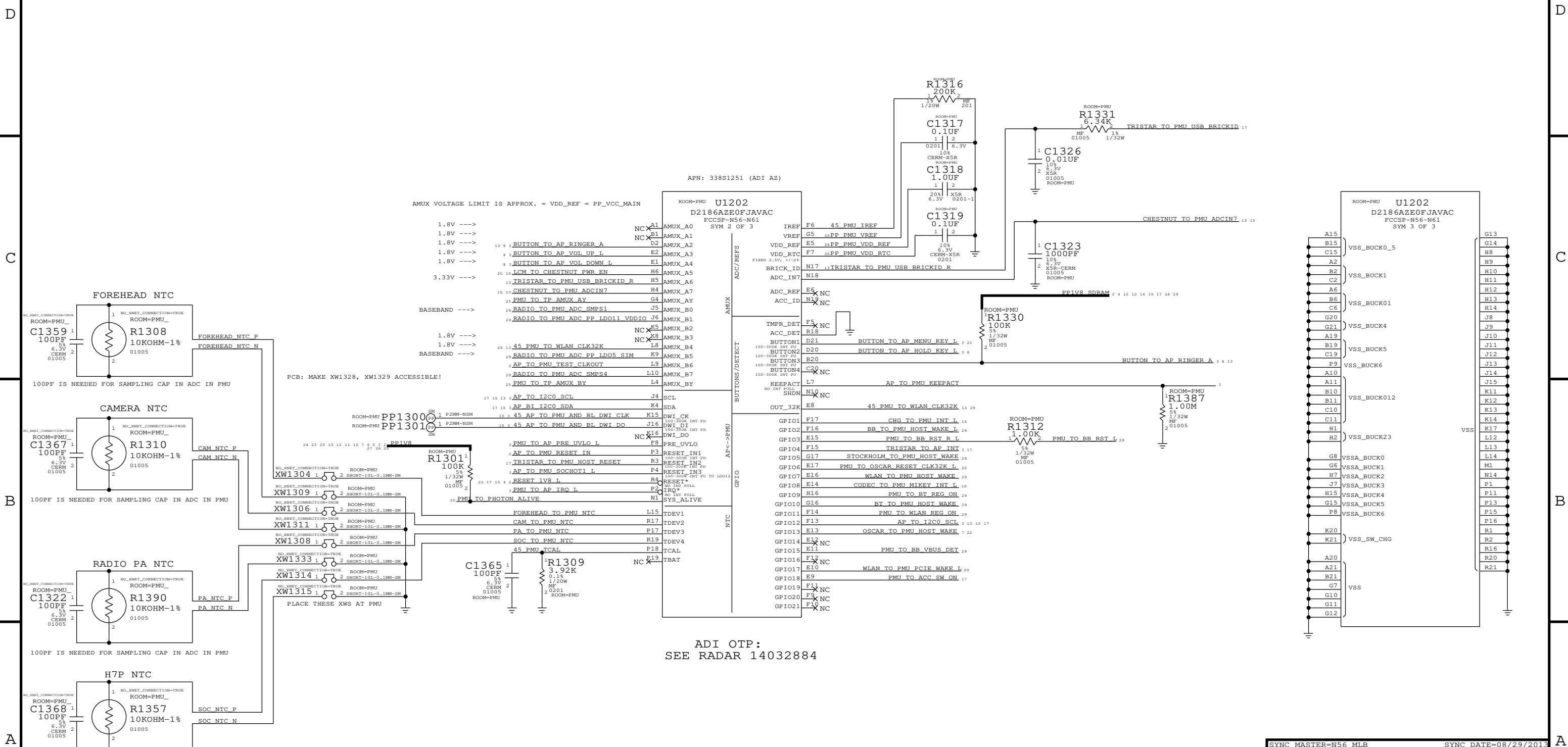


AUDIO

PAGE TITLE		SYNC DATE=08/26/2013	
CAMERA: FRONT FLEX CONN			
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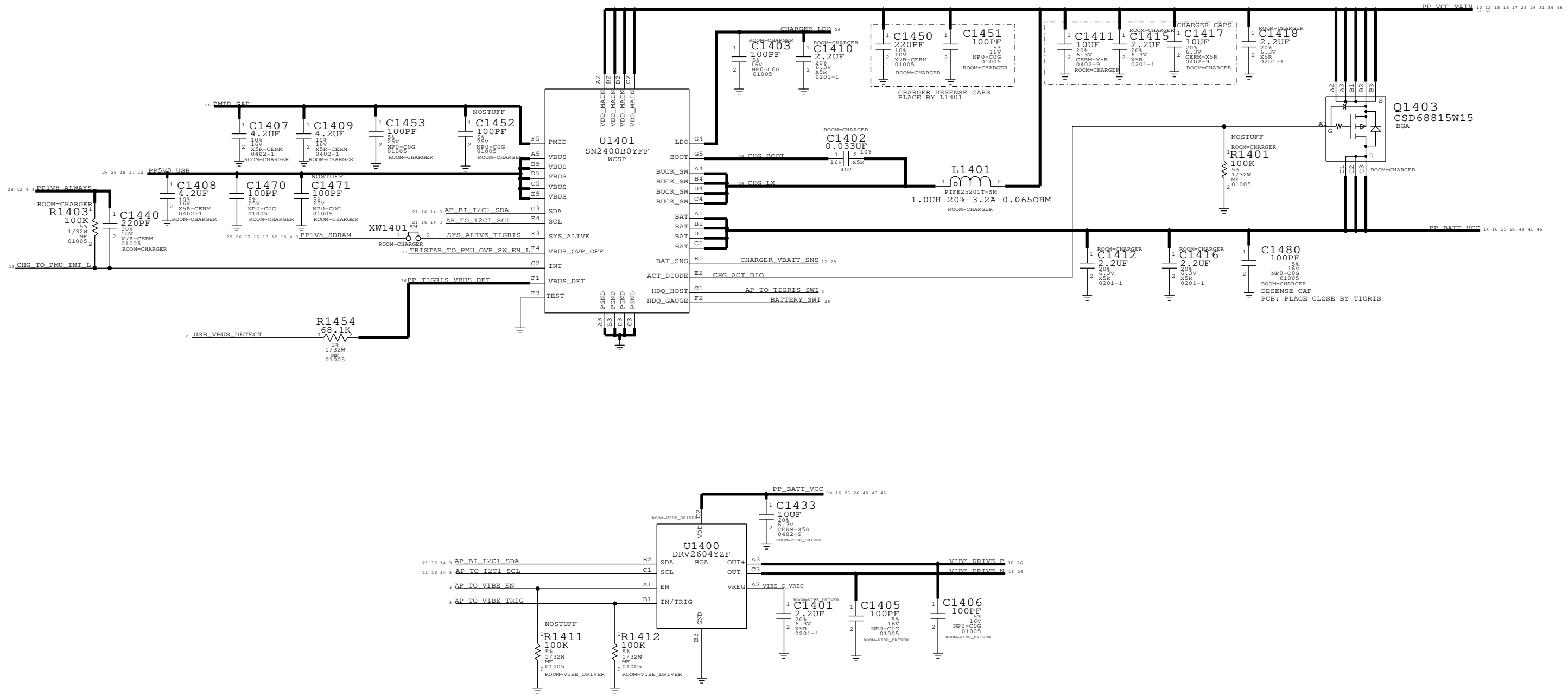
ADI PMU

(AMUX, GPIO, BUTTONS, ADC, THERMISTORS, SYSTEM I/F, GND)



SYNC MASTER=N56 MLB		SYNC DATE=08/29/2013	
PAGE TITLE			
POWER:ADI (2/2)			
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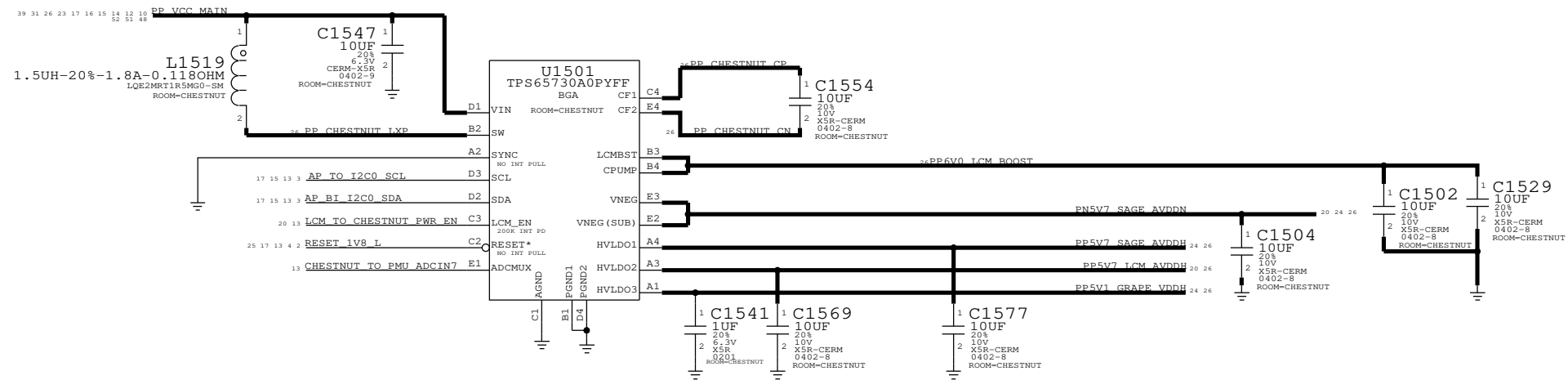
TIGRIS CHARGER & VIBE DRIVER



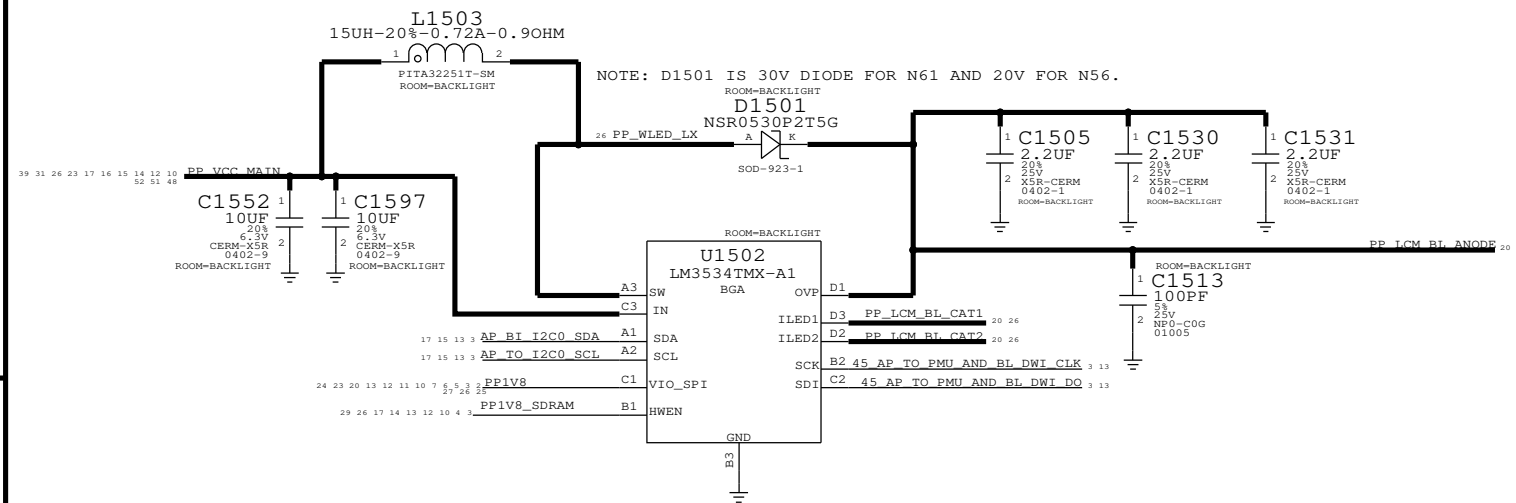
POWER: TIGRIS, VIBE DRIVER		
Apple Inc.	DRAWING NUMBER 051-9903	SIZE D
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CHESTNUT, BACKLIGHT DRIVER, MESA BOOST

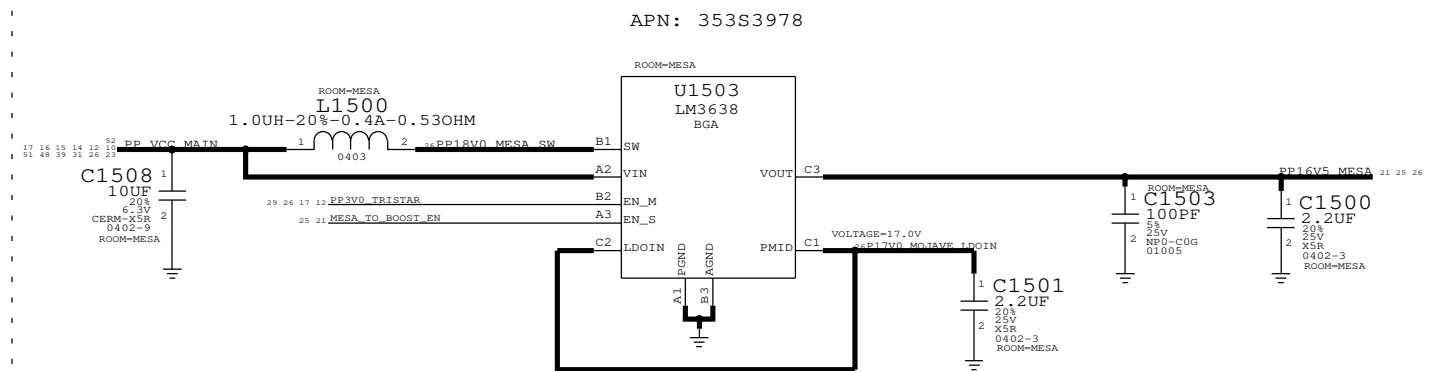
D500 DISPLAY PMU (TI CHESTNUT, 338S1149)



D500 BACKLIGHT DRIVER



MESA BOOST A0

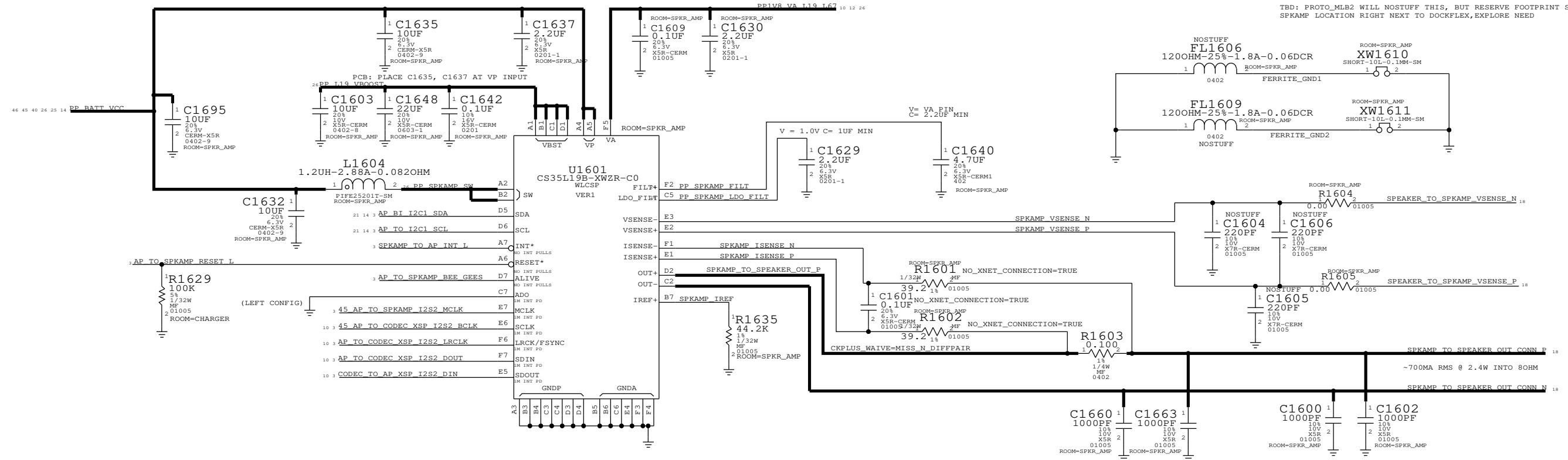


SYNC MASTER=N61 MLB		SYNC DATE=08/26/2013	
PAGE TITLE DISPLAY:CHESTNUT, BACKLIGHT DRIVER			
DRAWING NUMBER 051-9903		SIZE D	
REVISION 7.0.0		BRANCH	
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SPEAKER AMP, LED DRIVER

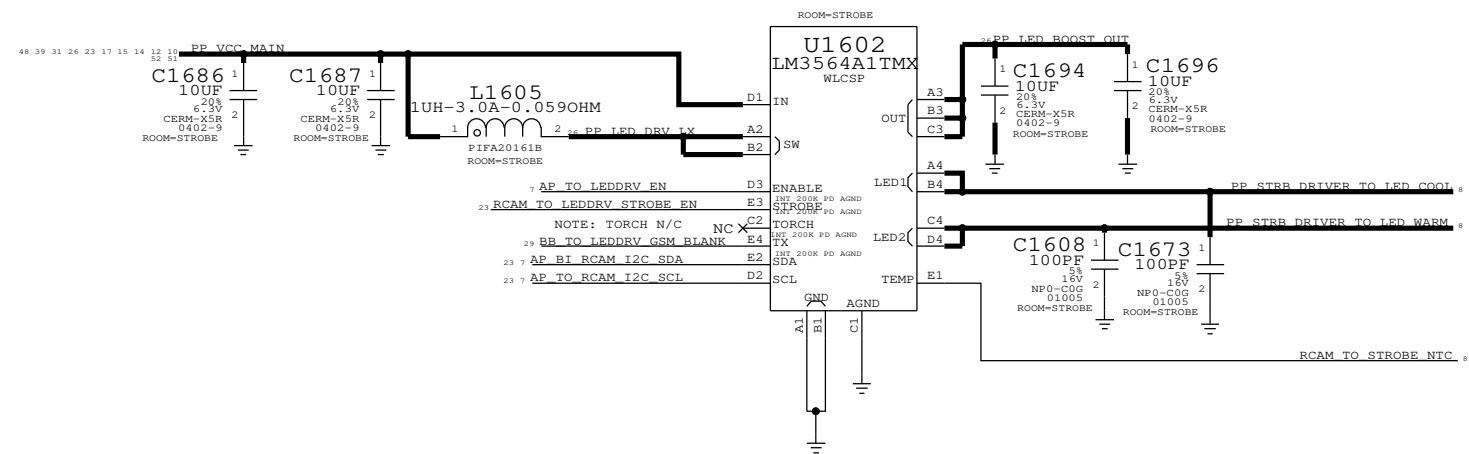
SPEAKER AMP

I2C ADDRESS: 1000000X



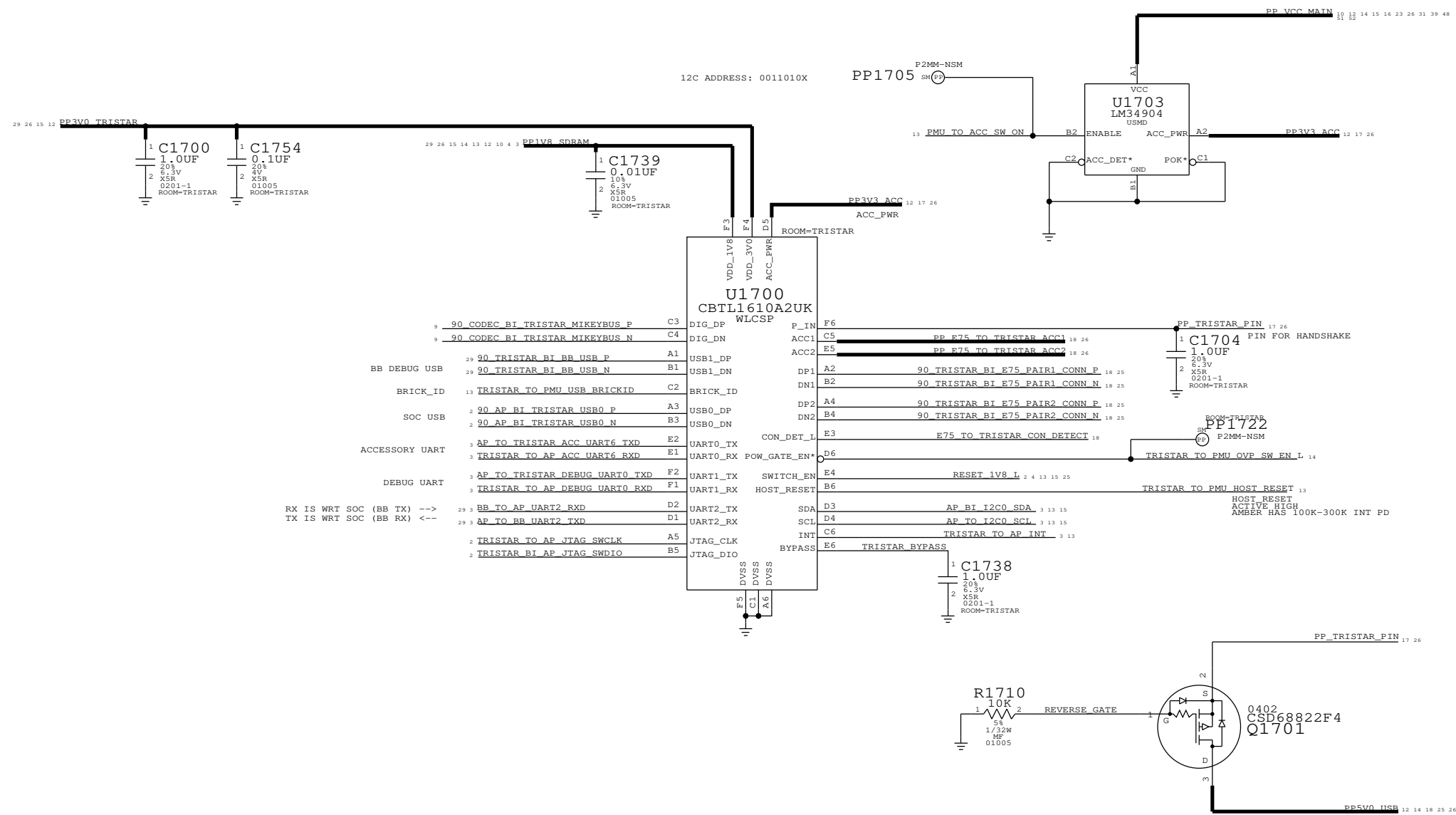
STROBE DRIVER

TI: APN 353S3899



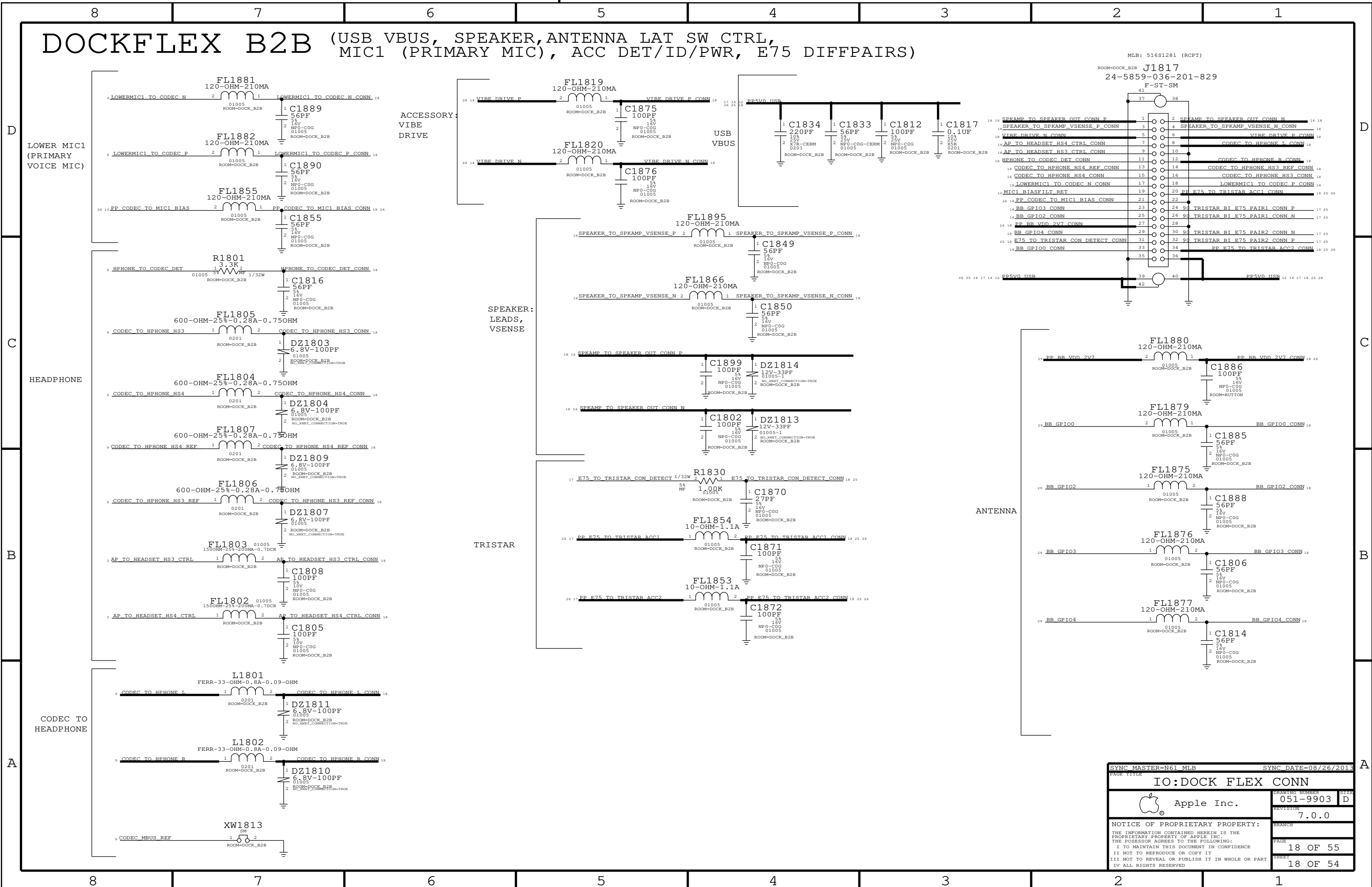
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AUDIO: SPKR AMP, STROBE			
Apple Inc.	DRAWING NUMBER	051-9903	SIZE D
	REVISION	7.0.0	
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TRISTAR2



SYNC MASTER=N61 MLB		SYNC DATE=08/26/2013	
PAGE TITLE			
IO:TRISTAR2			
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		17 OF 55	
SHEET		17 OF 54	

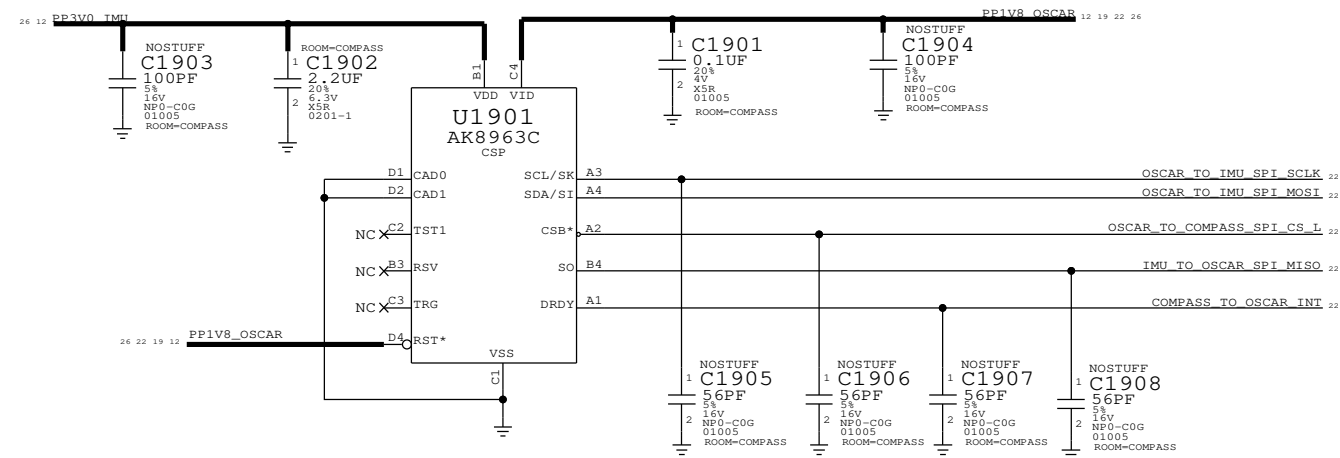
DOCKFLEX B2B (USB VBUS, SPEAKER, ANTENNA LAT SW CTRL, MIC1 (PRIMARY MIC), ACC DET/ID/PWR, E75 DIFFPAIRS)



SYNC MASTER=N61 MLB		SYNC DATE=08/26/2013	
PAGE TITLE			
IO:DOCK FLEX CONN			
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	REVISION	7.0.0	D
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COMPASS - AKM COMPASS IN POR LOCATION

COMPASS CSP: 338S1014

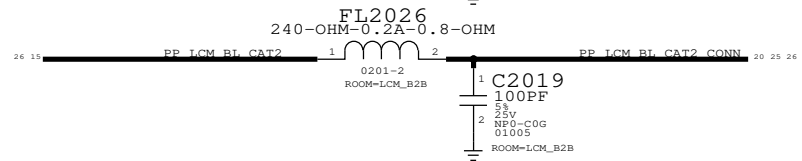
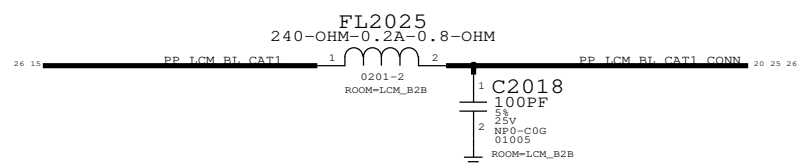
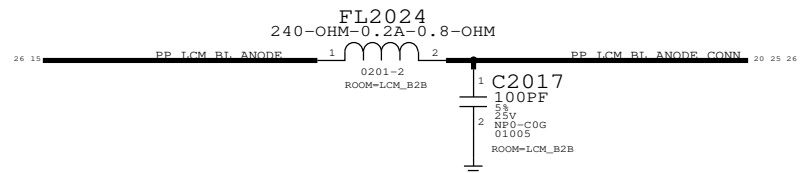


SYNC MASTER=N61 MLB		SYNC DATE=08/26/2013	
SENSORS: COMPASS			
Apple Inc.		DRAWING NUMBER	SIZE
		051-9903	D
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		PAGE	19 OF 55
		SHEET	19 OF 54

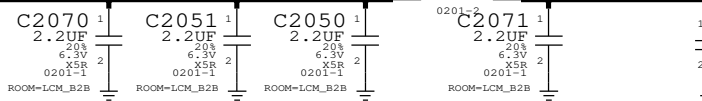
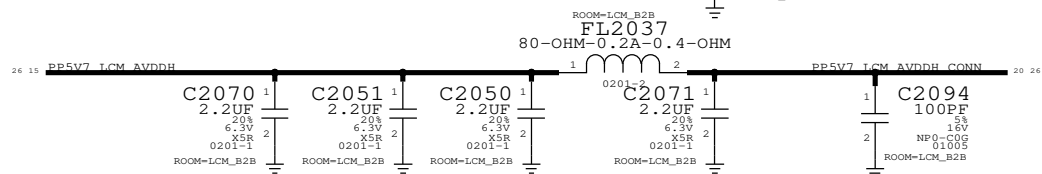
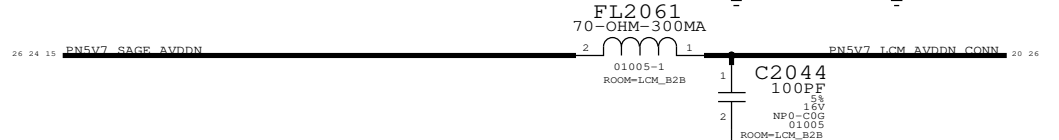
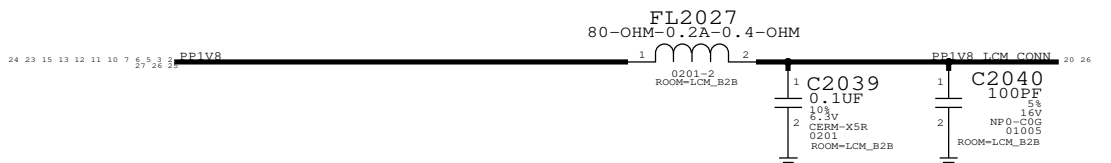
LCD B2B

Backlight

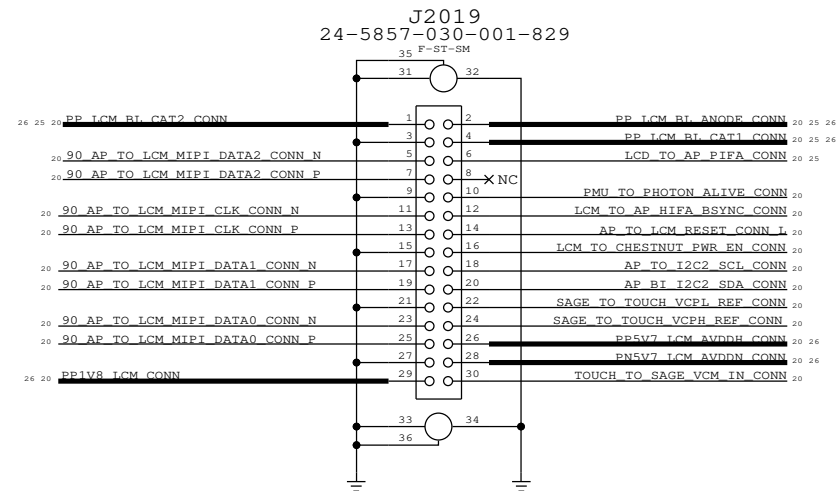
(N56 HAS A 2ND SET OF BL SIGNALS ON P. 19).



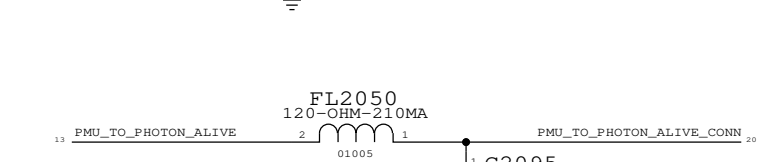
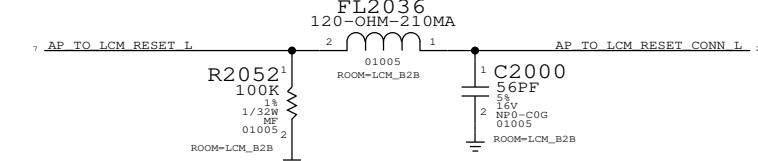
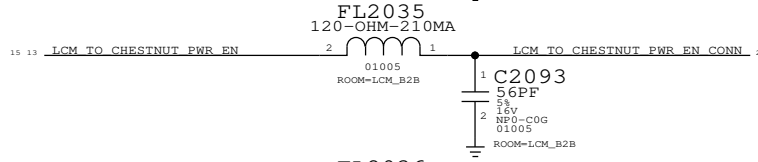
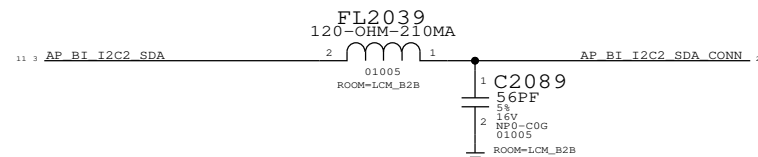
LCM Supplies



THIS ONE ON MLB ----> 516S1164

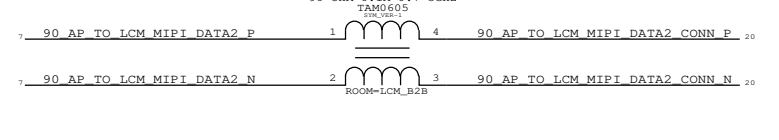
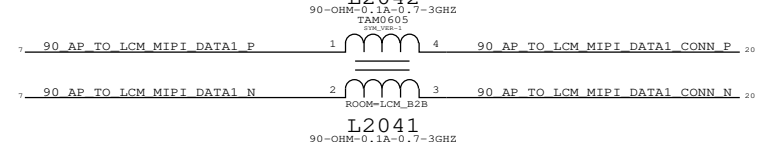
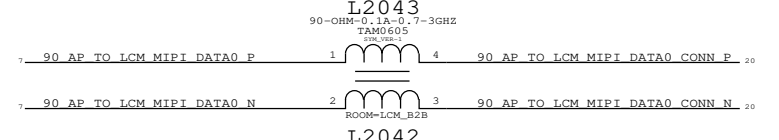
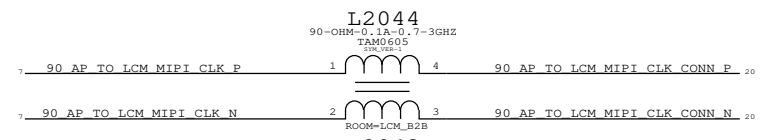


Digital Interfaces

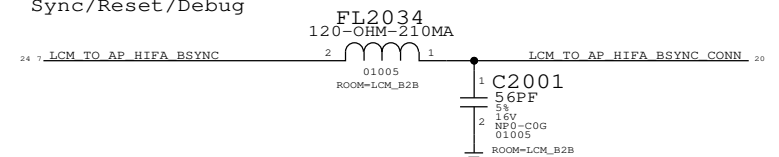


MIPI Common Mode Chokes

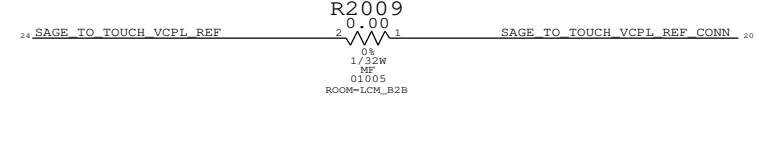
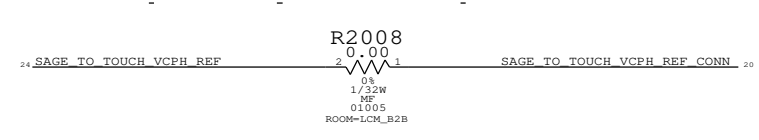
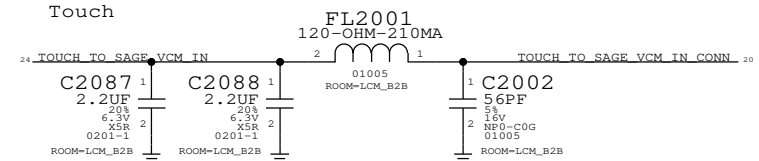
(N56 HAS A 4TH MIPI LANE ON P. 19).



Sync/Reset/Debug

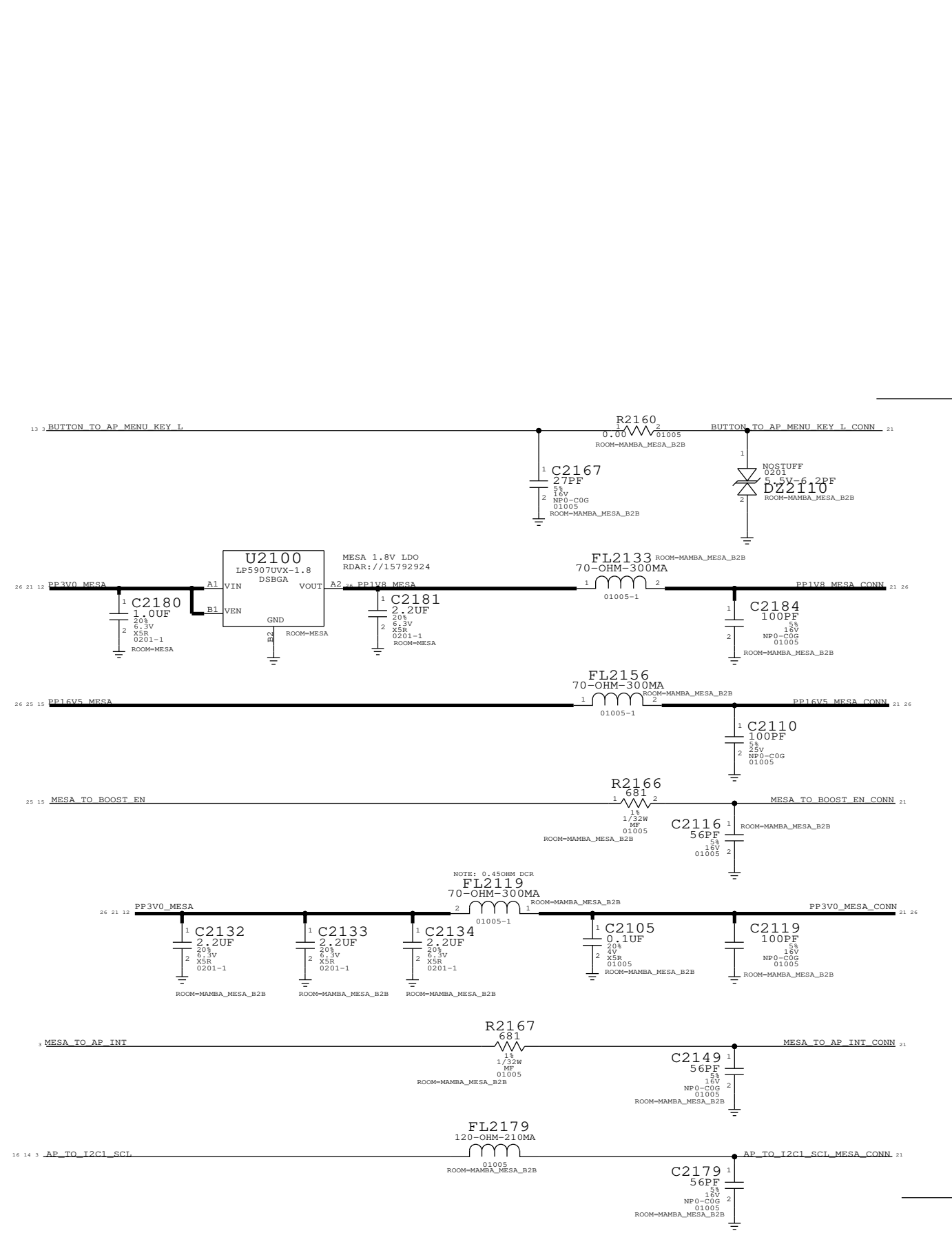


Touch

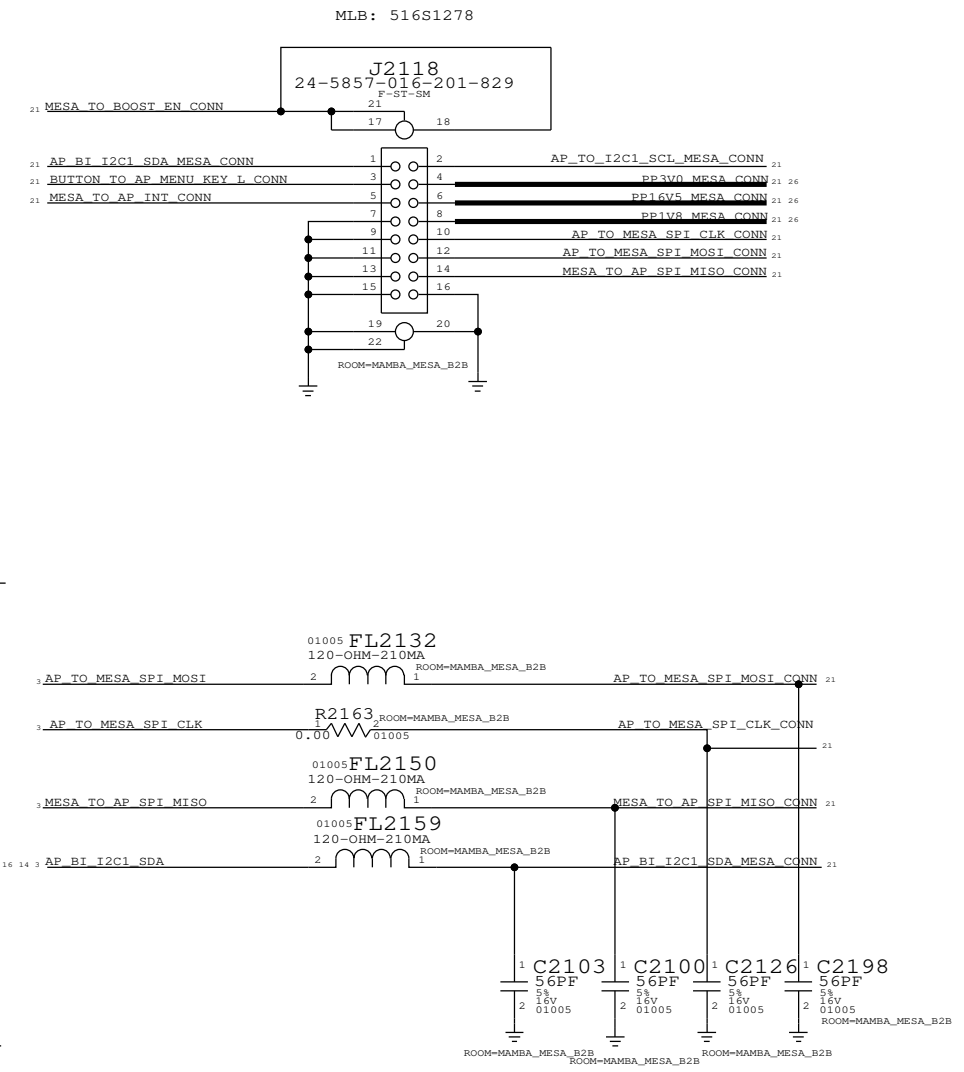


SYNC MASTER=N61 MLB		SYNC DATE=08/26/2013	
PAGE TITLE			
DISPLAY:FLEX CONN			
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MESA CONNECTOR



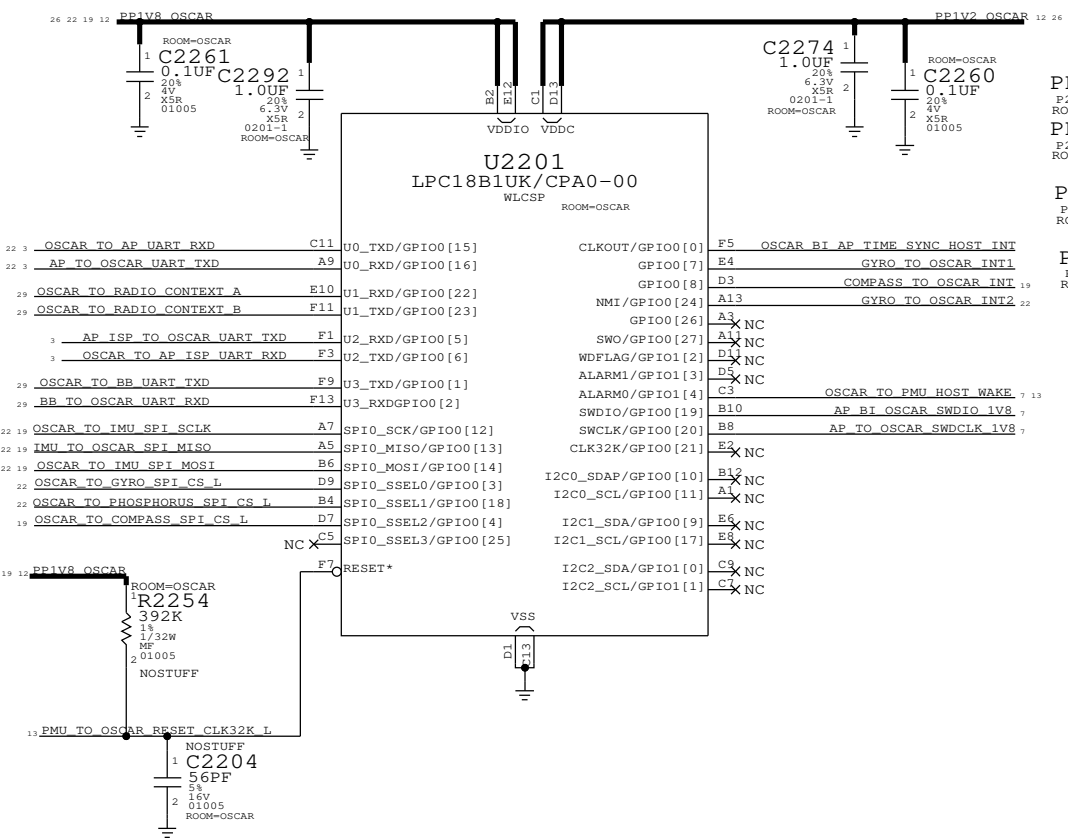
MESA SENSOR:



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SENSORS:MESA FLEX CONN		
Apple Inc.	DRAWING NUMBER	051-9903
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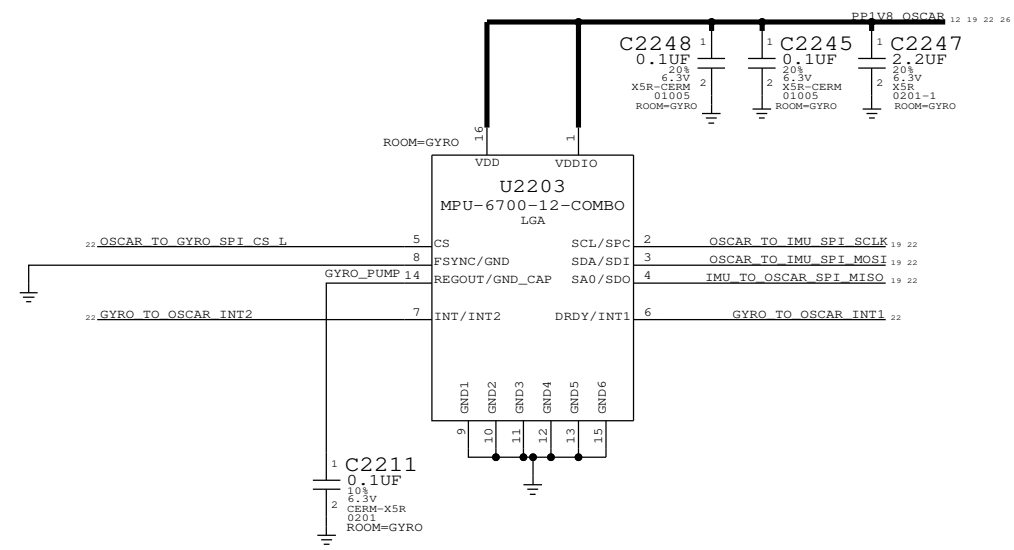
OSCAR + SENSORS

OSCAR VDDIO = 1.8V ALWAYS ON (NEED TO MAKE HOST & RUN PLL)
OSCAR CORE = 1.2V ALWAYS ON (NEED TO RUN IN SDRAM)

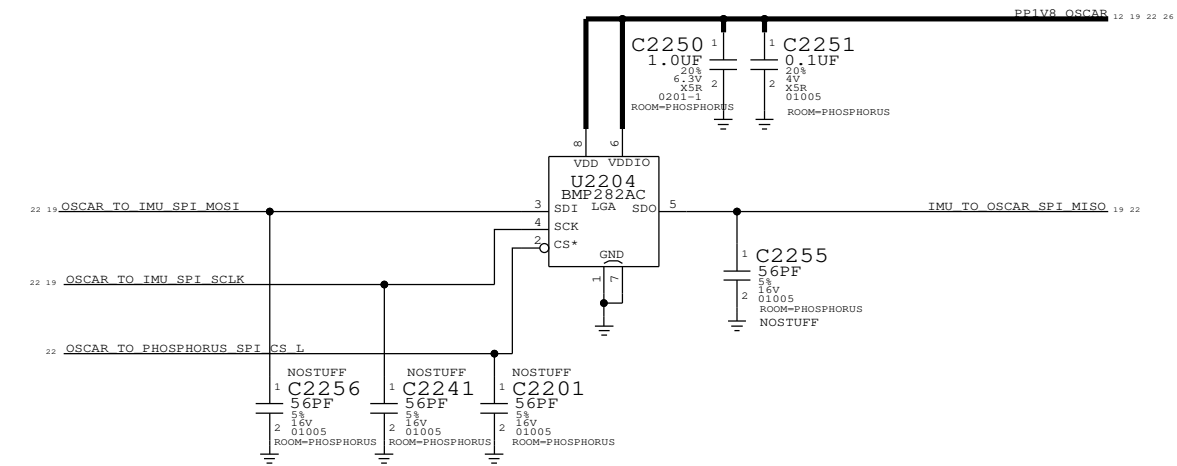


CARBON (ACCEL GYRO COMBO)

INVENSENSE, APN 338S00017, C2211=0.1UF
BOSCH, APN 338S00028, C2211=0.1UF
ST, APN 338S00029, C2211=0.01UF,25V



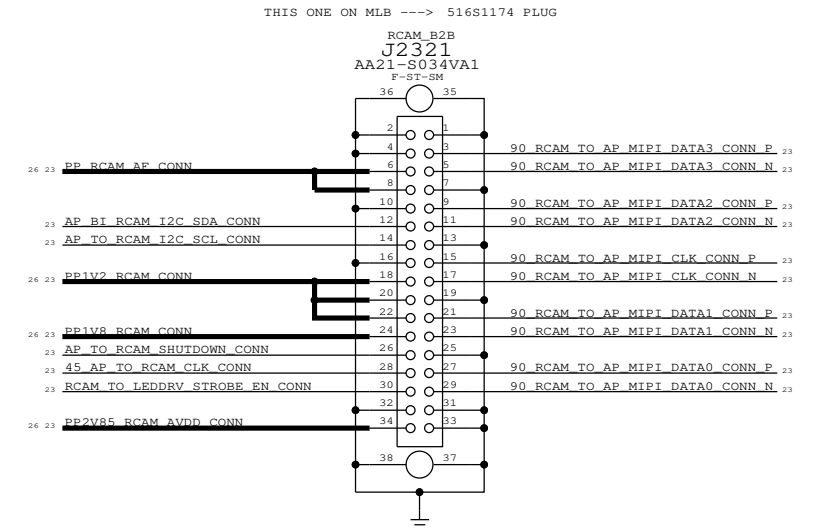
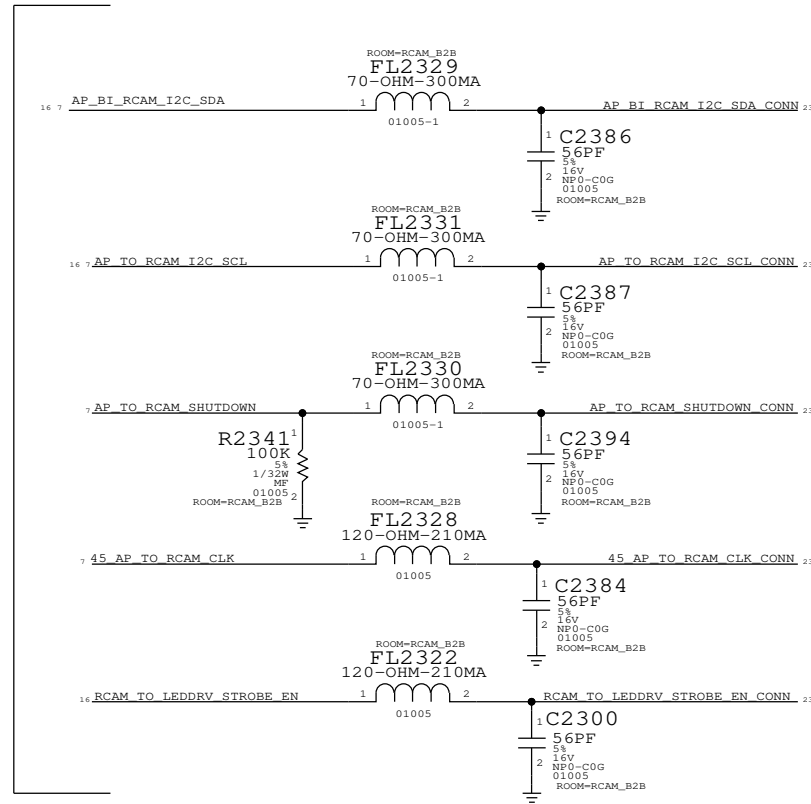
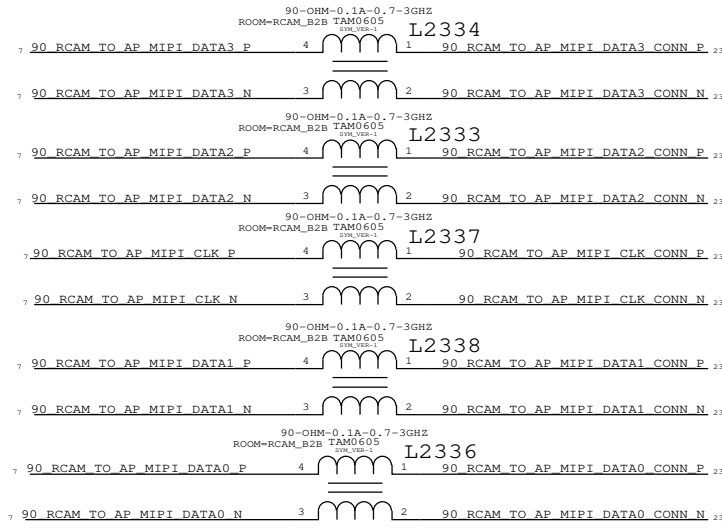
THIS IS OUTSIDE OF SHIELD IN
TO THE RIGHT OF THE NAND
PHOSPHORUS



SYNC MASTER=N61_MLB		SYNC DATE=08/26/2013	
PAGE TITLE SENSORS:OSCAR,CARBON,PHOS,MAGNESIUM			
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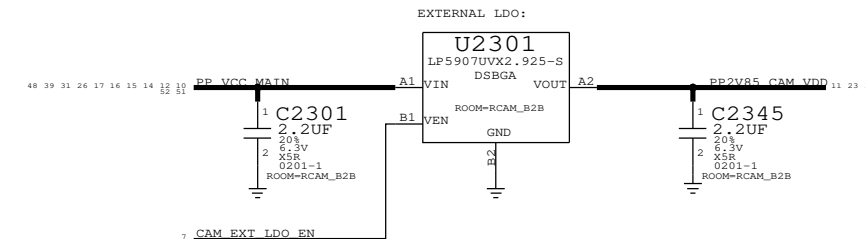
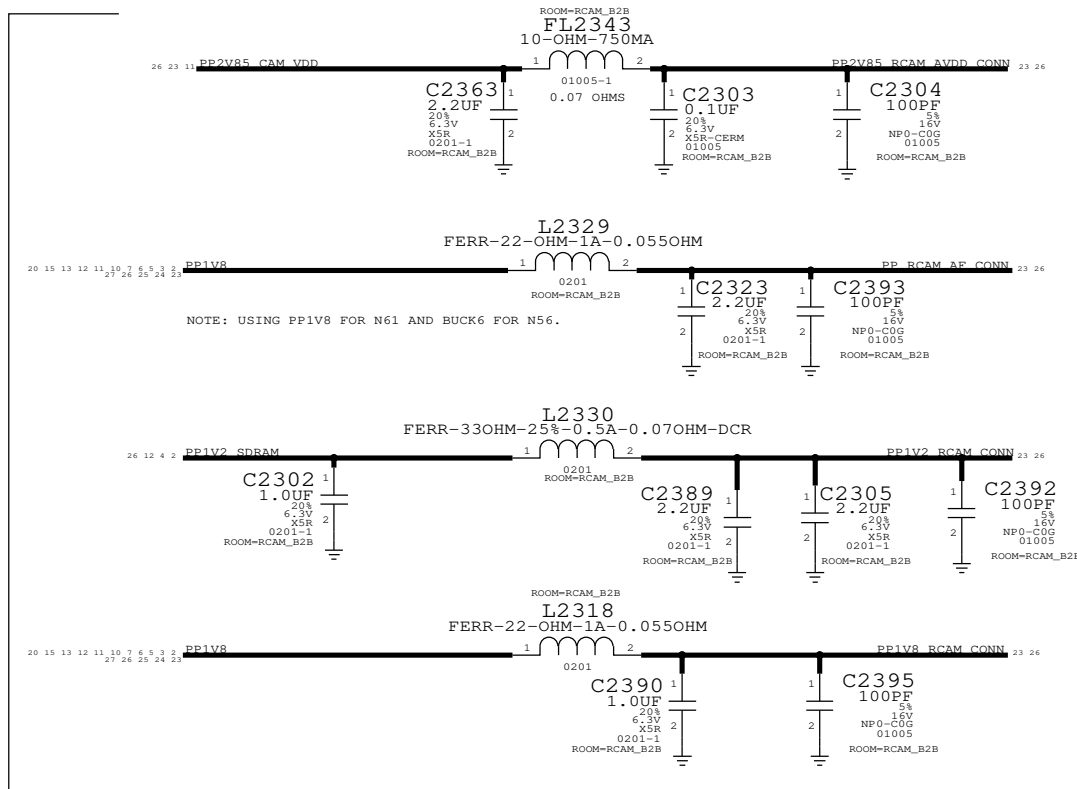
RCAM B2B (REAR CAMERA CONNECTOR)

RCAM:
4-LANE MIPI



RCAM/FCAM AVDD RAIL EXT. LDO:

RCAM:
POWER:
(1.8V DVDD)
(2.8V AVDD)
(1.2V VCC)
(1.8V/2V AF)



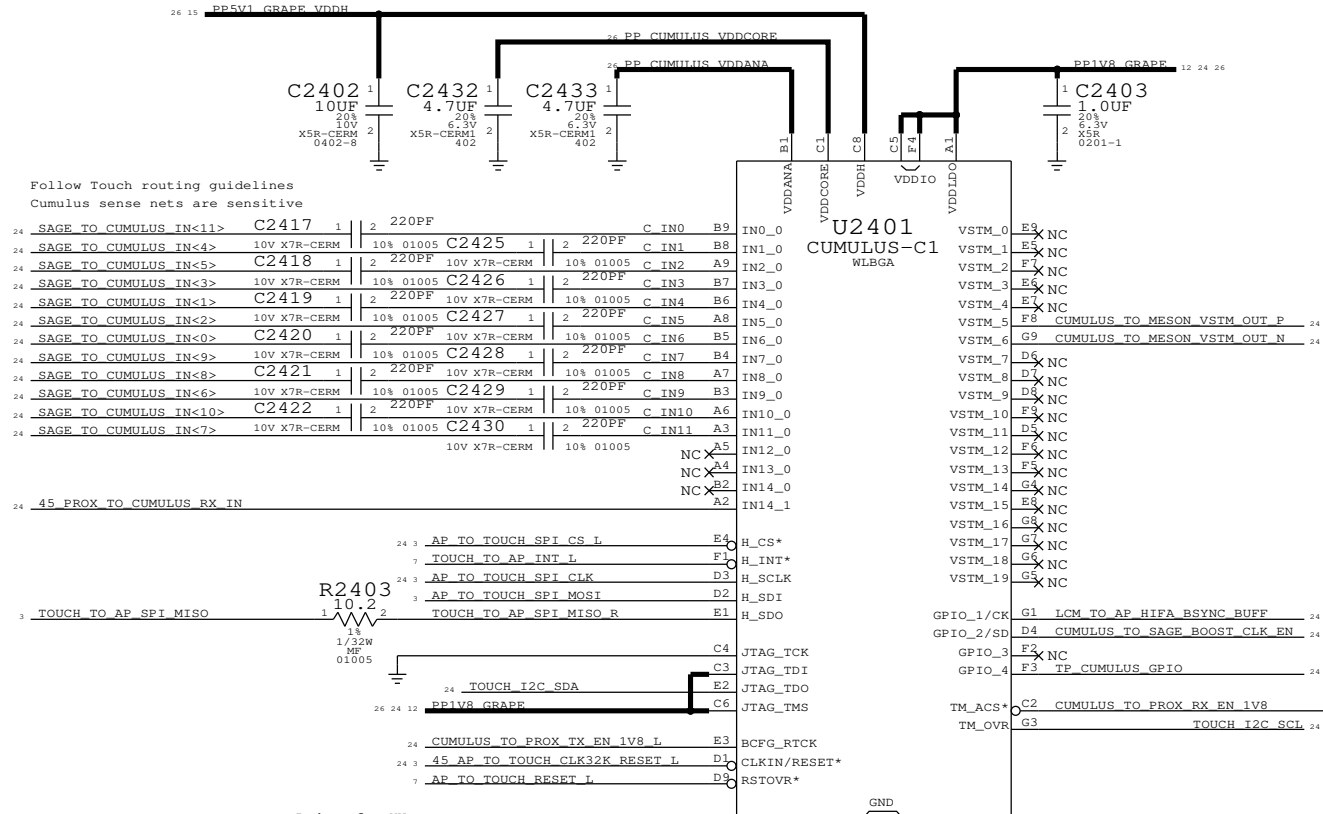
SYNC MASTER=N61 MLB		SYNC DATE=08/26/2013	
CAMERA: REAR FLEX CONN			
Apple Inc.		DRAWING NUMBER	051-9903
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Touch (B2B, Driver ICs)

Cumulus

APN: 34350638

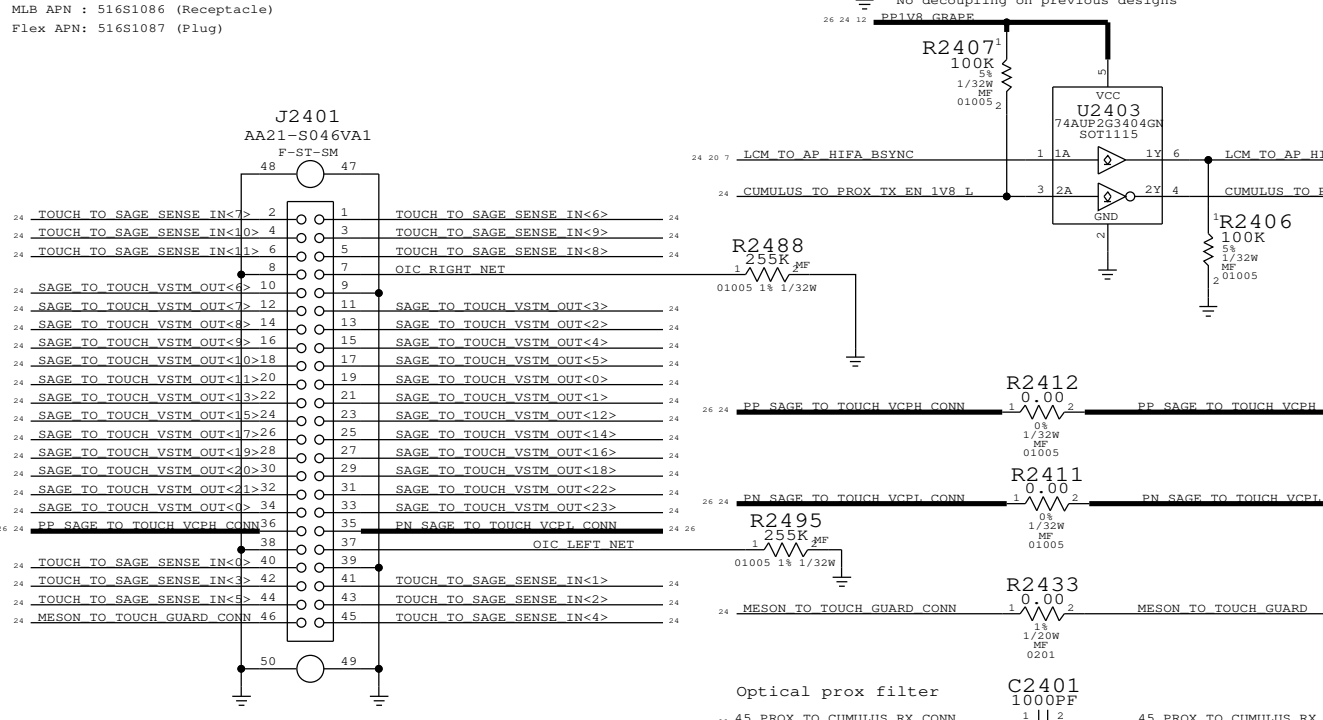
Turn on is later than PPIV8_GRAPE
Turn off is same time as PPIV8_GRAPE



Touch B2B

MLB APN : 516S1086 (Receptacle)
Flex APN: 516S1087 (Plug)

Radars for XM
rdar://12773579
rdar://12611242

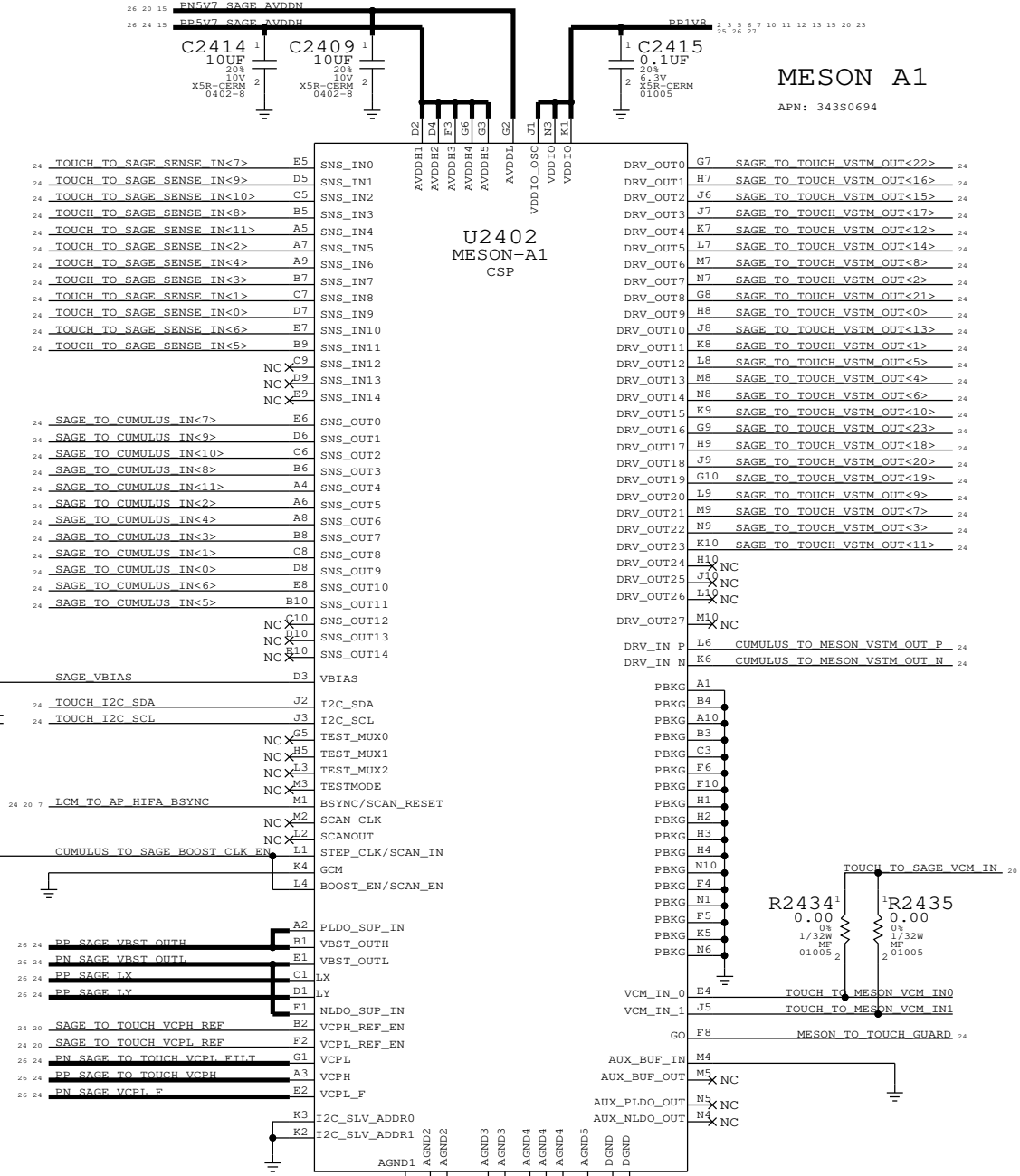


Touch probe points

- PP2402 CUMULUS TO SAGE BOOST CLK EN
- PP2403 AP TO TOUCH SPI CS L
- PP2404 AP TO TOUCH SPI CLK
- PP2405 LCM TO AP HIFA BSYNC
- PP2408 TP CUMULUS GPIO
- PP2410 CUMULUS TO MESON VSTM OUT N
- PP2411 CUMULUS TO MESON VSTM OUT P
- PP2412 45 AP TO TOUCH CLK32K RESET L

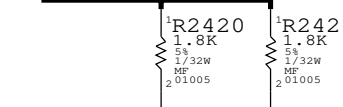
MESON A1

APN: 34350694

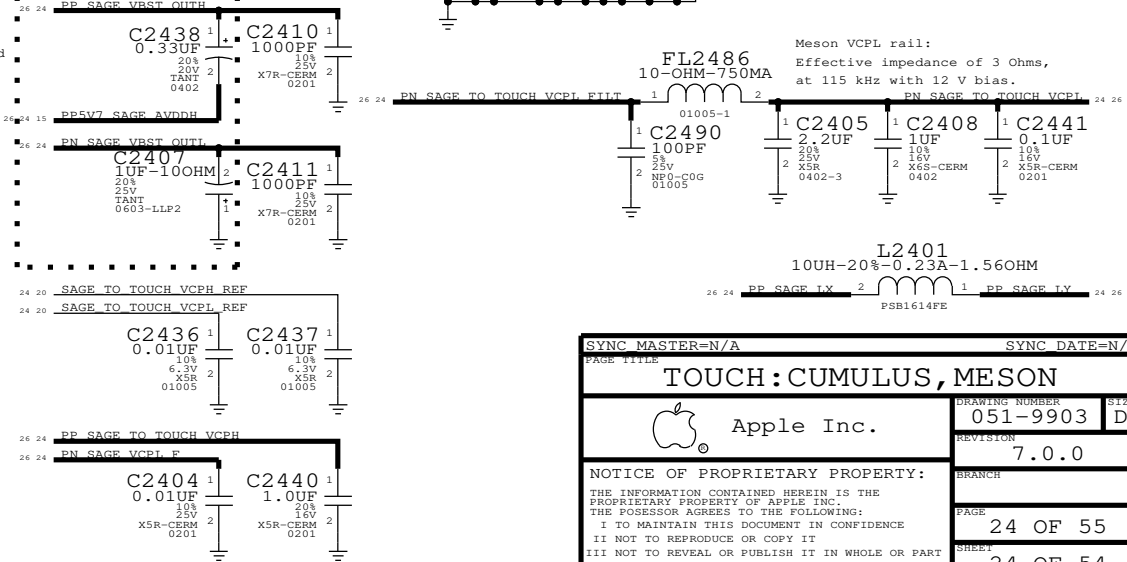


Tantalums solved singing caps issue. Validate issue is resolved with Meson and replace with 0402 ceramics.

I2C pull-ups



Meson decoupling



Apple Inc. TOUCH: CUMULUS, MESON

Apple logo

Apple Inc.

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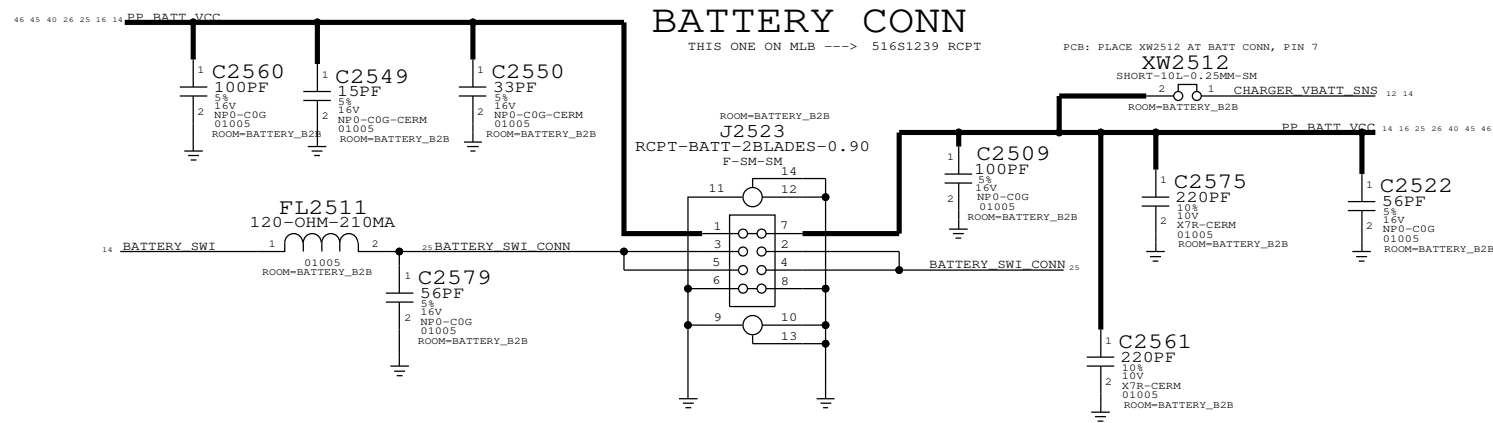
051-9903 D

7.0.0

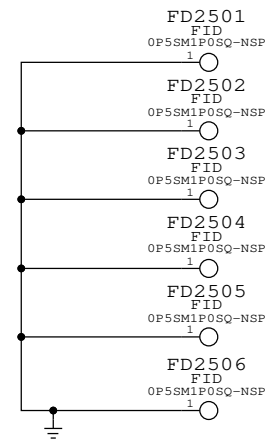
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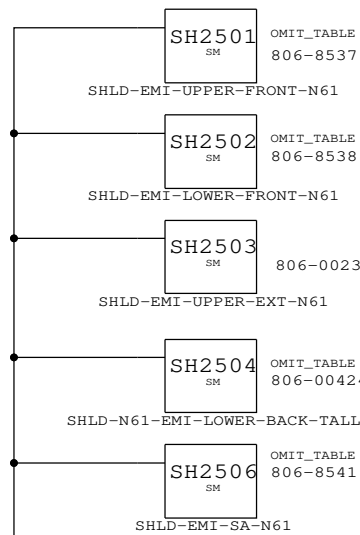
BATT CONN, TPS, STANDOFFS/SHIELDS/FIDUCIALS



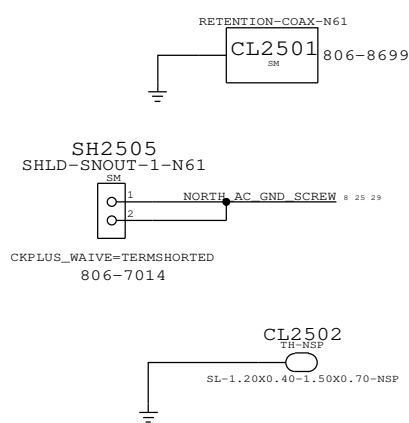
FIDUCIALS



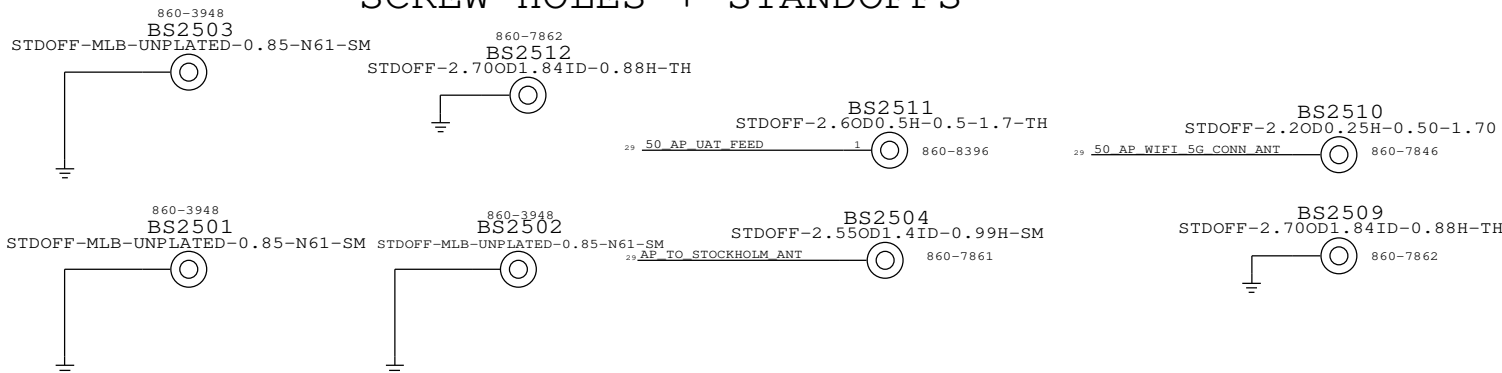
SHIELDS



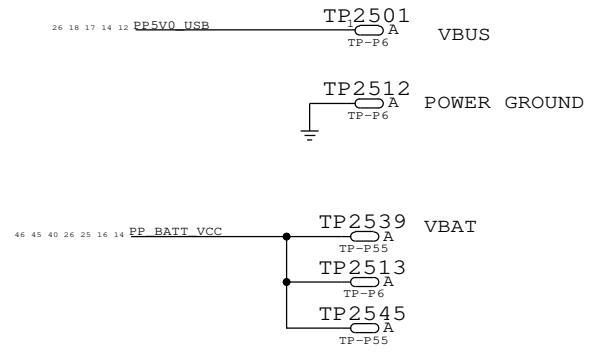
COWLING



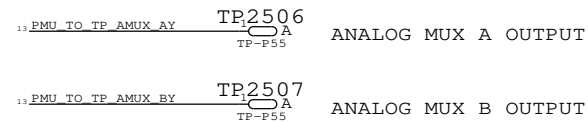
SCREW HOLES + STANDOFFS



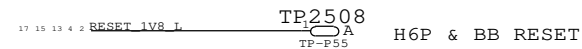
POWER TP



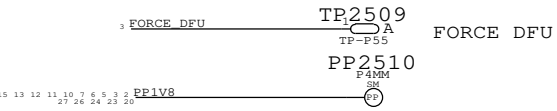
SUPER TP



RESET

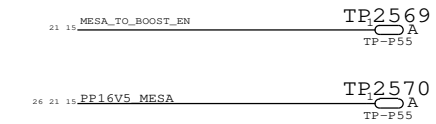


DFU

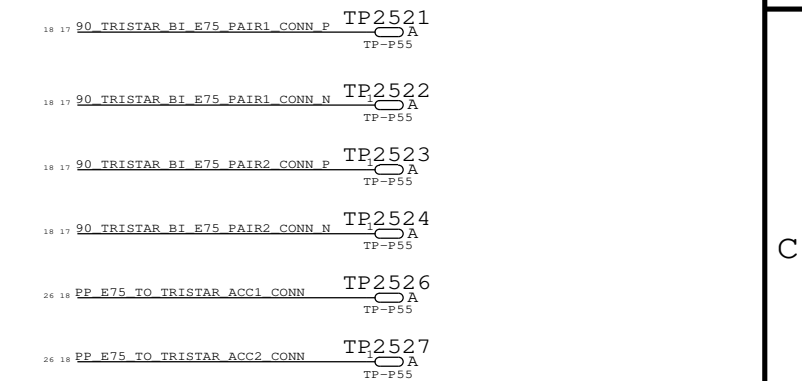


TESTPOINTS

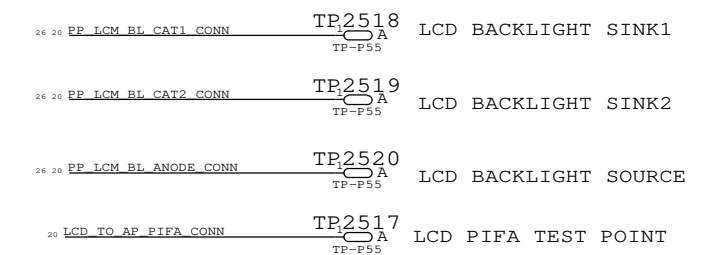
MOJAVE TP



E75 - USB/UART/ID/POWER



LCM BACKLIGHT



SYNC MASTER=N61 MLB		SYNC DATE=08/26/2013	
PAGE TITLE POWER:BATT CONN,TPS,PD FEATURES			
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VOLTAGE PROPERTIES

PP3V3 USB	VOLTAGE=3.3V	2 12
PP1V8 VA I19 I67	VOLTAGE=1.8V	10 12 16
PP3V0 TRISTAR	VOLTAGE=3.0V	12 15 17 29
PP3V0 TMI	VOLTAGE=3.0V	12 19
PP3V0 NAND	VOLTAGE=3.0V	6 12
PP3V3 ACC	VOLTAGE=3.0V	12 17
PP3V0 PROX AIS	VOLTAGE=3.0V	11 12
PP VCC MAIN	VOLTAGE=4.6V	10 12 14 15 16 17 23 31 39
PP1V0	VOLTAGE=1.0V	7 12 52
PP3V0 PROX ITRID	VOLTAGE=3.0V	11 12
PP1V8 ALWAYS	VOLTAGE=1.8V	3 5 12 14
PP3V0 MESA	VOLTAGE=3.0V	12 21
PP CPU	VOLTAGE=1.1V	4 12
PP GPU	VOLTAGE=1.1V	4 12
PP1V2 SDRAM	VOLTAGE=1.2V	2 4 12 23
PP1V8 SDRAM	VOLTAGE=1.8V	3 4 10 12 13 14 15 17 29
PP1V8	VOLTAGE=1.8V	3 4 5 7 10 11 12 13 15 20 23
PP1V8 GRAPE	VOLTAGE=1.8V	12 24
PP1V8 OSCAR	VOLTAGE=1.8V	12 19 22
PP1V2 NAND VDDT	VOLTAGE=1.2V	6
PP EXTMIC BIAS FILT IN	VOLTAGE=1.8V	10
BOARD_ID2	VOLTAGE=1.8V	3 27
PP1V2	VOLTAGE=1.2V	3 4 5 11 12
PP E75 TO TRISTAR ACC1 CONN	VOLTAGE=5.0V	18 25
PP E75 TO TRISTAR ACC1	VOLTAGE=5.0V	17 18
PP LCM BL ANODE	VOLTAGE=22.0V	15 20
PP LCM BL CAT2	VOLTAGE=0.2V	15 20
PP LCM BL CAT1	VOLTAGE=0.2V	15 20
PP LCM BL CAT2 CONN	VOLTAGE=0.2V	20 25
PP LCM BL CAT1 CONN	VOLTAGE=0.2V	20 25
PNSV7 SAGE AVDDN	VOLTAGE=-5.7V	15 20 24
PP1V2 OSCAR	VOLTAGE=1.2V	12 22
PP3V0 MESA CONN	VOLTAGE=3.0V	21
PP6V0 LCM BOOST	VOLTAGE=6V	15
PP STRB DRIVER TO LED_WARM	VOLTAGE=5.0V	8 16
PP STRB DRIVER TO LED_COOL	VOLTAGE=5.0V	8 16
PP CODEC TO MIC1 BIAS	VOLTAGE=1.8V	10 18
PP EXTMIC BIAS IN	VOLTAGE=1.8V	10
PP EXTMIC BIAS ENW	VOLTAGE=1.8V	10
PP CODEC TO FRONTMIC3 BIAS	VOLTAGE=1.8V	10 11
PP CODEC TO REARMIC2 BIAS	VOLTAGE=1.8V	8 10
PP CODEC FILT+	VOLTAGE=1.8V	10
PP CODEC SPKR VO	VOLTAGE=2.2V	10
PP CODEC VCPFLT-	VOLTAGE=2.5V	10
PP CODEC VCPFLT+	VOLTAGE=2.5V	10
PP CODEC VHP FLN	VOLTAGE=2.5V	10
PP CODEC VHP FLV	VOLTAGE=0.2V	10
PP CODEC VHP FLV	VOLTAGE=2.5V	10
PP1V8 FCAM CONN	VOLTAGE=1.8V	11
PP2V85 FCAM AVDD CONN	VOLTAGE=3.0V	11
PP CODEC TO FRONTMIC3 BIAS CONN	VOLTAGE=1.8V	11
PP3V0 ALS CONN	VOLTAGE=3.0V	11
PP1V2 FCAM VDDIO CONN	VOLTAGE=1.2V	11
PP5V0 USB	VOLTAGE=5.0V	12 14 17 18 25
PP5V0 USB TO PMU	VOLTAGE=5.0V	12
PP_BUCK5_LX0	VOLTAGE=4.6V	12
PP_BUCK3_LX	VOLTAGE=4.6V	12
PP_BUCK4_LX	VOLTAGE=4.6V	12
PP_BUCK2_LX	VOLTAGE=4.6V	12
PP_BUCK1_LX	VOLTAGE=4.6V	12
PP_BUCK1_LX0	VOLTAGE=4.6V	12
PP_BUCK0_LX3	VOLTAGE=4.6V	12
PP_BUCK0_LX2	VOLTAGE=4.6V	12
PP_BUCK0_LX1	VOLTAGE=4.6V	12
PP_BUCK0_LX0	VOLTAGE=4.6V	12
PP_CHESTNUT_LXP	VOLTAGE=6.0V	15
PP_CHESTNUT_CP	VOLTAGE=6.0V	15
PP_CHESTNUT_CN	VOLTAGE=6.0V	15
PP5V7 SAGE AVDDH	VOLTAGE=5.7V	15 24
PNSV7 LCM AVDDH	VOLTAGE=5.7V	15 20
PP5V1 GRAPE VDDH	VOLTAGE=5.1V	15 24
PP_NLED_LX	VOLTAGE=22.0V	15
PP18V0 MESA_SW	VOLTAGE=18.0V	15
PP17V0 MESA_SW	VOLTAGE=17.0V	15
PP16V5 MESA	VOLTAGE=16.5V	15 21 25
PP_SPKAMP_SW	VOLTAGE=8.0V	16
PP_I19_VBOOST	VOLTAGE=8.0V	16
PP_SPKAMP_FILT	VOLTAGE=1.8V	16
PP_SPKAMP_LDO_FILT	VOLTAGE=1.8V	16
PP_LED_DRV_LX	VOLTAGE=5.0V	16
PP_LED_BOOST_OUT	VOLTAGE=5.0V	16
PP2V9_LDO9	VOLTAGE=2.9V	12
PP_CODEC_TO_MIC1_BIAS_CONN	VOLTAGE=1.8V	18
PP E75 TO TRISTAR ACC2	VOLTAGE=4.6V	17 18
PP E75 TO TRISTAR ACC2 CONN	VOLTAGE=4.6V	18 25
PP1V8 LCM CONN	VOLTAGE=1.8V	20
PP_LCM_BL_ANODE_CONN	VOLTAGE=22.0V	20 25
PNSV7 LCM AVDDN CONN	VOLTAGE=-5.7V	20
PNSV7 LCM AVDDH CONN	VOLTAGE=5.7V	20
PP1V8 MESA	VOLTAGE=1.8V	21
PP16V5 MESA CONN	VOLTAGE=16.5V	21
PP_TRISTAR_PIN	VOLTAGE=5.0V	17
PP1V2 FCAM CONN	VOLTAGE=1.2V	23
PP1V8 FCAM CONN	VOLTAGE=1.8V	23
PP2V85 CAM VDD	VOLTAGE=3.0V	11 23
PP2V85 FCAM AVDD CONN	VOLTAGE=1.8V	23
PP_CUMIUS_VDDCORE	VOLTAGE=1.8V	24
PP_CUMIUS_VDDANA	VOLTAGE=1.2V	24
PP_SAGE_TO_TOUCH_VCPH CONN	VOLTAGE=13.5V	24
PP_SAGE_TO_TOUCH_VCPH CONN	VOLTAGE=-12V	24
PP_SAGE_TO_TOUCH_VCPH	VOLTAGE=13.5V	24
PP_SAGE_TO_TOUCH_VCPH	VOLTAGE=-12V	24
PP_SAGE_VCPH_F	VOLTAGE=-12V	24
PP_SAGE_LX	VOLTAGE=5.7V	24
PP_SAGE_LX	VOLTAGE=17.0V	24
PP_PMU_VREF	VOLTAGE=1.8V	13
PP_SAGE_VBST_OUTH	VOLTAGE=14V	24
PP_TIGRIS_VBUS_DET	VOLTAGE=5.0V	14
PP1V8_FIL	VOLTAGE=1.8V	10
PP_MIPIOD_VREG	VOLTAGE=2.5V	13
BOARD_ID0	VOLTAGE=1.8V	10
PP_PMU_VDD_BEE	VOLTAGE=1.8V	13
PP_EXTMIC_BIAS	VOLTAGE=1.8V	10
PP1V8_VTAL	VOLTAGE=1.8V	2
PP_PMU_VDD_RTC	VOLTAGE=1.8V	13
PP_BATT_VCC	VOLTAGE=4.6V	14 16 25 40 45 46
PP1V8 MESA CONN	VOLTAGE=1.8V	21
PP3V0 PROX CONN	VOLTAGE=3.0V	11
PP0V95 FIXED SOC	VOLTAGE=1.0V	4 7 12
PP0V95 FIXED SOC PCIE	VOLTAGE=1.0V	7
PP1V2_BLL	VOLTAGE=1.2V	2
PP_BUCK5_LX1	VOLTAGE=1.0V	12
PP_VAR_SOC	VOLTAGE=1.0V	5 12
PPMID_CAP	VOLTAGE=5.0V	14
CHARGER_LDO	VOLTAGE=5.0V	14
CHG_BOOT	VOLTAGE=4.6V	14
CHG_LX	VOLTAGE=4.6V	14
VIBR_DRIVE_P	VOLTAGE=3.0V	14 18
VIBR_DRIVE_N	VOLTAGE=3.0V	14 18
PP_BCAM_AE_CONN	VOLTAGE=1.8V	23
PP_SAGE_VBST_OUTL	VOLTAGE=-14.0V	24
PP_SAGE_TO_TOUCH_VCPH_FILT	VOLTAGE=-12.0V	24
PP_BB_VDD_2V7_CONN	VOLTAGE=2.7V	18

PAGE TITLE		
SYSTEM:VOLTAGE PROPERTIES		
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N61 SPECIFIC

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BOARD_REV[3:0]={GPIO34, GPIO35, GPIO36, GPIO37}
FLOAT=LOW, PULLUP=HIGH
1111 PROTOMLB1
1110 PROTOMLB2
1101 PROTO1
1100 PROTO2
1011 EVT
1010 EVT SPLIT CARBON DOE
1001 CARRIER BUILD <--- SELECTED
1000 DVT

BOARD_ID[4:0]={GPIO29, GPIO16, SPI0_MISO, SPI0_MOSI, SPI0_SCLK}
FLOAT=LOW, PULLUP=HIGH
00100 N56, T133 MLB
00101 N56 DEV
00110 FIJI N61 MLB <--- SELECTED

BOOT_CONFIG[2:0]={GPIO28, GPIO25, GPIO18}
FLOAT=LOW, PULLUP=HIGH
000 SPI0
001 SPI0 TEST MODE
010 NAND <--- SELECTED
011 NAND TEST MODE
100 NVME
101 NVME TEST MODE
111 FAST SPI

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PAGE TITLE		SYSTEM:N61 SPECIFIC	
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RADIO_MLB HIERARCHICAL SYMBOL

POWER

VCC_MAIN, VBAT GOES TO RADIO_MLB DIRECTLY
CHECK ALL PAGES IN RF SIDE!

CELLULAR HOUSE KEEPING

AP_TO_RADIO_ON_L	MAKE_BASE-TRUE	I325	RADIO_ON_L	30	32
BB_TO_AP_RESET_DET_L	MAKE_BASE-TRUE	I324	BB_RESET_DET_L	30	35
PMU_TO_BB_RST_L	MAKE_BASE-TRUE	I326	RF_PMIC_RESET_L	30	32
AP_TO_BB_RST_L	MAKE_BASE-TRUE	I327	BB_RST_L	30	32
AP_TO_BB_WAKE_MODEM	MAKE_BASE-TRUE	I329	AP_WAKE_MODEM	30	35
BB_TO_PMU_HOST_WAKE_L	MAKE_BASE-TRUE	I328	BB_WAKE_HOST_L	30	35
BB_TO_AP_IPC_GPIO	MAKE_BASE-TRUE	I331	BB_IPC_GPIO	30	35
BB_TO_LEDDRVM_GSM_BLANK	MAKE_BASE-TRUE	I330	GSM_TXBURST_IND	30	35
BB_TO_AP_GPS_SYNC	MAKE_BASE-TRUE	I332	BB_GPS_SYNC	30	35

HSIC IPC

50_AP_BI_BB_HSIC1_DATA	MAKE_BASE-TRUE	I368	50_BB_HSIC_DATA	30	34
50_AP_BI_BB_HSIC1_STB	MAKE_BASE-TRUE	I369	50_BB_HSIC_STROBE	30	34
AP_TO_BB_HOST_RDY	MAKE_BASE-TRUE	I371	BB_HOST_RDY	30	35
BB_TO_AP_DEVICE_RDY	MAKE_BASE-TRUE	I370	BB_DEVICE_RDY	30	35
BB_TO_AP_IPC_GPIO1	MAKE_BASE-TRUE	I372	BB_IPC_GPIO1	30	35

UART IPC

AP_TO_BB_UART2_RTS_L	MAKE_BASE-TRUE	I373	BB_UART_CTS_L	30	35
BB_TO_AP_UART2_CTS_L	MAKE_BASE-TRUE	I374	BB_UART_RTS_L	30	35
AP_TO_BB_UART2_TXD	MAKE_BASE-TRUE	I374	BB_UART_RXD	30	35
BB_TO_AP_UART2_RXD	MAKE_BASE-TRUE	I375	BB_UART_TXD	30	35

AUDIO I2S

45_AP_TO_BB_I2S3_BCLK	MAKE_BASE-TRUE	I377	BB_I2S_CLK	30	35
AP_TO_BB_I2S3_DOUT	MAKE_BASE-TRUE	I378	BB_I2S_RXD	30	35
BB_TO_AP_I2S3_DIN	MAKE_BASE-TRUE	I379	BB_I2S_TXD	30	35
AP_TO_BB_I2S3_LRCLK	MAKE_BASE-TRUE	I380	BB_I2S_WS	30	35

OSCAR UART

OSCAR_TO_BB_UART_TXD	MAKE_BASE-TRUE	I382	BB_OTHER_RXD	30	35
BB_TO_OSCAR_UART_RXD	MAKE_BASE-TRUE	I381	BB_OTHER_TXD	30	35

BB DEBUG INTERFACES

AP_TO_BB_COREDUMP	MAKE_BASE-TRUE	I384	BB_CORE_DUMP	30	35
PMU_TO_BB_VBUS_DET	MAKE_BASE-TRUE	I387	BB_USB_VBUS	30	34
90_TRISTAR_BI_BB_USB_N	MAKE_BASE-TRUE	I388	90_BB_USB_N	30	34
90_TRISTAR_BI_BB_USB_P	MAKE_BASE-TRUE	I388	90_BB_USB_P	30	34

RADIO ANTENNA CONTROL

PP_BB_VDD_2V7	MAKE_BASE-TRUE	I389	PP_LDO14_RFSW	31	41
BB_GPIO0	MAKE_BASE-TRUE	I390	BB_LAT_GPIO0	30	35
BB_GPIO2	MAKE_BASE-TRUE	I391	BB_LAT_GPIO2	30	35
BB_GPIO3	MAKE_BASE-TRUE	I392	BB_LAT_GPIO3	30	35
BB_GPIO4	MAKE_BASE-TRUE	I394	BB_LAT_GPIO4	30	35

FCT TESTING

RADIO_TO_PMU_ADC_SMP51	MAKE_BASE-TRUE	I395	ADC_SMP51	30	30
RADIO_TO_PMU_ADC_PP_LDO11_VDDIO	MAKE_BASE-TRUE	I396	ADC_PP_LDO11	30	30
RADIO_TO_PMU_ADC_PP_LDO5_SIM	MAKE_BASE-TRUE	I397	ADC_PP_LDO5	30	30
RADIO_TO_PMU_ADC_SMP54	MAKE_BASE-TRUE	I397	ADC_SMP54	30	30

UPPER RADIO ANTENNA CONTROL

50_AP_WIFI_5G_CONN_ANT	MAKE_BASE-TRUE	I410	50_WIFI_5G_CONN_ANT	50	50
50_AP_UAT_FEED	MAKE_BASE-TRUE	I409	50_UPPER_ANT_FEED	50	50
UAT_ANT_GND	MAKE_BASE-TRUE	I411	ANT_GND	50	50
PP3V0_TRISTAR	MAKE_BASE-TRUE	I404	PAC_VDD_3V0	53	53
NORTH_AC_GND_SCREW	MAKE_BASE-TRUE	I412	NORTH_ANT_GND	50	50

POWER



WLAN/BT HOUSE KEEPING

45_PMU_TO_WLAN_CLK32K	MAKE_BASE-TRUE	I316	CLK32K_AP	30	51
PMU_TO_WLAN_REG_ON	MAKE_BASE-TRUE	I317	WLAN_REG_ON	30	51
WLAN_TO_PMU_HOST_WAKE	MAKE_BASE-TRUE	I318	HOST_WAKE_WLAN	30	51
PMU_TO_BT_REG_ON	MAKE_BASE-TRUE	I319	BT_REG_ON	30	51
AP_TO_BT_WAKE	MAKE_BASE-TRUE	I320	WAKE_BT	30	51
BT_TO_PMU_HOST_WAKE	MAKE_BASE-TRUE	I321	HOST_WAKE_BT	51	51

AP_TO_WLAN_JTAG_SWCLK	MAKE_BASE-TRUE	I333	WLAN_JTAG_SWCLK	30	51
AP_TO_WLAN_JTAG_SWDIO	MAKE_BASE-TRUE	I334	WLAN_JTAG_SWDIO	30	51
WLAN_TO_PMU_PCIE_WAKE_L	MAKE_BASE-TRUE	I335	WLAN_PCIE_WAKE_L	30	51
AP_TO_WLAN_DEVICE_WAKE	MAKE_BASE-TRUE	I336	PCIE_DEV_WAKE	30	51
90_WLAN_TO_AP_PCIE1_RXDP_P	MAKE_BASE-TRUE	I337	90_WLAN_PCIE_TDP	30	51
90_WLAN_TO_AP_PCIE1_RXDP_N	MAKE_BASE-TRUE	I338	90_WLAN_PCIE_TDN	30	51
90_AP_TO_WLAN_PCIE1_TXDP_P	MAKE_BASE-TRUE	I338	90_WLAN_PCIE_RDP	30	51
90_AP_TO_WLAN_PCIE1_TXDP_N	MAKE_BASE-TRUE	I339	90_WLAN_PCIE_RDN	30	51
90_AP_TO_WLAN_PCIE1_REFCLK1_P	MAKE_BASE-TRUE	I342	90_WLAN_PCIE_REFCLK_P	51	51
90_AP_TO_WLAN_PCIE1_REFCLK1_N	MAKE_BASE-TRUE	I341	90_WLAN_PCIE_REFCLK_N	51	51
WLAN_TO_AP_PCIE1_CLKREQ_L	MAKE_BASE-TRUE	I344	WLAN_PCIE_CLKREQ_L	30	51
AP_TO_WLAN_PCIE1_RST_L	MAKE_BASE-TRUE	I345	WLAN_PCIE_PERST_L	30	51

WLAN HSIC IPC

WLAN_TO_AP_UART4_RXD	MAKE_BASE-TRUE	I345	WLAN_UART_TXD	30	51
AP_TO_WLAN_UART4_TXD	MAKE_BASE-TRUE	I346	WLAN_UART_RXD	30	51
WLAN_TO_AP_UART4_CTS_L	MAKE_BASE-TRUE	I347	WLAN_UART_RTS_L	30	51
AP_TO_WLAN_UART4_RTS_L	MAKE_BASE-TRUE	I346	WLAN_UART_CTS_L	30	51

BT UART IPC

AP_TO_BT_UART1_RTS_L	MAKE_BASE-TRUE	I349	BT_UART_CTS_L	51	51
BT_TO_AP_UART1_CTS_L	MAKE_BASE-TRUE	I352	BT_UART_RTS_L	51	51
AP_TO_BT_UART1_TXD	MAKE_BASE-TRUE	I351	BT_UART_RXD	30	51
BT_TO_AP_UART1_RXD	MAKE_BASE-TRUE	I350	BT_UART_TXD	30	51

BT AUDIO PCM

45_AP_TO_BT_I2S1_BCLK	MAKE_BASE-TRUE	I354	BT_PCM_CLK	51	51
AP_TO_BT_I2S1_DOUT	MAKE_BASE-TRUE	I355	BT_PCM_IN	51	51
BT_TO_AP_I2S1_DIN	MAKE_BASE-TRUE	I355	BT_PCM_OUT	51	51
AP_TO_BT_I2S1_LRCLK	MAKE_BASE-TRUE	I356	BT_PCM_SYNC	51	51

OSCAR STATES

OSCAR_TO_RADIO_CONTEXT_A	MAKE_BASE-TRUE	I358	OSCAR_CONTEXT_A	51	51
OSCAR_TO_RADIO_CONTEXT_B	MAKE_BASE-TRUE	I357	OSCAR_CONTEXT_B	51	51

STOCKHOLM

STOCKHOLM_TO_AP_UART3_CTS_L	MAKE_BASE-TRUE	I359	STOCKHOLM_RTS_L	30	52
AP_TO_STOCKHOLM_UART3_RTS_L	MAKE_BASE-TRUE	I360	STOCKHOLM_CTS_L	30	52
STOCKHOLM_TO_AP_UART3_RXD	MAKE_BASE-TRUE	I361	STOCKHOLM_UART_TXD	30	52
AP_TO_STOCKHOLM_UART3_TXD	MAKE_BASE-TRUE	I362	STOCKHOLM_UART_RXD	30	52
AP_TO_STOCKHOLM_DWLD_REQ	MAKE_BASE-TRUE	I363	STOCKHOLM_FW_DWLD_REQ	52	52
STOCKHOLM_TO_PMU_HOST_WAKE	MAKE_BASE-TRUE	I364	STOCKHOLM_HOST_WAKE	30	52
AP_TO_STOCKHOLM_EN	MAKE_BASE-TRUE	I365	STOCKHOLM_ENABLE	52	52
PP3V0_TRISTAR	MAKE_BASE-TRUE	I366	STOCKHOLM_VDD_MUX_3V0	54	54
AP_TO_STOCKHOLM_SIM_SEL	MAKE_BASE-TRUE	I367	STOCKHOLM_SIM_SEL	54	54
AP_TO_STOCKHOLM_ANT	MAKE_BASE-TRUE	I406	STOCKHOLM_ANT	52	52

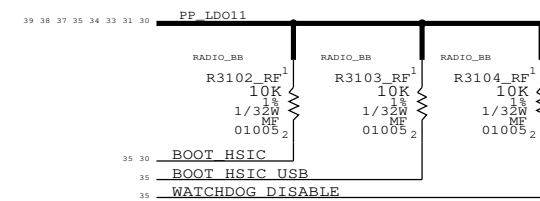
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AP INTERFACE & DEBUG CONNECTORS

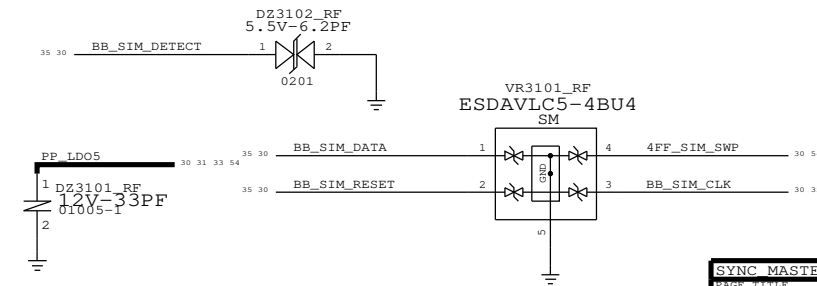
PROBE POINTS

PP3105_RF P2MM-NSM SM 1 CLK32K_AP 29 51	PP3121_RF P2MM-NSM SM 1 STOCKHOLM_HOST_WAKE 29 52	PP3115_RF P4MM-NSM SM 1 50_BB_HSIC_STROBE 29 34	PP3130_RF P4MM-NSM SM 1 BB_JTAG_RST_L 34	PP3141_RF P4MM-NSM SM 1 BB_UART_TXD 29 35	PP3170_RF P4MM-NSM SM 1 RFFE1_CLK 35 39 40 41 42 43 44
PP3113_RF P4MM-NSM SM 1 BB_COEX_UART_RXD 35 51	PP3122_RF P4MM-NSM SM 1 BB_REQUEST_XO_CLK 32 52	PP3116_RF P4MM-NSM SM 1 50_BB_HSIC_DATA 29 34	PP3131_RF P4MM-NSM SM 1 BB_JTAG_TCK 34	PP3142_RF P4MM-NSM SM 1 BB_UART_RXD 29 35	PP3171_RF P4MM-NSM SM 1 RFFE1_DATA 35 39 40 41 42 43 44
PP3114_RF P4MM-NSM SM 1 BB_COEX_UART_TXD 35 51	PP3123_RF P2MM-NSM SM 1 STOCKHOLM_UART_RXD 29 52	PP3101_RF P4MM-NSM SM 1 BB_DEBUG_ERROR 35	PP3132_RF P4MM-NSM SM 1 BB_JTAG_TMS 34	PP3143_RF P4MM-NSM SM 1 BB_UART_RTS_L 29 35	PP3172_RF P4MM-NSM SM 1 RFFE2_CLK 35 45 46 48
PP3119_RF P2MM-NSM SM 1 BT_UART_TXD 29 51	PP3124_RF P2MM-NSM SM 1 STOCKHOLM_UART_TXD 29 52	PP3102_RF P4MM-NSM SM 1 RF_PMIC_RESET_L 29 32	PP3133_RF P4MM-NSM SM 1 BB_JTAG_TDO 34	PP3144_RF P4MM-NSM SM 1 BB_UART_CTS_L 29 35	PP3173_RF P4MM-NSM SM 1 RFFE2_DATA 35 45 46 48
PP3120_RF P2MM-NSM SM 1 BT_UART_RXD 29 51	PP3125_RF P2MM-NSM SM 1 STOCKHOLM_CTS_L 29 52	PP3103_RF P4MM-NSM SM 1 PS_HOLD_PMIC 32	PP3134_RF P4MM-NSM SM 1 BB_JTAG_TDI 34	PP3145_RF P4MM-NSM SM 1 BB_HOST_RDY 29 35	PP3175_RF P4MM-NSM SM 1 BB_I2S_WS 29 35
PP3152_RF P2MM-NSM SM 1 WAKE_BT 29 51	PP3126_RF P2MM-NSM SM 1 STOCKHOLM_RTS_L 29 52	PP3127_RF P4MM-NSM SM 1 PMIC_RESOUT_L 32 34	PP3135_RF P4MM-NSM SM 1 BB_JTAG_TRST_L 34	PP3146_RF P4MM-NSM SM 1 BB_DEVICE_RDY 29 35	PP3176_RF P4MM-NSM SM 1 BB_I2S_RXD 29 35
PP3153_RF P2MM-NSM SM 1 WLAN_REG_ON 29 51	PP3128_RF P4MM-NSM SM 1 PP_PN65_VCC_SIM 52	PP3104_RF P4MM-NSM SM 1 MDM_CLK 32 34	PP3136_RF P4MM-NSM SM 1 BB_DEBUG_STATUS 35	PP3147_RF P4MM-NSM SM 1 BB_GPS_SYNC 29 35	PP3177_RF P4MM-NSM SM 1 BB_I2S_TXD 29 35
PP3154_RF P4MM-NSM SM 1 BT_REG_ON 29 51	PP3174_RF P4MM-NSM SM 1 STOCKHOLM_SIM_SWP 52 54	PP3109_RF P4MM-NSM SM 1 PP_LDO11 30 31 33 34 35 37 38	PP3137_RF P4MM-NSM SM 1 BB_CORE_DUMP 29 35	PP3148_RF P4MM-NSM SM 1 BB_WAKE_HOST_L 29 35	PP3178_RF P4MM-NSM SM 1 BB_OTHER_TXD 29 35
PP3155_RF P2MM-NSM SM 1 HOST_WAKE_WLAN 29 51	PP3129_RF P4MM-NSM SM 1 REF_CLK_FROM_BB 32 52	PP3110_RF P4MM-NSM SM 1 RADIO_ON_L 29 32	PP3138_RF P4MM-NSM SM 1 BB_USB_VBUS 29 34	PP3149_RF P4MM-NSM SM 1 BB_RESET_DET_L 29 35	PP3179_RF P4MM-NSM SM 1 BB_OTHER_RXD 29 35
PP3156_RF P2MM-NSM SM 1 WLAN_PCIE_WAKE_L 29 51	PP3165_RF P4MM-NSM SM 1 DSDS_SIM_CLK 34 54	PP3111_RF P4MM-NSM SM 1 SPMI_DATA 32 34	PP3139_RF P4MM-NSM SM 1 90_BB_USB_N 29 34	PP3150_RF P4MM-NSM SM 1 BB_RST_L 29 32	
PP3157_RF P2MM-NSM SM 1 WLAN_PCIE_PERST_L 29 51	PP3183_RF P4MM-NSM SM 1 DSDS_SIM_RESET 34 54	PP3112_RF P4MM-NSM SM 1 SPMI_CLK 32 34	PP3140_RF P4MM-NSM SM 1 90_BB_USB_P 29 34	PP3151_RF P4MM-NSM SM 1 BOOT_HSIC 30 35	
PP3158_RF P2MM-NSM SM 1 WLAN_PCIE_CLKREQ_L 29 51	PP3184_RF P4MM-NSM SM 1 DSDS_SIM_DATA 34 54				
PP3159_RF P4MM-NSM SM 1 PCIE_DEV_WAKE 29 51	PP3185_RF P4MM-NSM SM 1 DSDS_SIM_DETECT 34				
PP3160_RF P2MM-NSM SM 1 WLAN_UART_RTS_L 29 51	PP3187_RF P4MM-NSM SM 1 PP_LDO6 31 33 54				
PP3161_RF P2MM-NSM SM 1 WLAN_UART_CTS_L 29 51	PP3188_RF P4MM-NSM SM 1 DSDS_SIM_SWP 54				
PP3162_RF P2MM-NSM SM 1 WLAN_UART_RXD 29 51	PP3189_RF P4MM-NSM SM 1 DSDS_SIM_DATA_R 54				
PP3163_RF P2MM-NSM SM 1 WLAN_UART_TXD 29 51	PP 3178_RF P2MM-NSM SM 1 BB_SIM_RESET 30 35				
PP3190_RF P2MM-NSM SM 1 WLAN_JTAG_SWDCCLK 29 51	PP 3179_RF P2MM-NSM SM 1 BB_SIM_CLK 30 35				
PP3191_RF P2MM-NSM SM 1 WLAN_JTAG_SWDIO 29 51	PP 3180_RF P2MM-NSM SM 1 BB_SIM_DATA 30 35				
	PP 3183_RF P2MM-NSM SM 1 BB_SIM_DETECT 30 35				
	PP 3184_RF P2MM-NSM SM 1 PP_LDO5 30 31 33 54				

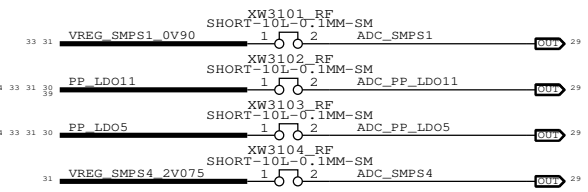
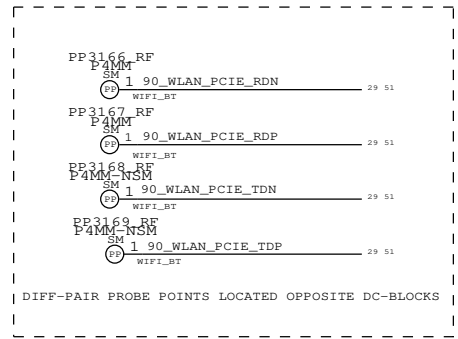
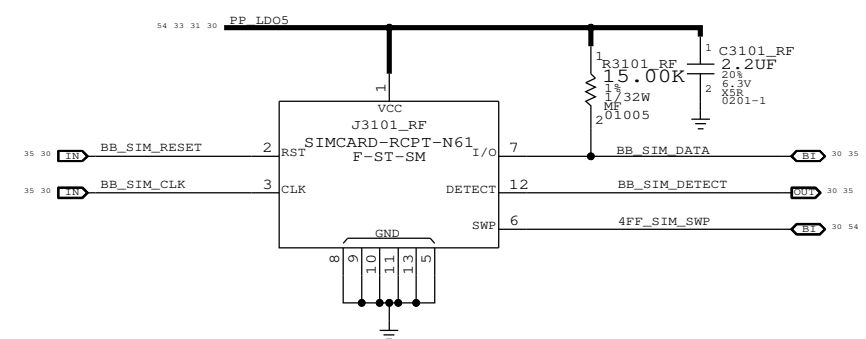
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197S0598	197S0593	ALTERNATE	Y3301_RF	AVX 19.2MHZ XTAL
138S00005	138S00003	ALTERNATE	C3216_RF	15UF CAPACITOR
138S0739	138S0706	ALTERNATE	C4207_RF	1.0UF CAPACITOR
138S0945	138S0706	ALTERNATE	C4207_RF	1.0UF CAPACITOR
138S1103	138S0719	ALTERNATE	C4007_RF	4.7UF CAPACITOR
339S0231	339S0228	ALTERNATE	U5201_RF	CORONA MODULE USI
339S0242	339S0228	ALTERNATE	U5201_RF	CORONA MODULE TDK
155S00024	155S0950	ALTERNATE	F_TRI_RF	TRIPLEXER BIN2



SIM CARD ESD PROTECTION



SIM CARD CONNECTOR



SYNC MASTER=N/A SYNC DATE=N/A

AP INTERFACE & DEBUG CONNECTORS

Apple Inc.

051-9903 D

7.0.0

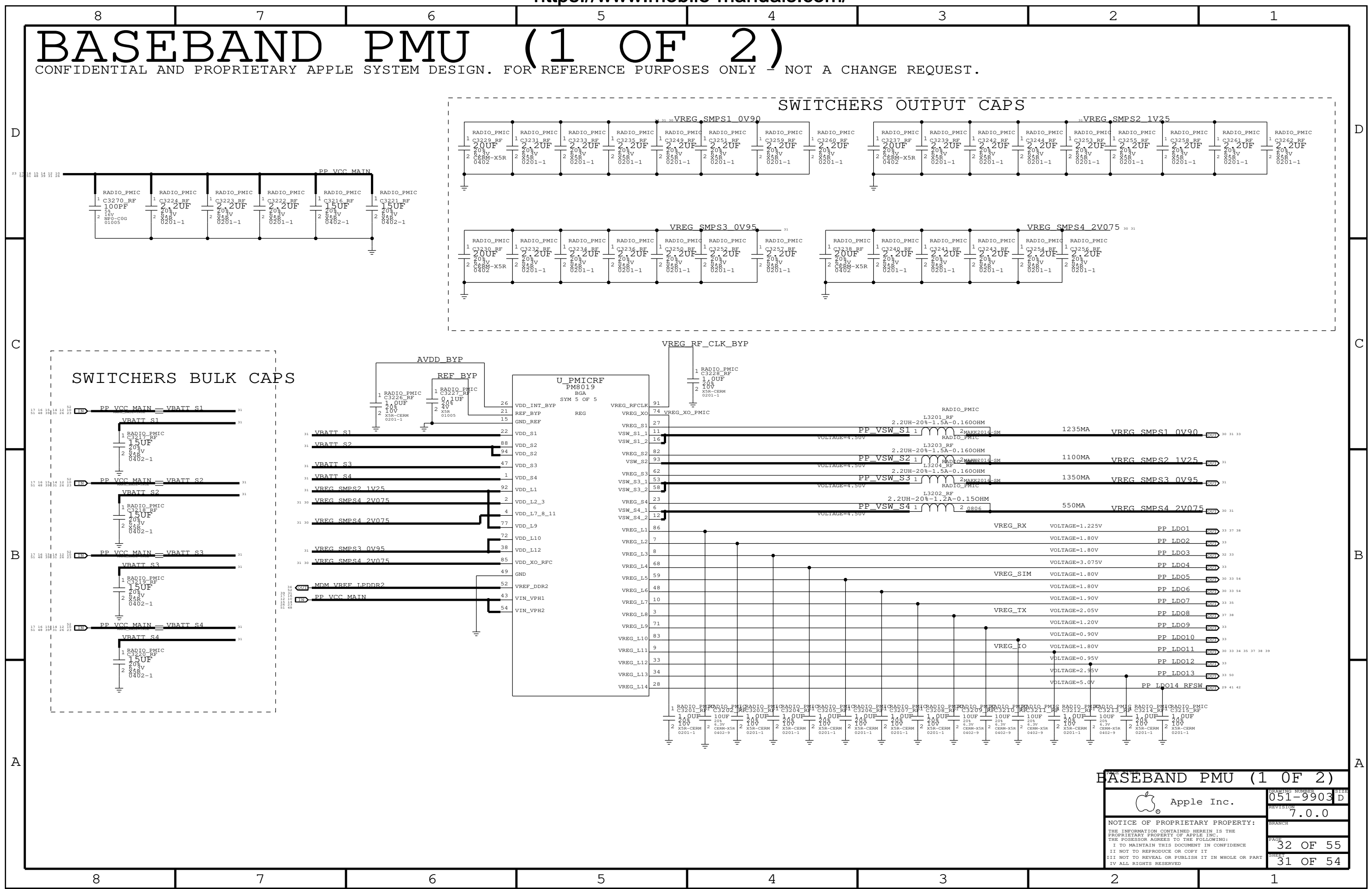
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31 OF 55

30 OF 54

BASEBAND PMU (1 OF 2)

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BASEBAND PMU (1 OF 2)

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BASEBAND PMU (2 OF 2)

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C401
R411
L400
U404

BOARD REVISION	
0.00V	N61 PROTO_MLB1
0.50V	N61 DEV3
0.70V	N61 DEV4
0.90V	N61 PROTO_MLB2
1.10V	N61/N56 PROTO1
1.30V	N61/N56 PROTO2
1.40V	N61/N56 EVT1
1.50V	N61/N56 EVT2 (CARRIER)
1.60V	N61/N56 DVT
1.70V	N61/N56 PVT

D

D

C

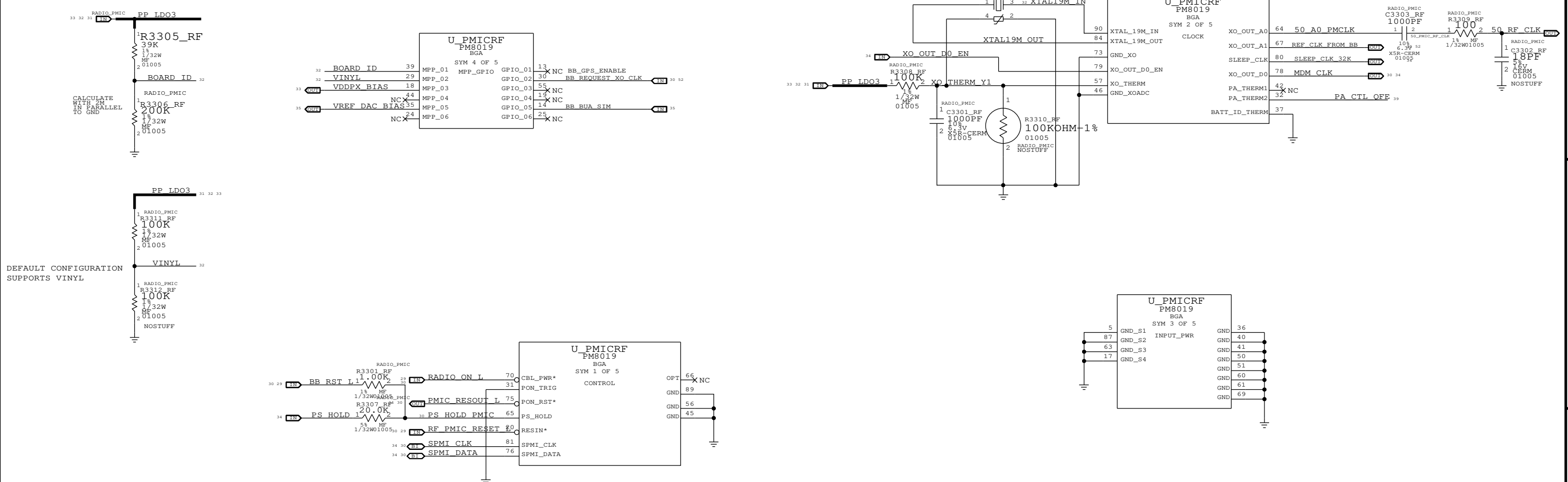
C

B

B

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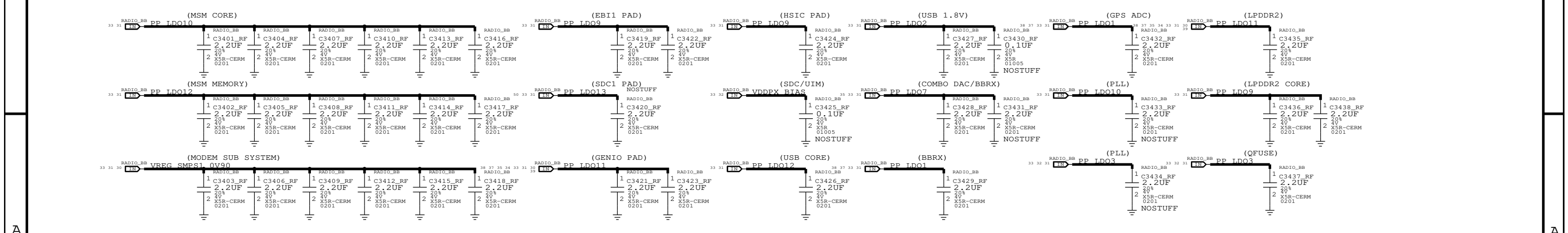
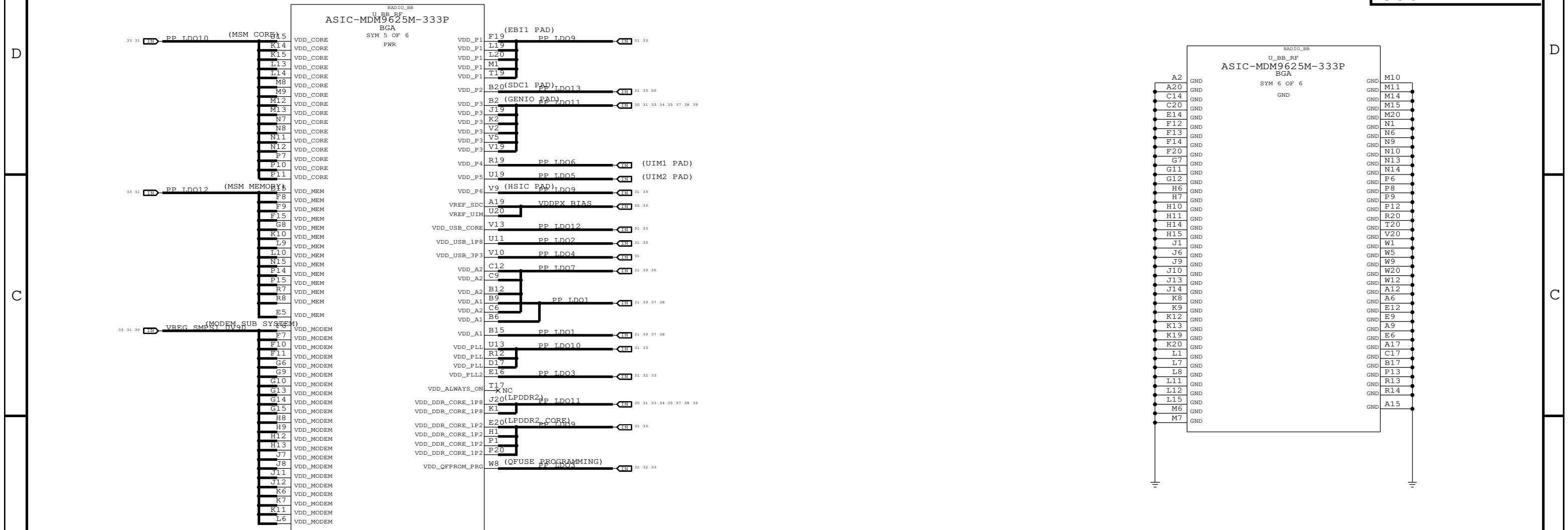


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C538
R500
L500
U502

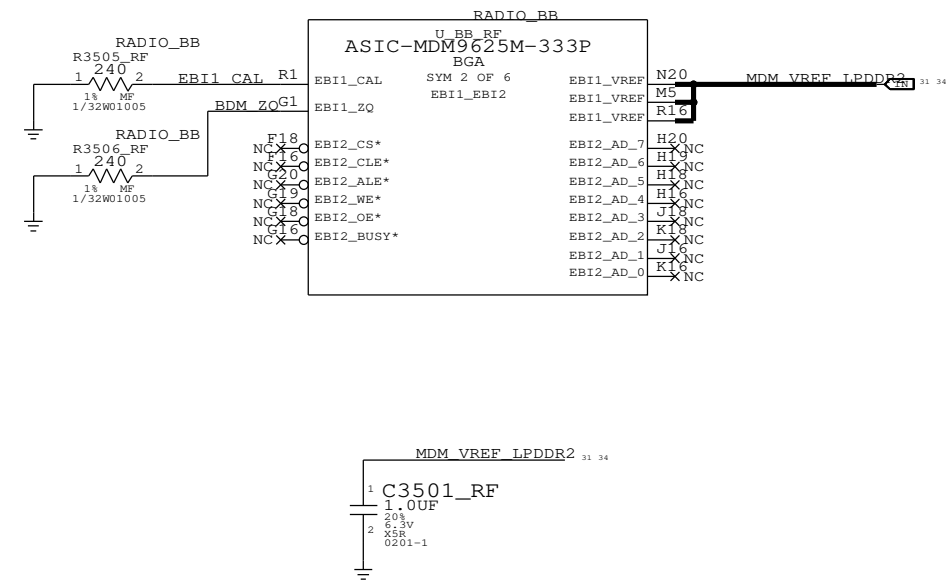
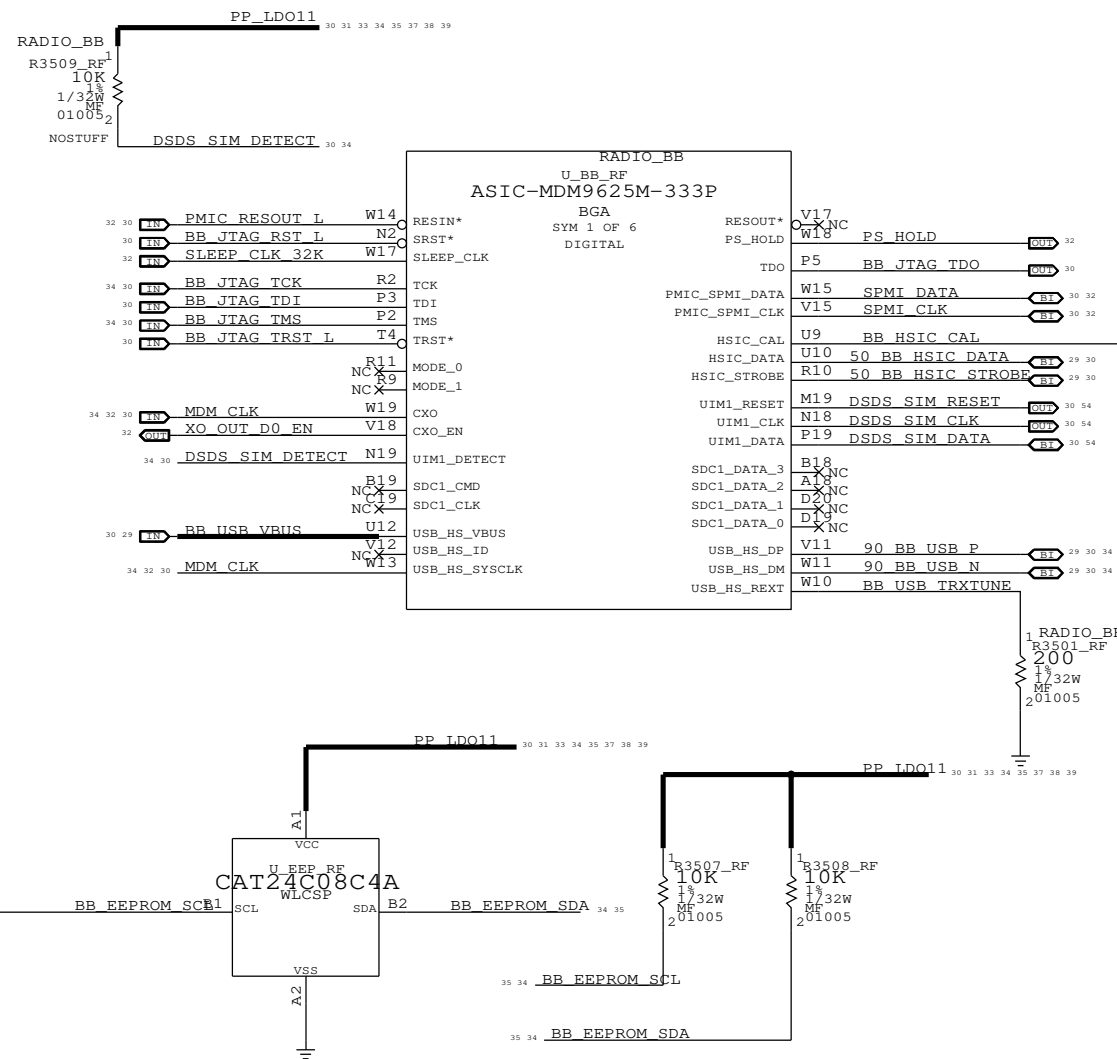
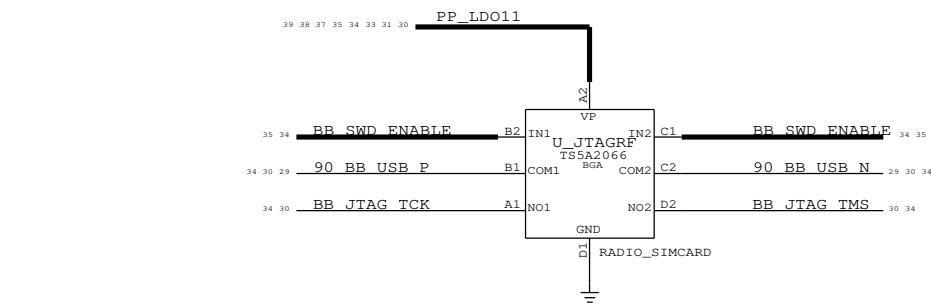


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C600
R606
L600
U602

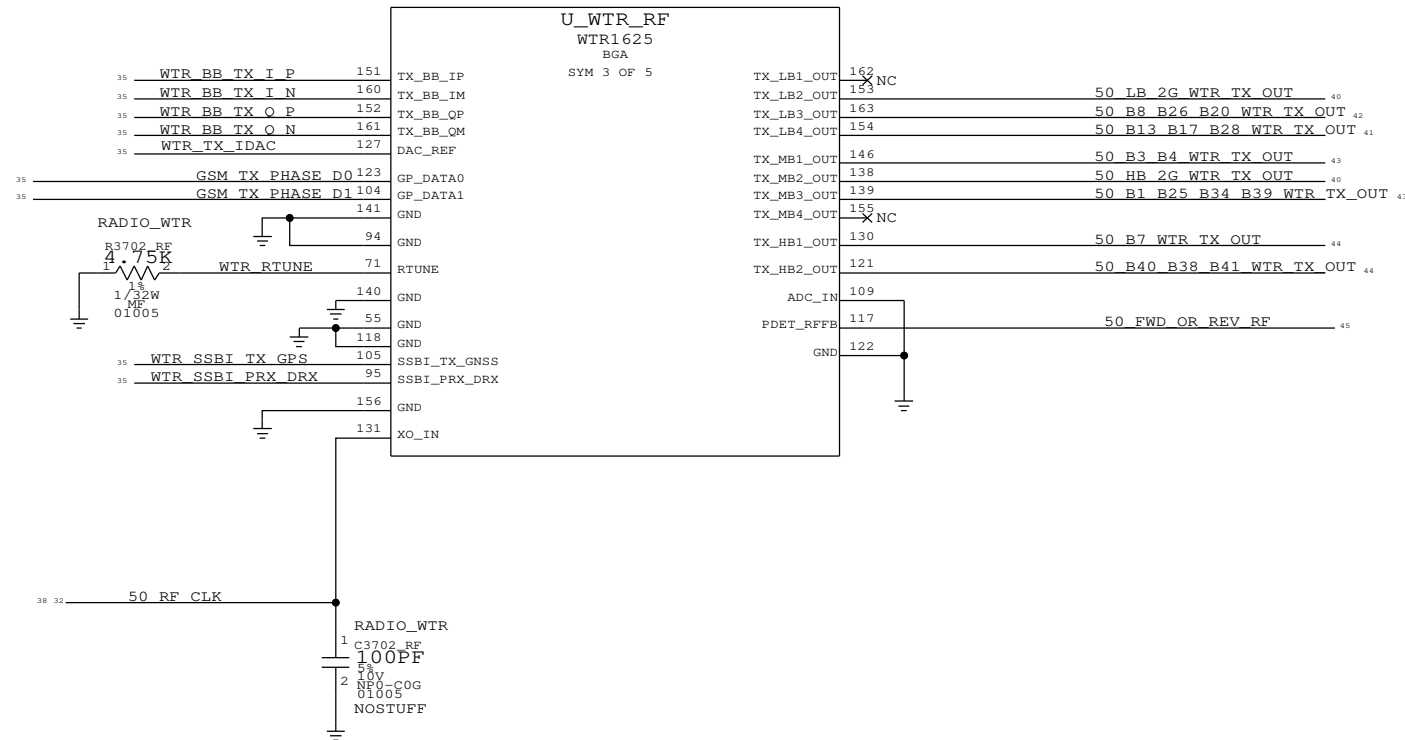
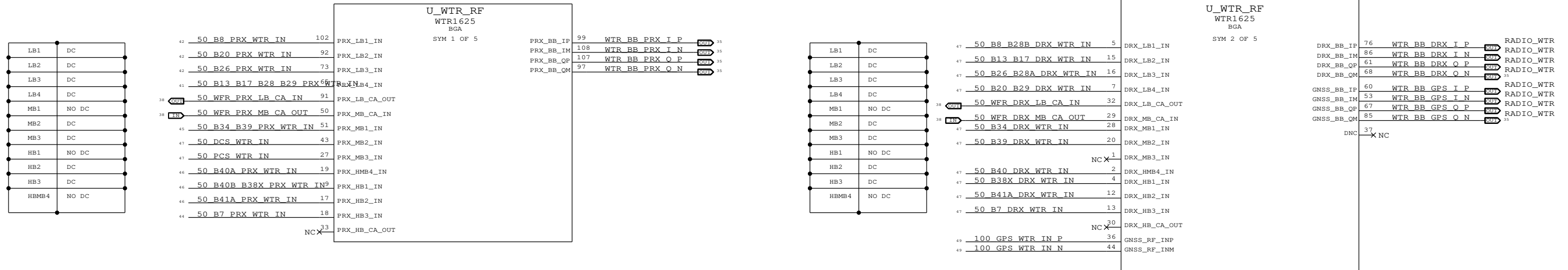


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WTR TRANSCEIVER (1 OF 2)

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C802
R802
L800
U803



RF_CLK IS SHARED BETWEEN WTR AND WFR. LENGTH DIFFERENCE BETWEEN THE TWO SHOULD BE < 5MM.

RF TRANSCEIVER (1 OF 3)

Apple Inc.	DRAWING NUMBER	051-9903 D
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WFR TRANSCEIVER

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C1019
R1016
L1000
U1002

D

C

B

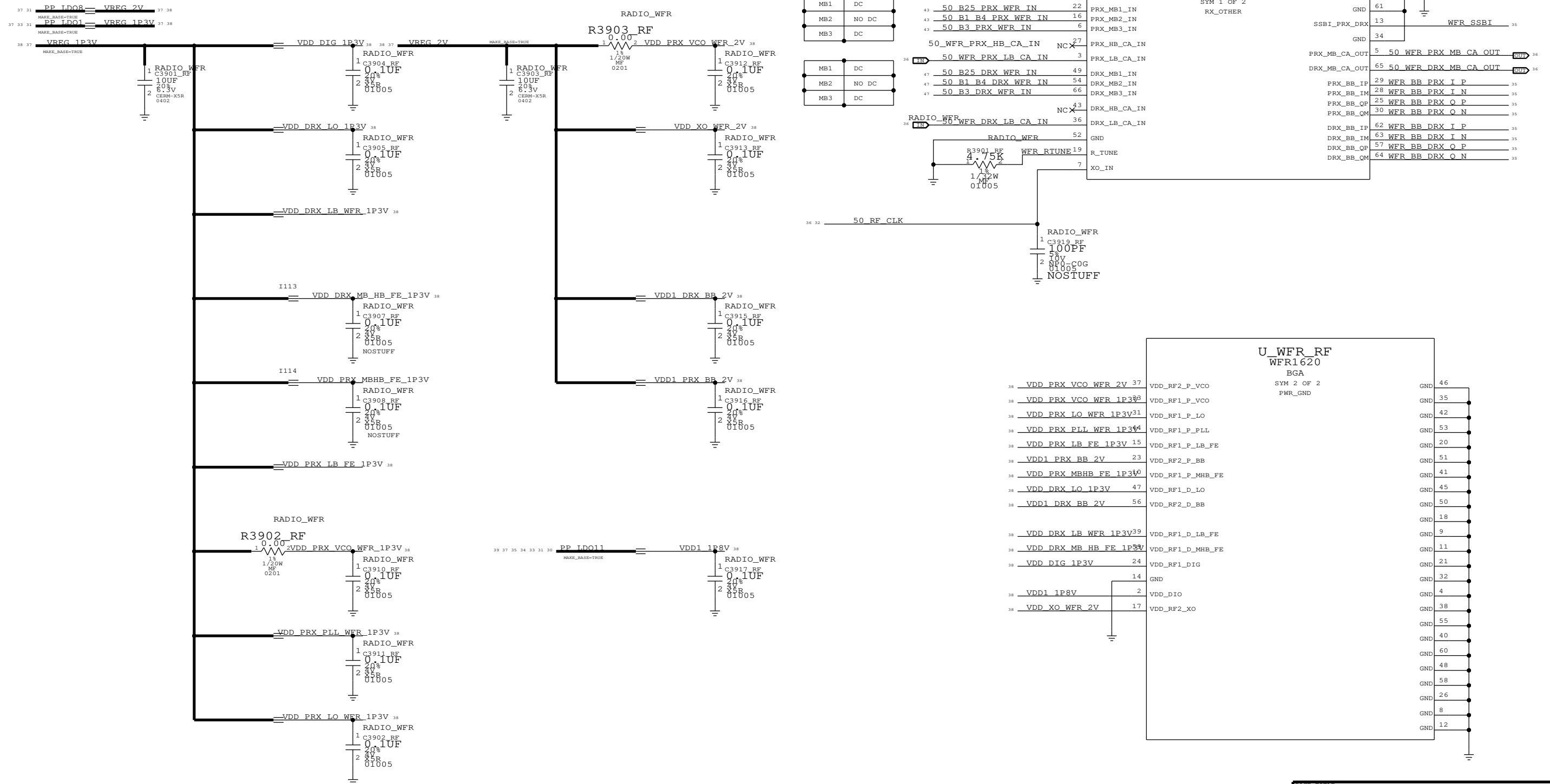
A

D

C

B

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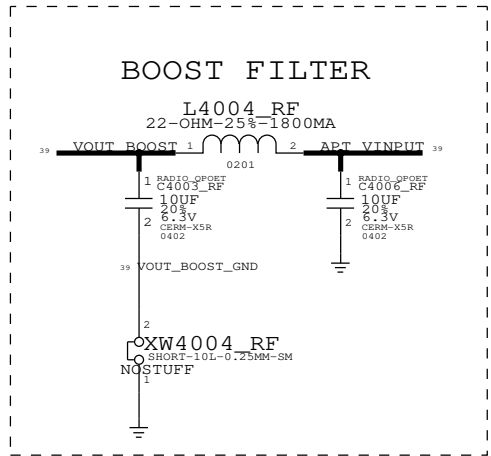
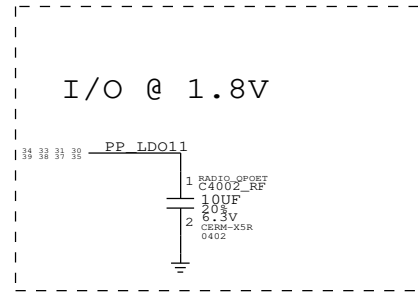
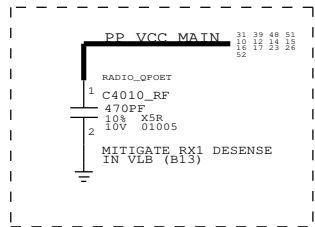
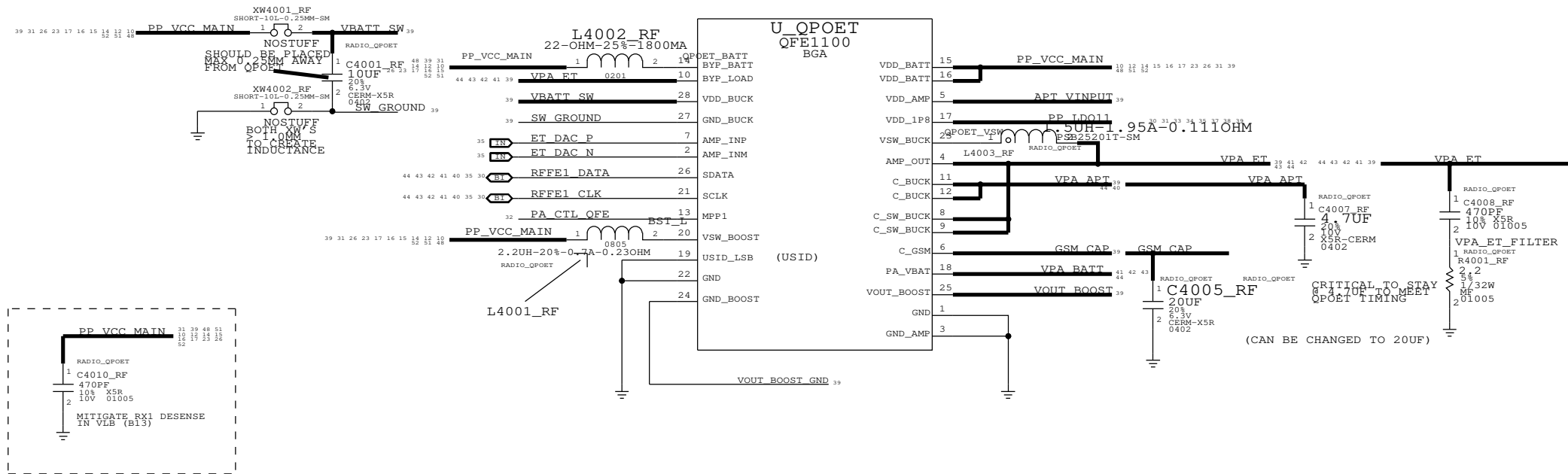
RF TRANSCEIVER (3 OF 3)

Apple Inc.		DRAWING NUMBER	051-9903 D
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QFE DCDC

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C1110
R1102
L1104
U1101

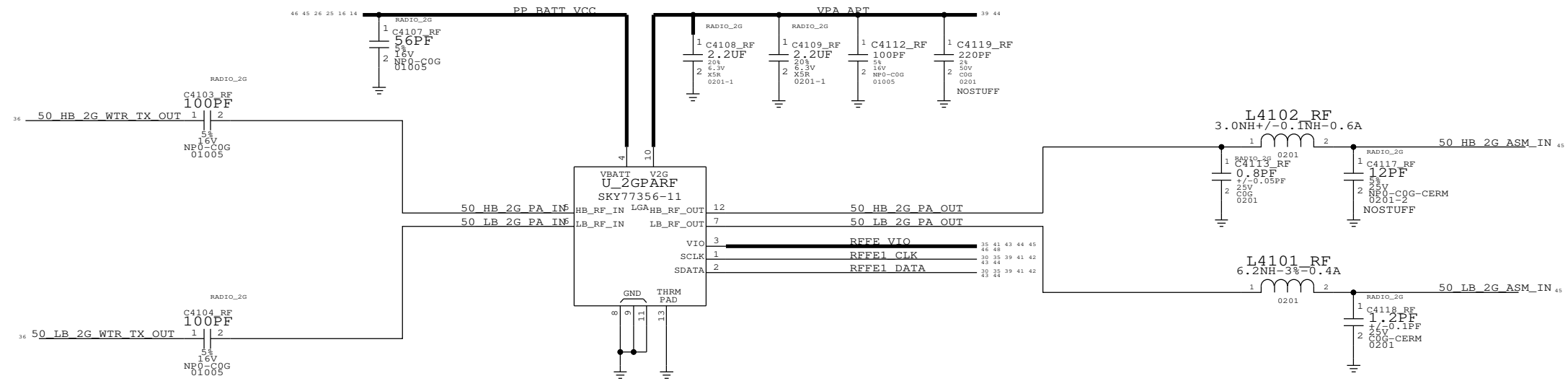


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2G PA

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C1208
R1200
L1204
U1201

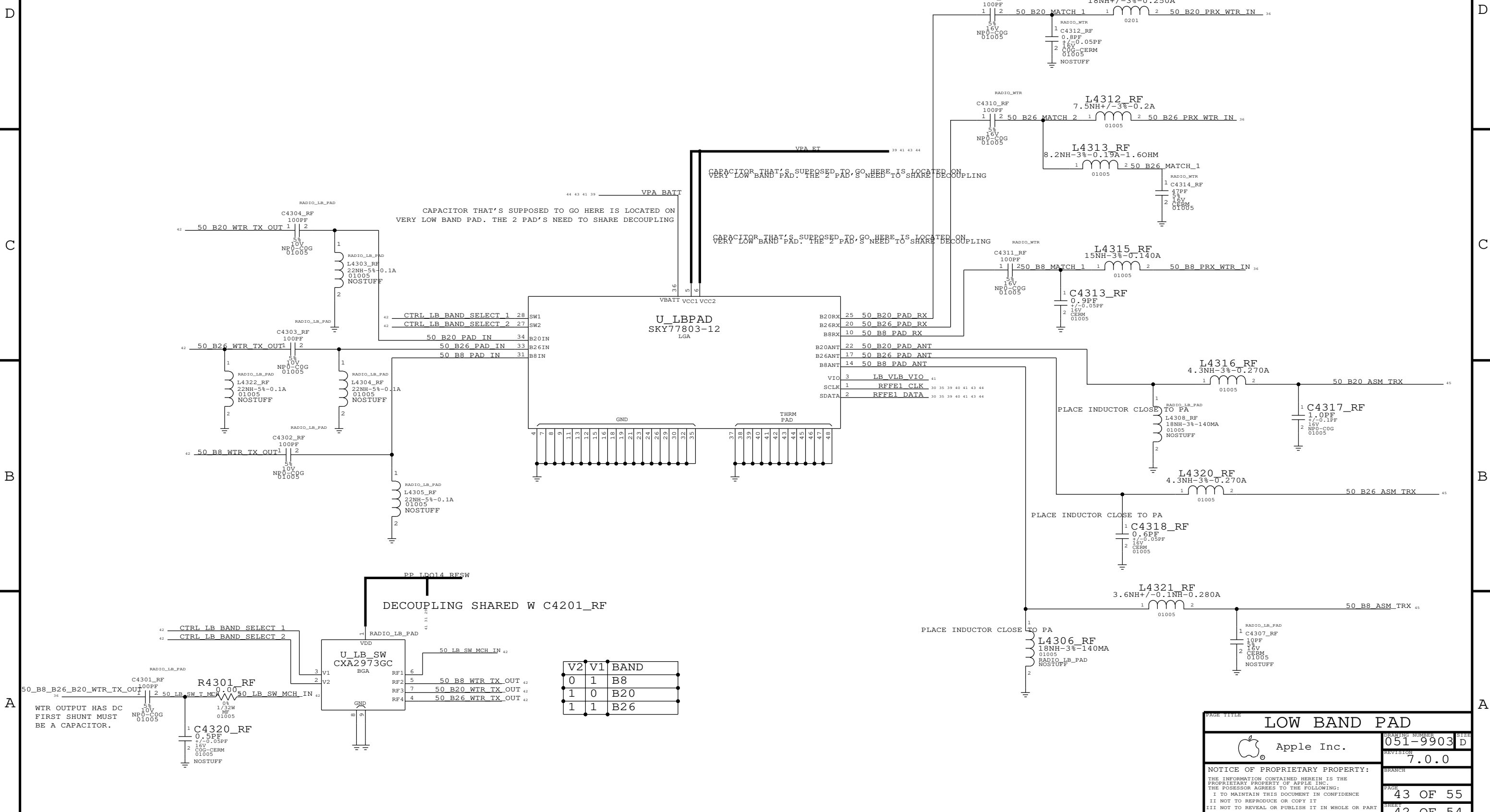


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LOW BAND PAD (B8, B26, B20)

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C4318_RF
R1400
L4322_RF
U1402



V2	V1	BAND
0	1	B8
1	0	B20
1	1	B26

LOW BAND PAD

Apple Inc.

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MID BAND PAD (B1, B25, B3, B4, B34, B39)

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C4426_RF
R1500
L4409_RF
U1501

D

D

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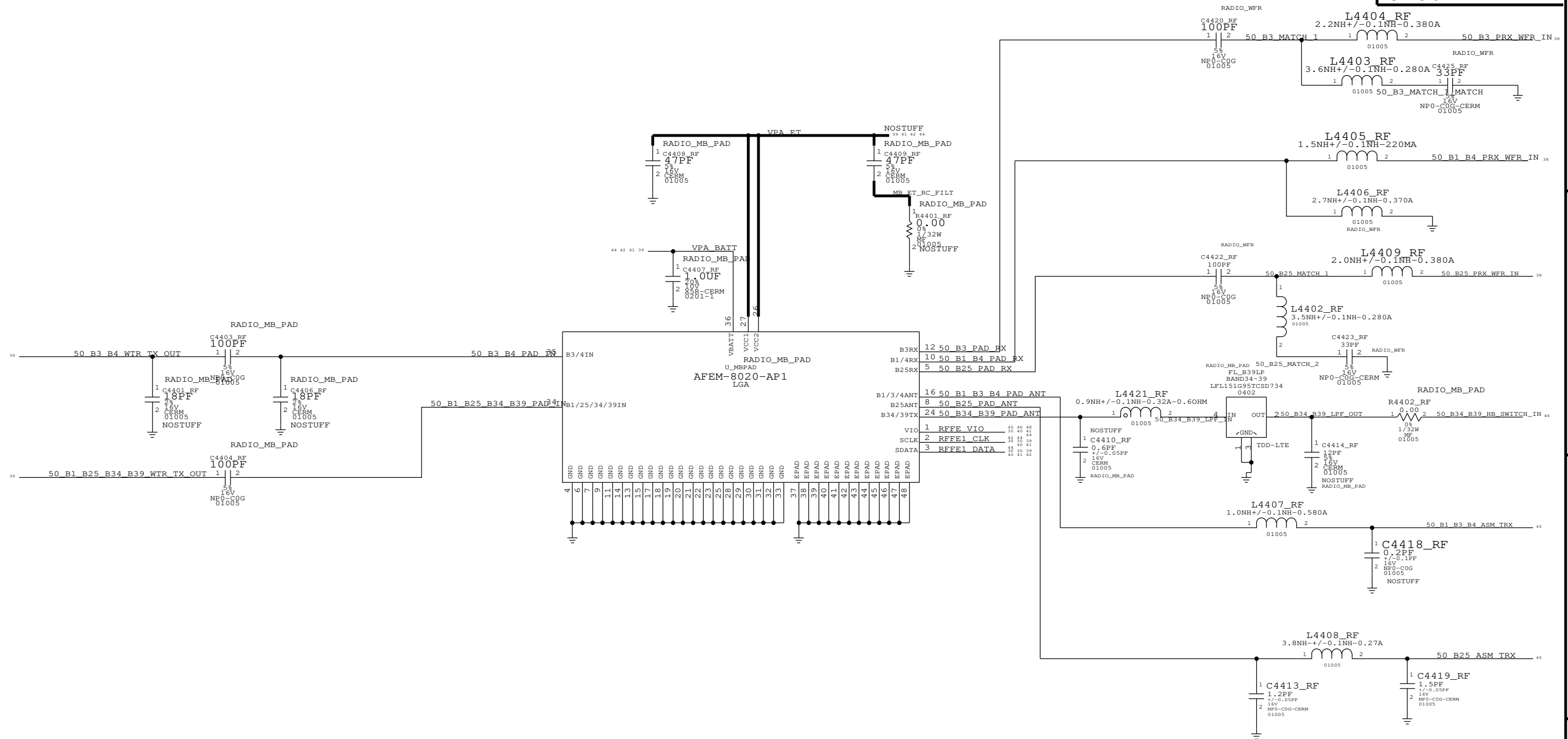
C

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PAGE TITLE		
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7.0.0		REVISION
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HIGH BAND PAD (B7, B38, B40, B41, XGP)

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C4533_RF
R1600
L1616
U1601

D

D

C

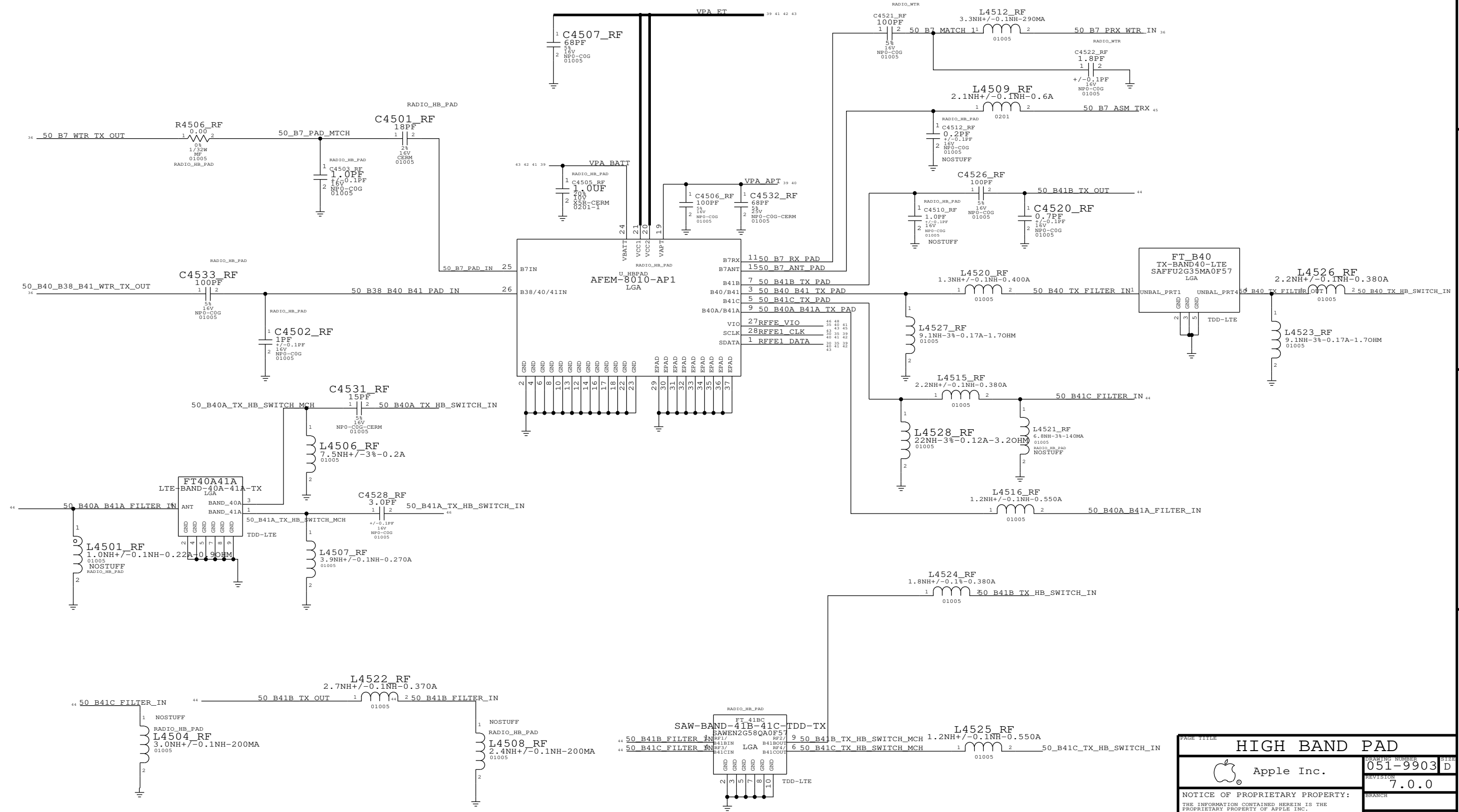
C

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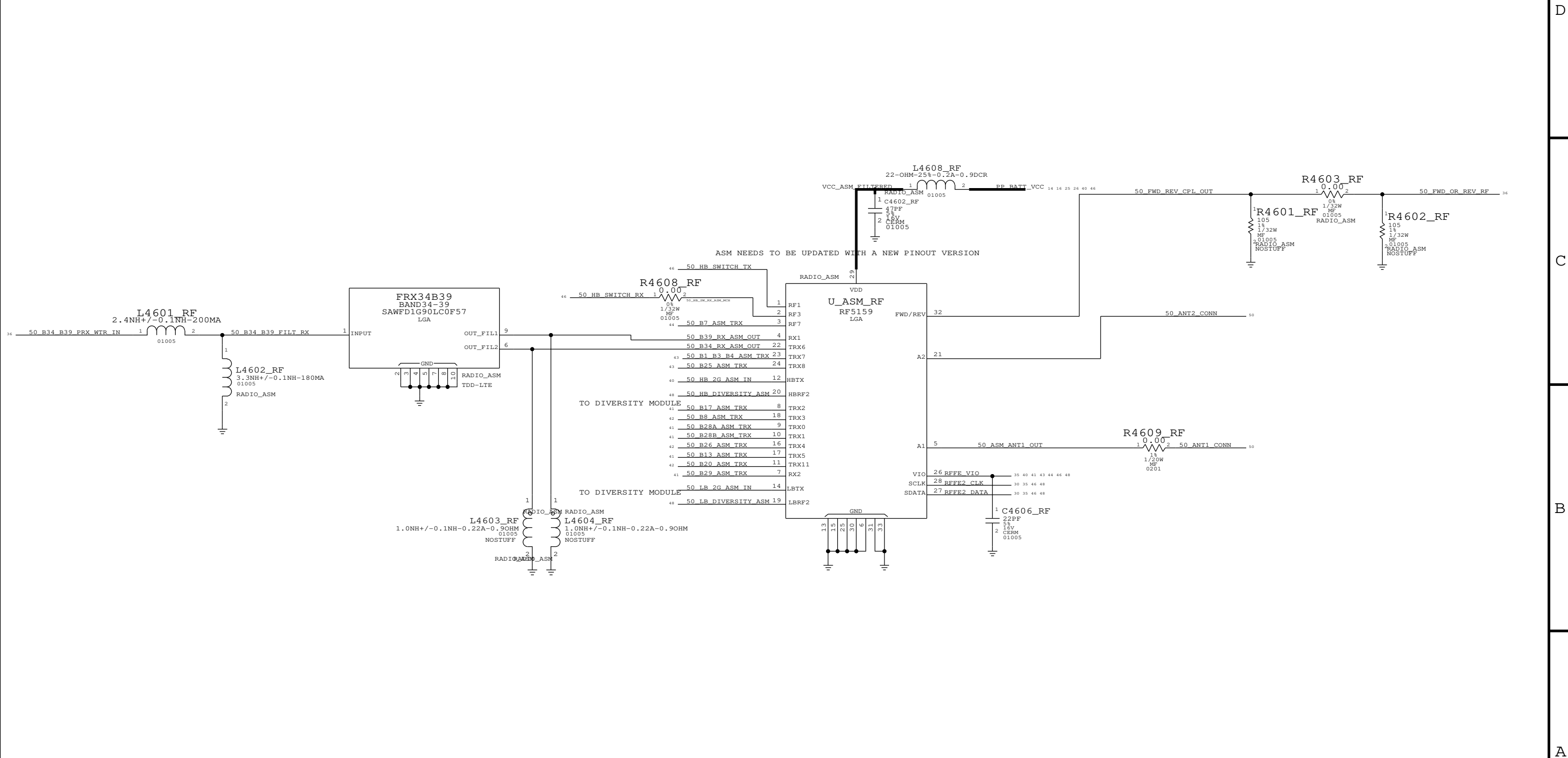


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ANTENNA SWITCH

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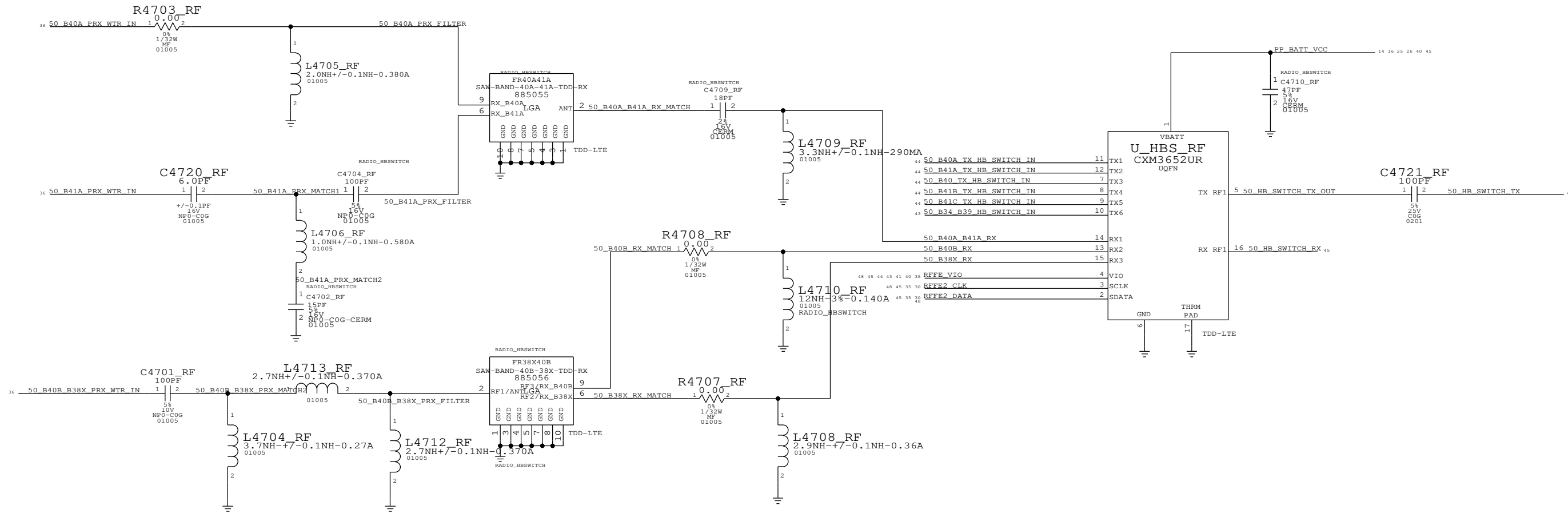
C1702
R1700
L4608_RF
U1702



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HIGH BAND SWITCH

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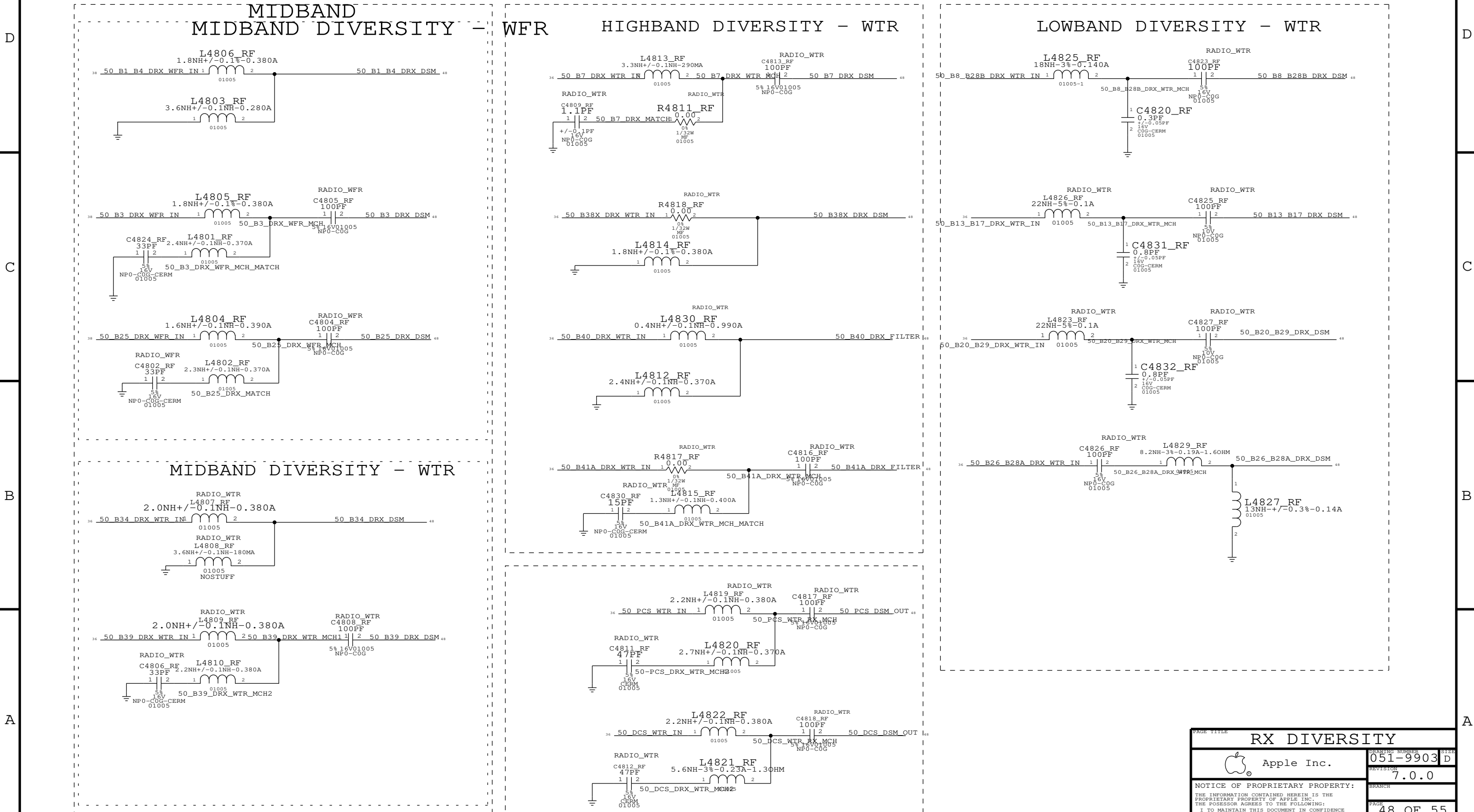


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RX DIVERSITY (1)

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C4826_RF
R1800
L1829
U1801



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RX DIVERSITY	
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RX DIVERSITY (2)

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C1900
R1900
L1900
U1901

D

D

C

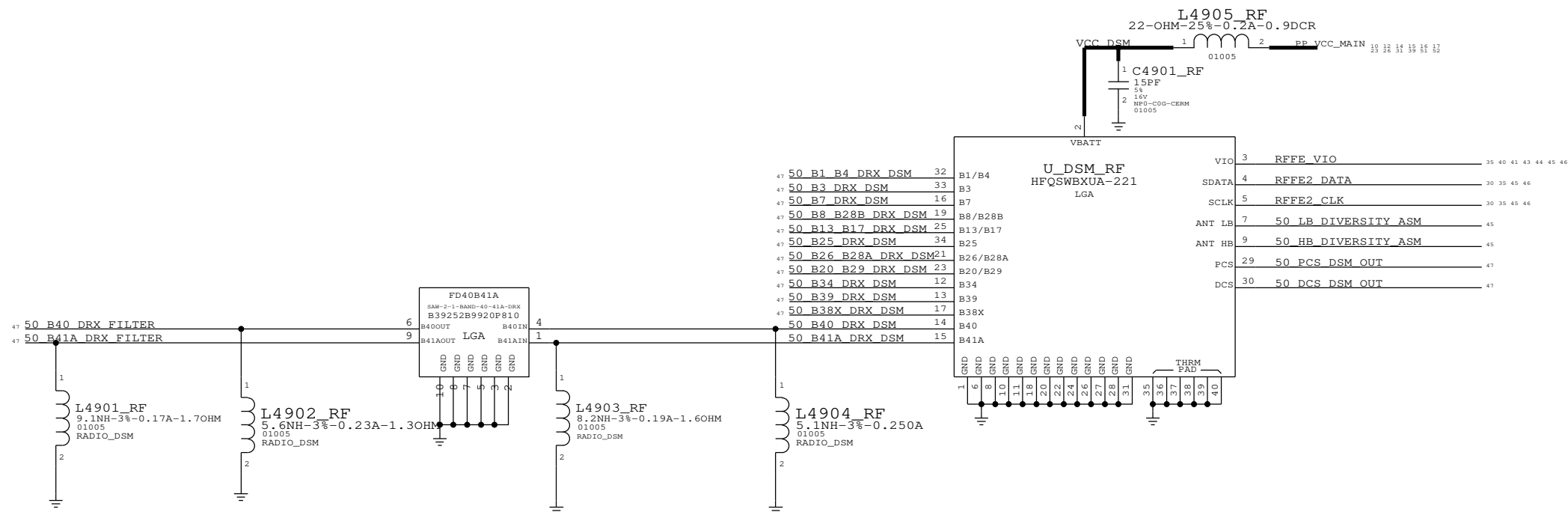
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GPS	
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SHEET: 48 OF 54	SIZE:

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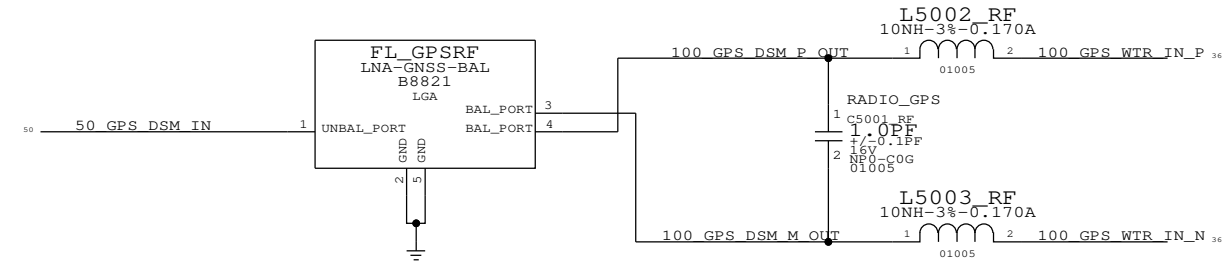
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1

GPS

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C1900
R1900
L1900
U1901



D

D

C

C

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PAGE TITLE		GPS	
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		SHEET	49 OF 54

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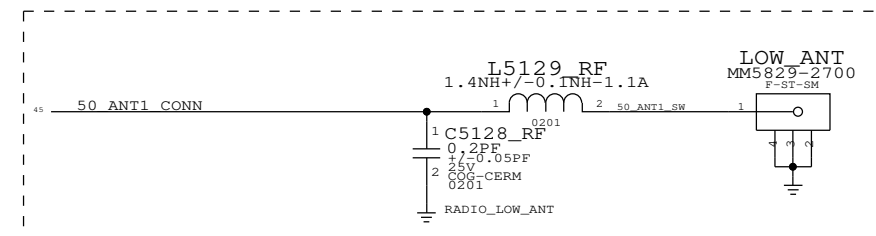
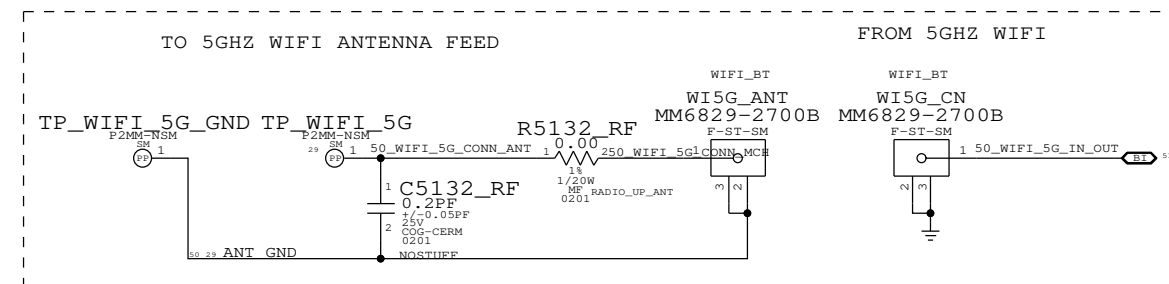
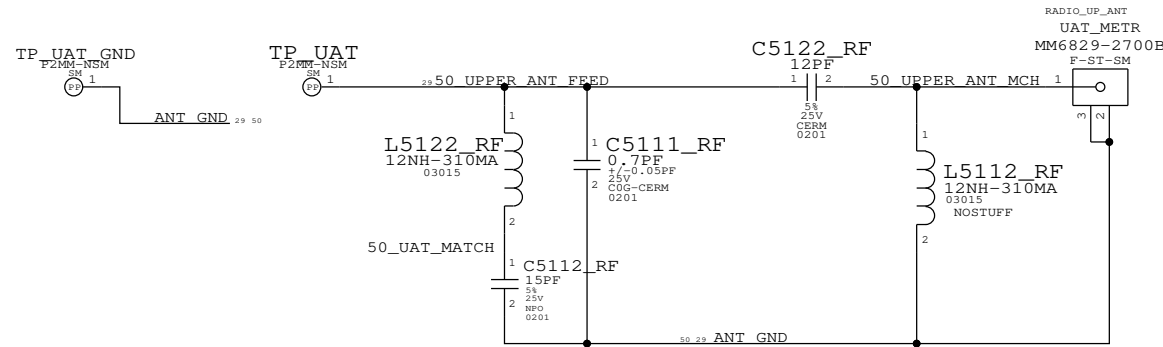
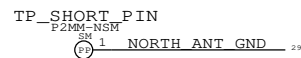
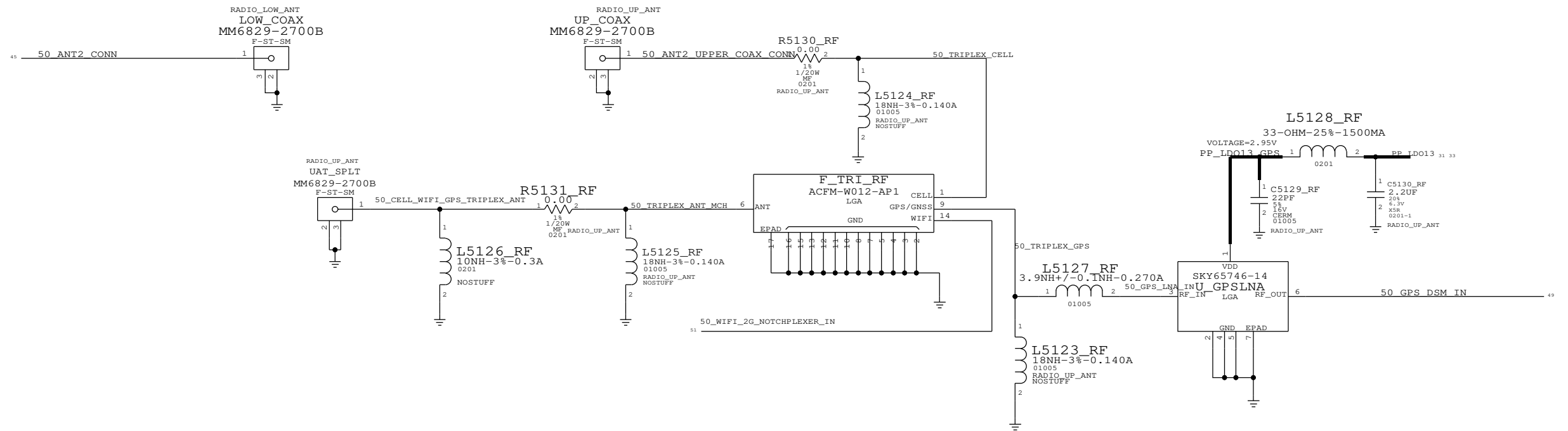
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ANTENNA FEED'S

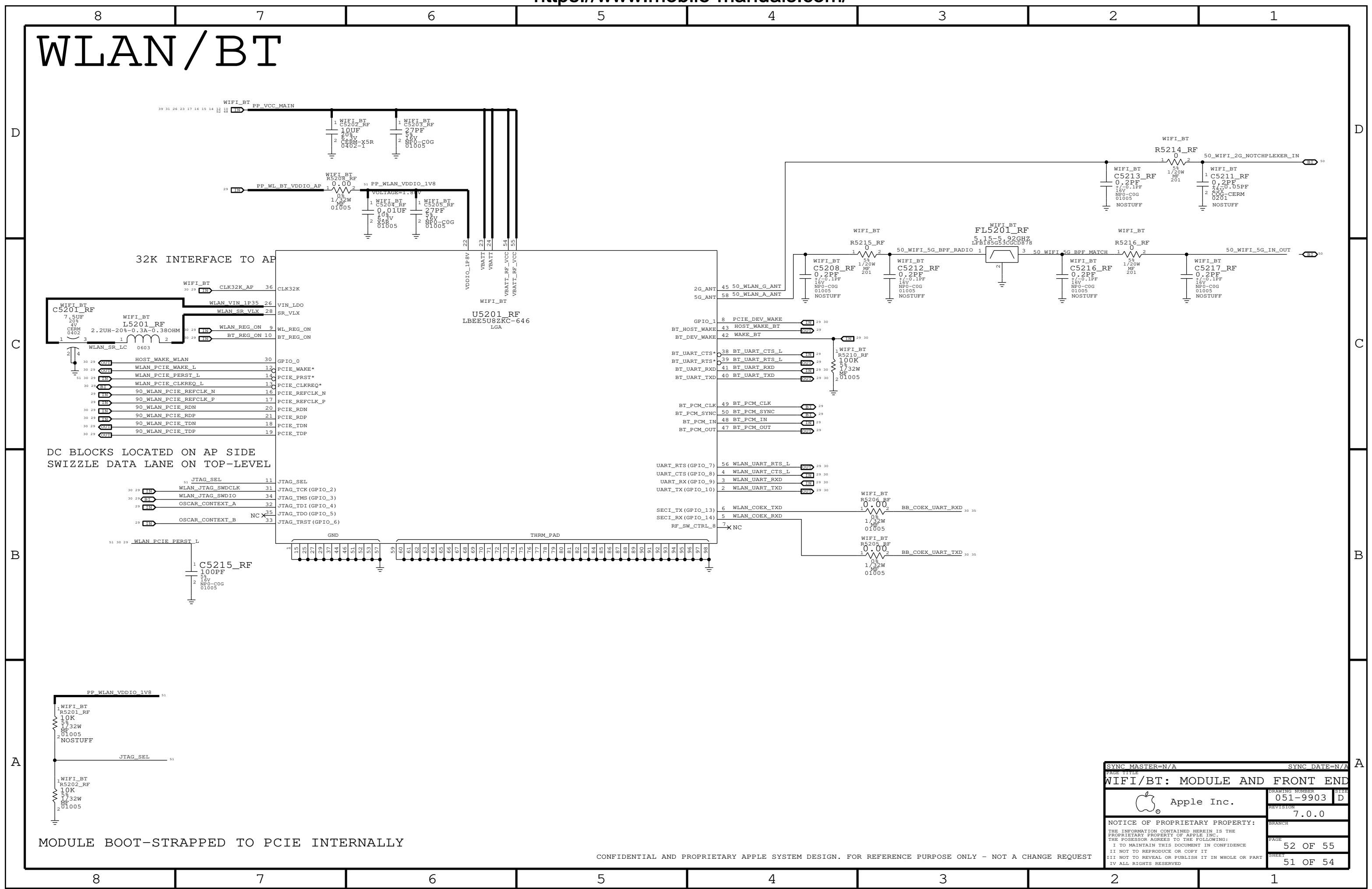
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TEST & COAX CONNECTOR FOR LOWER SECTION OF MLB



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ANTENNA FEEDS		051-9903		D
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WLAN/BT



MODULE BOOT-STRAPPED TO PCIe INTERNALLY

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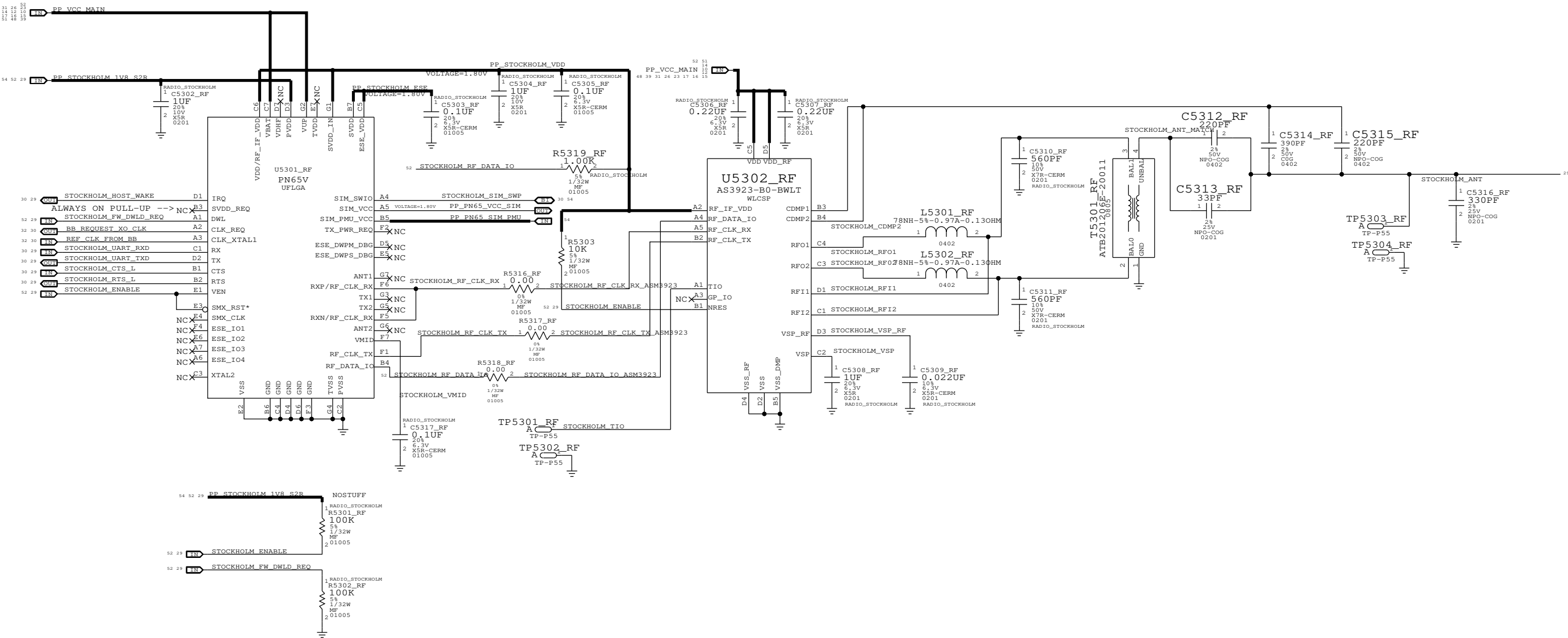
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STOCKHOLM

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C2101
R2100
L2102
U2100

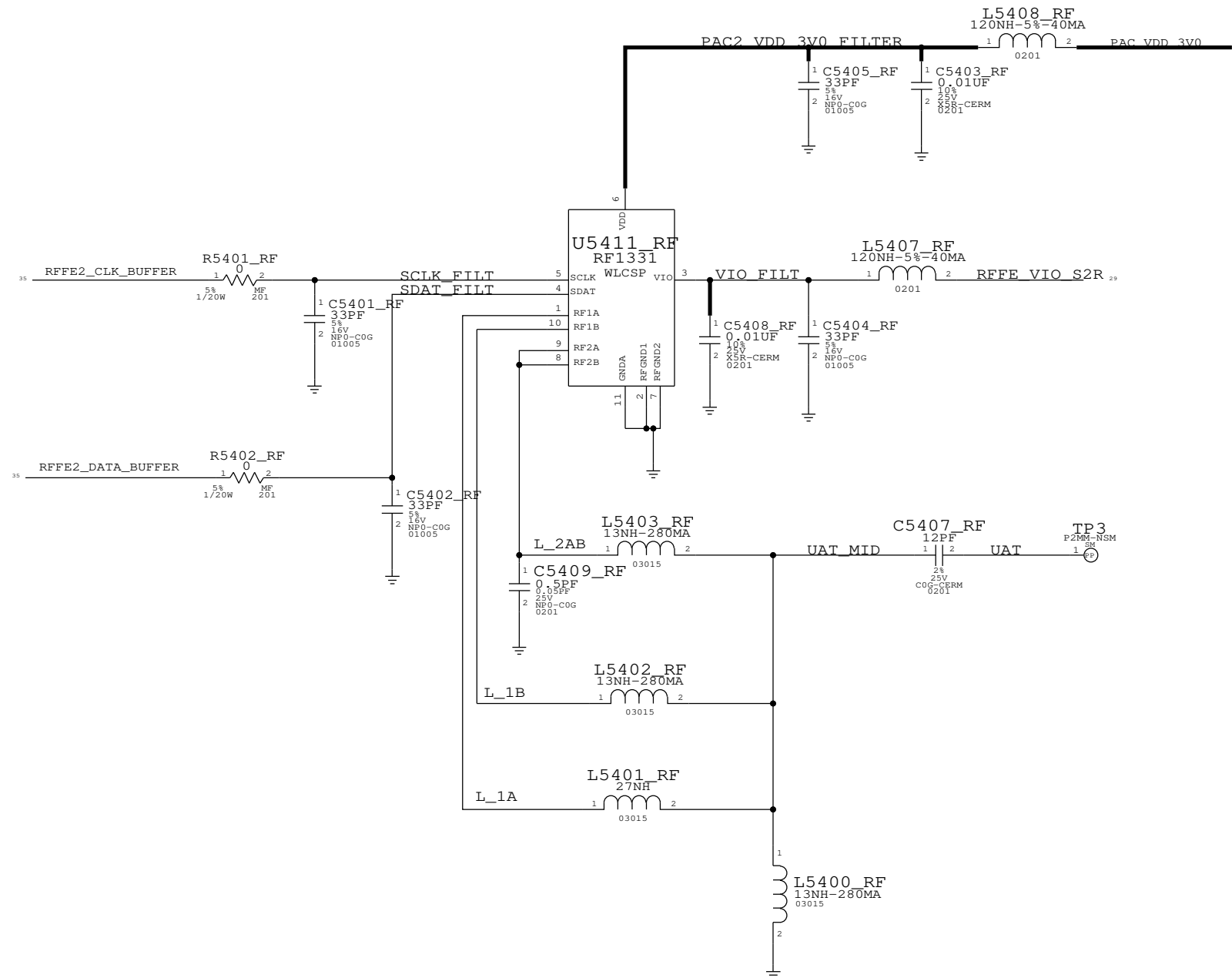
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BECAUSE OF OTHER BULK CAPS IN LAYOUT




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		BRANCH	
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ON-BOARD JUMPER FLEX

UAT JUMPER



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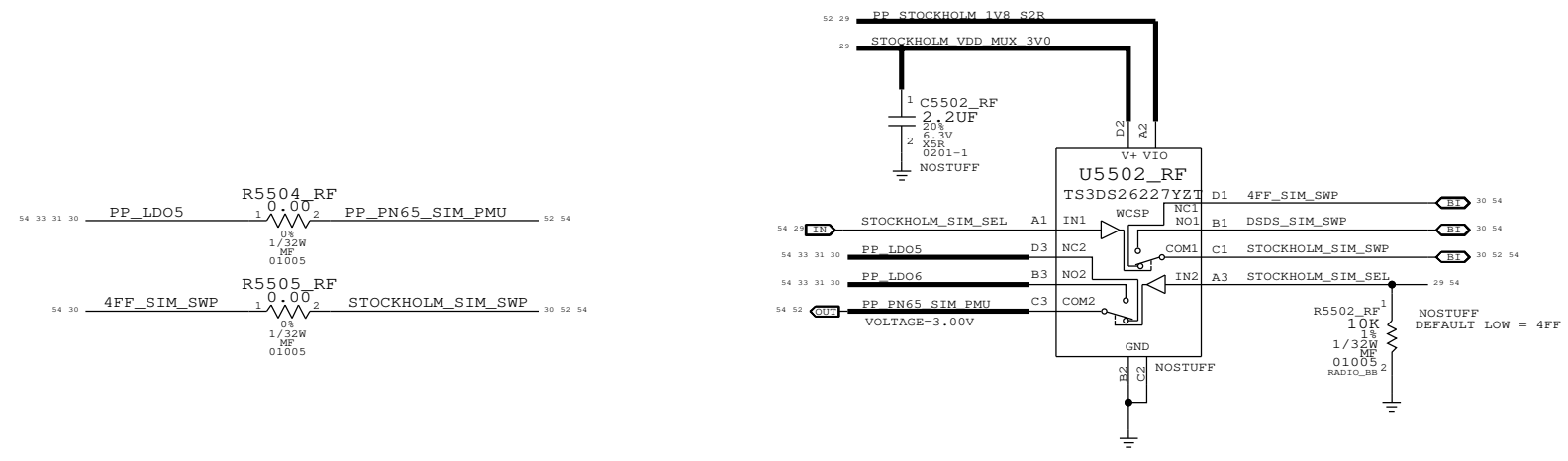
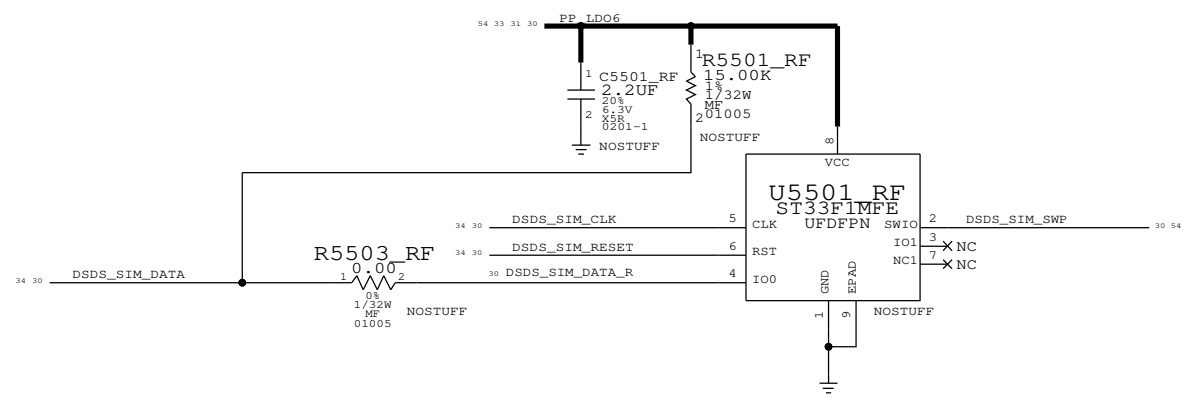
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