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.

REV	ECN	DESCRIPTION OF REVISION	CK APPD / DATE
4	0003980769	ENGINEERING RELEASED	2015-03-27

N66 MLB - EVT_MD

LAST_MODIFICATION=Tue Mar 24 12:47:11 2015

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56		CELLULAR FRONT END: MB-HB ASM		
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SCH 051-00094
BRD 820-00040
MCO 056-00472

BOM 639-00299 (BETTER)
BOM 639-00301 (ULTRA)
BOM 639-00302 (SUPREME)
BOM 639-01063 (BETTER, RF2)
BOM 639-01064 (ULTRA, RF2)
BOM 639-01065 (SUPREME, RF2)
BOM 639-01116 (BETTER, RFC)
BOM 639-01117 (ULTRA, RFC)
BOM 639-01118 (SUPREME, RFC)

BOM 639-01119 (BETTER, M)
BOM 639-01122 (ULTRA, M)
BOM 639-01125 (SUPREME, M)
BOM 639-01120 (BETTER, RF2, M)
BOM 639-01123 (ULTRA, RF2, M)
BOM 639-01126 (SUPREME, RF2, M)
BOM 639-01121 (BETTER, RFC, M)
BOM 639-01124 (ULTRA, RFC, M)
BOM 639-01127 (SUPREME, RFC, M)

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Active Diode Alternate

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
376S00106	376S00047	ALTERNATE	Q2300	DIODES INC. ACT DIODE

NAND BOM Options

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00039	1	NAND,T,B0,1Y,MLC,16GX8,S3E,WLGA70	U1500	CRITICAL	NAND_16G
335S00040	1	NAND,T,B0,1Y,MLC,64GX8,S3E,VLGA70	U1500	CRITICAL	NAND_64G
335S00079	1	NAND,H,B0,1Y,TLC,128GX8,S3E,VLGA70	U1500	CRITICAL	NAND_128G

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00074	335S00039	ALTERNATE	U1500	H, B0, 1Y, MLC, 16Gx8
335S00075	335S00040	ALTERNATE	U1500	H, B0, 1Y, MLC, 64Gx8
335S00078	335S00040	ALTERNATE	U1500	H, B0, 1Y, TLC, 64Gx8
335S00082	335S00040	ALTERNATE	U1500	T, B0, 1Z, TLC, 64Gx8
335S00064	335S00040	ALTERNATE	U1500	S, B0, 1Z, TLC, 64Gx8
335S00083	335S00079	ALTERNATE	U1500	T, B0, 1Z, TLC, 128Gx8
335S00065	335S00079	ALTERNATE	U1500	S, B0, 1Z, TLC, 128Gx8

Carbon BOM Options

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
338S1163	1	DISCRETE ACCEL, BOSCH	U3030	CRITICAL	NOSTUFF
338S1163	1	DISCRETE ACCEL, BOSCH	U3030	CRITICAL	CARBON_INVENSENSE
338S00017	1	CARBON, INVENSENSE	U3010	CRITICAL	CARBON_INVENSENSE
132S0395	1	C3013, 0.1UF, INVENSENSE OPTION	C3013	CRITICAL	CARBON_INVENSENSE
338S00029	1	CARBON, ST	U3010	CRITICAL	CARBON_ST
132S0391	1	C3013, 0.01UF, ST OPTION	C3013	CRITICAL	CARBON_ST
338S00087	1	CARBON, INVENSENSE MPU-6800	U3010	CRITICAL	CARBON_INVENSENSE_6800
132S0395	1	C3013, 0.1UF, INVENSENSE OPTION	C3013	CRITICAL	CARBON_INVENSENSE_6800

Power Inductor Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S00117	152S00074	ALTERNATE	$?	IND,PWR,SHLD,1.0 UH,3.6A,0.060 OHM,2016
152S00118	152S00075	ALTERNATE	$?	IND,PWR,SHLD,1.2 UH,3.0A,0.080 OHM,2016
152S00120	152S00077	ALTERNATE	$?	IND,PWR,SHLD,1.0 UH,2.25A,0.150 OHM,2016
152S00121	152S00081	ALTERNATE	$?	IND,PWR,SHLD,0.47 UH,3.9A,0.040 OHM,2012
152S00123	152S1936	ALTERNATE	$?	IND,PWR,SHLD,15 UH,0.71A,0.900 OHM,3225
152S2052	152S1929	ALTERNATE	$?	IND,MULT,1UH,1.2A,0.320 OHM,0603

SIM Callouts

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
512S00013	1	SIM, Integrated Eject, N66	J3001_RF	CRITICAL	COMMON

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
512S00015	512S00013	ALTERNATE	J3001_RF	SIM, INTEGRATED EJECT, N71

NOTE: Revisit for Carrier

Shield Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
613-01503	806-02349	ALTERNATE	SH0500	Upper Front shield
613-01504	806-02350	ALTERNATE	SH0501	Lower Front shield
806-02655	806-02352	ALTERNATE	SH0503	Upper Back shield
806-03410	806-02352	ALTERNATE	SH0503	Upper Back shield
806-02656	806-02353	ALTERNATE	SH0504	Lower Back shield
806-03411	806-02353	ALTERNATE	SH0504	Lower Back shield

NOTE: Revisit for Carrier

Schematic & PCB Callouts

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-00094	1	SCH,SINGLE_BRD,N66	SCH	CRITICAL	?
820-00040	1	PCBF,SINGLE_BRD,N66	PCB	CRITICAL	?
825-6838	1	EEEE CODE FOR 639-00299	EEEE_G360	CRITICAL	EEEE_BETTER
825-6838	1	EEEE CODE FOR 639-00301	EEEE_G35W	CRITICAL	EEEE_ULTRA
825-6838	1	EEEE CODE FOR 639-00302	EEEE_G35V	CRITICAL	EEEE_SUPREME
825-6838	1	EEEE CODE FOR 639-01063	EEEE_GKKY	CRITICAL	EEEE_BETTER_RF2
825-6838	1	EEEE CODE FOR 639-01064	EEEE_GKL0	CRITICAL	EEEE_ULTRA_RF2
825-6838	1	EEEE CODE FOR 639-01065	EEEE_GKL1	CRITICAL	EEEE_SUPREME_RF2
825-6838	1	EEEE CODE FOR 639-01116	EEEE_GLL7	CRITICAL	EEEE_BETTER_RFC
825-6838	1	EEEE CODE FOR 639-01117	EEEE_GLL4	CRITICAL	EEEE_ULTRA_RFC
825-6838	1	EEEE CODE FOR 639-01118	EEEE_GLL1	CRITICAL	EEEE_SUPREME_RFC
825-6838	1	EEEE CODE FOR 639-01119	EEEE_GLL2	CRITICAL	EEEE_BETTER_M
825-6838	1	EEEE CODE FOR 639-01122	EEEE_GLL3	CRITICAL	EEEE_ULTRA_M
825-6838	1	EEEE CODE FOR 639-01125	EEEE_GLL6	CRITICAL	EEEE_SUPREME_M
825-6838	1	EEEE CODE FOR 639-01120	EEEE_GLL8	CRITICAL	EEEE_BETTER_RF2_M
825-6838	1	EEEE CODE FOR 639-01123	EEEE_GLL0	CRITICAL	EEEE_ULTRA_RF2_M
825-6838	1	EEEE CODE FOR 639-01126	EEEE_GLLC	CRITICAL	EEEE_SUPREME_RF2_M
825-6838	1	EEEE CODE FOR 639-01121	EEEE_GLKY	CRITICAL	EEEE_BETTER_RFC_M
825-6838	1	EEEE CODE FOR 639-01124	EEEE_GLL5	CRITICAL	EEEE_ULTRA_RFC_M
825-6838	1	EEEE CODE FOR 639-01127	EEEE_GLL9	CRITICAL	EEEE_SUPREME_RFC_M

PMU/SOC BOM Options

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
998-01699	1	IC,PMU,ANTIGUA,A0,A1,200UBM,2165B,CSP380	U2000	POR
118S0631	1	RES,MF,100 OHM,1%,1/32W,01005	R0730	POR
131S0307	1	CAP,CER,NP0/C0G,100PF,5%,16V,01005	C0730	POR
339S00057	1	DEV FUSED, H DRAM	U0600	POR

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
998-02438	1	IC,PMU,ANTIGUA,A1,Z2,200UBM,2165B,CSP380	U2000	M
118S00009	1	RES,MF,3.01KOHM,1%,1/32W,01005	R0730	M
131S0307	1	CAP,CER,NP0/C0G,100PF,5%,16V,01005	C0730	NOSTUFF
339S00067	1	M DEV FUSED, M DRAM	U0600	M

Maui AP Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
339S00058	339S00057	ALTERNATE	U0600	DEV FUSED, M DRAM
339S00059	339S00057	ALTERNATE	U0600	DEV FUSED, S DRAM
339S00068	339S00067	ALTERNATE	U0600	M DEV FUSED, M DRAM

Low Noise Caps

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
138S0867	3	CAP,X5R,10UF,20%,6.3V,0.65MM,HRZTL,0402	C2085, C2086, C2087	CAPS_NORMAL
998-01223	3	CAP,X5R,10UF,20%,6.3V,0.65MM,0402,INTPOSER	C2085, C2086, C2087	CAPS_LOW_NOISE

SEP EEPROM Alternate

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00066	335S0946	ALTERNATE	U0900	IC,EEPROM,16KX8,1.8V,I2C,WLCSP4,ONSEMI

Global Capacitor Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
118S0764	118S0717	ALTERNATE	?	RES, 3.92K, 0.1%, 0201
138S0702	138S0657	ALTERNATE	?	CAP, X5R, 4.3UF, 4V, 0610
138S00006	138S0835	ALTERNATE	?	CAP, 3-TERM, 4.3UF, 4V, 0402
138S00005	138S00003	ALTERNATE	?	CAP,X5R,15UF,6.3V,0.65MM,0402,TAIYO
138S00048	138S00003	ALTERNATE	?	CAP,X5R,15UF,6.3V,0.65MM,0402,KYOCERA
138S0648	138S0652	ALTERNATE	?	CAP,X5R,4.7UF,6.3V,0.65MM,0402,TAIYO
132S0400	132S0436	ALTERNATE	?	CAP,X5R,0.22UF,6.3V,01005,TDK
138S00032	138S0831	ALTERNATE	?	CAP,X5R,2.2UF,6.3V,0201,TAIYO
138S00049	138S0831	ALTERNATE	?	CAP,X5R,2.2UF,6.3V,0201,KYOCERA
138S00024	138S0986	ALTERNATE	?	CAP,CER,3-TERM,7.5UF,20%,6V,0402,TAIYO/TDK
138S0706	138S0739	ALTERNATE	?	CAP,CER,1UF,20%,10V,X5R,0201,MURATA
138S0945	138S0739	ALTERNATE	?	CAP,CER,1UF,20%,10V,X5R,0201,KYOCERA

Global Ferrite Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S2052	152S1929	ALTERNATE	?	IND, 1UH, 1.2A, 0603
155S0773	155S0453	ALTERNATE	?	FERR, 120OHM, 0.80HM DCR, 01005
155S0653	155S0511	ALTERNATE	?	FERR, 33OHM, 0.090HM DCR, 0201
155S00067	155S0581	ALTERNATE	?	FERR, 240OHM, 0.38OHM DCR, 0201
155S00012	155S00009	ALTERNATE	?	FLTR, 65 OHMS, 0605
155S0960	155S0941	ALTERNATE	?	FERR, 70 OHMS, 01005

Global Varistor Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
377S0168	377S0140	ALTERNATE	?	VARISTOR, 6.8V, 100PF, 01005

DDR PLL Alternate

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155S00095	155S00068	ALTERNATE	FL1200	FERR BD,1000OHM,25%,100MA,20HM,01005

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SYSTEM:BOM TABLES

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TESTPOINTS

POWER

TP00 — TP-P5 — ROOM=TEST — A — VOLTAGE=0V — POWER GROUND

TP01 — TP-P55 — ROOM=TEST — A — 32 31 17 PP5V0_USB — VBUS

TP02 — TP-P5 — ROOM=TEST — A — 18 17 PP_BATT_VCC — VBATT

TP03 — TP-P5 — ROOM=TEST — A

TP04 — TP-P5 — ROOM=TEST — A — POWER GROUND

RESET

PP06 — P4MM-NSM — SM — PP — ROOM=TEST — 34 16 9 5 PMU_TO_SYSTEM_COLD_RESET_L — SOC & BB RESET

DFU

TP07 — TP-P55 — ROOM=TEST — A — 34 8 FORCE_DFU — FORCE DFU

PP07 — P4MM-NSM — SM — PP — ROOM=TEST — 21 20 17 14 13 12 9 8 7 6 5 3 34 30 PP1V8

PP08 — P4MM-NSM — SM — PP — ROOM=TEST — 34 8 DFU_STATUS

AMUX

TP16 — TP-P55 — ROOM=TEST — A — 16 PMU_AMUX_AY — ANALOG MUX A OUTPUT

TP17 — TP-P55 — ROOM=TEST — A — 16 PMU_AMUX_BY — ANALOG MUX B OUTPUT

MOJAVE

TP18 — TP-P55 — ROOM=TEST — A — 29 28 MESA_TO_BOOST_EN

TP19 — TP-P55 — ROOM=TEST — A — 29 28 PP16V5_MESA

LCM

TP20 — TP-P55 — ROOM=TEST — A — 30 PP_LCM_BL_CAT1_CONN — LCM BACKLIGHT SINK1

TP21 — TP-P55 — ROOM=TEST — A — 30 PP_LCM_BL_CAT2_CONN — LCM BACKLIGHT SINK2

TP22 — TP-P55 — ROOM=TEST — A — 30 PP_LCM_BL_ANODE_CONN — LCM BACKLIGHT SOURCE

TP23 — TP-P55 — ROOM=TEST — A — 30 PP_LCM_BL_CAT3_CONN — LCM BACKLIGHT SINK3

TP24 — TP-P55 — ROOM=TEST — A — 30 PP_LCM_BL_CAT4_CONN — LCM BACKLIGHT SINK4

TP25 — TP-P55 — ROOM=TEST — A — 30 PP_LCM_BL34_ANODE_CONN — LCM BACKLIGHT SOURCE (3/4)

UAT GND Ring Opening

PP09 — 0.50MM — SM — PP — ROOM=TEST — GND

N66 I2C DEVICE MAP

I2C BUS	DEVICE	BINARY	7-BIT HEX	8-BIT HEX
I2C0	ANTIGUA PMU	1110100X	0X74	0XE8
	CHESTNUT	0100111X	0X27	0X4E
	BACKLIGHT 1	1100011X	0X62	0XC4
I2C1	TIGRIS	1110101X	0X75	0XEA
	ARC DRIVER	1000001X	0X41	0X82
	SPEAKER AMP	1000000X	0X40	0X80
	TRISTAR	0011010X	0X1A	0X34
I2C2	ALS	0101001X	0X29	0X52
	DISP EEPROM	1010001X	0X51	0XA2
	BACKLIGHT 2	1100011X	0X62	0XC4
OWL	UNUSED	N/A	N/A	N/A
ISP I2C0	REAR CAM	TBD	TBD	TBD
	LED DRIVER	1100011X	0X63	0XC6
ISP I2C1	FRONT CAM	0010000X	0X10	0X20
TOUCH I2C	MESON	1000000X	0x40	0x80
	MAMBA	1100000X	0x60	0xC0
	DOPPLER	1011000X	0x58	0xB0
SEP I2C	SEP EEPROM	1010001X	0x51	0xA2

E75

TP08 — TP-P5 — ROOM=TEST — A — 32 31 TRISTAR_DP1_CONN_P

TP09 — TP-P5 — ROOM=TEST — A — 32 31 TRISTAR_DP1_CONN_N

TP10 — TP-P5 — ROOM=TEST — A — 32 31 TRISTAR_DP2_CONN_P

TP11 — TP-P5 — ROOM=TEST — A — 32 31 TRISTAR_DP2_CONN_N

TP12 — TP-P5 — ROOM=TEST — A — 32 31 PP_TRISTAR_ACC1 — ACCESSORY ID AND POWER

TP13 — TP-P5 — ROOM=TEST — A — 32 31 PP_TRISTAR_ACC2

TP14 — TP-P55 — ROOM=TEST — A — TP IS TO HELP WITH USB SI IN THE FACTORY FIXTURE.

TP15 — TP-P55 — ROOM=TEST — A — 32 31 TRISTAR_CON_DETECT_L — FOR DIAGS

BOOTSTRAPPING:BOARD REV
BOARD ID
BOOT CONFIG

8 BOARD_REV3 — R0400 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W — PP1V8 (1 5 6 7 8 9 12 13 14 17 20 21 30 34)

8 BOARD_REV2 — R0401 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

8 BOARD_REV1 — NOSTUFF R0402 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

8 BOARD_REV0 — NOSTUFF R0403 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

SELECTED -->

BOARD_REV[3:0]
FLOAT=LOW, PULLUP=HIGH

1111	PROTO1
1110	PROTO2
1101	EVT
1100	EVT-MD
XXXX	CARRIER
XXXX	DVT

8 BOARD_ID4 — NOSTUFF R0404 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

8 BOARD_ID3 — NOSTUFF R0405 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

8 BOARD_ID2 — R0406 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

8 BOARD_ID1 — R0407 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

8 BOARD_ID0 — NOSTUFF R0408 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

SELECTED -->

BOARD_ID[4:0]
FLOAT=LOW, PULLUP=HIGH

00100	N71 MLB
00101	N71 DEV
00110	N66 MLB
00111	N66 DEV

8 BOOT_CONFIG2 — NOSTUFF R0409 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

8 BOOT_CONFIG1 — R0410 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

8 BOOT_CONFIG0 — R0411 — ROOM=SOC — 1.00K — 01005 MF 5% 1/32W

SELECTED -->

BOOT_CONFIG[2:0]
FLOAT=LOW, PULLUP=HIGH

000	SPI0
001	SPI0 TEST MODE
010	NVME0_X2
011	NVME0 X2 TEST
100	NVME0 X1
101	NVME0 X1 TEST
111	FAST SPI0

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TUBE STANDOFF
860-00177

ROOM=ASSEMBLY
BS0530
STDOFF-2.60D0.648H-TH
1

ROOM=ASSEMBLY
BS0531
STDOFF-2.60D0.648H-TH
1

33 4 NORTH_AC_GND_SCREW

TUBE STANDOFF: STOCKHOLM FEED
860-5189

34 AP_TO_STOCKHOLM_ANT 1

BS0520
STDOFF-2.490D1.4ID-1.25H-SM
ROOM=ASSEMBLY
1

TUBE STANDOFF
860-00176

BS0513
STDOFF-2.60D0.808H
ROOM=ASSEMBLY
1

THREADED STANDOFF
860-00175

BS0510
STDOFF-2.90D0.888H-SM
1
ROOM=ASSEMBLY

TOP SIDE

THREADED STANDOFF
860-00175

BS0512
STDOFF-2.90D0.888H-SM
1
ROOM=ASSEMBLY

THREADED STANDOFF
860-00175

BS0511
STDOFF-2.90D0.888H-SM
1
ROOM=ASSEMBLY

PLATED SLOTTED THRU-HOLE
998-00099
CL0502
TH-NSP
1
SL-1.20X0.40-1.50X0.70-NSP

806-02349
SHLD-EMI-UPPER-FRONT-N66
1
SH0500
SM
ROOM=ASSEMBLY

806-02350
SHLD-EMI-LOWER-FRONT-N66
1
SH0501
SM
ROOM=ASSEMBLY

TIGRIS/SPKR INDUCTOR SHIELD

806-02351
SHLD-EMI-SA-N66
1
SH0502
SM
ROOM=ASSEMBLY

SOUTH TUBE STANDOFF
860-00176

BS0500
STDOFF-2.60D0.808H
1
ROOM=ASSEMBLY

MLB NORTH PENINSULA AC CHASSIS SHORT
(BLOCKS DC CURRENT THROUGH COMPASS REGION)

33 4 NORTH_AC_GND_SCREW

C0550
220PF
10%
16V
X7R-CERM
01005
1 2
ROOM=ASSEMBLY

C0551
100PF
5%
16V
NP0-C0G
01005
1 2
ROOM=ASSEMBLY

C0552
100PF
5%
16V
NP0-C0G
01005
1 2
ROOM=ASSEMBLY

C0553
4.7PF
+/-0.1PF
16V
NP0-C0G
01005
1 2
ROOM=ASSEMBLY

TODO: TUNE AC CAPS FOR ANTENNA RF GND

CL0501
SM
1 2 3 4 5

COAX CLIP BRACE
806-02354
CLIP-BRACE-COAX-N66

BOTTOM SIDE

806-02352
SHLD-EMI-UPPER-BACK-N66
1
SH0503
SM
ROOM=ASSEMBLY

DOUBLE COAX CLIP
806-01802
CLIP-RETENTION-COAX-DOUBLE
1
CL0500
SM

806-02353
SHLD-EMI-LOWER-BACK-N66
1
SH0504
SM
ROOM=ASSEMBLY

FIDUCIALS

FD0501
FID
0P5SM1P05Q-NSP
1
ROOM=ASSEMBLY

FD0503
FID
0P5SM1P05Q-NSP
1
ROOM=ASSEMBLY

FD0504
FID
0P5SM1P05Q-NSP
1
ROOM=ASSEMBLY

FD0505
FID
0P5SM1P05Q-NSP
1
ROOM=ASSEMBLY

FD0510
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0511
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0512
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0513
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0514
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0515
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0502
FID
0P5SM1P05Q-NSP
29 28 27 26 25 23 22 17 15 14 34 PP_VCC_MAIN
1
ROOM=ASSEMBLY

PAGE TITLE
SYSTEM: MECHANICAL COMPONENTS

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MAUI - USB, JTAG, XTAL

VDD12_PLL_LPDP:1.14-1.26V @2mA MAX
VDD12_PLL_SOC: 1.14-1.26V @12mA MAX
VDD12_PLL_CPU: 1.14-1.26V @2mA MAX

VDD18_USB: 1.71-1.89V @20mA MAX
VDD18_XTAL:1.62-1.98V @2mA MAX

PP1V2 — R0600 0.00 5% 1/32W MF 01005 ROOM=SOC — PP1V2_PLL VOLTAGE=1.2V

C0600 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0601 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0602 0.01UF 10% 6.3V X5R 01005 ROOM=SOC
C0603 0.01UF 10% 6.3V X5R 01005 ROOM=SOC
C0612 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC

PP1V8 — FL0610 1KOHM-25%-0.2A 0201 ROOM=SOC — PP1V8_XTAL VOLTAGE=1.8V

C0611 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0610 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC

PP3V3_USB
C0620 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
3.14-3.46V @5mA MAX

VDD12_UH1_HSIC0 AP21
VDD12_UH2_HSIC1 C15
VDD12_PLL_LPDP F22
VDD12_PLL_SOC U20, T19, W19
VDD12_PLL_CPU AF13
VDD18_USB AL21
VDD33_USB AN20
VDD18_XTAL AL34

OMIT_TABLE
CRITICAL
U0600
MAUI-2GB-25NM-DDR-H
FCMSP
SC58980B0B-A040
SYM 1 OF 14
ROOM=SOC

NC	AN22	UH1_HSIC0_DATA	
NC	AN21	UH1_HSIC0_STB	
NC	C16	UH2_HSIC1_DATA	
NC	D15	UH2_HSIC1_STB	
	Y32	JTAG_SEL	
NC	AC32	JTAG_TRST*	
NC	AB31	JTAG_TDO	
NC	AA32	JTAG_TDI	
	AB32	JTAG_TMS	SWD_DOCK_BI_AP_SWDIO (31)
	AA31	JTAG_TCK	SWD_DOCK_TO_AP_SWCLK (31)
	AC31	COLD_RESET*	PMU_TO_SYSTEM_COLD_RESET_L (34 16 9 3)
	H33	CFSB	PMU_TO_OWL_ACTIVE_READY (31 28 16 9)
	AR23	TST_CLKOUT	AP_TO_PMU_TEST_CLKOUT (16 5)
	AN23	S3E_RESET*	AP_TO_NAND_RESET_L (13)
	H32	HOLD_RESET	
	AF6	TESTMODE	
	AL22	FUSE1_FSRC	
	AG25	FUSE2_FSRC	

ANALOGMUX_OUT	AP24	AP_TO_PMU_AMUX_OUT	16
USB_D_P	AT20	USB_AP_DATA_P	5 31
USB_D_N	AT19	USB_AP_DATA_N	5 31
USB_VBUS	AP19	USB_VBUS_DETECT	17
USB_ID	AR19	NC	
USB_REXT	AP18	USB_REXT	
WDOG	Y33	AP_TO_PMU_WDOG_RESET	16
XI0	AK35	XTAL_AP_24M_IN	
XO0	AL35	XTAL_AP_24M_OUT	

R0640 200 1% 1/32W MF 01005 ROOM=SOC

R0650 511K 1% 1/32W MF 01005 ROOM=SOC
R0651 0.00 5% 1/32W MF 01005 ROOM=SOC
CRITICAL ROOM=SOC Y0600 1.60X1.20MM-SM 24.000MHZ-30PPM-9.5PF-60OHM
SOC_24M_O
C0650 12PF 5% 16V CERM 01005 ROOM=SOC
C0651 12PF 5% 16V CERM 01005 ROOM=SOC
PCB: PLACE THIS XW AT U1, NEAR XI/XO
XW0650 SHORT-10L-0.1MM-SM ROOM=SOC
AP_XTAL_GND VOLTAGE=0V

PROBE POINTS

31 5	USB_AP_DATA_P	PP0600	P3MM-NSM ROOM=SOC
31 5	USB_AP_DATA_N	PP0601	P3MM-NSM ROOM=SOC
16 5	AP_TO_PMU_TEST_CLKOUT	PP0610	P3MM-NSM ROOM=SOC

SYNC_MASTER=N71_SINGLE_BRD SYNC_DATE=05/29/2014

PAGE TITLE
SOC:JTAG,USB,XTAL

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MAUI - PCIE INTERFACES

VDD12_PCIE_REFBUF:1.08-1.26V @50mA MAX
VDD12_PCIE_TXPLL: 1.08-1.32V @10mA MAX
VDD12_PCIE: 1.14-1.26V @115mA MAX
PP1V2

VDD085_PCIE:0.802-TBDV @TBDmA MAX
PP_FIXED

C0740 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC
C0741 1.0UF 20% 6.3V X5R 0201-1 ROOM=SOC
C0742 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0743 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0731 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0752 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0751 1.0UF 20% 6.3V X5R 0201-1 ROOM=SOC
C0750 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC

AK28 VDD12_PCIE
AK25 VDD12_PCIE
AL24 VDD12_PCIE
AL27 VDD12_PCIE
AL26 VDD12_PCIE_TXPLL
AA26 VDD12_PCIE_REFBUF
AH28 VDD085_PCIE
AJ25 VDD085_PCIE
AL23 VDD085_PCIE
AJ29 VDD085_PCIE
AL29 VDD085_PCIE
AJ24 VDD085_PCIE
AK27 VDD085_PCIE
AJ27 VDD085_PCIE

PCIE EXT C AP29 PCIE_EXT_C

OMIT_TABLE
CRITICAL
U0600
MAUI-2GB-25NM-DDR-H
FCMSP
SC58980B0B-A040
SYM 2 OF 14
ROOM=SOC

PCIE LINK 0

PCIE_NAND_TO_AP_RXD0_P → C0701 0.1UF → PCIE_NAND_TO_AP_RXD0_C_P → AM30 PCIE_RX0_P
PCIE_NAND_TO_AP_RXD0_N → C0702 0.1UF → PCIE_NAND_TO_AP_RXD0_C_N → AN30 PCIE_RX0_N
PCIE_AP_TO_NAND_TXD0_P → C0703 0.1UF → PCIE_AP_TO_NAND_TXD0_C_P → AT32 PCIE_TX0_P
PCIE_AP_TO_NAND_TXD0_N → C0704 0.1UF → PCIE_AP_TO_NAND_TXD0_C_N → AR32 PCIE_TX0_N
PCIE_NAND_TO_AP_RXD1_P → C0705 0.1UF → PCIE_NAND_TO_AP_RXD1_C_P → AM28 PCIE_RX1_P
PCIE_NAND_TO_AP_RXD1_N → C0706 0.1UF → PCIE_NAND_TO_AP_RXD1_C_N → AN28 PCIE_RX1_N
PCIE_AP_TO_NAND_TXD1_P → C0707 0.1UF → PCIE_AP_TO_NAND_TXD1_C_P → AT31 PCIE_TX1_P
PCIE_AP_TO_NAND_TXD1_N → C0708 0.1UF → PCIE_AP_TO_NAND_TXD1_C_N → AR31 PCIE_TX1_N

PCIE LINK 1

PCIE_WLAN_TO_AP_RXD_P → C0709 0.1UF → PCIE_WLAN_TO_AP_RXD_C_P → AM27 PCIE_RX2_P
PCIE_WLAN_TO_AP_RXD_N → C0710 0.1UF → PCIE_WLAN_TO_AP_RXD_C_N → AN27 PCIE_RX2_N
PCIE_AP_TO_WLAN_TXD_P → C0711 0.1UF → PCIE_AP_TO_WLAN_TXD_C_P → AT28 PCIE_TX2_P
PCIE_AP_TO_WLAN_TXD_N → C0712 0.1UF → PCIE_AP_TO_WLAN_TXD_C_N → AR28 PCIE_TX2_N

PCIE LINK 2

PCIE_BB_TO_AP_RXD_P → C0715 0.1UF → PCIE_BB_TO_AP_RXD_C_P → AM26 PCIE_RX3_P
PCIE_BB_TO_AP_RXD_N → C0716 0.1UF → PCIE_BB_TO_AP_RXD_C_N → AN26 PCIE_RX3_N
PCIE_AP_TO_BB_TXD_P → C0717 0.1UF → PCIE_AP_TO_BB_TXD_C_P → AT26 PCIE_TX3_P
PCIE_AP_TO_BB_TXD_N → C0718 0.1UF → PCIE_AP_TO_BB_TXD_C_N → AR26 PCIE_TX3_N

AM25 NC PCIE_RX4_P
AN25 NC PCIE_RX4_N
AR24 NC PCIE_TX4_P
AT24 NC PCIE_TX4_N

PCIE_REF_CLK0_P AN35 → PCIE_AP_TO_NAND_REFCLK_P
PCIE_REF_CLK0_N AP35 → PCIE_AP_TO_NAND_REFCLK_N
PCIE_REF_CLK1_P AN34 → PCIE_AP_TO_WLAN_REFCLK_P
PCIE_REF_CLK1_N AP34 → PCIE_AP_TO_WLAN_REFCLK_N
PCIE_REF_CLK2_P AM32 → PCIE_AP_TO_BB_REFCLK_P
PCIE_REF_CLK2_N AN32 → PCIE_AP_TO_BB_REFCLK_N
PCIE_REF_CLK3_P AM31 NC
PCIE_REF_CLK3_N AN31 NC

PP1V8
R0720 100K 5% 1/32W MF 01005 ROOM=SOC
R0721 100K 5% 1/32W MF 01005 ROOM=SOC
R0722 100K 5% 1/32W MF 01005 ROOM=SOC

PCIE_CLKREQ0* AT11 → PCIE_NAND_TO_AP_CLKREQ_L
PCIE_CLKREQ1* AP12 → PCIE_WLAN_TO_AP_CLKREQ_L
PCIE_CLKREQ2* AR12 → PCIE_BB_BI_AP_CLKREQ_L
PCIE_CLKREQ3* AT12 NC

PCIE_PERST0* AR10 → PCIE_AP_TO_NAND_RESET_L
PCIE_PERST1* AT10 → PCIE_AP_TO_WLAN_RESET_L
PCIE_PERST2* AP11 → PCIE_AP_TO_BB_RESET_L
PCIE_PERST3* AR11 NC

R0700 100K 5% 1/32W MF 01005 ROOM=SOC
R0701 100K 5% 1/32W MF 01005 ROOM=SOC
R0702 100K 5% 1/32W MF 01005 ROOM=SOC

PCIE_EXT_REF_CLK_P AR33
PCIE_EXT_REF_CLK_N AT33
PCIE_RX_TX_BYPASS_CLK_P AT29
PCIE_RX_TX_BYPASS_CLK_N AR29

PCIE_RCAL_P
PCIE_RCAL_P AT30
PCIE_RCAL_N AR30
PCIE_RCAL_N
OMIT_TABLE R0730 100 1% 1/32W MF 01005 ROOM=SOC
OMIT_TABLE C0730 100PF 5% 10V NP0-C0G 01005 ROOM=SOC

PROBE POINTS

PCIE RX CAPS ARE PLACED CLOSER TO TX DRIVERS
PROBE POINTS ADDED FOR MEASUREMENTS AT RX DRIVER

PCIE_BB_TO_AP_RXD_C_P → PP0706 SM P3MM-NSM ROOM=SOC
PCIE_BB_TO_AP_RXD_C_N → PP0707 SM P3MM-NSM ROOM=SOC

SYNC_MASTER=N71_SINGLE_BRD SYNC_DATE=05/29/2014
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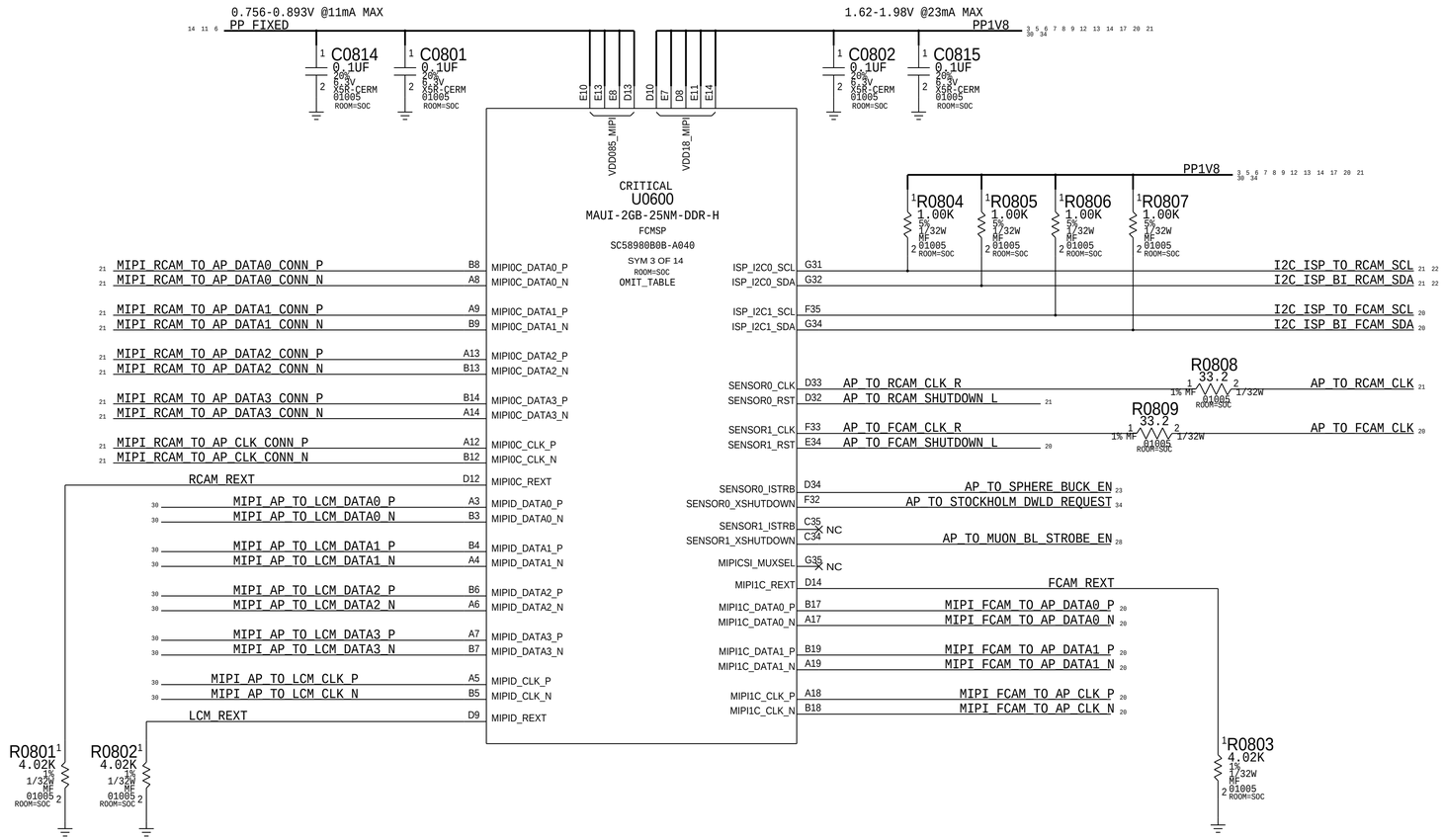
MAUI - CAMERA & DISPLAY INTERFACES



SYNC_MASTER=N71_SINGLE_BRD SYNC_DATE=05/29/2014

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MAUI - GPIO & SERIAL INTERFACES

U0600
MAUI-2GB-25NM-DDR-H
FCMSP
SC58980B0B-A040
SYM 5 OF 14
CRITICAL
ROOM=SOC
OMIT_TABLE

32	AP_TO_HP_HS3_CTRL	C1	GPIO_0	
32	AP_TO_HP_HS4_CTRL	D2	GPIO_1	
34 33 16	BUTTON_VOL_UP_L	D1	GPIO_2	
34 33 16	BUTTON_VOL_DOWN_L	F1	GPIO_3	
26	SPEAKERAMP_TO_AP_INT_L	E2	GPIO_4	
26	AP_TO_SPEAKERAMP_STAYIN_ALIVE	F3	GPIO_5	
26	AP_TO_SPEAKERAMP_RESET_L	F2	GPIO_6	
34	AP_TO_BT_WAKE	H3	GPIO_7	
34	AP_TO_BB_RESET_L	G3	GPIO_8	
34	PCIE_AP_TO_WLAN_DEV_WAKE	J1	GPIO_9	
22	AP_TO_LED_DRIVER_EN	H4	GPIO_10	
29	AP_TO_TOUCH_RESET_L	K1	GPIO_11	
30	AP_TO_LCM_RESET_L	J3	GPIO_12	
16	PMU_TO_AP_IRQ_L	K2	GPIO_13	
34	AP_TO_BB_PCIE_DEV_WAKE	J4	GPIO_14	
34	AP_TO_STOCKHOLM_DEV_WAKE	L2	GPIO_15	
3	BOARD_ID3	K3	GPIO_16	
NO_TEST=1	NC_AP_TO_STOCKHOLM_SIM_SEL	L3	GPIO_17	
3	BOOT_CONFIG0	N1	GPIO_18	
27	AP_TO_ARC_RESET_L	AH2	GPIO_19	
34 30 9	LCM_TO_OWL_BSYNC	AH3	GPIO_20	
27	ARC_TO_AP_INT_L	AH4	GPIO_21	
34	BB_TO_AP_GPS_TIME_MARK	AJ1	GPIO_22	
27	AP_TO_ARC_STAYIN_ALIVE	AJ2	GPIO_23	
34	BB_TO_AP_RESET_DETECT_L	AJ3	GPIO_24	
3	BOOT_CONFIG1	AJ4	GPIO_25	
34 3	FORCE_DFU	AK1	GPIO_26	
34 3	DFU_STATUS	AP3	GPIO_27	
3	BOOT_CONFIG2	AN4	GPIO_28	
3	BOARD_ID4	AP4	GPIO_29	
25 16	CODEC_TO_AP_PMU_INT_L	AP5	GPIO_30	
34	AP_TO_BB_RADIO_ON_L	AR2	GPIO_31	
13	AP_TO_NAND_FW_STRAP	AR3	GPIO_32	
30	TOUCH_TO_AP_INT_L	AR4	GPIO_33	
3	BOARD_REV3	AP6	GPIO_34	
3	BOARD_REV2	AT3	GPIO_35	
3	BOARD_REV1	AT4	GPIO_36	
3	BOARD_REV0	AR6	GPIO_37	
34	AP_TO_BB_COREDUMP	AP7	GPIO_38	
34	BB_IPC_GPIO	AT5	GPIO_39	
34 33 16 8	BUTTON_RINGER_A	AP8	GPIO_40	
34	AP_TO_BB_MESA_ON_L	AP9	GPIO_41	
29	MAMBA_EXT_LDO_EN	AP10	GPIO_42	

TMR32_PWM0	AE1	AP_TO_SPHERE_BUCK_MODE	23
TMR32_PWM1	AF2	NC	
TMR32_PWM2	AF3	NC	
UART0_RXD	AE3	UART_AP_DEBUG_RXD	31 34
UART0_TXD	AE4	UART_AP_DEBUG_TXD	31 34
UART1_CTS*	K31	UART_BT_TO_AP_CTS_L	34
UART1_RTS*	K32	UART_AP_TO_BT_RTS_L	34
UART1_RXD	L33	UART_BT_TO_AP_RXD	34
UART1_TXD	L32	UART_AP_TO_BT_TXD	34
UART2_CTS*	AT23	NC	
UART2_RTS*	AR20	NC	
UART2_RXD	AP21	NC	
UART2_TXD	AR22	NC	
UART3_CTS*	N4	UART_STOCKHOLM_TO_AP_CTS_L	34
UART3_RTS*	P3	UART_AP_TO_STOCKHOLM_RTS_L	34
UART3_RXD	R3	UART_STOCKHOLM_TO_AP_RXD	34
UART3_TXD	R2	UART_AP_TO_STOCKHOLM_TXD	34
UART4_CTS*	J33	UART_WLAN_TO_AP_CTS_L	34
UART4_RTS*	J34	UART_AP_TO_WLAN_RTS_L	34
UART4_RXD	J35	UART_WLAN_TO_AP_RXD	34
UART4_TXD	K33	UART_AP_TO_WLAN_TXD	34
UART5_RTXD	T32	SWI_AP_BI_TIGRIS	9 17
UART6_RXD	AF1	UART_ACCESSORY_TO_AP_RXD	31
UART6_TXD	AE2	UART_AP_TO_ACCESSORY_TXD	31
UART7_RXD	J31		
UART7_TXD	J32	NC	

PIN J31 (UART7_RXD) SHOULD BE
SET TO INTERNAL PULL-DOWN.
STUFF R0911 FOR ANALOG PROX.
NOSTUFF R0911 FOR DOPPLER PROX.

PP1V8
ANALOG_PROX
R0911 1.00K 5% 1/32W MF 01005 ROOM=SOC
PROX_SELECT

SPI_AP_TO_TOUCH_SCLK — R0960 0.00 0% 1/32W MF 01005 ROOM=SOC
SPI_AP_TO_MESA_SCLK — R0930 0.00 0% 1/32W MF 01005 ROOM=SOC

25	I2S_AP_TO_CODEC_MCLK	R0920 33.2 1% 1/32W MF 01005 ROOM=SOC	I2S_AP_TO_CODEC_MCLK_R
27	I2S_AP_TO_ARC_MCLK	R0921 33.2 1% 1/32W MF 01005 ROOM=SOC	I2S_AP_TO_ARC_MCLK_R
26	I2S_AP_TO_SPEAKERAMP_MCLK	R0922 33.2 1% 1/32W MF 01005 ROOM=SOC	I2S_AP_TO_SPEAKERAMP_MCLK_R

25 9	I2S_AP_OWL_TO_CODEC_XSP_BCLK	R34	I2S0_BCLK
25 9	I2S_AP_OWL_TO_CODEC_XSP_LRCLK	N34	I2S0_LRCK
25 9	I2S_CODEC_TO_AP_OWL_XSP_DIN	N35	I2S0_DIN
25	I2S_AP_TO_CODEC_XSP_DOUT	M33	I2S0_DOUT
34	I2S_AP_TO_BT_BCLK	M3	I2S1_BCLK
34	I2S_AP_TO_BT_LRCLK	P1	I2S1_LRCK
34	I2S_BT_TO_AP_DIN	N3	I2S1_DIN
34	I2S_AP_TO_BT_DOUT	L4	I2S1_DOUT
27 26 25	I2S_AP_TO_CODEC_ASP_BCLK	V33	I2S2_BCLK
27 26 25	I2S_AP_TO_CODEC_ASP_LRCLK	U33	I2S2_LRCK
27 26 25	I2S_CODEC_TO_AP_ASP_DIN	T33	I2S2_DIN
27 26 25	I2S_AP_TO_CODEC_ASP_DOUT	V34	I2S2_DOUT
20	ALS_TO_AP_INT_L	AM3	I2S3_MCK
34	I2S_AP_TO_BB_BCLK	AM4	I2S3_BCLK
34	I2S_AP_TO_BB_LRCLK	AN2	I2S3_LRCK
34	I2S_BB_TO_AP_DIN	AP1	I2S3_DIN
34	I2S_AP_TO_BB_DOUT	AN1	I2S3_DOUT
31 16	TRISTAR_TO_AP_INT	R32	I2S4_MCK
25	I2S_AP_TO_CODEC_MSP_BCLK	R31	I2S4_BCLK
25	I2S_AP_TO_CODEC_MSP_LRCLK	V32	I2S4_LRCK
25	I2S_CODEC_TO_AP_MSP_DIN	P31	I2S4_DIN
25	I2S_AP_TO_CODEC_MSP_DOUT	P32	I2S4_DOUT
3	BOARD_ID2	AD4	SPI0_MISO
3	BOARD_ID1	AC3	SPI0_MOSI
3	BOARD_ID0	AB2	SPI0_SCLK
	NC	AD3	SPI0_SSIN
25	SPI_CODEC_TO_AP_MISO	P33	SPI1_MISO
25	SPI_AP_TO_CODEC_MOSI	V35	SPI1_MOSI
25	SPI_AP_TO_CODEC_SCLK	N32	SPI1_SCLK
25	SPI_AP_TO_CODEC_CS_L	M31	SPI1_SSIN
30 8	SPI_TOUCH_TO_AP_MISO	E33	SPI2_MISO
30	SPI_AP_TO_TOUCH_MOSI	E35	SPI2_MOSI
	SPI_AP_TO_TOUCH_SCLK_R	F34	SPI2_SCLK
30	SPI_AP_TO_TOUCH_CS_L	F31	SPI2_SSIN
29	SPI_MESA_TO_AP_MISO	AA2	SPI3_MISO
29	SPI_AP_TO_MESA_MOSI	Y2	SPI3_MOSI
29	SPI_AP_TO_MESA_SCLK_R	AA3	SPI3_SCLK
29	MESA_TO_AP_INT	AC4	SPI3_SSIN

U0600
MAUI-2GB-25NM-DDR-H
FCMSP
SC58980B0B-A040
SYM 6 OF 14
CRITICAL
ROOM=SOC
OMIT_TABLE

I2C0_SCL	E31	I2C0_AP_SCL	8 16 28 34
I2C0_SDA	D35	I2C0_AP_SDA	8 16 28 34
I2C1_SCL	AH1	I2C1_AP_SCL	8 17 26 27 31 34
I2C1_SDA	AG4	I2C1_AP_SDA	8 17 26 27 31 34
I2C2_SCL	L31	I2C2_AP_SCL	20 28 30
I2C2_SDA	M32	I2C2_AP_SDA	20 28 30
SEP_SPI0_SCLK	W3	NC	
SEP_SPI0_MISO	AA4	NC	
SEP_SPI0_MOSI	U2	NC	
SEP_I2C_SCL	V3	I2C_SEP_TO_EEPROM_SCL	8
SEP_I2C_SDA	Y4	I2C_SEP_BI_EEPROM_SDA	8
SEP_GPIO0	Y3	NC	
SEP_GPIO1	AB4	NC	
SOCHOT0	AM1	PMU_TO_AP_SOCHOT0_R_L	
SOCHOT1	AM2	AP_TO_PMU_SOCHOT1_R_L	16
CPU_ACTIVE_STATUS	H31	NC	
CLK32K_OUT	H34	AP_TO_TOUCH_CLK32K_RESET_L	30
NAND_SYS_CLK	AM24	AP_TO_NAND_SYS_CLK_R	AP_TO_NAND_SYS_CLK 13

PP1V8 3 5 6 7 8 9 12 13 14 17 20 21 30 34
R0900 2.2K 5% 1/32W MF 01005 ROOM=SOC
R0901 2.2K 5% 1/32W MF 01005 ROOM=SOC
R0902 2.2K 5% 1/32W MF 01005 ROOM=SOC
R0903 2.2K 5% 1/32W MF 01005 ROOM=SOC
R0904 1.33K 1% 1/32W MF 01005 ROOM=SOC
R0905 1.33K 1% 1/32W MF 01005 ROOM=SOC

PP1V8 3 5 6 7 8 9 12 13 14 17 20 21 30 34
R0906 2.2K 5% 1/32W MF 01005 ROOM=SOC
R0907 2.2K 5% 1/32W MF 01005 ROOM=SOC

PP1V8 3 5 6 7 8 9 12 13 14 17 20 21 30 34
R0909 10K 5% 1/32W MF 01005 ROOM=SOC
R0910 10K 5% 1/32W MF 01005 ROOM=SOC
R0940 0.00 0% MF 1/32W 01005 ROOM=SOC
R0941 0.00 0% MF 1/32W 01005 ROOM=SOC
R0945 0.00 0% 1/32W MF 01005 ROOM=SOC

SPI PROBE POINTS

SPI_TOUCH_TO_AP_MISO 30 8 — PP0906 P3MM-NSM ROOM=SOC PLACE_SIDE=TOP

I2C PROBE POINTS

I2C0_AP_SCL 34 28 16 8	PP0900	P3MM-NSM ROOM=SOC
I2C0_AP_SDA 34 28 16 8	PP0901	P3MM-NSM ROOM=SOC
I2C1_AP_SCL 34 31 27 26 17 8	PP0902	P3MM-NSM ROOM=SOC PLACE_SIDE=TOP
I2C1_AP_SDA 34 31 27 26 17 8	PP0903	P3MM-NSM ROOM=SOC PLACE_SIDE=TOP

ANTI-ROLLBACK EEPROM

128kbit
APN:335S0946

PP1V8 21 20 17 14 13 12 9 8 7 6 5 3 34 30
C0900 1.0UF 20% 6.3V X6S 0201-1 ROOM=SOC
U0900 M34128-FCS6_P/T CRITICAL ROOM=SOC
VCC A1 · SCL B1 · WLCSP · SDA A2 · VSS B2
I2C_SEP_BI_EEPROM_SDA 8
I2C_SEP_TO_EEPROM_SCL 8

BUTTON PULL-UP RESISTORS

PP1V8_SDRAM 12 14 15 16 25 28 31 32 34
R0950 191K 1% 1/32W MF 01005 ROOM=SOC
R0951 100K 5% 1/32W MF 01005 ROOM=SOC
BUTTON_MENU_KEY_L 9 16 29 34
BUTTON_RINGER_A 8 16 33 34

PP1V8_ALWAYS 12 15 17
R0952 220K 5% 1/32W MF 01005 ROOM=SOC
BUTTON_HOLD_KEY_L 9 16 33 34

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PAGE TITLE: SOC:SERIAL & GPIO

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MAUI - OWL

POWER STATE CONTROL PROBE POINTS

16 9 OWL_TO_PMU_ACTIVE_REQUEST — 1 SM PP — PP1020 P3MM-NSM ROOM=SOC

31 28 16 9 5 PMU_TO_OWL_ACTIVE_READY — 1 SM PP — PP1021 P3MM-NSM ROOM=SOC

16 9 OWL_TO_PMU_SLEEP1_REQUEST — 1 SM PP — PP1022 P3MM-NSM ROOM=SOC

16 11 9 PMU_TO_OWL_SLEEP1_READY — 1 SM PP — PP1023 P3MM-NSM ROOM=SOC

PP1V8 3 5 6 7 8 12 13 14 17 20 21 30 34

NOSTUFF R1002 1.00K 5% 1/32W MF 01005 (1, 2)

U0600
MAUI-2GB-25NM-DDR-H
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SYM 7 OF 14

16 9	OWL_TO_PMU_SLEEP1_REQUEST	AD30	OWL_DDR_REQ		
16 11 9	PMU_TO_OWL_SLEEP1_READY	AB33	OWL_DDR_RESET*	CRITICAL ROOM=SOC OMIT_TABLE	
19	SPI_OWL_TO_COMPASS_CS_L	AF35	OWL_FUNC_0		
19	COMPASS_TO_OWL_INT	AH32	OWL_FUNC_1		
19	DISCRETE_ACCEL_TO_OWL_INT2	AG32	OWL_FUNC_2		
19	ACCEL_GYRO_TO_OWL_INT1	AG31	OWL_FUNC_3		
19	SPI_OWL_TO_ACCEL_GYRO_CS_L	AG30	OWL_FUNC_4		
19	ACCEL_GYRO_TO_OWL_INT2	AF33	OWL_FUNC_5		
19	SPI_OWL_TO_PHOSPHOROUS_CS_L	AE34	OWL_FUNC_6		
34 30 8	LCM_TO_OWL_BSYNC	AF34	OWL_FUNC_7		
9	OWL_TO_PMU_SHDN_BI_TIGRIS_SWI	AF31	OWL_FUNC_8		
19	PHOSPHORUS_TO_OWL_IRQ	AF32	OWL_FUNC_9	EXT OSC IN	
19	SPI_OWL_TO_DISCRETE_ACCEL_CS_L	AH31	OWL_I2CM_SCL	GPO	
19	DISCRETE_ACCEL_TO_OWL_INT1	AH33	OWL_I2CM_SDA		
19	SPI_IMU_TO_OWL_MISO	AK31	OWL_SPI_MISO		
19	SPI_OWL_TO_IMU_MOSI	AK32	OWL_SPI_MOSI	GPO	
19	SPI_OWL_TO_IMU_SCLK	AL33	OWL_SPI_SCLK	GPO	
34	UART_BB_TO_OWL_RXD	AJ32	OWL_UART0_RXD		
34	UART_OWL_TO_BB_TXD	AK33	OWL_UART0_TXD		
34	OWL_TO_WLAN_CONTEXT_B	AH30	OWL_UART1_RXD		
34	OWL_TO_WLAN_CONTEXT_A	AJ31	OWL_UART1_TXD		
30	TOUCH_TO_OWL_ACCEL_DATA_REQUEST	AJ34	OWL_UART2_RXD		
30	UART_OWL_TO_TOUCH_TXD	AJ33	OWL_UART2_TXD		
25 8	I2S_AP_OWL_TO_CODEC_XSP_BCLK	AD34	OWL_I2S_BCLK		
25 8	I2S_CODEC_TO_AP_OWL_XSP_DIN	AA34	OWL_I2S_DIN		
	NC	AE32	OWL_I2S_MCK		
25 8	I2S_AP_OWL_TO_CODEC_XSP_LRCLK	AE31	OWL_I2S_LRCK		
	CFSB_AOP	W33			PMU_TO_SYSTEM_COLD_RESET_L 3 5 16 34
	AWAKE_REQ	AA33			OWL_TO_PMU_ACTIVE_REQUEST 9 16
	AWAKE_RESET*	AD32			PMU_TO_OWL_ACTIVE_READY 5 9 16 28 31
	PMGR_MISO	AL2			DWI_PMU_TO_PMGR_MISO 16
	PMGR_MOSI	AL1			DWI_PMGR_TO_PMU_BACKLIGHT_MOSI 16 28
	PMGR_SCLK0	AK4			DWI_PMGR_TO_PMU_SCLK 16
	PMGR_SSCLK1	AL3			DWI_PMGR_TO_BACKLIGHT_SCLK 28
	RT_CLK32768	AD31			PMU_TO_OWL_CLK32K 16
	OWL_SWD_TCK_OUT	AE33			SWD_AP_PERIPHERAL_SWCLK 13 34
	OWL_SWD_TMS0	AD35			NC
	OWL_SWD_TMS1	AC33			SWD_AP_BI_BB_SWDIO 34
	SWD_TMS2	U31			SWD_AP_BI_NAND_SWDIO 13
	SWD_TMS3	T31			NC
	HOLD_KEY*	U3			BUTTON_HOLD_KEY_L 8 16 33 34
VDD_SOC	SKEY*	W4			NC
	MENU_KEY*	V4			BUTTON_MENU_KEY_L 8 16 29 34

OWL SYSTEM SHUTDOWN OPTION

9 OWL_TO_PMU_SHDN_BI_TIGRIS_SWI

NOSTUFF R1020 10 MF 5% 1/32W 01005 ROOM=SOC (1, 2) — SWI_AP_BI_TIGRIS 8 17

NOSTUFF R1021 10 MF 5% 1/32W 01005 ROOM=SOC (1, 2) — OWL_TO_PMU_SHDN 16

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MAUI - CPU, GPU & SOC RAILS

14 10 PP_GPU
0.8V @10.5A MAX

TP1120 0.50MM SM 1 PP PP_GPU 10 14

C1101 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=SOC
C1102 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=SOC
C1103 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC
C1104 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC
C1105 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC

C1106 4.3UF 20% 4V CERM 0402
C1107 7.5UF 20% 4V CERM 0402
C1108 4.3UF 20% 4V CERM 0402
C1109 7.5UF 20% 4V CERM 0402
C1110 4.3UF 20% 4V CERM 0402
C1111 7.5UF 20% 4V CERM 0402

C1112 1UF 20% 4V CERM 0402
C1113 1UF 20% 4V CERM 0402
C1114 1UF 20% 4V CERM 0402
C1115 1UF 20% 4V CERM 0402
C1116 0.47UF 20% 6.3V CERM 0402
C1117 0.47UF 20% 6.3V CERM 0402

XW1110 SHORT-10L-0.1MM-SM ROOM=SOC
14 BUCK1_PP_GPU_FB

14 10 PP_CPU
0.625V @TBDA MAX
0.9V @10.5A MAX
1.0V @12.5A MAX

TP1100 0.50MM SM 1 PP PP_CPU 10 14

C1120 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=SOC
C1121 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=SOC
C1122 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC
C1123 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC
C1124 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC
C1125 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC

C1126 7.5UF 20% 4V CERM 0402
C1127 7.5UF 20% 4V CERM 0402
C1128 4.3UF 20% 4V CERM 0402
C1129 4.3UF 20% 4V CERM 0402
C1130 4.3UF 20% 4V CERM 0402
C1131 7.5UF 20% 4V CERM 0402

C1132 4.3UF 20% 4V CERM 0402
C1133 7.5UF 20% 4V CERM 0402
C1134 1UF 20% 4V CERM 0402
C1135 1UF 20% 4V CERM 0402
C1136 1UF 20% 4V CERM 0402
C1137 1UF 20% 4V CERM 0402

C1138 0.47UF 20% 6.3V CERM 0402
C1139 0.47UF 20% 6.3V CERM 0402
C1140 0.47UF 20% 6.3V CERM 0402
C1141 0.47UF 20% 6.3V CERM 0402

XW1100 SHORT-10L-0.1MM-SM ROOM=SOC
14 BUCK0_PP_CPU_FB

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MAUI-2GB-25NM-DDR-H
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CRITICAL
ROOM=SOC
OMIT_TABLE

VDD_CPU: AA7 AA9 AA11 AB6 AB10 AB12 AC13 AD6 AD8 AD10 AD12 AE7 AE9 AE11 AE13 AF8 AF10 AF12 AH6 AH8 AH10 AH12 AJ5 AJ7 AJ9 AJ11 AJ13 AK6 AK10 AL7 AL9 AL11 AM6 AM8 AM10 AN7 AN11 AL13 Y8 Y10 Y12 AM12

VDD_GPU: G15 W13 T12 M6 U9 V12 W9 M12 M18 N15 N21 N9 F10 H14 H16 H20 H22 H6 H8 J11 J13 J17 J19 J23 J7 K10 K14 K16 K20 K22 K6 K8 L11 L13 L15 L17 L19 L21 M24 L7 L9 F8 M8 N11 N13 N17 N19 P10 G11 P12 P14 P16 P20 R15 R19 G13 R9 T10 T14 T16 U11 V14 V16 G7 R23 G9 H10 T24 P22 W17 N23 G17 G21 T18 T20

U0600
MAUI-2GB-25NM-DDR-H
FCMSP
SC58980B0B-A040
SYM 9 OF 14
CRITICAL
ROOM=SOC
OMIT_TABLE

VDD_SOC: W23 Y14 Y16 Y20 Y22 Y24 Y26 G29 AA27 F17 F20 L29 N29 V28

VDD_SOC: AA17 AA19 AA23 AB14 AB16 AB20 AB22 AB24 AB26 AC17 AC19 AC23 AD16 AD20 AD22 AD24 AD26 AE5 AE15 AE17 AE19 AE23 AF14 AF16 AF20 AF22 AF24 AF26 AG17 AG19 AG23 AH16 AH20 AH22 AH24 AH26 AJ15 AJ17 AJ19 AJ23 AK14 J29 G23 AK22 F6 F14 AL15 AM5 G25 G27 H24 H26 H28 J27 K24 K26 K28 L27 L23 M26 M28 AL19 N7 N27 P24 P26 P28 R17 R27 R29 T22 T26 T7 T28 U17 V8 V20 V22 V24 V26 W7 W11 Y28

VSS: L22 L24 L26 L28 M1 M5 M7 M9 M11 M13 M17 M21 M23 M25 M27 M29 M35 N6 N10 N12 N14 N16 N18 G19 N22 N24 N26 N28 N30 N33 P9 P11 P13 P15 P17 P19 P21 P23 P25 P27 P29 P35 R4 R6 R8 R10 R12 R14 M19 R18 R20 R22 R24 R26 R28 R30 T1 T2 R33 T9 T11 T13 T15 T17 P7 T23 T25 T27 T30 T35 U6 U10 U12

PP1105 SM P2MM-NSM PP 1 ROOM=SOC AP_SOC_SENSE_P AJ20 VDD_SOC_SENSE
PP1104 SM P2MM-NSM PP 1 ROOM=SOC AP_SOC_SENSE_N AK21 VSS_SOC_SENSE

PP1100 SM P2MM-NSM PP 1 ROOM=SOC AP_CPU_SENSE_P Y6 VDD_CPU_SENSE
PP1101 SM P2MM-NSM PP 1 ROOM=SOC AP_CPU_SENSE_N Y7 VSS_CPU_SENSE

VDD_GPU_SENSE G20 AP_GPU_SENSE_P 16
VSS_GPU_SENSE H19 AP_GPU_SENSE_N
PP1102 SM P2MM-NSM PP 1 ROOM=SOC

NOTE: AP_GPU_SENSE_P probe location @ R2205.2

PP_SOC 14
0.825V @4.7A MAX
0.725V @TBDA MAX

C1151 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=SOC

XW1120 SHORT-10L-0.1MM-SM ROOM=SOC
BUCK2_PP_SOC_FB 14

C1153 4.3UF 20% 4V CERM 0402 ROOM=SOC
C1154 1UF 20% 4V CERM 0402 ROOM=SOC
C1155 1UF 20% 4V CERM 0402 ROOM=SOC
C1156 0.47UF 20% 6.3V CERM 0402 ROOM=SOC
C1157 0.47UF 20% 6.3V CERM 0402 ROOM=SOC

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PAGE TITLE
SOC:POWER (1/3)

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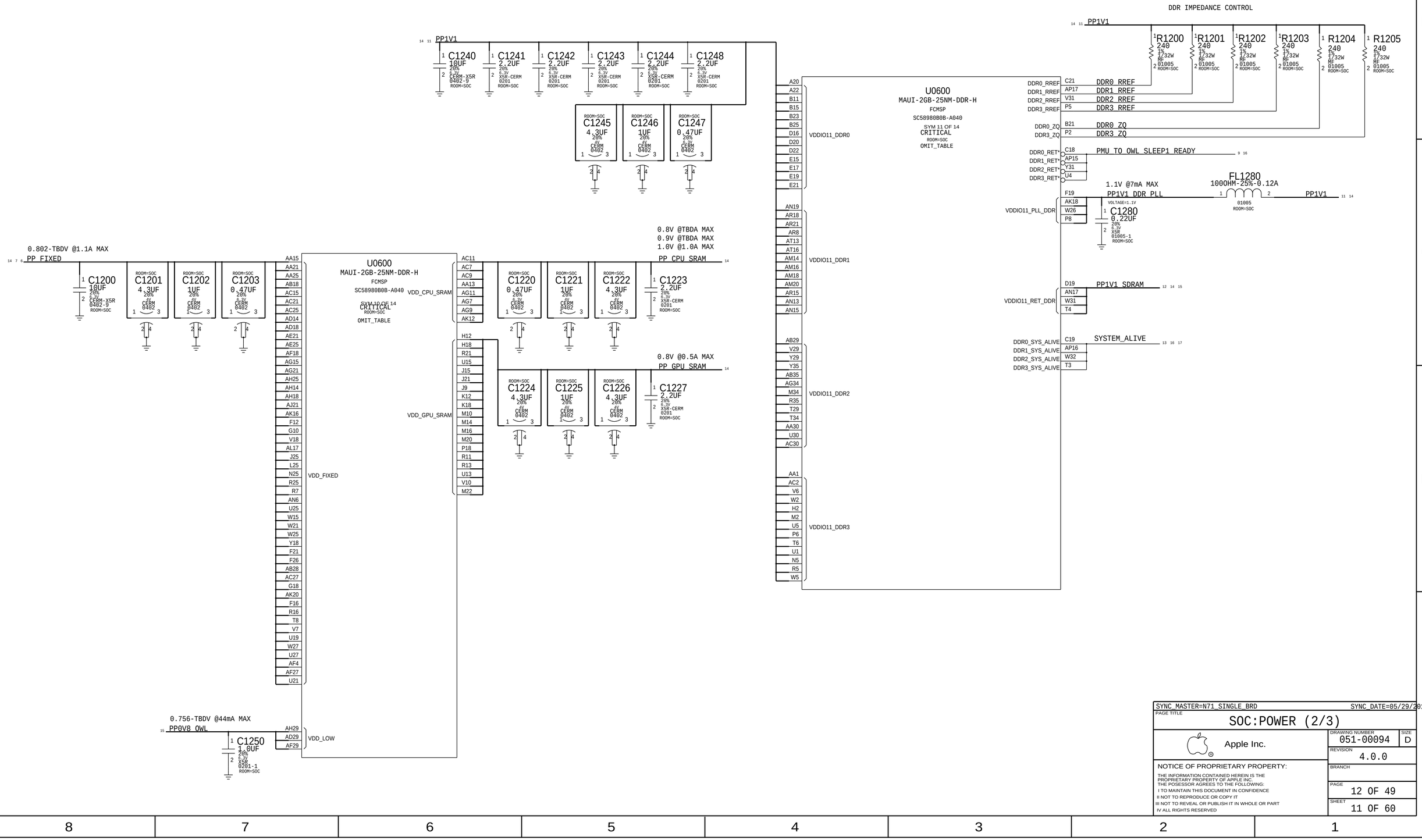
MAUI - POWER SUPPLIES



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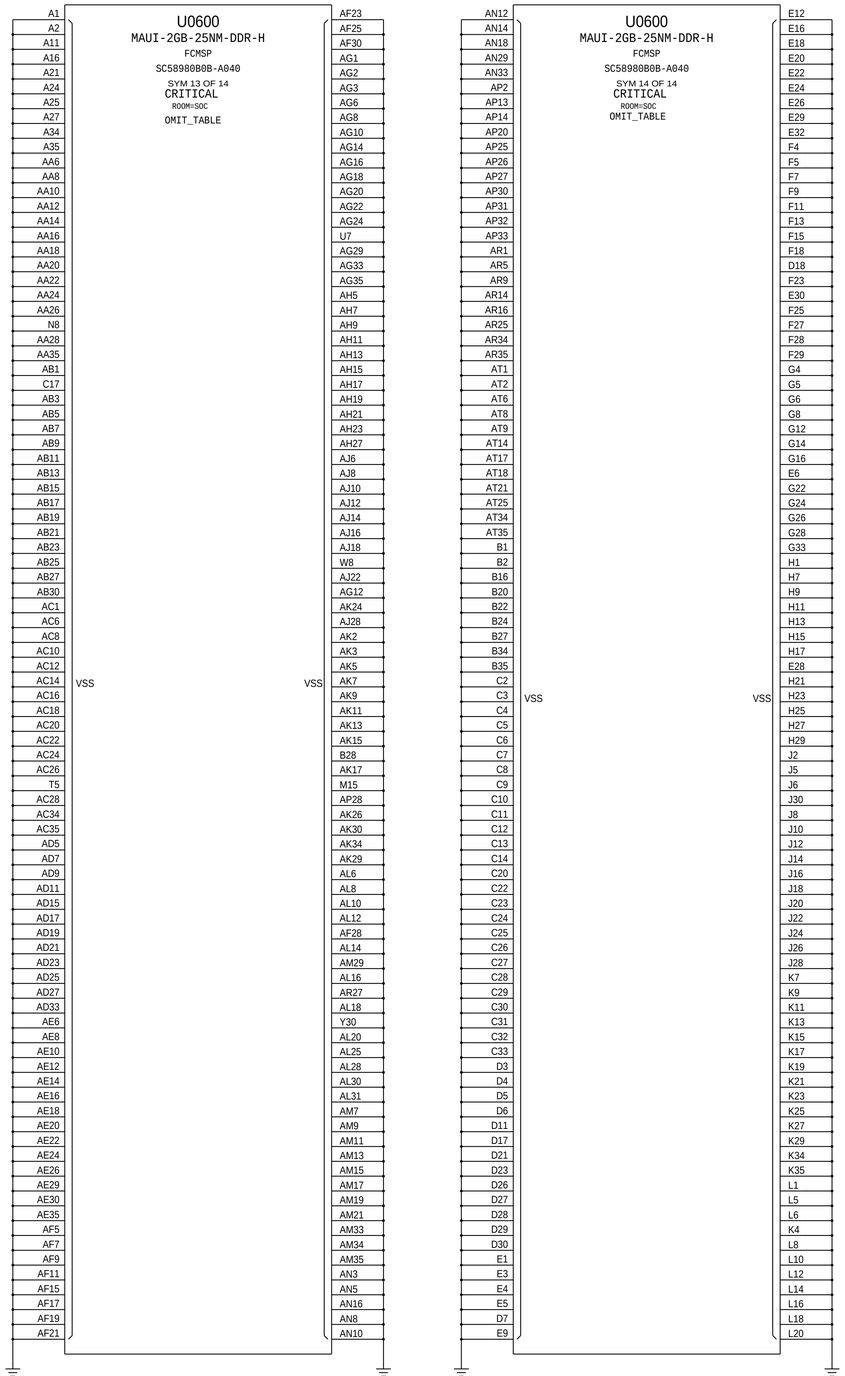
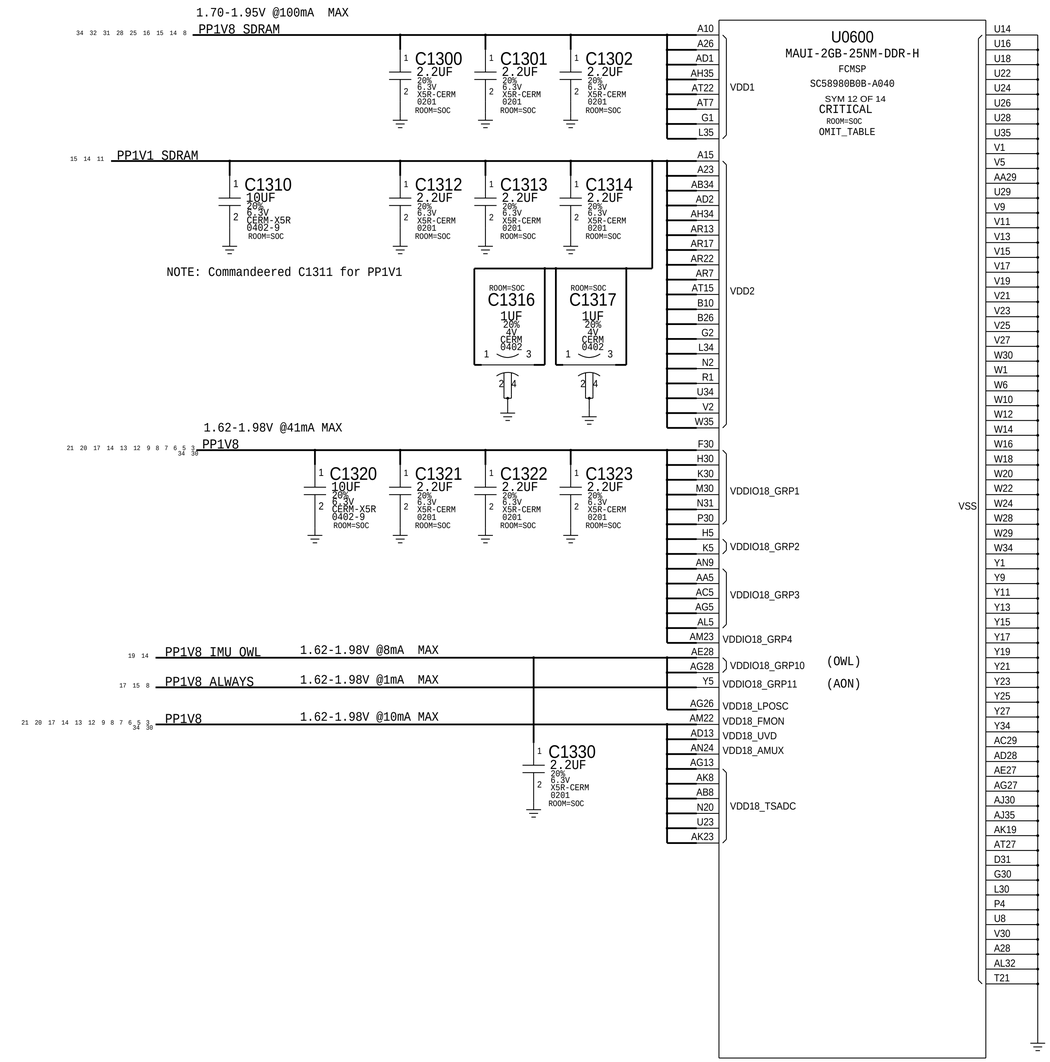
MAUI - POWER SUPPLIES





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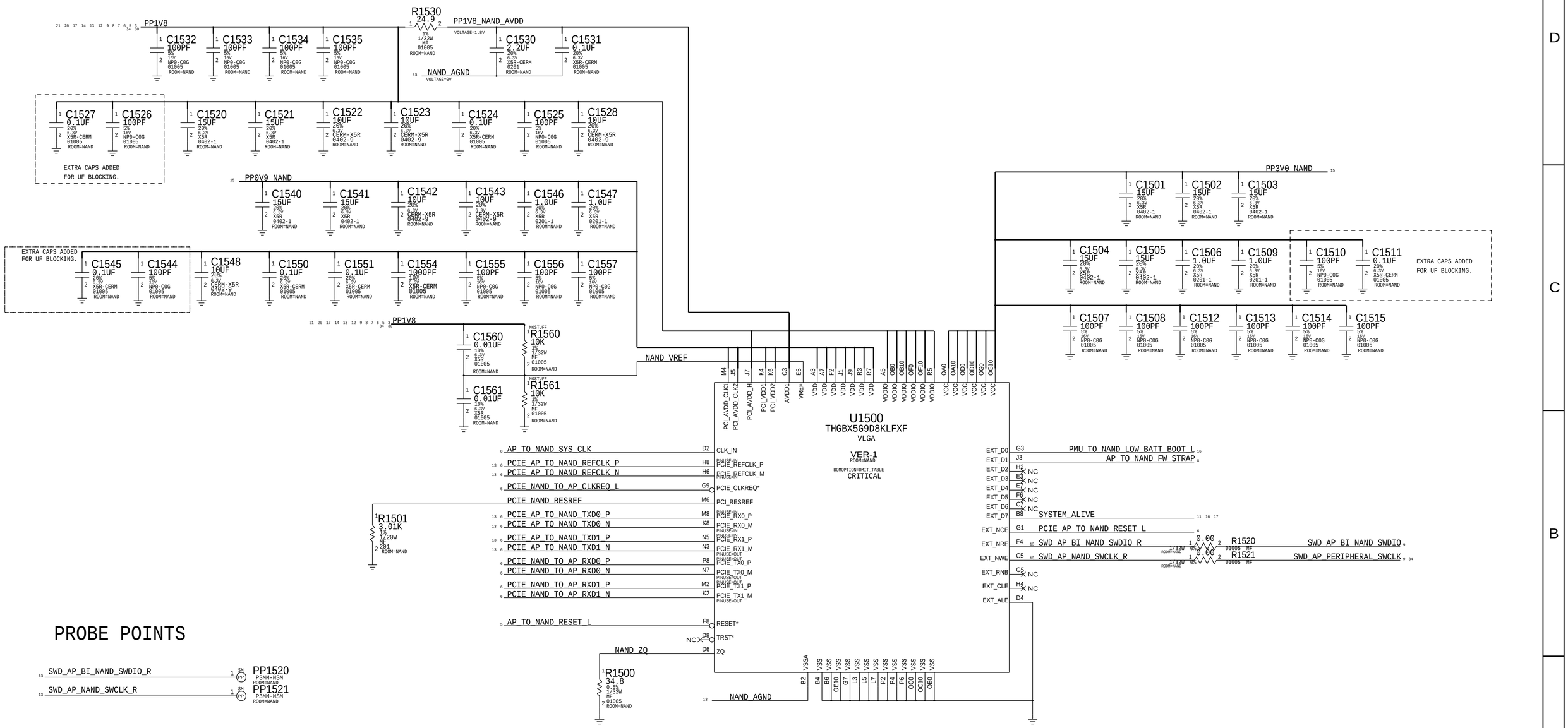
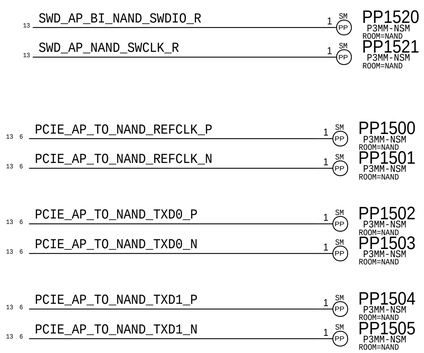
S3E NAND



PROBE POINTS



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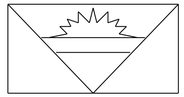
ANTIGUA PMU - Buck Supplies



OMIT_TABLE

U2000
D2255A080UXUVAI2
CSP
ROOM=PMU
SYM 2 OF 5
CRITICAL

15 VCC_MAIN_SNS → V3 VDD_MAIN_SNS
29 28 27 26 25 23 22 17 15 4 34 PP_VCC_MAIN → R6 F10 L13 L5 R8 L4 VDD_MAIN
BAT/USB

A4 B4 C4 VDD_BUCK0_01
A8 B8 C8 VDD_BUCK0_23
A16 B16 C16 VDD_BUCK1_01
A12 B12 C12 VDD_BUCK1_23
J17 J18 J19 VDD_BUCK2
T18 T19 VDD_BUCK3
V12 Y12 Z12 VDD_BUCK4
N17 N18 N19 VDD_BUCK5
J1 J2 VDD_BUCK6
E1 E2 VDD_BUCK7
E17 E18 E19 VDD_BUCK8
BUCK INPUT

30 21 20 17 13 12 9 8 7 6 5 3 34 PP1V8 $VOLTAGE=? → U18 V18 Y18 Z18 BUCK3_SW1
30 29 26 PP1V8_TOUCH VOLTAGE=1.8V → U16 BUCK3_SW2
19 12 PP1V8_IMU_OWL VOLTAGE=1.8V → U15 BUCK3_SW3
11 PP1V1 VOLTAGE=1.1V → V16 Y16 Z16 BUCK4_SW1

OMIT_TABLE

C2085 10UF 20% 6.3V 0402 ROOM=PMU
C2086 10UF 20% 6.3V 0402 ROOM=PMU
C2087 10UF 20% 6.3V 0402 ROOM=PMU
C2088 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2089 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2090 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2091 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2092 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2093 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2094 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2095 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2096 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2097 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2098 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2099 100PF 5% 16V NP0-C0G 01005 ROOM=PMU

BUCK5 1.1A MAX
11 7 6 PP_FIXED VOLTAGE=0.85V
C2050 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2051 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
CRITICAL L2050 1.0UH-20%-3.6A-0.060OHM PIQA20161T-SM ROOM=PMU
XW2050 SHORT-10L-0.1MM-SM ROOM=PMU
M17 M18 M19 BUCK5_LX0
BUCK5_LX0 BUCK5_FB M13 BUCK5_FB

BUCK6 400mA MAX
21 20 PP1V2_CAMERA VOLTAGE=1.2V
C2060 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2061 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2062 100PF 5% 16V NP0-C0G 01005 ROOM=PMU
CRITICAL L2060 1UH-20%-1.2A-0.320OHM 0603 ROOM=PMU
H1 H2 BUCK6_LX0
21 BUCK6_FB J5 BUCK6_FB

BUCK7 1.1A MAX
13 PP_CPU_SRAM VOLTAGE=1V 0.80V/0.90V/1.0V
C2070 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2071 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
CRITICAL L2070 1.0UH-20%-2.25A-0.15OHM PIXB2016FE-SM ROOM=PMU
XW2070 SHORT-10L-0.1MM-SM ROOM=PMU
F1 F2 BUCK7_LX0
BUCK7_LX0 BUCK7_FB C1 BUCK7_FB

BUCK8 1.1A MAX
11 PP_GPU_SRAM VOLTAGE=1V 0.80V/0.90V/1.0V
C2080 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2081 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
CRITICAL L2080 1.0UH-20%-2.25A-0.15OHM PIXB2016FE-SM ROOM=PMU
XW2080 SHORT-10L-0.1MM-SM ROOM=PMU
F17 F18 F19 BUCK8_LX0
BUCK8_LX0 BUCK8_FB C19 BUCK8_FB

A3 B3 C3 BUCK0_LX0
A5 B5 C5 BUCK0_LX1
A7 B7 C7 BUCK0_LX2
A9 B9 C9 BUCK0_LX3

L2000 1.0UH-20%-3.6A-0.060OHM
L2001 0.47UH-20%-3.8A-0.048OHM
L2002 1.0UH-20%-3.6A-0.060OHM
L2003 0.47UH-20%-3.8A-0.048OHM
PIQA20161T-SM ROOM=PMU
PIQA20121T-SM ROOM=PMU
CRITICAL

BUCK0_FB F8 BUCK0_PP_CPU_FB 10

A17 B17 C17 BUCK1_LX0
A15 B15 C15 BUCK1_LX1
A13 B13 C13 BUCK1_LX2
A11 B11 C11 BUCK1_LX3

L2010 1.0UH-20%-3.6A-0.060OHM
L2011 0.47UH-20%-3.8A-0.048OHM
L2012 1.0UH-20%-3.6A-0.060OHM
L2013 0.47UH-20%-3.8A-0.048OHM
PIQA20161T-SM ROOM=PMU
PIQA20121T-SM ROOM=PMU
CRITICAL

BUCK1_FB F12 BUCK1_PP_GPU_FB 10

H17 H18 H19 BUCK2_LX0
K17 K18 K19 BUCK2_LX1

L2020 1.0UH-20%-3.6A-0.060OHM
L2021 0.47UH-20%-3.8A-0.048OHM
PIQA20161T-SM ROOM=PMU
PIQA20121T-SM ROOM=PMU
CRITICAL

BUCK2_FB J14 BUCK2_PP_SOC_FB 10

R18 R19 BUCK3_LX0
V19 BUCK3_FB
V17 Y17 Z17 VBUCK3_SW

CRITICAL L2030 ROOM=PMU 1.0UH-20%-3.6A-0.060OHM
XW2030 SHORT-10L-0.1MM-SM ROOM=PMU
PIQA20161T-SM ROOM=PMU

V11 Y11 Z11 BUCK4_LX0
V13 Y13 Z13 BUCK4_LX1
T9 BUCK4_FB
V15 Y15 Z15 VBUCK4_SW

L2040 1.0UH-20%-3.6A-0.060OHM
L2041 0.47UH-20%-3.8A-0.048OHM
PIQA20161T-SM ROOM=PMU
PIQA20121T-SM ROOM=PMU
CRITICAL

BUCK0
12.5A MAX
C2000 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2001 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2002 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2003 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2004 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2005 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2006 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2007 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2008 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2009 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2010 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
PP_CPU 10 VOLTAGE=1V 0.775V/0.95V/1.0V

BUCK1
10.5A MAX
C2011 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2012 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2013 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2014 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2015 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2016 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2017 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2018 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2019 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2020 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2021 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
PP_GPU 10 VOLTAGE=1V 0.80V/0.90V/1.0V

BUCK2
4.7A MAX
C2022 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2023 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2024 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2025 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2026 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
PP_SOC 10 VOLTAGE=1.1V 0.725V/0.825V

BUCK3
1.5A MAX
C2030 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2031 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2032 100PF 5% 16V NP0-C0G 01005 ROOM=PMU
PP1V8_SDRAM 8 12 15 16 25 28 31 32 34 VOLTAGE=1.8V

BUCK4
4.7A MAX
C2040 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2041 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2042 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2043 15UF 20% 6.3V X5R 0402-1 ROOM=PMU
C2044 100PF 5% 16V NP0-C0G 01005 ROOM=PMU
PP1V1_SDRAM 11 12 15 VOLTAGE=1.1V

SYNC_MASTER=N71_SINGLE_BRD SYNC_DATE=05/29/2014

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ANTIGUA PMU - LDOs

ANTIGUA LDO SPECS

LDO#	ADJ.RANGE	ACCURACY	MAX.CURRENT
LDO1 (A)	2.5-3.3V	+/-1.4%	50mA
LDO2 (B)	1.2-2.0V	+/-2.5%	50mA
LDO3 (A)	2.5-3.3V	+/-1.4%	50mA
LDO4 (D)	0.7-1.2V	+/-2.5%	100mA
LDO5 (F)	2.5-3.3V	+/-2.5%	1000mA
LDO6 (C1)	1.2-3.6V	+/-2.5%	150mA
LDO7 (C)	2.5-3.3V	+/-25mV	250mA
LDO8 (C)	2.5-3.3V	+/-25mV	250mA
LDO9 (C)	2.5-3.3V	+/-25mV	250mA
LDO10 (G)	0.7-1.2V	+/-5.5%	1335mA
LDO11 (C)	2.5-3.3V	+/-25mV	250mA
LDO12 (E)	1.8V	+/-5%	10mA
LDO13 (C)	2.5-3.3V	+/-25mV	250mA
LDO14 (H)	0.8-1.5V	+/-2.5%	250mA
LDO15 (B)	1.2-2.0V	+/-2.5%	50mA

PP_VCC_MAIN (29 28 27 26 25 23 22 17 14 4 3)

C2120 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2121 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2122 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU

XW2105 SHORT-10L-0.1MM-SM ROOM=PMU PLACE_NEAR=U2000.V2:2MM

VCC_MAIN_SNS (14)

C2123 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2124 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2125 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2126 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2127 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU

PP1V1_SDRAM (14 12 11)

C2130 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2131 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU

PP1V8_SDRAM (34 32 31 28 25 16 14 12 8)

C2132 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU

OMIT_TABLE
U2000
D2255A080UXUVAI2
CSP
SYM 1 OF 5
CRITICAL
ROOM=PMU

M3	VDD_LDO1_3	VLDO1	M1
V2	VDD_LDO2	VLDO2	V1
M2	VDD_LDO4	VLDO3	L1
U1		VLDO4	N1
U2	VDD_LDO5	VLDO5	T1
L2	VDD_LDO6	VLDO6	T2
Y6	VDD_LDO7	VBYPASS	K1
Y4	VDD_LDO8	VLDO7	K2
Y3	VDD_LDO9	VLDO8	Z6
Y9		VLDO9	Z4
Z9	VDD_LDO10	VLDO9_FB	Z3
R3	VDD_LDO11	VLDO10	Y2
Y5	VDD_LDO13	VLDO11	Y8
Y7	VDD_LDO14	VLDO12	Z8
N2	VDD_LDO15	VLDO13	R2
K3	VDD_BYPASS	VLDO14	K6
P12	VPP_OTP	VLDO15	Z5
		VPUMP	Z7
			P2
			U19

LDO_INPUT

CAM_AVDD_FB — PLACE_NEAR=U2000.Y2:2mm ROOM=PMU — XW2100 SHORT-10L-0.25MM-SM

PMU_VPUMP

VPUMP:10nF min. @ 4.6V

C2100 47NF 20% 6.3V X5R-CERM 01005 ROOM=PMU

VOLTAGE=3.3V	PP3V3_USB	5
VOLTAGE=1.8V	PP1V8_VA	25 26 27
VOLTAGE=3.0V	PP3V0_TRISTAR	19 28 31 32 34
VOLTAGE=0.8V	PP0V8_OWL	11
VOLTAGE=3.0V	PP3V0_NAND	13
VOLTAGE=3.3V	PP3V3_ACC	31
VOLTAGE=3.0V	PP3V0_PROX_ALS	20
VOLTAGE=2.75V	PMU_LDO8	
VOLTAGE=2.85V	PP2V85_CAM_AVDD_PMU	20 21
VOLTAGE=0.9V	PP0V9_NAND	13
VOLTAGE=3.0V	PP3V0_PROX_IRLED	20
VOLTAGE=1.8V	PP1V8_ALWAYS	8 12 17
VOLTAGE=3.0V	PP3V0_MESA	29
VOLTAGE=1.2V	PP1V2	5 6 7
VOLTAGE=1.8V	PP1V8_MESA	29

C2101 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2103 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2105 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2107 4.3UF 20% 4V X5R-CERM 0610 ROOM=PMU
C2109 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2111 4.3UF 20% 4V X5R-CERM 0610 ROOM=PMU
C2113 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2115 4.3UF 20% 4V X5R-CERM 0610 ROOM=PMU

C2102 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2104 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2106 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2108 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2110 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2112 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2114 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU

OMIT_TABLE
U2000
D2255A080UXUVAI2
CSP
SYM 5 OF 5
CRITICAL
ROOM=PMU

D10		J15	
D11		J16	
D12		J3	
D13		J4	
D14		K15	
D15		K16	
D16		L15	
D17		L16	
D18		M14	
D2		M15	
D5		M16	
D6		N14	
D7		N15	
D8		N16	
D9		P13	
D3		P14	
E10		P15	
E11		P16	
E12		P17	
E13		R13	
D4	NC	R14	NC
E15		R15	
E16		R16	
E3		R17	
E4		T10	
E5		T11	
E7		T12	
E8		T13	
E9		T14	
F14		T15	
F15		T17	
F16		U10	
F3		U11	
F4		U12	
G14		U13	
G15		U14	
G16		U4	
G3		U5	
G4		U6	
H15		V4	
H16		V5	
H3		V6	
H4			

OMIT_TABLE
U2000
D2255A080UXUVAI2
CSP
SYM 4 OF 5
CRITICAL
ROOM=PMU

A1		L9	
A10		M8	
A14		M9	
A18		N10	
A19		N12	
A2		N13	
A6		N9	
B1		P10	
B10		P11	
B14		P18	
B18		P19	
B19		P5	
B2		R10	
B6		R11	
C10		R12	
C14		R9	
C18		T16	
C2	VSS	T3	XTAL GND
C6		T6	
D1		T8	
D19		U3	
E14		U9	
G1		V10	
G17		V14	
G18		V8	
G19		V9	
G2		Y1	
H7		Y10	
J6		Y14	
K12		Y19	
K7		Z1	
L17		Z10	
L18		Z14	
L19		Z19	
L6		Z2	
L7			

PMU_VSS_RTC (16)

SYNC_MASTER=N71_SINGLE_BRD SYNC_DATE=05/29/2014

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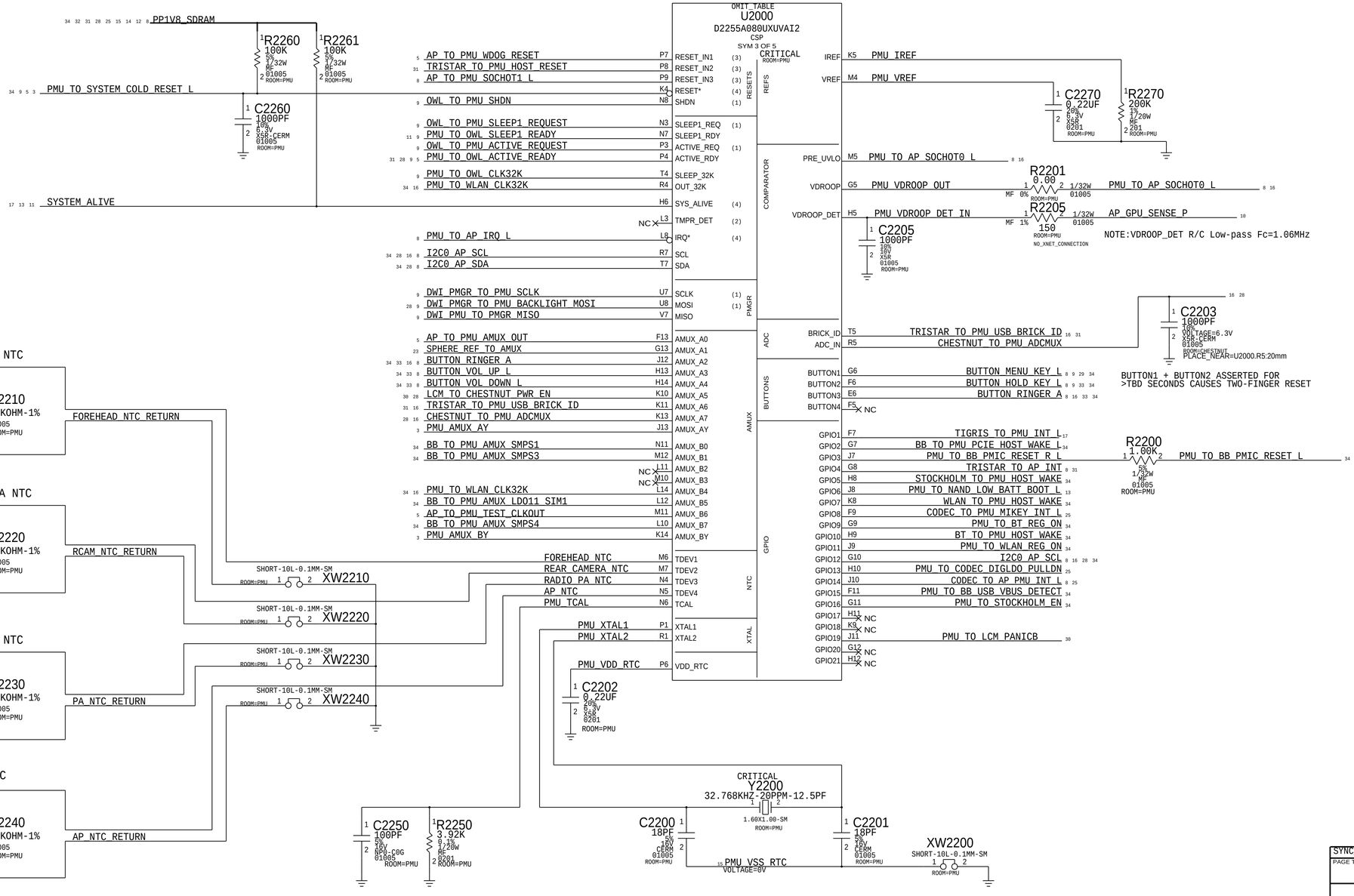
ANTIGUA PMU - GPIOs, NTCs

CONTROL PIN NOTES:

NOTE (1):INPUT PULL-DOWN 100-300k
NOTE (2):INPUT PULL-DOWN 1M
NOTE (3):INPUT PULL-UP OR DOWN 100k-300k
NOTE (4):OUTPUT OPEN-DRAIN, REQUIRES PULL-UP



NOTE:100PF CAPS ARE THE SAMPLING CAPS FOR PMU ADC

SYNC_MASTER=N/A	SYNC_DATE=N/A
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TIGRIS CHARGER

APN:343S0693

C2320 4.2UF 10% 10V X5R-CERM 0402-1 ROOM=CHARGER
C2321 4.2UF 10% 10V X5R-CERM 0402-1 ROOM=CHARGER
C2322 100PF 5% 50V NP0-C0G 01005 ROOM=CHARGER
TIGRIS PMID

C2330 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=CHARGER
C2331 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=CHARGER

C2307 100PF 5% 50V NP0-C0G 01005 ROOM=CHARGER
C2305 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CHARGER
TIGRIS LDO

PP5V0 USB
C2310 4.2UF 10% 10V X5R-CERM 0402-1 ROOM=CHARGER
C2311 100PF 5% 50V NP0-C0G 01005 ROOM=CHARGER

PP1V8 ALWAYS
R2310 100K 5% 1/32W MF 01005 ROOM=CHARGER

TIGRIS TO PMU INT L
R2311 100 1% 1/32W MF 01005 ROOM=CHARGER

USB VBUS DETECT
R2320 30.1K 1% 1/32W MF 01005 ROOM=CHARGER

I2C1 AP SDA
I2C1 AP SCL
SYSTEM ALIVE
TRISTAR TO TIGRIS VBUS OFF
TIGRIS TO PMU INT R L
TIGRIS VBUS DETECT

U2300 SN2400AB0 WCSP ROOM=CHARGER CRITICAL

F5	PMID	LDO	G4
A5	VBUS	BOOT	G5
B5	VBUS	BUCK_SW	A4
D5	VBUS	BUCK_SW	B4
C5	VBUS	BUCK_SW	D4
E5	VBUS	BUCK_SW	C4
G3	SDA	BAT	A1
E4	SCL	BAT	B1
E3	SYS_ALIVE	BAT	D1
F4	VBUS_OVP_OFF	BAT	C1
G2	INT	BAT_SNS	E1
F1	VBUS_DET	ACT_DIODE	E2
F3	TEST	HDQ_HOST	G1
		HDQ_GAUGE	F2
A3	PGND		
B3	PGND		
D3	PGND		
C3	PGND		

VDD_MAIN A2, VDD_MAIN B2, VDD_MAIN D2, VDD_MAIN C2

TIGRIS BOOT
NO_XNET_CONNECTION C2300 0.047UF 10% 16V X5R 0201 ROOM=CHARGER
CRITICAL L2300 1.0UH-20%-3.6A-0.0600HM PIQA20161T-SM ROOM=CHARGER
TIGRIS BUCK LX

C2301 100PF 5% 16V NP0-C0G 01005 ROOM=CHARGER
C2302 100PF 5% 16V NP0-C0G 01005 ROOM=CHARGER

VBATT SENSE
TIGRIS ACTIVE DIODE
SWI AP BI TIGRIS FET
TIGRIS TO BATTERY SWI

PP1V8
CRITICAL Q2301 DMN2990UFA DFN0806 ROOM=CHARGER
NOSTUFF R2301 0.00 0% 1/32W MF 01005 ROOM=CHARGER

PP1V8
R2302 40.2K 1% 1/32W MF 01005 ROOM=CHARGER
SWI_AP_BI_TIGRIS

PP_VCC_MAIN VOLTAGE=4.3V

C2333 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CHARGER

CRITICAL Q2300 CSD68827W BGA ROOM=CHARGER
A2, A3, B1, B2, B3, S, G, D, A1, C1, C2, C3

NOSTUFF R2300 100K 5% 1/32W MF 01005 ROOM=CHARGER

C2306 100PF 5% 16V NP0-C0G 01005 ROOM=CHARGER
C2303 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CHARGER
C2304 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CHARGER

PP_BATT_VCC

SYNC_MASTER=N71_SINGLE_BRD
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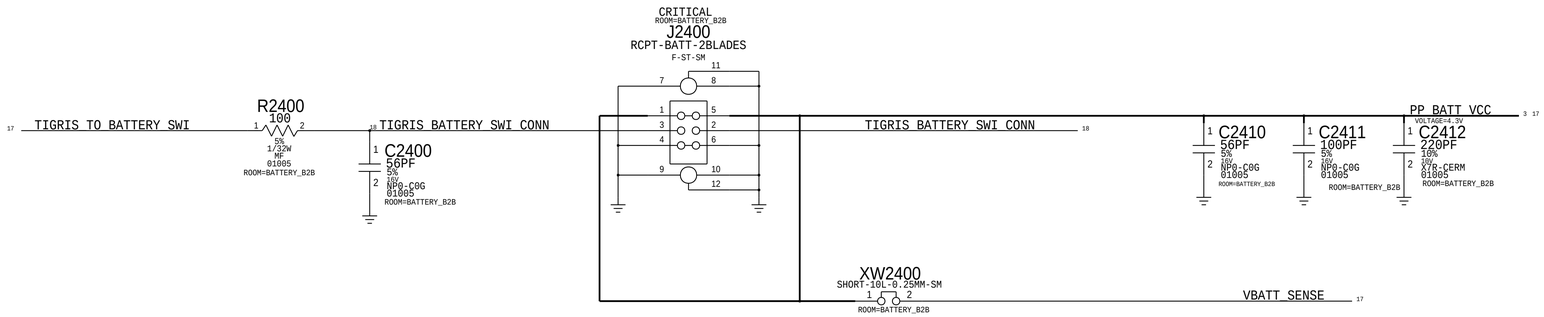
BATTERY CONNECTOR

THIS ONE ON MLB ---> 516S00104 (RCPT)
516????? (PLUG)



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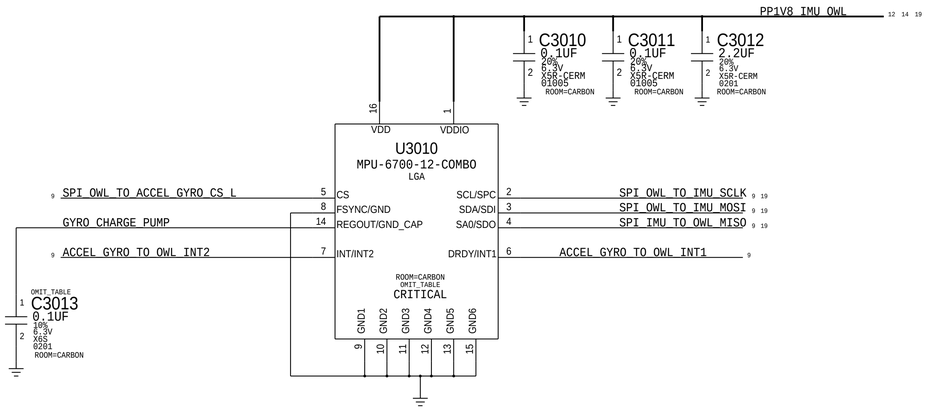
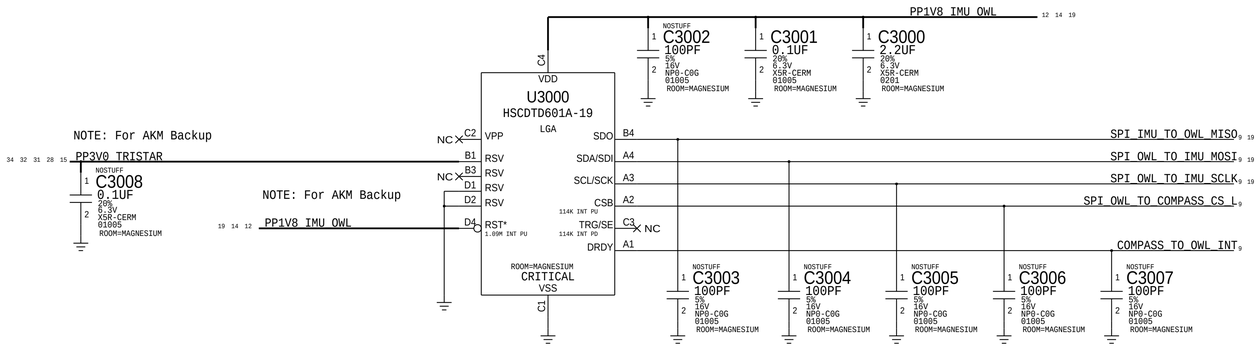
CARBON - ACCEL & GYRO

ST (APN 338S00029): C3013=0.01UF
INVENSENSE, MPU-6700 (APN 338S00017): C3013=0.1UF
DOE INVENSENSE, MPU-6800 (APN 338S00087): C3013=0.1UF



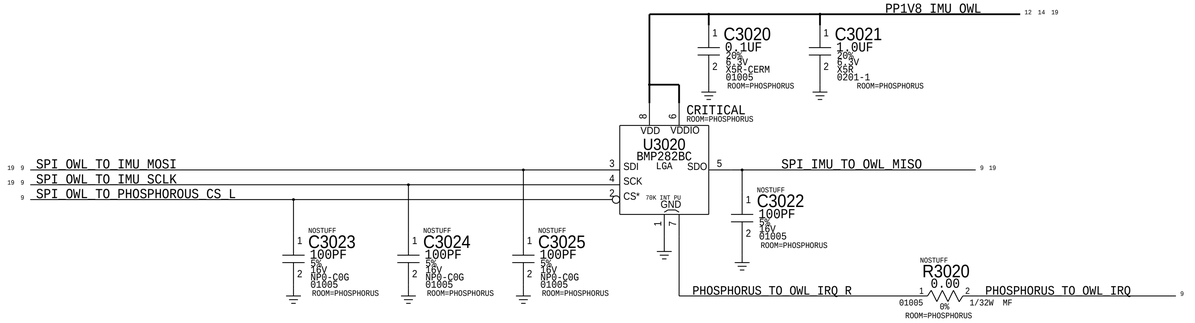
MAGNESIUM - COMPASS

APN:338S00084



PHOSPHOROUS

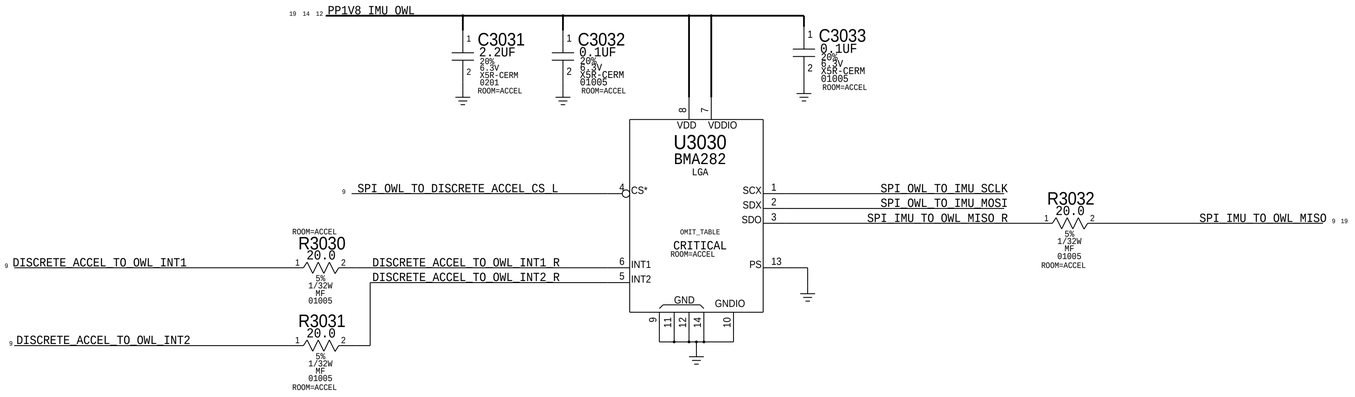
BOSCH (APN:338S00044)



R3020 SHOULD BE STUFFED FOR ST PHOSPHORUS ONLY.
FOR BOSCH PHOSPHORUS, PINS 1 AND 7 ARE SHORTED INTERNALLY,
SO NO NEED FOR 0-OHM TO GROUND OPTION ON PIN 7.

DISCRETE ACCEL

BOSCH APN 338S1163
NO-STUFF for Invensense DOE



SYNC_MASTER=N71_SINGLE_BRD SYNC_DATE=05/29/2014

PAGE TITLE
SENSORS:MOTION SENSORS

Apple Inc.

DRAWING NUMBER 051-00094
SIZE D
REVISION 4.0.0
BRANCH
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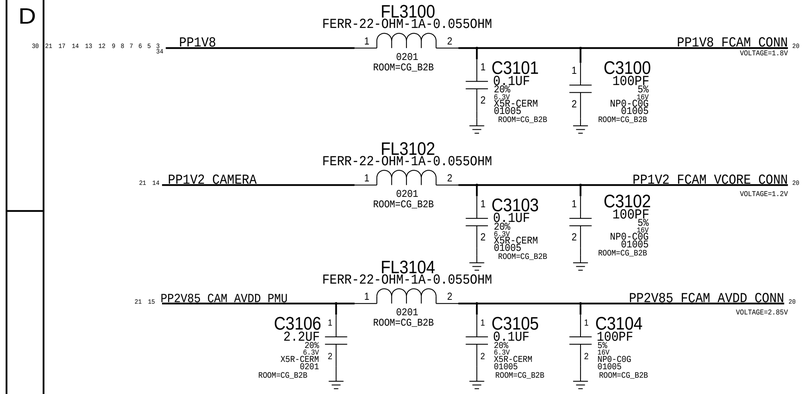
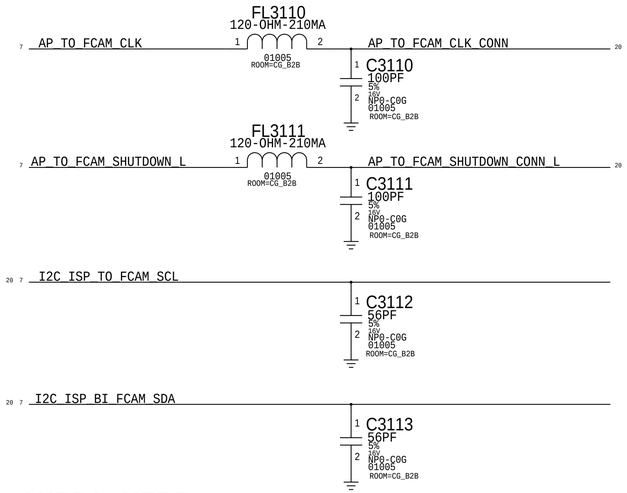
FRONT CAMERA FLEX

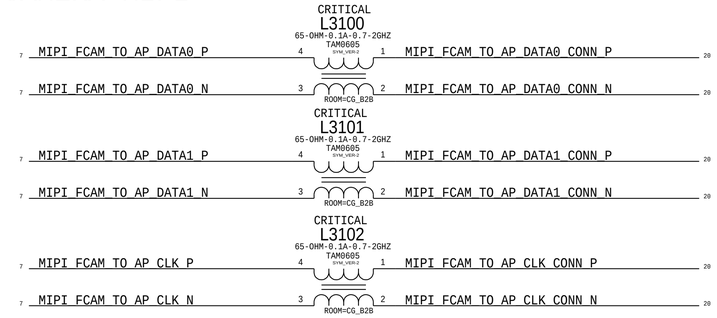
CAMERA POWER



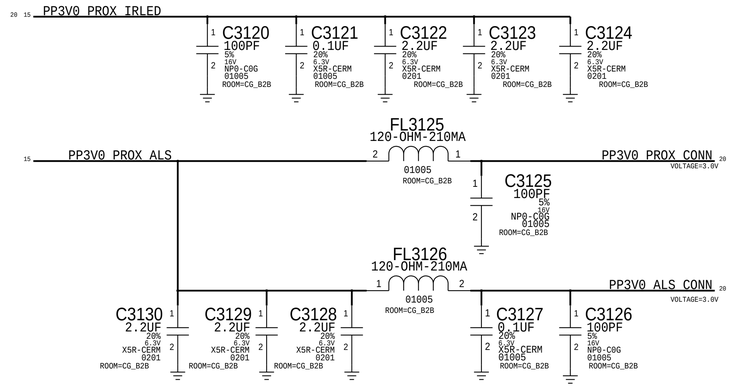
CAMERA I/O



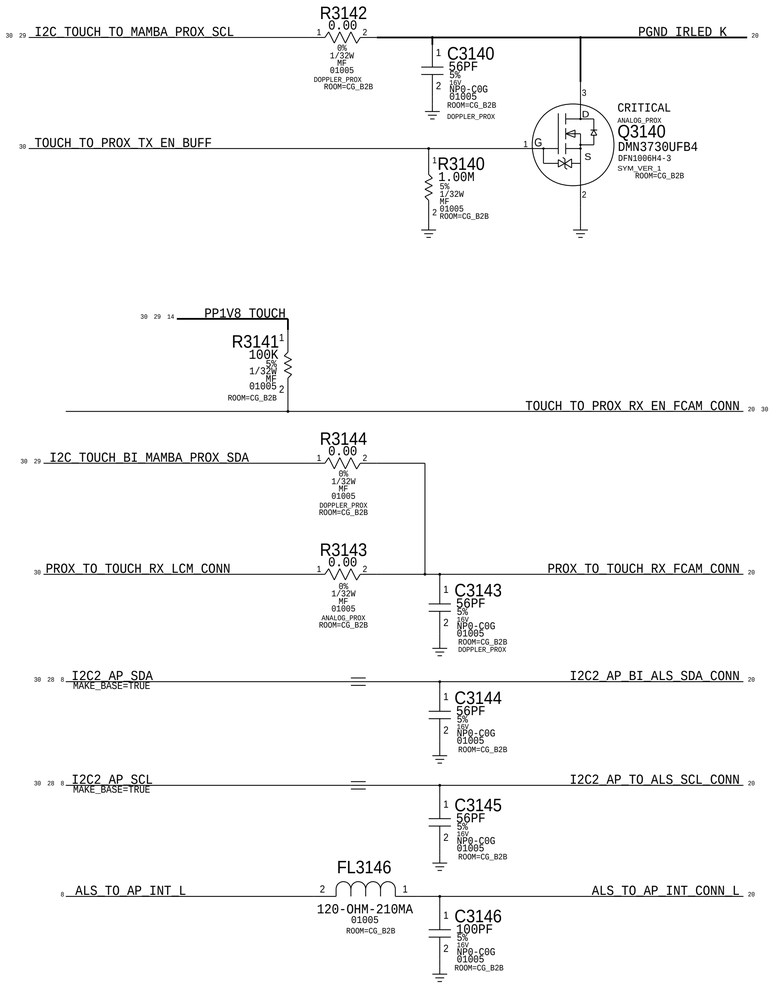
CAMERA MIPI



PROX & ALS POWER

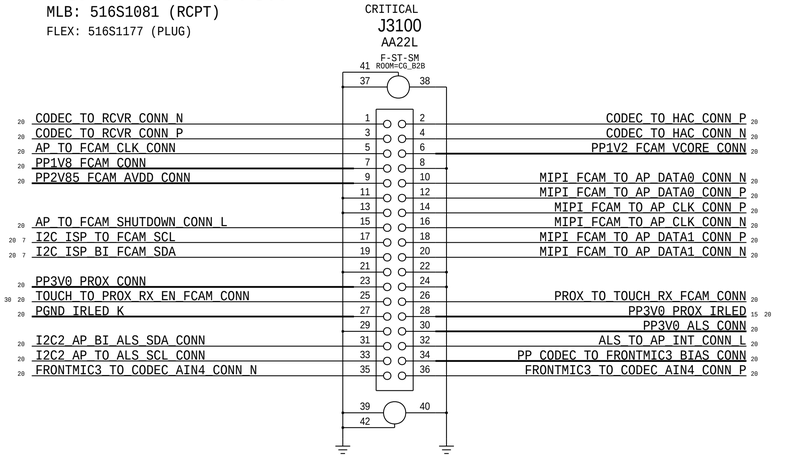


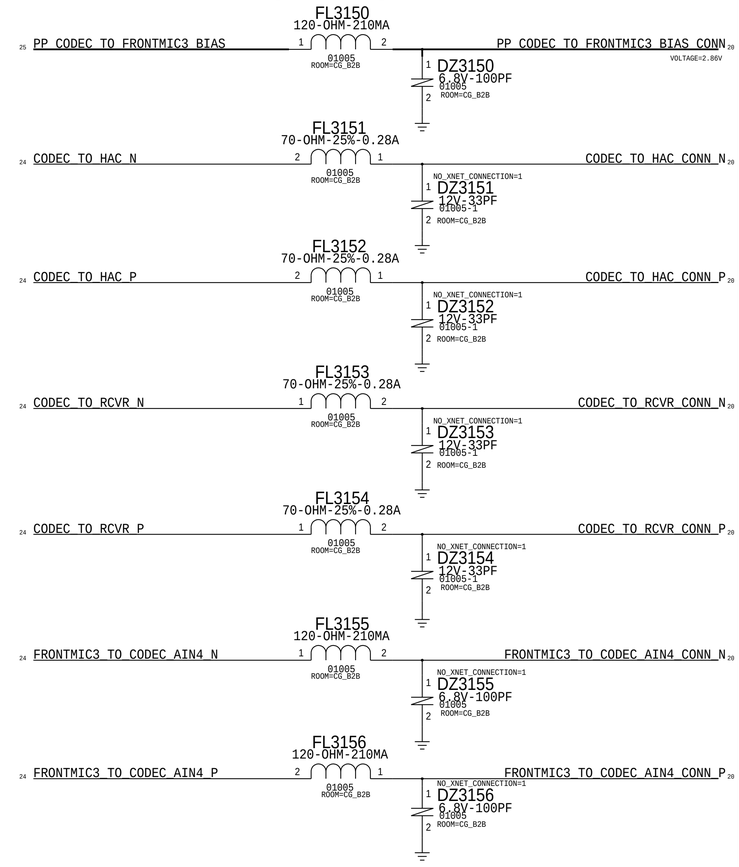
PROX & ALS INTERFACE



FCAM CONNECTOR

MLB: 516S1081 (RCPT)
FLEX: 516S1177 (PLUG)





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PAGE TITLE
CAMERA:FRONT CAMERA B2B

Apple Inc.

DRAWING NUMBER 051-00094
SIZE D
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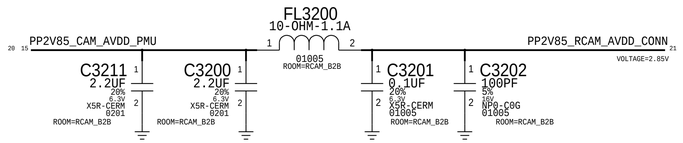
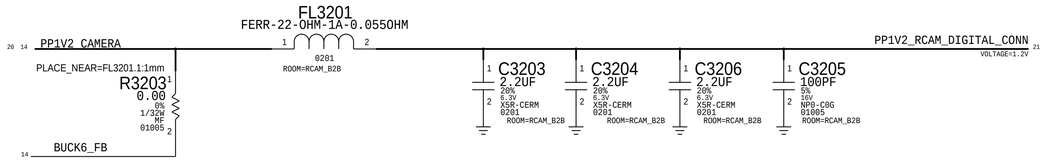
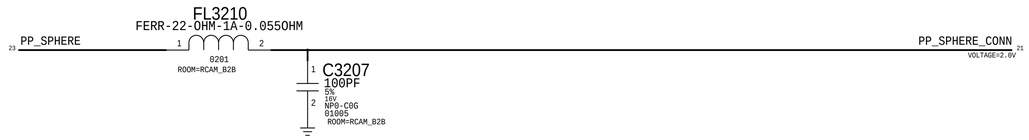
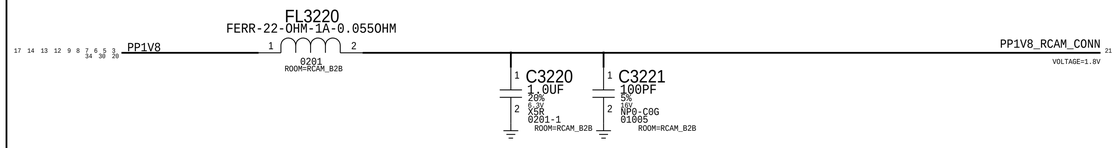
REAR CAMERA FLEX

CAMERA POWER/MAMBA LDO

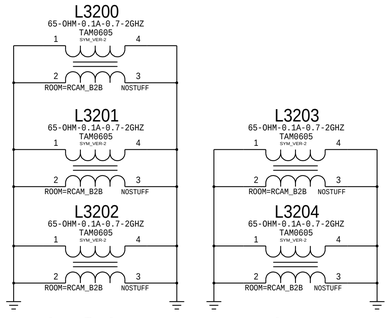








MIPI Common-Mode Chokes

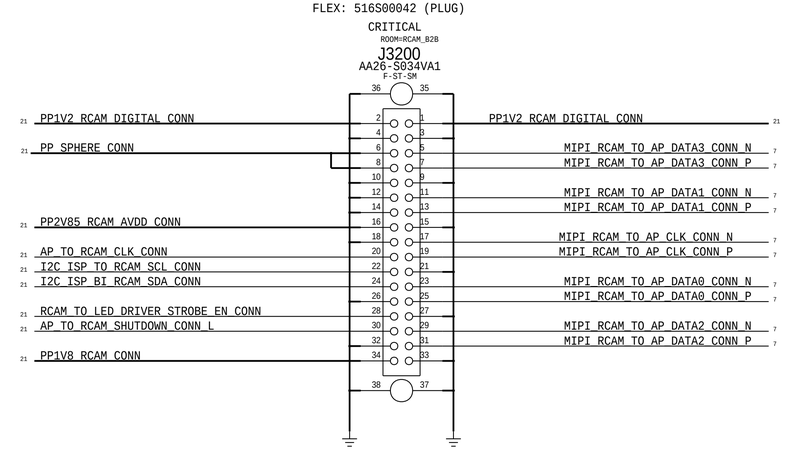


Placeholder Footprints

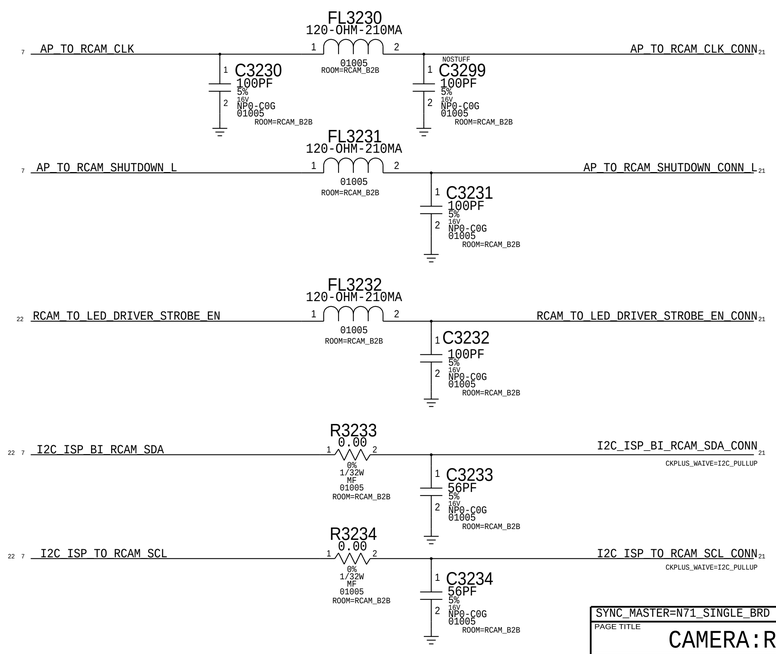
RCAM CONNECTOR

MLB: 516S00043 (RCPT)

FLEX: 516S00042 (PLUG)



Digital I/O



SYNC_MASTER=N71_SINGLE_BRD SYNC_DATE=05/29/2014

PAGE TITLE

CAMERA:REAR CAMERA B2B

Apple Inc.

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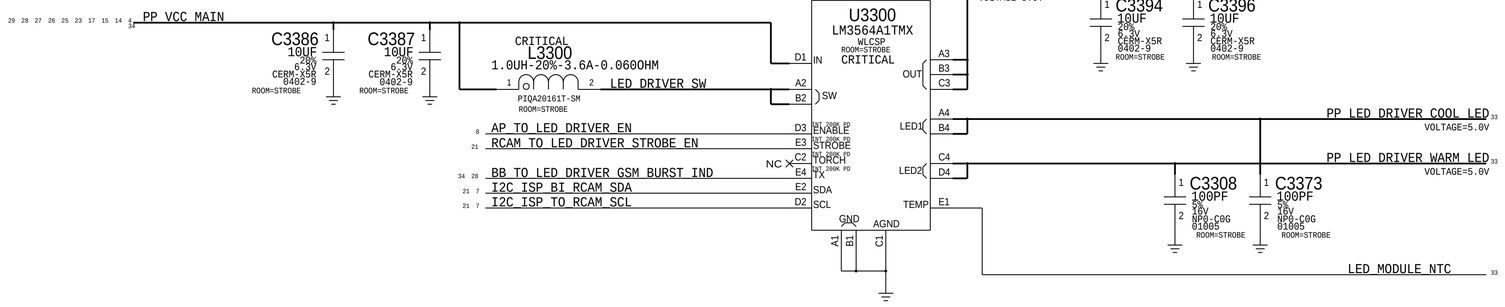
DUAL LED STROBE DRIVER

APN:353S3899



SYNC_MASTER=N71_SINGLE_BRD	SYNC_DATE=05/29/2014
PAGE TITLE	CAMERA:STROBE DRIVER
Apple Inc.	DRAWING NUMBER 051-00094 · SIZE D
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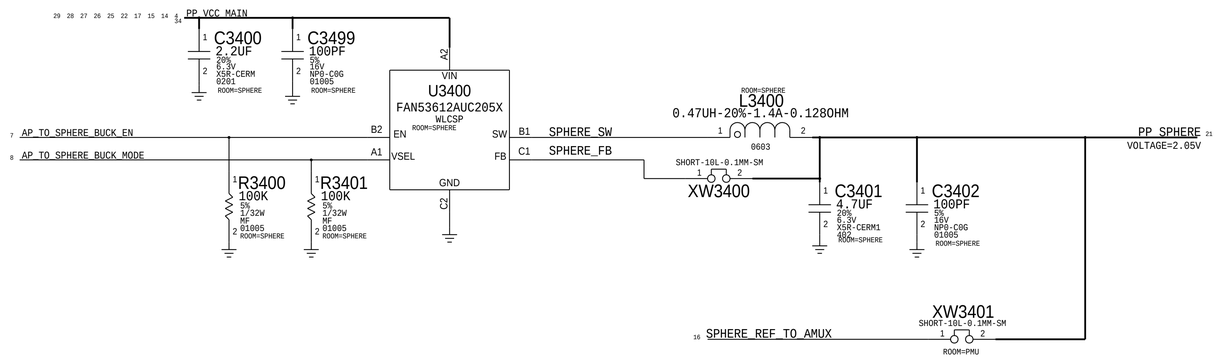
Sphere Driver

APN:353S00413



PAGE TITLE	CAMERA: SPHERE DRIVER
Apple Inc.	DRAWING NUMBER 051-00094 · SIZE D
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CALTRA AUDIO CODEC (ANALOG INPUTS & OUTPUTS)

APN:338S00105

VOICE MIC
32 LOWERMIC1_TO_CODEC_AIN1_P
32 LOWERMIC1_TO_CODEC_AIN1_N

LOWER MIC
32 LOWERMIC4_TO_CODEC_AIN2_P
32 LOWERMIC4_TO_CODEC_AIN2_N

ANC REF MIC
33 REARMIC2_TO_CODEC_AIN3_P
33 REARMIC2_TO_CODEC_AIN3_N

ANC ERROR MIC
20 FRONTMIC3_TO_CODEC_AIN4_P
20 FRONTMIC3_TO_CODEC_AIN4_N

CRITICAL
ROOM=CODEC
U3500
WLCSP-1
SYM 1 OF 3
CS42L71

L2	AIN1+	
L1	AIN1-	
K3	AIN2+	
L3	AIN2-	
K2	AIN3+	
K1	AIN3-	
J3	AIN4+	
J4	AIN4-	
NC F1	AIN5+	
NC G1	AIN5-	
NC F2	AIN6+	
NC F3	AIN6-	
NC G2	AIN7+	
NC G3	AIN7-	
NC A4	DMIC1_CLK	
NC B4	DMIC1_DATA	
NC C4	DMIC2_CLK	
NC C3	DMIC2_DATA	
NC A3	DMIC3_CLK	
NC B3	DMIC3_DATA	
NC A2	DMIC4_CLK	
NC B2	DMIC4_DATA	
NC A9	PDM_CLK	
NC B9	PDM_DATA	
L9	AOUT1+	CODEC_TO_RCVR_P 20
M9	AOUT1-	CODEC_TO_RCVR_N 20
L8	AOUT2+	CODEC_TO_HAC_P 20
M8	AOUT2-	CODEC_TO_HAC_N 20
K10	HPOUTA	CODEC_TO_HPHONE_L 32
K11	HPOUTB	CODEC_TO_HPHONE_R 32
M5	HS3	CODEC_TO_HPHONE_HS3 32
M4	HS4	CODEC_TO_HPHONE_HS4 32
L10	HS3_REF	CODEC_TO_HPHONE_HS3_REF 32
M10	HS4_REF	CODEC_TO_HPHONE_HS4_REF 32
D1	HSIN+	CODEC_HSIN_P
E1	HSIN-	CODEC_HSIN_N
J9	HPDETECT	HPHONE_TO_CODEC_DETECT 32
J12	DP	MIKEYBUS_CALTRA_DATA_P
H12	DN	MIKEYBUS_CALTRA_DATA_N
G10	MBUS_REF	

C3505 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=CODEC
C3506 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=CODEC
C3504 220PF 10% 10V X7R-CERM 01005 ROOM=CODEC
CODEC_HSIN_R_P
CODEC_HSIN_R_N
R3515 1.33K 1% 1/32W MF 01005 ROOM=CODEC NO_XNET_CONNECTION=1
R3550 1.33K 1% 1/32W MF 01005 ROOM=CODEC NO_XNET_CONNECTION=1
NOSTUFF C3550 56PF 5% 16V NP0-C0G 01005 ROOM=CODEC
NOSTUFF C3551 56PF 5% 16V NP0-C0G 01005 ROOM=CODEC
C3552 100PF 5% 16V NP0-C0G 01005 ROOM=CODEC
C3554 100PF 5% 16V NP0-C0G 01005 ROOM=CODEC
R3502 20.0 5% 1/32W MF 01005 ROOM=CODEC
R3503 20.0 5% 1/32W MF 01005 ROOM=CODEC
MIKEYBUS_DATA_P 31
MIKEYBUS_DATA_N 31

SYNC_MASTER=N71_SINGLE_BRD SYNC_DATE=05/29/2014

PAGE TITLE
AUDIO:CALTRA CODEC (1/2)

Apple Inc.

DRAWING NUMBER 051-00094
SIZE D
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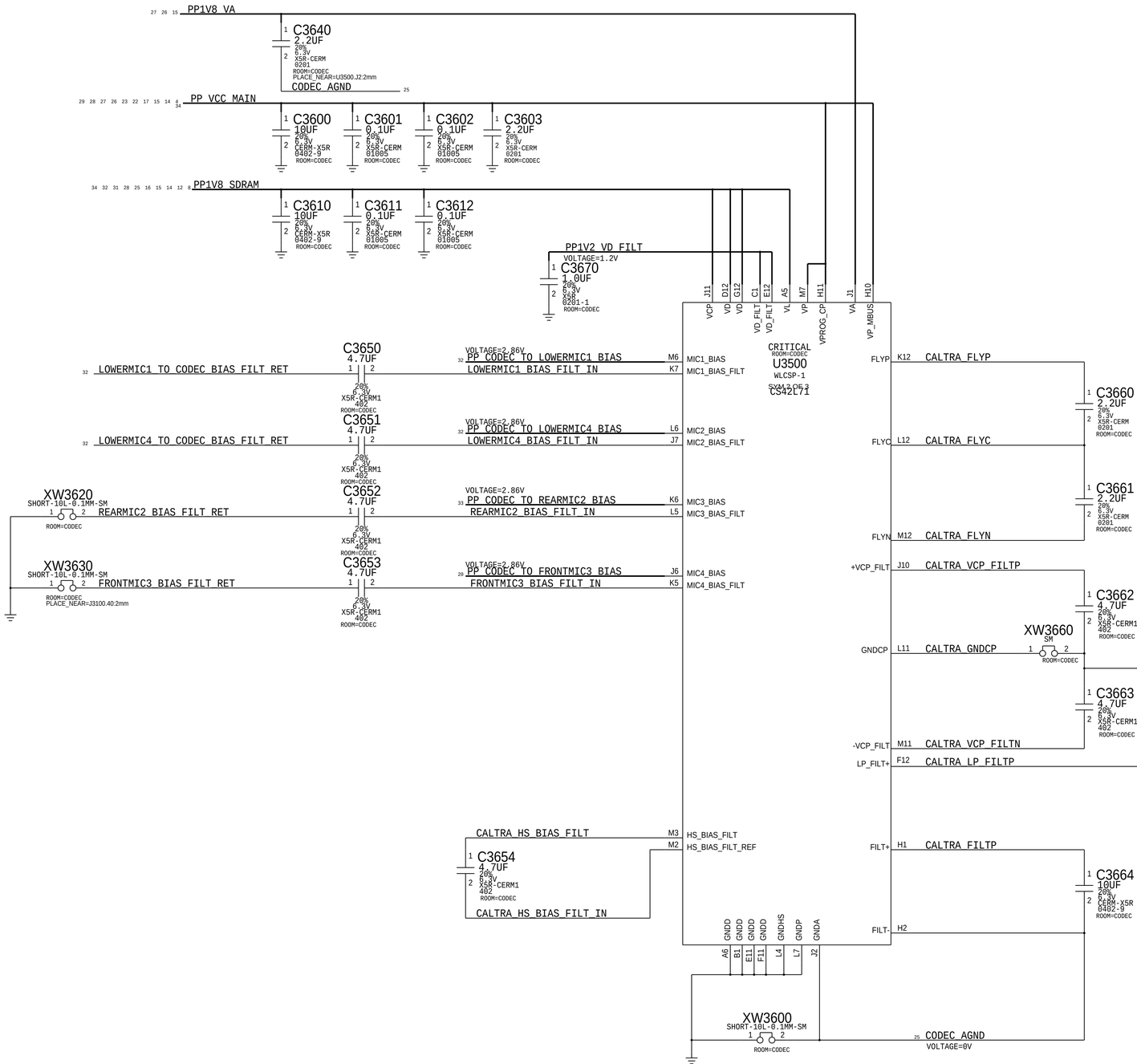
CALTRA AUDIO CODEC (POWER & I/O)



SYNC_MASTER=N71_SINGLE_BRD	SYNC_DATE=05/29/2014
PAGE TITLE	AUDIO:CALTRA CODEC (2/2)
Apple Inc.	DRAWING NUMBER 051-00094 · SIZE D
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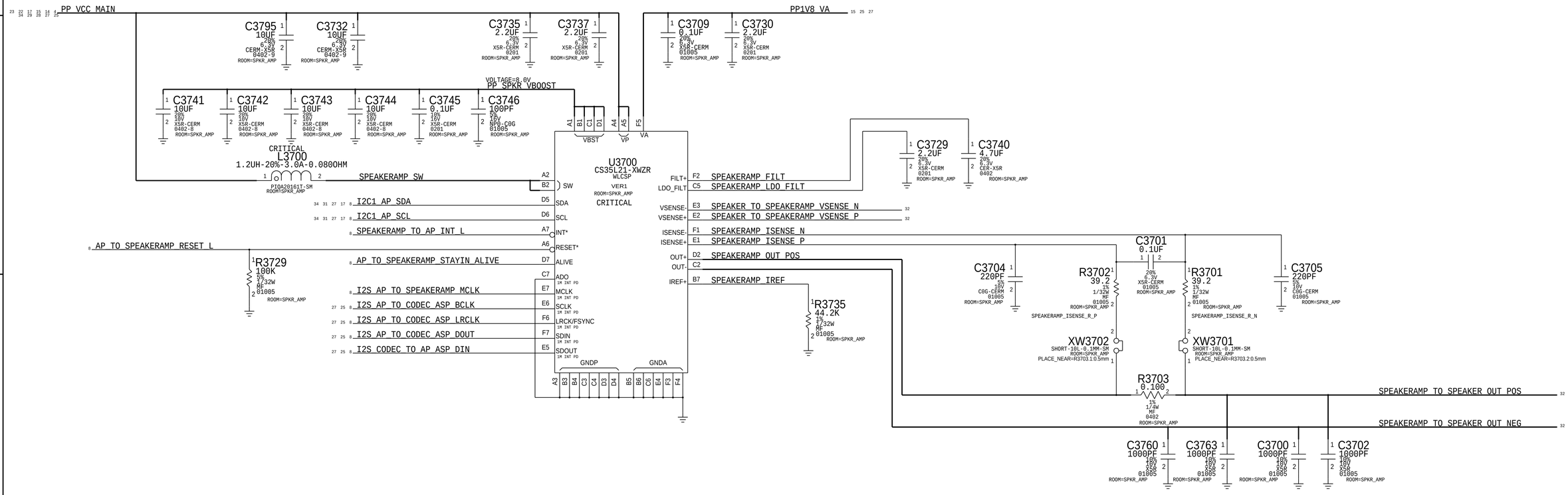
SPEAKER AMPLIFIER

APN: 338S1285
I2C ADDRESS: 1000000



SYNC_MASTER=N71_SINGLE_BRD
SYNC_DATE=05/29/2024

PAGE TITLE
AUDIO:SPEAKER DRIVER

Apple Inc.

DRAWING NUMBER 051-00094
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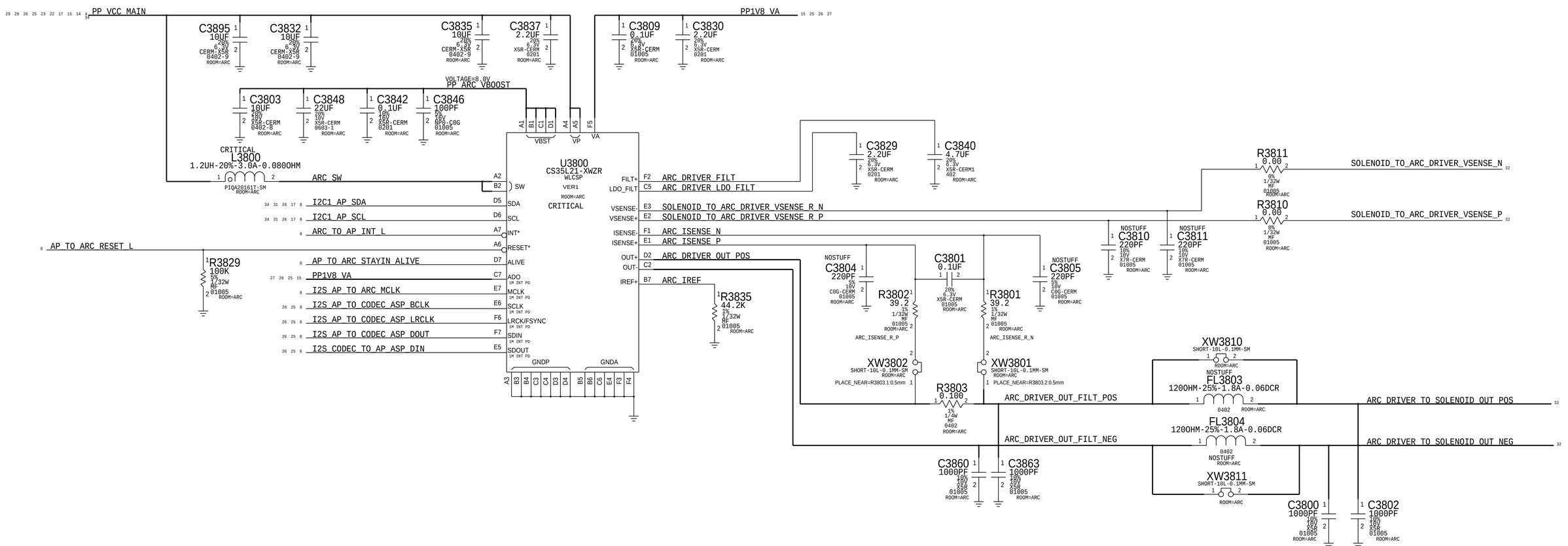
ARC DRIVER

APN: 338S1285
I2C ADDRESS: 1000001



PAGE TITLE	
AUDIO:ARC DRIVER	
Apple Inc.	DRAWING NUMBER 051-00094 SIZE D
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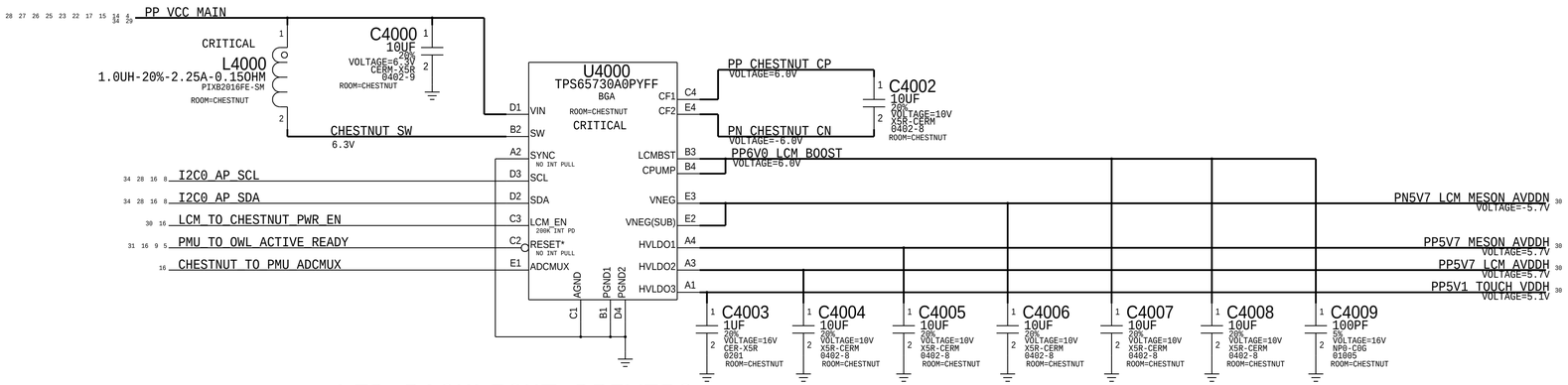
DISPLAY & TOUCH - POWER SUPPLIES

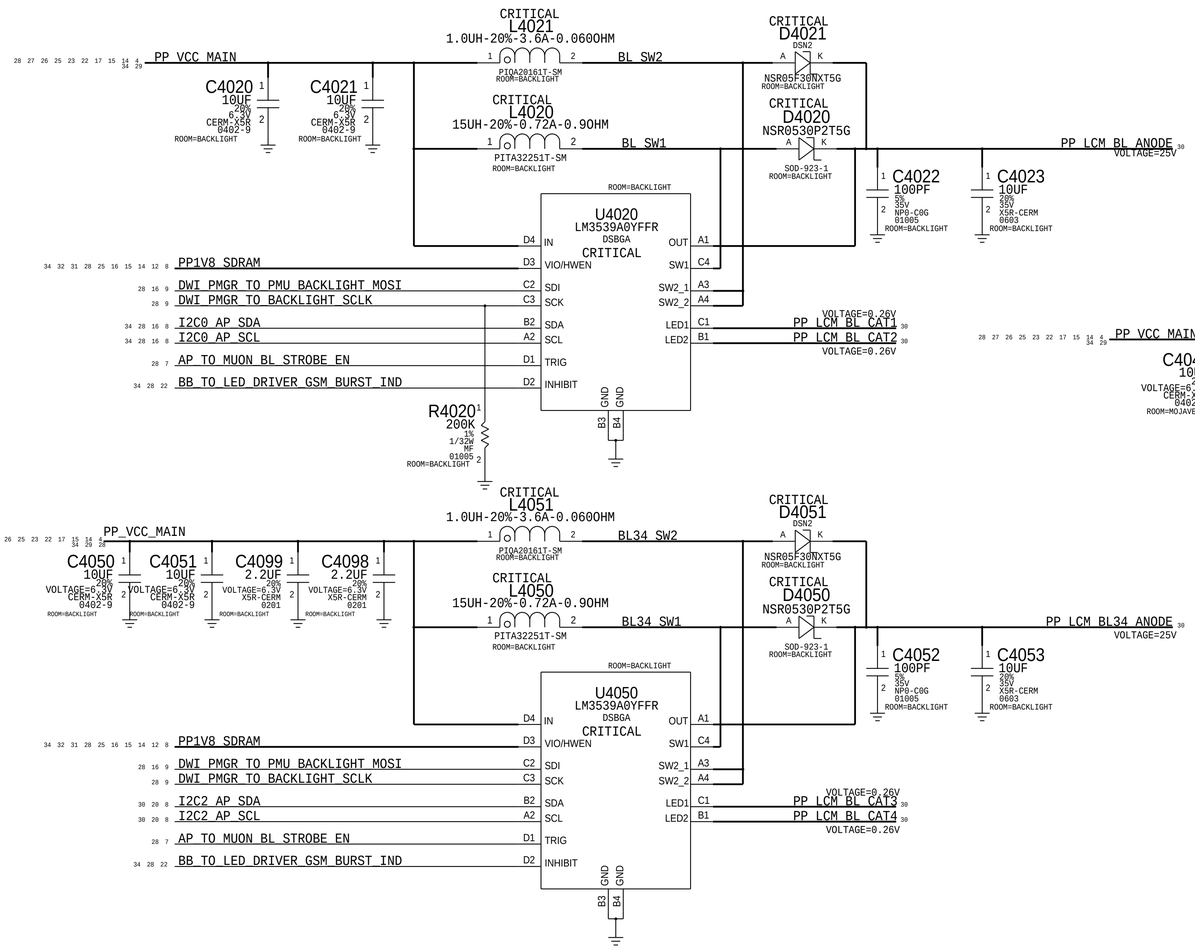
CHESTNUT DISPLAY PMU

APN:338S1172



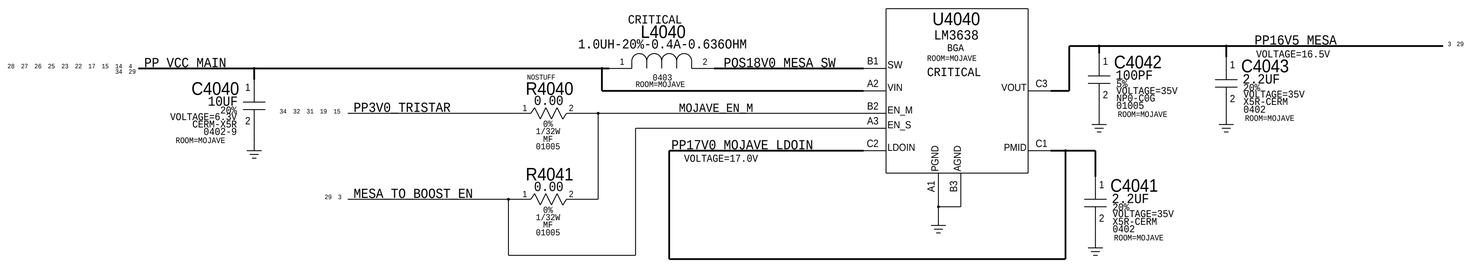
LED BACKLIGHT DRIVERS

APN:353S00407



MOJAVE MESA BOOST

APN:353S3978



SYNC_MASTER=N71_SINGLE_BRD	SYNC_DATE=05/29/2014
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Apple Inc.	DRAWING NUMBER 051-00094 · SIZE D
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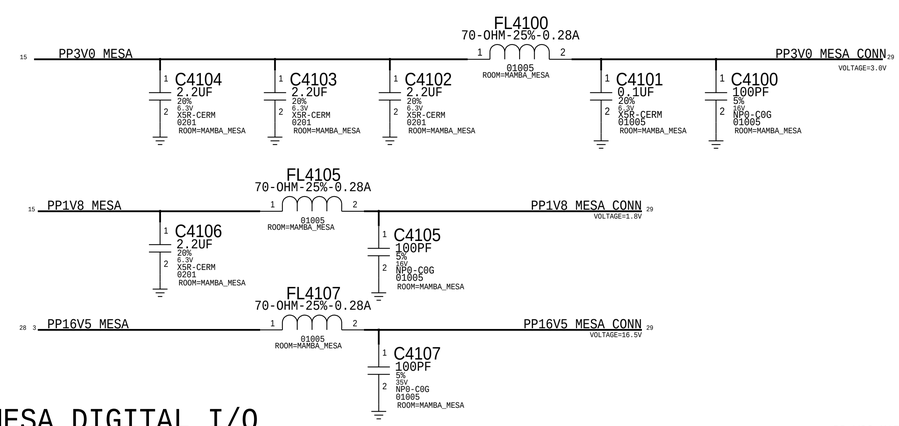
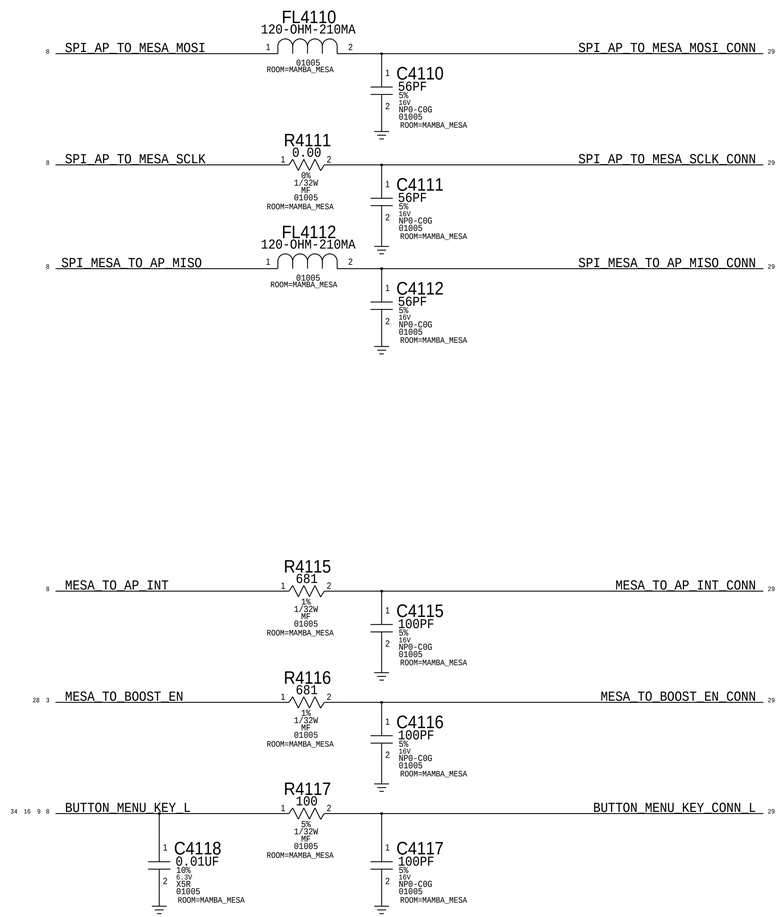
MAMBA & MESA FLEX

MESA POWER

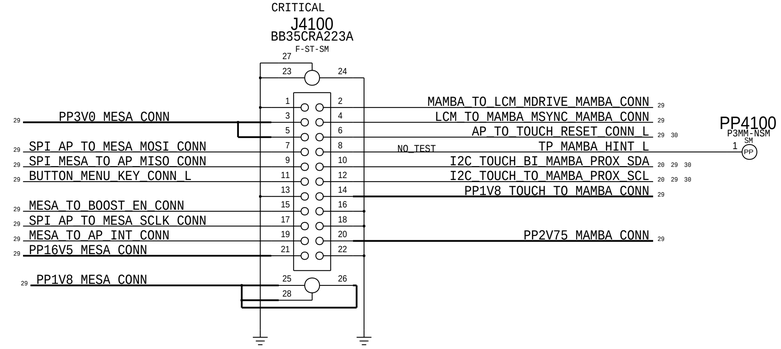


MESA DIGITAL I/O

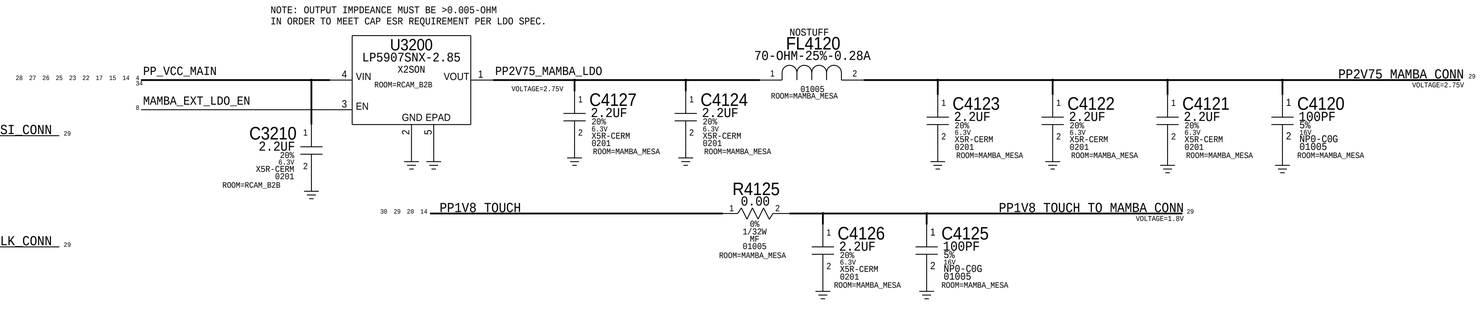


ORB & MESA CONNECTOR

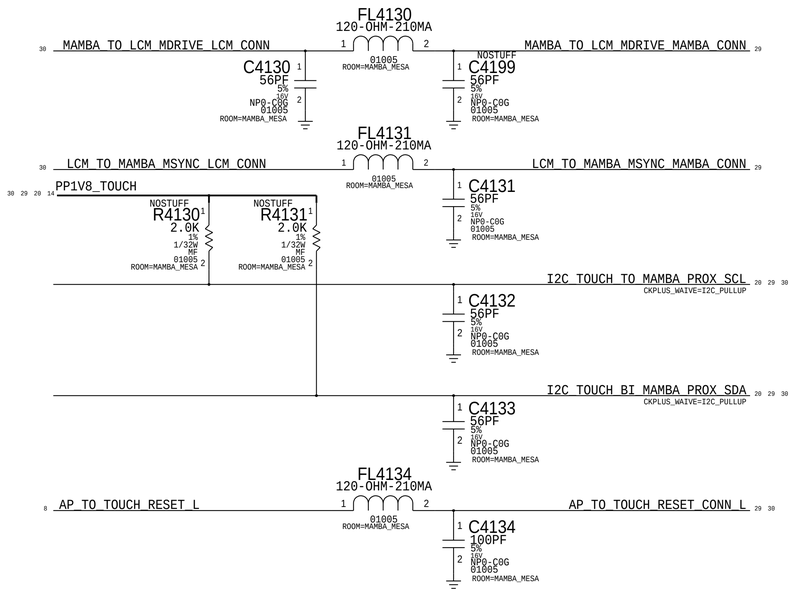
MLB: 516S00056 (RCPT)



MAMBA POWER



MAMBA DIGITAL I/O



NOTE:MAMBA I2C PULL-UPS TO PP1V8_TOUCH INSIDE KEPLER
ADDING R4130, R4131 AS OPTION FOR TWEAKING VALUE

SYNC_MASTER=N71_SINGLE_BRD SYNC_DATE=05/29/2014

PAGE TITLE

TOUCH:ORB & MESA B2B

Apple Inc.

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REVISION 4.0.0

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DISPLAY POWER

PP5V7_LCM_AVDDH (28) → FL4200 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP5V7_LCM_AVDDH_CONN (30) VOLTAGE=5.7V
- C4200 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4201 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4202 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4203 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4204 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PP1V8 (14 13 12 9 8 7 6 5 3 34 21 20 17) → FL4205 2400HM-350MA 0201 ROOM=KEPLER_B2B → PP1V8_LCM_CONN (30) VOLTAGE=1.8V
- C4205 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4206 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PN5V7_LCM_MESON_AVDDN (28) → FL4207 70-OHM-25%-0.28A 01005 ROOM=KEPLER_B2B → PN5V7_LCM_MESON_AVDDN_CONN (30) VOLTAGE=-5.7V
- C4207 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PP5V7_MESON_AVDDH (28) → FL4208 2400HM-350MA 0201 ROOM=KEPLER_B2B → PP5V7_MESON_AVDDH_CONN (30) VOLTAGE=5.7V
- C4208 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PP1V8_TOUCH (30 29 20 14) → FL4209 2400HM-350MA 0201 ROOM=KEPLER_B2B → PP1V8_TOUCH_CONN (30) VOLTAGE=1.8V
- C4215 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4209 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PP5V1_TOUCH_VDDH (28) → FL4210 2400HM-350MA 0201 ROOM=KEPLER_B2B → PP5V1_TOUCH_VDDH_CONN (30) VOLTAGE=5.1V
- C4210 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

BACKLIGHT

PP_LCM_BL_ANODE (28) → FL4211 2400HM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL_ANODE_CONN (3 30) VOLTAGE=25V
- C4211 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

PP_LCM_BL_CAT1 (28) → FL4212 2400HM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL_CAT1_CONN (3 30) VOLTAGE=0.26V
- C4212 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

PP_LCM_BL_CAT2 (28) → FL4213 2400HM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL_CAT2_CONN (3 30) VOLTAGE=0.26V
- C4213 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

PP_LCM_BL34_ANODE (28) → FL4291 2400HM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL34_ANODE_CONN (3 30) VOLTAGE=25V
- C4291 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

PP_LCM_BL_CAT3 (28) → FL4292 2400HM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL_CAT3_CONN (3 30) VOLTAGE=0.26V
- C4292 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

PP_LCM_BL_CAT4 (28) → FL4293 2400HM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL_CAT4_CONN (3 30) VOLTAGE=0.26V
- C4293 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

DISPLAY EEPROM I2C

I2C2_AP_SDA (8 20 28 30)
- C4223 56PF 5% 16V NP0-C0G 01005 NOSTUFF ROOM=KEPLER_B2B

I2C2_AP_SCL (8 20 28 30)
- C4224 56PF 5% 16V NP0-C0G 01005 NOSTUFF ROOM=KEPLER_B2B

DISPLAY MIPI

MIPI_AP_TO_LCM_CLK_P (7)	L4200 CRITICAL 65-OHM-0.1A-0.7-2GHZ TAM0605 SYM_VER-2 ROOM=KEPLER_B2B	MIPI_AP_TO_LCM_CLK_CONN_P (30)
MIPI_AP_TO_LCM_CLK_N (7)		MIPI_AP_TO_LCM_CLK_CONN_N (30)
MIPI_AP_TO_LCM_DATA0_P (7)	L4201 CRITICAL 65-OHM-0.1A-0.7-2GHZ TAM0605 SYM_VER-2 ROOM=KEPLER_B2B	MIPI_AP_TO_LCM_DATA0_CONN_P (30)
MIPI_AP_TO_LCM_DATA0_N (7)		MIPI_AP_TO_LCM_DATA0_CONN_N (30)
MIPI_AP_TO_LCM_DATA1_P (7)	L4202 CRITICAL 65-OHM-0.1A-0.7-2GHZ TAM0605 SYM_VER-2 ROOM=KEPLER_B2B	MIPI_AP_TO_LCM_DATA1_CONN_P (30)
MIPI_AP_TO_LCM_DATA1_N (7)		MIPI_AP_TO_LCM_DATA1_CONN_N (30)
MIPI_AP_TO_LCM_DATA2_P (7)	L4293 CRITICAL 65-OHM-0.1A-0.7-2GHZ TAM0605 SYM_VER-2 ROOM=KEPLER_B2B	MIPI_AP_TO_LCM_DATA2_CONN_P (30)
MIPI_AP_TO_LCM_DATA2_N (7)		MIPI_AP_TO_LCM_DATA2_CONN_N (30)
MIPI_AP_TO_LCM_DATA3_P (7)	L4294 CRITICAL 65-OHM-0.1A-0.7-2GHZ TAM0605 SYM_VER-2 ROOM=KEPLER_B2B	MIPI_AP_TO_LCM_DATA3_CONN_P (30)
MIPI_AP_TO_LCM_DATA3_N (7)		MIPI_AP_TO_LCM_DATA3_CONN_N (30)

DISPLAY CONTROL SIGNALS

LCM_TO_CHESTNUT_PWR_EN (28 16) → FL4220 120-OHM-210MA 01005 ROOM=KEPLER_B2B → LCM_TO_CHESTNUT_PWR_EN_CONN (30)
- C4220 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

AP_TO_LCM_RESET_L (8) → FL4221 120-OHM-210MA 01005 ROOM=KEPLER_B2B → AP_TO_LCM_RESET_CONN_L (30)
- R4220 100K 5% 1/32W MF 01005 ROOM=KEPLER_B2B
- C4221 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PMU_TO_LCM_PANICB (16) → R4222 10 5% 1/32W MF 01005 ROOM=KEPLER_B2B → PMU_TO_LCM_PANICB_CONN (30)
- C4222 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

OWL/TOUCH INTERFACE

LCM_TO_OWL_BSYNC (34 9 8) → FL4230 120-OHM-210MA 01005 ROOM=KEPLER_B2B → LCM_TO_OWL_BSYNC_CONN (30)
- C4230 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

UART_OWL_TO_TOUCH_TXD (9) → FL4231 120-OHM-210MA 01005 ROOM=KEPLER_B2B → UART_OWL_TO_TOUCH_TXD_CONN (30)
- C4231 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

TOUCH_TO_OWL_ACCEL_DATA_REQUEST (9) → FL4232 120-OHM-210MA 01005 ROOM=KEPLER_B2B → TOUCH_TO_OWL_ACCEL_DATA_REQUEST_CONN (30)
- C4232 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PROX/TOUCH INTERFACE

PP1V8_TOUCH (30 29 20 14)
- R4240 100K 5% 1/32W MF 01005 ROOM=KEPLER_B2B
- C4240 0.22UF 20% 6.3V X5R 01005-1 ROOM=KEPLER_B2B
- U4240 74AUP1G04GX SOT1226 CRITICAL ROOM=KEPLER_B2B

TOUCH_TO_PROX_TX_EN_CONN_L (30) → TOUCH_TO_PROX_TX_EN_BUFF (20)

TOUCH_TO_PROX_RX_EN_FCAM_CONN (20) → FL4241 120-OHM-210MA 01005 ROOM=KEPLER_B2B → TOUCH_TO_PROX_RX_EN_LCM_CONN (30)
- C4241 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

KEPLER CONNECTOR

MLB: 516S00051 (RCPT)
FLEX: 516S00050 (PLUG)

CRITICAL J4200 AA27-S054VA1 F-ST-SM ROOM=DISPLAY

	55	56	
PP_LCM_BL_CAT3_CONN (30)	1	2	PP_LCM_BL_CAT2_CONN (3 30)
PP_LCM_BL_CAT4_CONN (30)	3	4	PP_LCM_BL_CAT1_CONN (3 30)
PP_LCM_BL34_ANODE_CONN (30)	5	6	PP_LCM_BL_ANODE_CONN (3 30)
	7	8	NC_KEPLER_MESON_TEST2_MUX_CONN
MIPI_AP_TO_LCM_DATA3_CONN_N (30)	9	10	NC_KEPLER_MESON_TEST0_MUX_CONN
MIPI_AP_TO_LCM_DATA3_CONN_P (30)	11	12	SPI_AP_TO_TOUCH_CS_CONN_L (30)
	13	14	I2C2_AP_SDA (8 20 28 30)
MIPI_AP_TO_LCM_DATA2_CONN_N (30)	15	16	
MIPI_AP_TO_LCM_DATA2_CONN_P (30)	17	18	TOUCH_TO_OWL_ACCEL_DATA_REQUEST_CONN (30)
	19	20	I2C_TOUCH_BI_MAMBA_PROX_SDA (20 29)
MIPI_AP_TO_LCM_CLK_CONN_N (30)	21	22	SPI_AP_TO_TOUCH_SCLK_CONN (30)
MIPI_AP_TO_LCM_CLK_CONN_P (30)	23	24	TOUCH_TO_PROX_RX_EN_LCM_CONN (30)
	25	26	AP_TO_TOUCH_RESET_CONN_L (29)
MIPI_AP_TO_LCM_DATA1_CONN_N (30)	27	28	TOUCH_TO_PROX_TX_EN_CONN_L (30)
MIPI_AP_TO_LCM_DATA1_CONN_P (30)	29	30	PROX_TO_TOUCH_RX_LCM_CONN (20)
	31	32	SPI_TOUCH_TO_AP_MISO_CONN (30)
MIPI_AP_TO_LCM_DATA0_CONN_N (30)	33	34	SPI_AP_TO_TOUCH_MOSI_CONN (30)
MIPI_AP_TO_LCM_DATA0_CONN_P (30)	35	36	LCM_TO_OWL_BSYNC_CONN (30)
	37	38	I2C2_AP_SCL (8 20 28 30)
MAMBA_TO_LCM_MDRIVE_LCM_CONN (29)	39	40	I2C_TOUCH_TO_MAMBA_PROX_SCL (30 29)
LCM_TO_MAMBA_MSYNC_LCM_CONN (29)	41	42	UART_OWL_TO_TOUCH_TXD_CONN (30)
PP5V1_TOUCH_VDDH_CONN (30)	43	44	NC_KEPLER_PHOTON_PIFA_CONN
PP5V7_MESON_AVDDH_CONN (30)	45	46	PMU_TO_LCM_PANICB_CONN (30)
PP1V8_LCM_CONN (30)	47	48	AP_TO_LCM_RESET_CONN_L (30)
PP5V7_LCM_AVDDH_CONN (30)	49	50	LCM_TO_CHESTNUT_PWR_EN_CONN (30)
PN5V7_LCM_MESON_AVDDN_CONN (30)	51	52	TOUCH_TO_AP_INT_L_CONN (30)
PP1V8_TOUCH_CONN (30)	53	54	AP_TO_TOUCH_CLK32K_RESET_CONN_L (30)
	57	58	

AP/TOUCH INTERFACE

SPI_AP_TO_TOUCH_CS_L (8) → FL4250 120-OHM-210MA 01005 ROOM=KEPLER_B2B → SPI_AP_TO_TOUCH_CS_CONN_L (30)
- C4250 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

SPI_AP_TO_TOUCH_SCLK (8) → FL4251 120-OHM-210MA 01005 ROOM=KEPLER_B2B → SPI_AP_TO_TOUCH_SCLK_CONN (30)
- C4251 56PF 5% 16V NP0-C0G 01005 NOSTUFF ROOM=KEPLER_B2B
- C4299 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

SPI_AP_TO_TOUCH_MOSI (8) → FL4252 120-OHM-210MA 01005 ROOM=KEPLER_B2B → SPI_AP_TO_TOUCH_MOSI_CONN (30)
- C4252 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

SPI_TOUCH_TO_AP_MISO (8) → FL4253 120-OHM-210MA 01005 ROOM=KEPLER_B2B → SPI_TOUCH_TO_AP_MISO_CONN (30)
- C4253 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

TOUCH_TO_AP_INT_L (8) → FL4254 120-OHM-210MA 01005 ROOM=KEPLER_B2B → TOUCH_TO_AP_INT_L_CONN (30)
- C4254 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

AP_TO_TOUCH_CLK32K_RESET_L (8) → FL4255 120-OHM-210MA 01005 ROOM=KEPLER_B2B → AP_TO_TOUCH_CLK32K_RESET_CONN_L (30)
- C4255 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

I2C_TOUCH_BI_MAMBA_PROX_SDA (20 29 30)
- C4260 56PF 5% 16V NP0-C0G 01005 NOSTUFF ROOM=KEPLER_B2B

I2C_TOUCH_TO_MAMBA_PROX_SCL (30 29 29)
- C4261 56PF 5% 16V NP0-C0G 01005 NOSTUFF ROOM=KEPLER_B2B

PAGE TITLE: DISPLAY:LCM B2B

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REVISION: 4.0.0
BRANCH:
PAGE: 42 OF 49
SHEET: 30 OF 60

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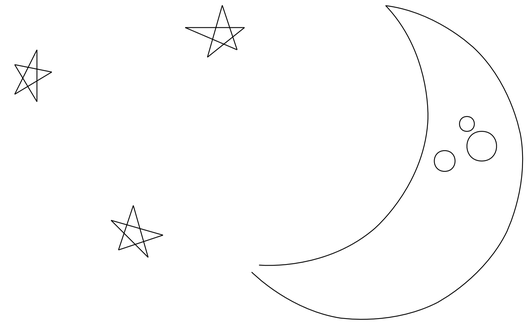
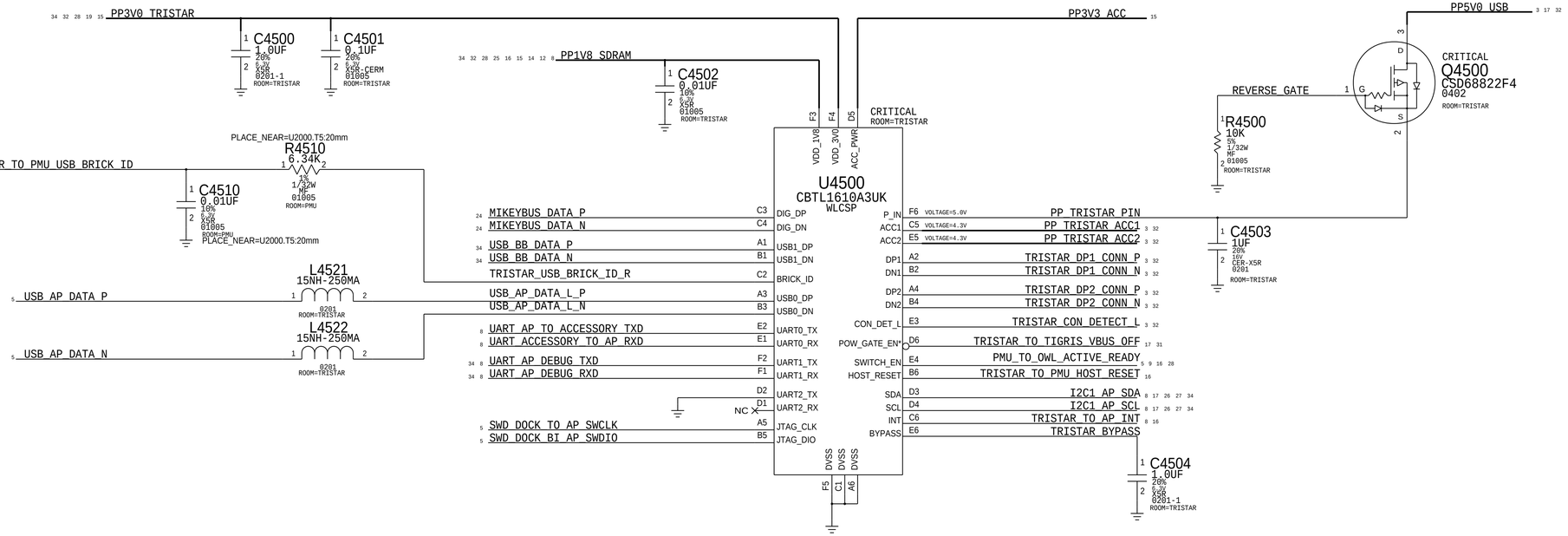
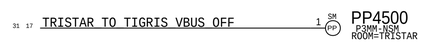
TRISTAR 2

APN:343S0695





PROBE POINTS



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Apple Inc.	DRAWING NUMBER 051-00094 · SIZE D
	REVISION 4.0.0
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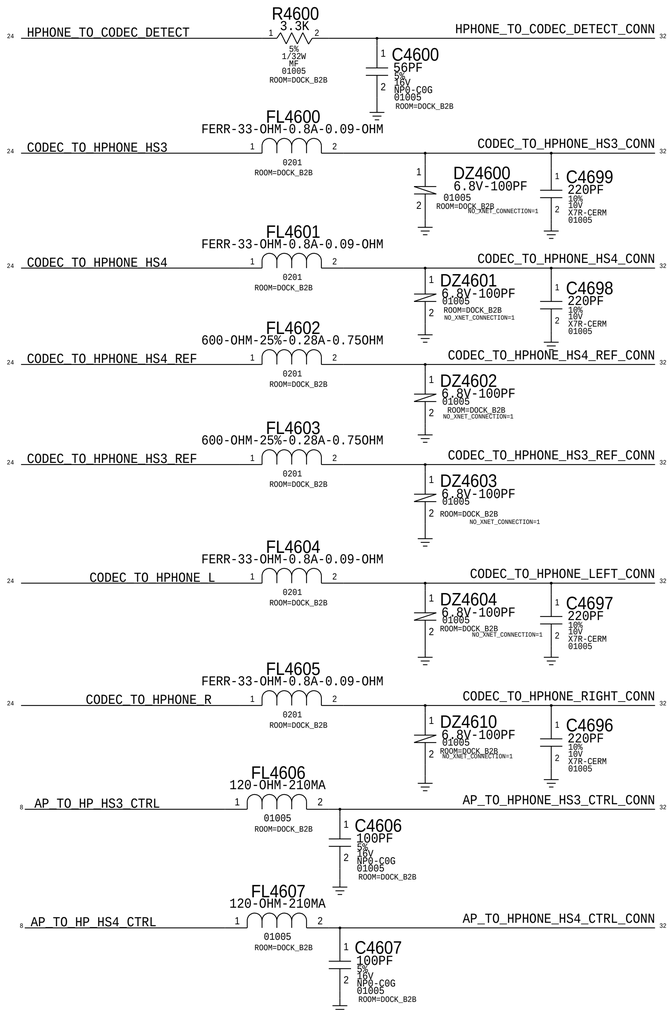
DOCK FLEX CONNECTOR

AUDIO JACK



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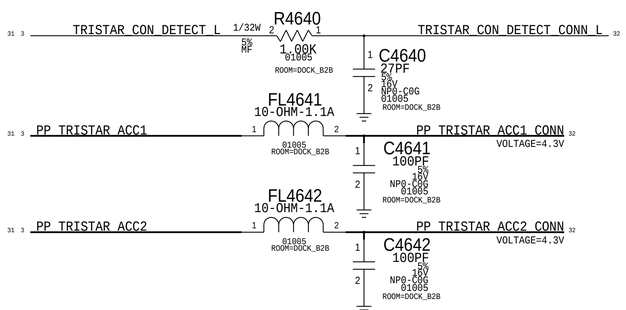

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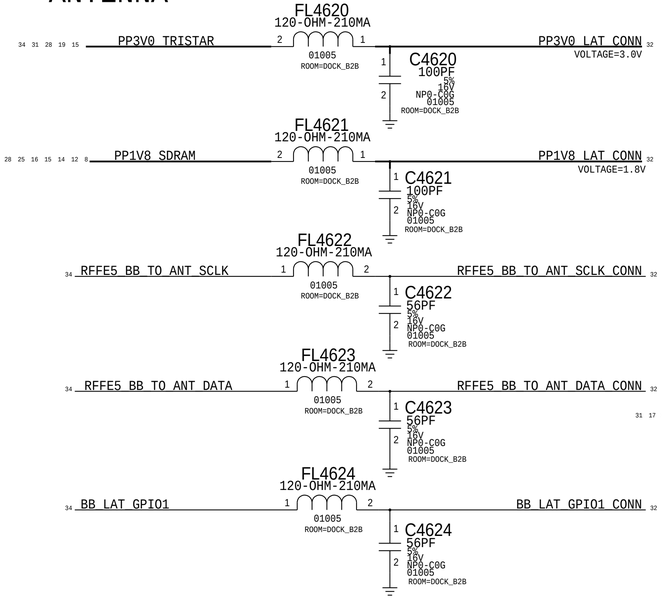

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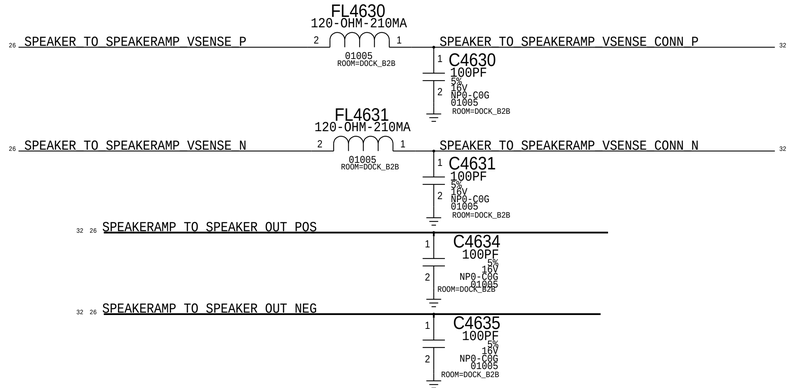

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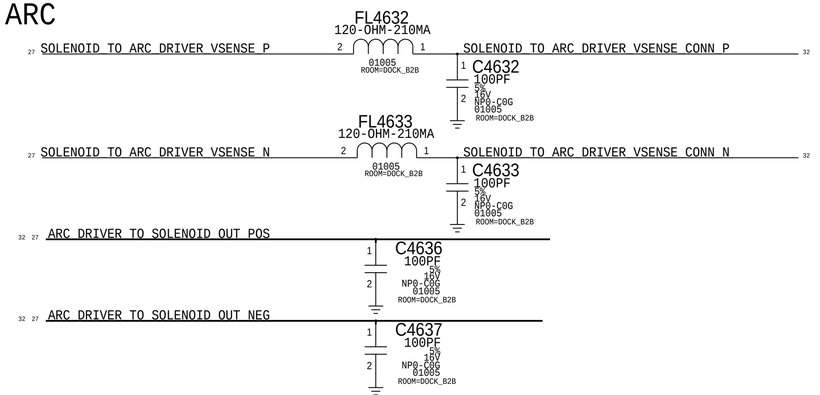


DOCK FLEX CONNECTOR

MLB: 516S00033 (RCPT)

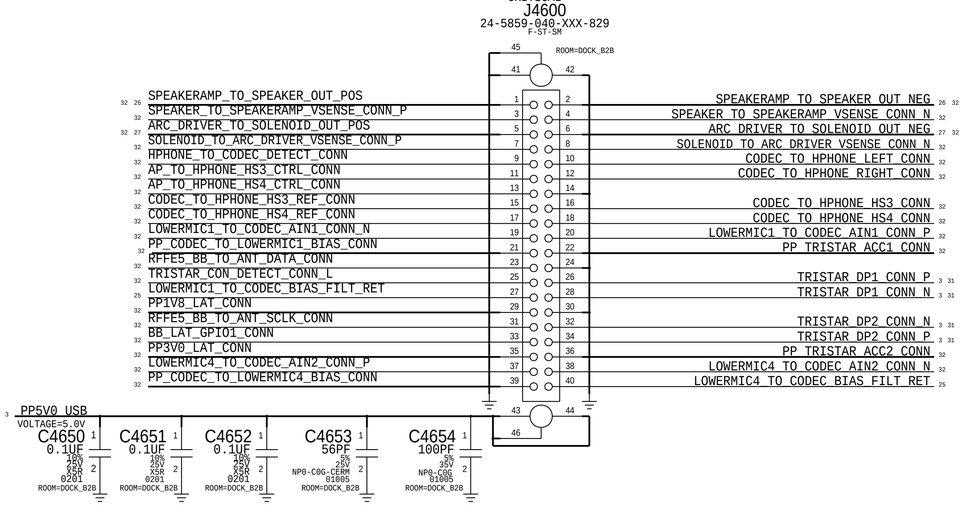
FLEX: 516S00034 (PLUG)

CRITICAL

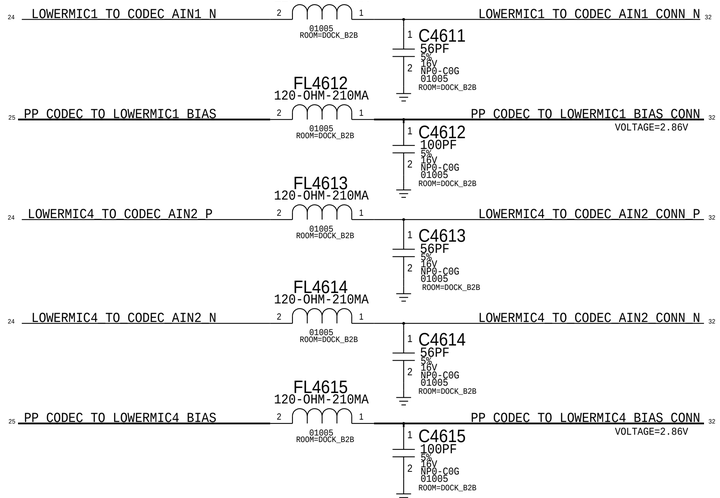
J4600

24-5859-040-XXX-829

F-ST-SM



LOWER MIC1/4



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PAGE TITLE

I/O:DOCK FLEX B2B

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BUTTON FLEX

MIC2
ANC REF MIC

FL4700
120-OHM-210MA
01005
ROOM=BUTTON_B2B
25 PP_CODEC_TO_REARMIC2_BIAS
PP_CODEC_TO_REARMIC2_BIAS_CONN 33
VOLTAGE=2.86V
C4700
100PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

FL4701
120-OHM-210MA
01005
ROOM=BUTTON_B2B
REARMIC2_TO_CODEC_AIN3_P
REARMIC2_TO_CODEC_AIN3_CONN_P 33
C4701
56PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

FL4702
120-OHM-210MA
01005
ROOM=BUTTON_B2B
24 REARMIC2_TO_CODEC_AIN3_N
REARMIC2_TO_CODEC_AIN3_CONN_N 33
C4702
56PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

R4710
0.00
5%
1/32W
MF
01005
ROOM=BUTTON_B2B
34 16 9 8 BUTTON_HOLD_KEY_L
BUTTON_HOLD_KEY_CONN_L 33
C4710
27PF
5%
6.3V
NP0-C0G
0201
ROOM=BUTTON_B2B
DZ4710
5.5V-6.2PF
0201
ROOM=BUTTON_B2B

FL4711
120-OHM-210MA
01005
ROOM=L_BUTTON_B2B
34 16 8 BUTTON_RINGER_A
BUTTON_RINGER_A_CONN 33
C4711
27PF
5%
6.3V
NP0-C0G
0201
ROOM=L_BUTTON_B2B
DZ4711
5.5V-6.2PF
0201
ROOM=L_BUTTON_B2B
NORTH_AC_GND_SCREW 4 33

FL4712
120-OHM-210MA
01005
ROOM=L_BUTTON_B2B
34 16 8 BUTTON_VOL_DOWN_L
BUTTON_VOL_DOWN_CONN_L 33
C4712
100PF
5%
16V
NP0-C0G
01005
ROOM=L_BUTTON_B2B
DZ4712
12V-33PF
01005-1
ROOM=L_BUTTON_B2B
NORTH_AC_GND_SCREW 4 33

FL4713
120-OHM-210MA
01005
ROOM=L_BUTTON_B2B
34 16 8 BUTTON_VOL_UP_L
BUTTON_VOL_UP_CONN_L 33
C4713
100PF
5%
16V
NP0-C0G
01005
ROOM=L_BUTTON_B2B
DZ4713
12V-33PF
01005-1
ROOM=L_BUTTON_B2B
NORTH_AC_GND_SCREW 4 33

BUTTONS:
HOLD
RINGER
VOL UP/DOWN

RIGHT BUTTON FLEX CONNECTOR

MLB: 516S00047 (RCPT)
FLEX: 516S00046 (PLUG)
CRITICAL
ROOM=BUTTON_B2B

J4700
BM28P0.6-10DS-0.35V
F-ST-SM
11 12 PP_LED_DRIVER_COOL_LED 22 33
1 2 BUTTON_HOLD_KEY_CONN_L 33
3 4 REARMIC2_TO_CODEC_AIN3_CONN_P 33
5 6 REARMIC2_TO_CODEC_AIN3_CONN_N 33
7 8 PP_CODEC_TO_REARMIC2_BIAS_CONN 33
9 10 LED_MODULE_NTC_CONN 33
13 14 PP_LED_DRIVER_WARM_LED 22 33

LEFT BUTTON FLEX CONNECTOR

MLB: 516S1317
CRITICAL
ROOM=L_BUTTON_B2B

J4701
505066-0610
F-ST-SM
7 8
NC 1 2 BUTTON_VOL_DOWN_CONN_L 33
NC 3 4 BUTTON_VOL_UP_CONN_L 33
5 6
33 BUTTON_RINGER_A_CONN 9 10

XW4701
SHORT-10L-0.1MM-SM
1 2 LEFT_BTN_RTN

STROBE:
WARM LED
COOL LED
MODULE NTC

PP_LED_DRIVER_WARM_LED 22 33
C4723
100PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B
C4724
27PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

PP_LED_DRIVER_COOL_LED 22 33
C4721
100PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B
C4722
27PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

FL4720
120-OHM-210MA
01005
ROOM=BUTTON_B2B
22 LED_MODULE_NTC
LED_MODULE_NTC_CONN 33
R4720
51.1K
1%
1/32W
MF
01005
ROOM=BUTTON_B2B
C4720
100PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

SYNC_MASTER=N71_SINGLE_BRD
SYNC_DATE=05/29/2014

PAGE TITLE
I/O:BUTTON FLEX B2B

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BASEBAND, WLAN, BT & STOCKHOLM

RADIO_MLB_MIMO

SUBDESIGN_SUFFIX=RF

SHARED POWER

28 27 26 25 23 22 17 15 14 45 4 29	PP_VCC_MAIN
37 32 31 28 19 15	PP3V0_TRISTAR
39 32 31 28 25 16 15 14 12 8	PP1V8_SDRAM

BASEBAND

39 6	PCIE_AP_TO_BB_TXD_P	PCIE0_AP_TO_BB_TX_P
39 6	PCIE_AP_TO_BB_TXD_N	PCIE0_AP_TO_BB_TX_N
39 6	PCIE_BB_TO_AP_RXD_P	PCIE0_BB_TO_AP_TX_P
39 6	PCIE_BB_TO_AP_RXD_N	PCIE0_BB_TO_AP_TX_N
39 6	PCIE_AP_TO_BB_REFCLK_P	PCIE0_AP_TO_BB_REFCLK_P
39 6	PCIE_AP_TO_BB_REFCLK_N	PCIE0_AP_TO_BB_REFCLK_N
39 6	PCIE_AP_TO_BB_RESET_L	PCIE0_AP_TO_BB_PERST_L
39 6	PCIE_BB_BI_AP_CLKREQ_L	PCIE0_AP_TO_BB_CLKREQ_L
39 16	BB_TO_PMU_PCIE_HOST_WAKE_L	PCIE0_BB_TO_PMU_HOST_WAKE_L
39 8	AP_TO_BB_PCIE_DEV_WAKE	PCIE0_AP_TO_BB_DEV_WAKE
39 8	I2S_AP_TO_BB_LRCLK	I2S_AP_TO_BB_WS
39 8	I2S_AP_TO_BB_BCLK	I2S_AP_TO_BB_CLK
39 8	I2S_AP_TO_BB_DOUT	I2S_AP_TO_BB_TX
39 8	I2S_BB_TO_AP_DIN	I2S_BB_TO_AP_TX
44 8	AP_TO_BB_RADIO_ON_L	AP_TO_BBPMU_RADIO_ON_L
39 16	PMU_TO_BB_PMIC_RESET_L	PMU_TO_BBPMU_RESET_L
44 8	AP_TO_BB_RESET_L	AP_TO_BB_RST_L
43 8	BB_TO_AP_RESET_DETECT_L	BB_TO_AP_RESET_DET_L
39 28 22	BB_TO_LED_DRIVER_GSM_BURST_IND	BB_TO_AP_GSM_TXBURST_IND
39 8	AP_TO_BB_MESA_ON_L	AP_TO_BB_MESA_ON_L
39 8	BB_TO_AP_GPS_TIME_MARK	BB_TO_AP_GPS_TIME_MARK
39 8	AP_TO_BB_COREDUMP	AP_TO_BB_COREDUMP_TRIG
43 8	BB_IPC_GPIO	AP_TO_BB_IPC_GPIO
39 30 9 8	LCM_TO_OWL_BSYNC	TOUCH_TO_BBPMU_FORCE_PWM
39 9	UART_OWL_TO_BB_TXD	UART0_OWL_TO_BB_TX
39 9	UART_BB_TO_OWL_RXD	UART0_BB_TO_OWL_TX
42 31	USB_BB_DATA_P	USB_BB_P
42 31	USB_BB_DATA_N	USB_BB_N
44 16	PMU_TO_BB_USB_VBUS_DETECT	USB_BB_VBUS_DETECT
42 13 9	SWD_AP_PERIPHERAL_SWCLK	SWD_CLK_BB_JTAG_TCK
39 9	SWD_AP_BI_BB_SWDIO	SWD_IO_BB_JTAG_TMS
36 32	RFFE5_BB_TO_ANT_SCLK	75_RFFE5_SCLK_BB
36 32	RFFE5_BB_TO_ANT_DATA	75_RFFE5_SDATA_BB
43 32	BB_LAT_GPIO1	RFFE_BUFFER_LAT_GPIO1
45 16	BB_TO_PMU_AMUX_LDO11_SIM1	BB_TO_PMU_AMUX_LDO11_SIM1
45 16	BB_TO_PMU_AMUX_SMPS1	BB_TO_PMU_AMUX_SMPS1
45 16	BB_TO_PMU_AMUX_SMPS3	BB_TO_PMU_AMUX_SMPS3
45 16	BB_TO_PMU_AMUX_SMPS4	BB_TO_PMU_AMUX_SMPS4

ANT

60 4	AP_TO_STOCKHOLM_ANT	STOCKHOLM_ANT

AP DEBUG

21 20 17 14 13 12 9 8 7 6 5 3	PP1V8	PP1V8
39 30 8 3	DFU_STATUS	DFU_STATUS
39 8 3	FORCE_DFU	FORCE_DFU
16 9 5 3	PMU_TO_SYSTEM_COLD_RESET_L	PMU_TO_SYSTEM_COLD_RESET_L
39 28 16 8	I2C0_AP_SCL	I2C0_AP_SCL
39 28 16 8	I2C0_AP_SDA	I2C0_AP_SDA
39 31 27 26 17 8	I2C1_AP_SCL	I2C1_AP_SCL
39 31 27 26 17 8	I2C1_AP_SDA	I2C1_AP_SDA
39 33 16 9 8	BUTTON_HOLD_KEY_L	BUTTON_HOLD_KEY_L
39 29 16 9 8	BUTTON_MENU_KEY_L	BUTTON_MENU_KEY_L
39 33 16 8	BUTTON_RINGER_A	BUTTON_RINGER_A
39 33 16 8	BUTTON_VOL_DOWN_L	BUTTON_VOL_DOWN_L
39 33 16 8	BUTTON_VOL_UP_L	BUTTON_VOL_UP_L
	NC_PMU_GPIO20 NO_TEST	PMU_GPIO20
	NC_PMU_GPIO21 NO_TEST	PMU_GPIO21
	NC_OWL_FUNC2 NO_TEST	OWL_FUNC2
	NC_AP_RESERVED2 NO_TEST	AP_RESERVED2
31 8	UART_AP_DEBUG_RXD	AP_RESERVED1
31 8	UART_AP_DEBUG_TXD	AP_RESERVED0
	NC_PMU_AMUX_AY NO_TEST	PMU_AMUX_AY
	NC_PMU_AMUX_BY NO_TEST	PMU_AMUX_BY

WLAN

PCIE_AP_TO_WLAN_TX_P	PCIE_AP_TO_WLAN_TXD_P	6 59
PCIE_AP_TO_WLAN_TX_N	PCIE_AP_TO_WLAN_TXD_N	6 59
PCIE_WLAN_TO_AP_TX_P	PCIE_WLAN_TO_AP_RXD_P	6 59
PCIE_WLAN_TO_AP_TX_N	PCIE_WLAN_TO_AP_RXD_N	6 59
PCIE_AP_TO_WLAN_REFCLK_P	PCIE_AP_TO_WLAN_REFCLK_P	6 59
PCIE_AP_TO_WLAN_REFCLK_N	PCIE_AP_TO_WLAN_REFCLK_N	6 59
PCIE_AP_TO_WLAN_PERST_L	PCIE_AP_TO_WLAN_RESET_L	6 59
PCIE_AP_TO_WLAN_DEV_WAKE	PCIE_AP_TO_WLAN_DEV_WAKE	8 59
PCIE_WLAN_TO_AP_CLKREQ_L	PCIE_WLAN_TO_AP_CLKREQ_L	6 59
UART4_AP_TO_WLAN_TX	UART_AP_TO_WLAN_TXD	8 59
UART4_AP_TO_WLAN_RTS_L	UART_AP_TO_WLAN_RTS_L	8 59
UART4_WLAN_TO_AP_TX	UART_WLAN_TO_AP_RXD	8 59
UART4_WLAN_TO_AP_RTS_L	UART_WLAN_TO_AP_CTS_L	8 59
PMU_TO_WLAN_32K_CLK	PMU_TO_WLAN_CLK32K	16 59
PMU_TO_WLAN_REG_ON	PMU_TO_WLAN_REG_ON	16 59
WLAN_TO_PMU_HOST_WAKE	WLAN_TO_PMU_HOST_WAKE	16 59
OWL_TO_WLAN_CONTEXT_A	OWL_TO_WLAN_CONTEXT_A	9 59
OWL_TO_WLAN_CONTEXT_B	OWL_TO_WLAN_CONTEXT_B	9 59

BLUETOOTH

I2S_AP_TO_BT_LRCK	I2S_AP_TO_BT_LRCLK	8 59
I2S_AP_TO_BT_BCLK	I2S_AP_TO_BT_BCLK	8 59
I2S_AP_TO_BT_DOUT	I2S_AP_TO_BT_DOUT	8 59
I2S_BT_TO_AP_DOUT	I2S_BT_TO_AP_DIN	8 59
UART1_AP_TO_BT_TX	UART_AP_TO_BT_TXD	8 59
UART1_AP_TO_BT_RTS_L	UART_AP_TO_BT_RTS_L	8 59
UART1_BT_TO_AP_TX	UART_BT_TO_AP_RXD	8 59
UART1_BT_TO_AP_RTS_L	UART_BT_TO_AP_CTS_L	8 59
PMU_TO_BT_REG_ON	PMU_TO_BT_REG_ON	16 59
BT_TO_PMU_HOST_WAKE	BT_TO_PMU_HOST_WAKE	16 59
AP_TO_BT_WAKE	AP_TO_BT_WAKE	8 59

STOCKHOLM

UART3_AP_TO_STOCKHOLM_TXD	UART_AP_TO_STOCKHOLM_TXD	8 39
UART3_AP_TO_STOCKHOLM_RTS_L	UART_AP_TO_STOCKHOLM_RTS_L	8 39
UART3_STOCKHOLM_TO_AP_TXD	UART_STOCKHOLM_TO_AP_RXD	8 39
UART3_STOCKHOLM_TO_AP_RTS_L	UART_STOCKHOLM_TO_AP_CTS_L	8 39
PMU_TO_STOCKHOLM_EN	PMU_TO_STOCKHOLM_EN	16 60
STOCKHOLM_TO_PMU_HOST_WAKE	STOCKHOLM_TO_PMU_HOST_WAKE	16 60
AP_TO_STOCKHOLM_DEV_WAKE	AP_TO_STOCKHOLM_DEV_WAKE	8 60
AP_TO_STOCKHOLM_FW_DWLD_REQ	AP_TO_STOCKHOLM_DWLD_REQUEST	7 60

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2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

REV	ECN	DESCRIPTION OF REVISION	CK APPD / DATE
4	0003980769	ENGINEERING RELEASED	2015-03-27

N66 RADIO_MLB_MIMO - EVT_MD
MARCH 26, 2015

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24	50	WIFI/BT: WIFI/BT MODULE
25	51	STOCKHOLM

HB PAD

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
353S00376	1	IC,PWR AMP,HB_PAD,TQS	UHBPA_RF	ROW
353S4494	1	IC,PWR AMP,HB_PAD,AVAGO	UHBPA_RF	RF2
353S00376	1	IC,PWR AMP,HB_PAD,TQS	UHBPA_RF	RFC

LB PAD

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
353S00461	1	IC,PWR AMP,LB_PAD,SKWS	ULBPA_RF	ROW
353S00056	1	IC,PWR AMP,LB_PAD,MURATA	ULBPA_RF	RF2
353S00461	1	IC,PWR AMP,LB_PAD,SKWS	ULBPA_RF	RFC

VINYL

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
337S00125	1	IC, VINYL	U5101_RF	ROW
337S00125	1	IC, VINYL	U5101_RF	RF2

VINYL RESISTOR

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
117S0161	1	0 OHM, RESISTOR	R3402_RF	RFC

RFC LB PAD MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0555	1	1.0PF, CAPACITOR	L4203_RF	RFC
152S00158	1	4.1NH, INDUCTOR	C4205_RF	RFC
131S0425	1	0.5PF, CAPACITOR	L4204_RF	RFC
152S2053	1	4.7NH, INDUCTOR	C4206_RF	RFC
131S0555	1	1.0PF, CAPACITOR	L4205_RF	RFC
152S00027	1	3.7NH, INDUCTOR	C4207_RF	RFC
131S0557	1	0.7PF, CAPACITOR	L4206_RF	RFC
152S2001	1	2.4NH, INDUCTOR	C4208_RF	RFC
131S0351	1	0.4PF, CAPACITOR	L4207_RF	RFC
152S2002	1	2.7NH, INDUCTOR	C4209_RF	RFC
152S2002	1	2.7NH, INDUCTOR	C4211_RF	RFC
152S2056	1	5.6NH, INDUCTOR	C4212_RF	RFC
131S0340	1	2.0PF, CAPACITOR	L4219_RF	RFC
152S2021	1	1.5NH, INDUCTOR	C4213_RF	RFC
118S0724	1	0 OHM, RESISTOR	R4201_RF	RFC
131S0551	1	1.2PF, CAPACITOR	L4601_RF	RFC
152S1342	1	15NH, INDUCTOR	L3902_RF	RFC
131S0630	1	27PF, CAPACITOR	C3902_RF	RFC

ROW HB PAD MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S1907	1	3.3NH, INDUCTOR	L4105_RF	ROW
152S2007	1	8.2NH, INDUCTOR	L4401_RF	ROW
131S0426	1	22PF, CAPACITOR	C4405_RF	ROW
152S2042	1	1.8NH, INDUCTOR	C4406_RF	ROW
131S0425	1	0.5PF, CAPACITOR	L4407_RF	ROW
152S2041	1	10.0NH, INDUCTOR	L4403_RF	ROW
131S00071	1	33PF, CAPACITOR	C4407_RF	ROW
152S00143	1	15NH, INDUCTOR	L4404_RF	ROW
131S00071	1	33PF, CAPACITOR	C4408_RF	ROW
117S0108	1	51 OHM, RESISTOR	L4410_RF	ROW
131S0599	1	1.5PF, CAPACITOR	C3921_RF	ROW
152S00052	1	3.4NH, INDUCTOR	L3910_RF	ROW
117S0201	1	0 OHM, RESISTOR	L3911_RF	ROW
152S2039	1	3.8NH, INDUCTOR	L3919_RF	ROW
131S0414	1	5.0PF, CAPACITOR	C4410_RF	ROW

RFC HB PAD MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S1907	1	3.3NH, INDUCTOR	L4105_RF	RFC
152S2007	1	8.2NH, INDUCTOR	L4401_RF	RFC
131S0426	1	22PF, CAPACITOR	C4405_RF	RFC
152S2042	1	1.8NH, INDUCTOR	C4406_RF	RFC
131S0425	1	0.5PF, CAPACITOR	L4407_RF	RFC
152S2041	1	10.0NH, INDUCTOR	L4403_RF	RFC
131S00071	1	33PF, CAPACITOR	C4407_RF	RFC
152S00143	1	15NH, INDUCTOR	L4404_RF	RFC
131S00071	1	33PF, CAPACITOR	C4408_RF	RFC
117S0108	1	51 OHM, RESISTOR	L4410_RF	RFC
131S0599	1	1.5PF, CAPACITOR	C3921_RF	RFC
152S00052	1	3.4NH, INDUCTOR	L3910_RF	RFC
117S0201	1	0 OHM, RESISTOR	L3911_RF	RFC
152S2039	1	3.8NH, INDUCTOR	L3919_RF	RFC
131S0414	1	5.0PF, CAPACITOR	C4410_RF	RFC

ROW LB PAD MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0555	1	1.0PF, CAPACITOR	L4203_RF	ROW
152S00158	1	4.1NH, INDUCTOR	C4205_RF	ROW
131S0425	1	0.5PF, CAPACITOR	L4204_RF	ROW
152S2053	1	4.7NH, INDUCTOR	C4206_RF	ROW
131S0555	1	1.0PF, CAPACITOR	L4205_RF	ROW
152S00027	1	3.7NH, INDUCTOR	C4207_RF	ROW
131S0557	1	0.7PF, CAPACITOR	L4206_RF	ROW
152S2001	1	2.4NH, INDUCTOR	C4208_RF	ROW
131S0351	1	0.4PF, CAPACITOR	L4207_RF	ROW
152S2002	1	2.7NH, INDUCTOR	C4209_RF	ROW
152S2002	1	2.7NH, INDUCTOR	C4211_RF	ROW
152S2056	1	5.6NH, INDUCTOR	C4212_RF	ROW
131S0340	1	2.0PF, CAPACITOR	L4219_RF	ROW
152S2021	1	1.5NH, INDUCTOR	C4213_RF	ROW
118S0724	1	0 OHM, RESISTOR	R4201_RF	ROW
131S0551	1	1.2PF, CAPACITOR	L4601_RF	ROW
152S1342	1	15NH, INDUCTOR	L3902_RF	ROW
131S0630	1	27PF, CAPACITOR	C3902_RF	ROW

RF2 HB PAD MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S1990	1	3.0NH, INDUCTOR	L4105_RF	RF2
131S0377	1	1.2PF, CAPACITOR	C4108_RF	RF2
131S0631	1	0.3PF, CAPACITOR	L4401_RF	RF2
152S2042	1	1.8NH, INDUCTOR	C4405_RF	RF2
152S2042	1	1.8NH, INDUCTOR	C4406_RF	RF2
131S0631	1	0.3PF, CAPACITOR	L4407_RF	RF2
131S00001	1	0.1PF, CAPACITOR	L4403_RF	RF2
152S2051	1	1.3NH, INDUCTOR	C4407_RF	RF2
152S2051	1	1.3NH, INDUCTOR	C4408_RF	RF2
131S0805	1	100PF, CAPACITOR	C4409_RF	RF2
131S0431	1	0.2PF, CAPACITOR	L4410_RF	RF2
131S0381	1	1.6PF, CAPACITOR	C3921_RF	RF2
152S00027	1	3.7NH, INDUCTOR	L3910_RF	RF2
117S0201	1	0 OHM, RESISTOR	L3911_RF	RF2
152S2045	1	3.0NH, INDUCTOR	L3919_RF	RF2
152S00052	1	3.4NH, INDUCTOR	L3912_RF	RF2
131S0599	1	1.5PF, CAPACITOR	C3922_RF	RF2
131S0630	1	27PF, CAPACITOR	C3911_RF	RF2
131S0414	1	5.0PF, CAPACITOR	C4410_RF	RF2

RF2 LB PAD MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0551	1	1.2PF, CAPACITOR	L4203_RF	RF2
152S2004	1	3.3NH, INDUCTOR	C4205_RF	RF2
131S0551	1	1.2PF, CAPACITOR	L4204_RF	RF2
152S2020	1	3.6NH, INDUCTOR	C4206_RF	RF2
131S0551	1	1.2PF, CAPACITOR	L4205_RF	RF2
152S00202	1	4.0NH, INDUCTOR	C4207_RF	RF2
131S0336	1	1.3PF, CAPACITOR	L4206_RF	RF2
152S2022	1	4.3NH, INDUCTOR	C4208_RF	RF2
131S0555	1	1.0PF, CAPACITOR	L4207_RF	RF2
152S00052	1	3.4NH, INDUCTOR	C4209_RF	RF2
131S0551	1	1.2PF, CAPACITOR	L4209_RF	RF2
152S00158	1	4.1NH, INDUCTOR	C4211_RF	RF2
131S00070	1	1.3PF, CAPACITOR	L4210_RF	RF2
152S00180	1	4.2NH, INDUCTOR	C4212_RF	RF2
131S0560	1	1.1PF, CAPACITOR	L4211_RF	RF2
152S00027	1	3.7NH, INDUCTOR	C4213_RF	RF2
152S00202	1	4.0NH, INDUCTOR	L4201_RF	RF2
152S2045	1	3.0NH, INDUCTOR	R4201_RF	RF2
152S2056	1	5.6NH, INDUCTOR	L4202_RF	RF2
152S1996	1	15NH, INDUCTOR	C3913_RF	RF2
131S00074	1	30PF, CAPACITOR	L3902_RF	RF2
152S1995	1	12NH, INDUCTOR	C3902_RF	RF2

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Apple Inc.

DRAWING NUMBER: 051-00094 | SIZE: D

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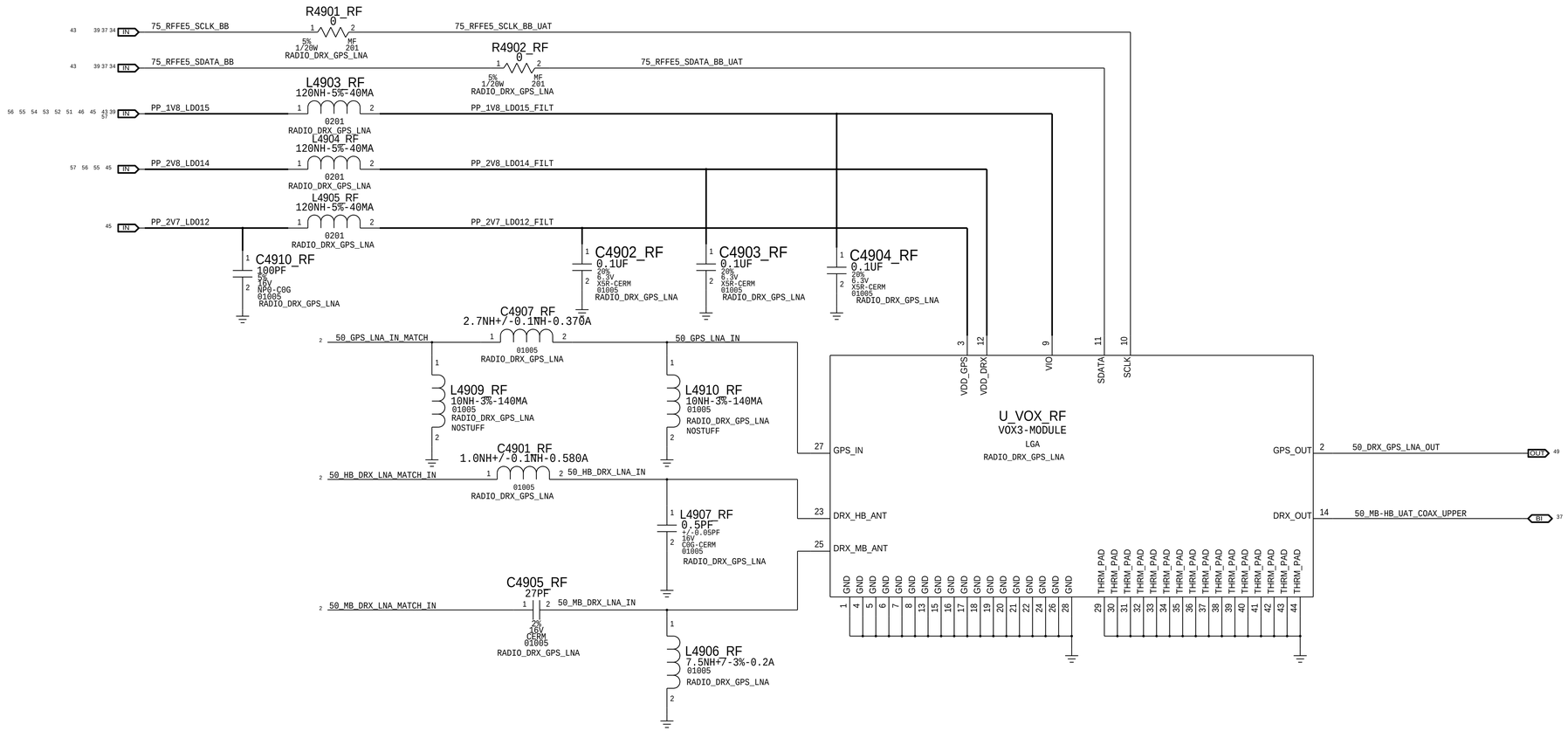
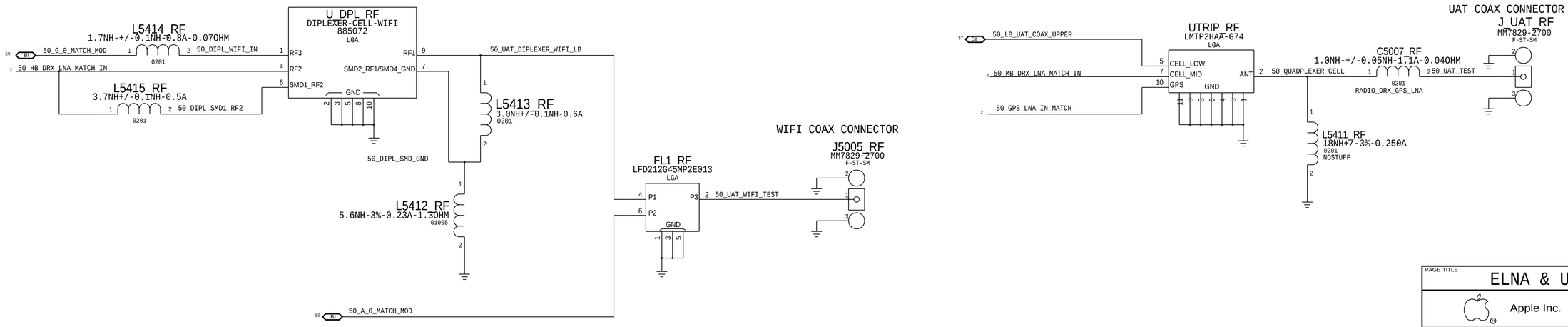
N66-SPECIFIC RADIO PAGE 2

DIVERSITY LNA



UAT ANT FEED



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PAGE TITLE: ELNA & UAT ANT FEED

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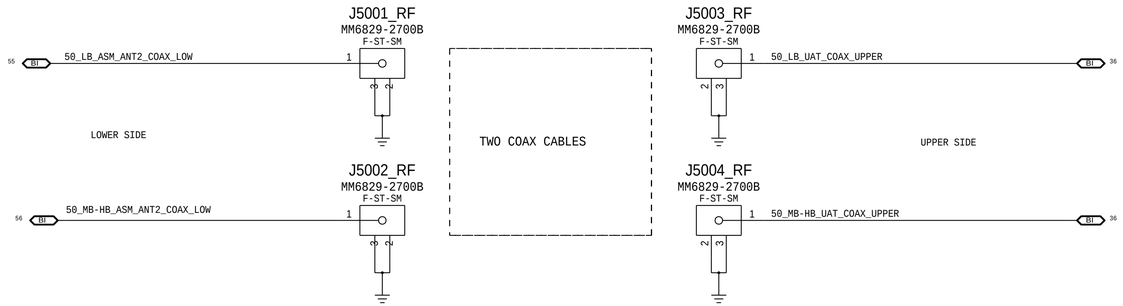
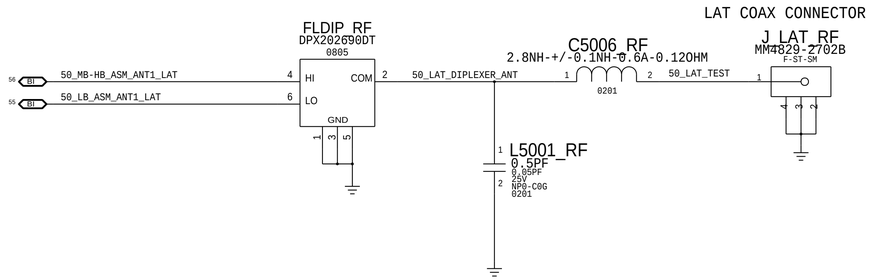
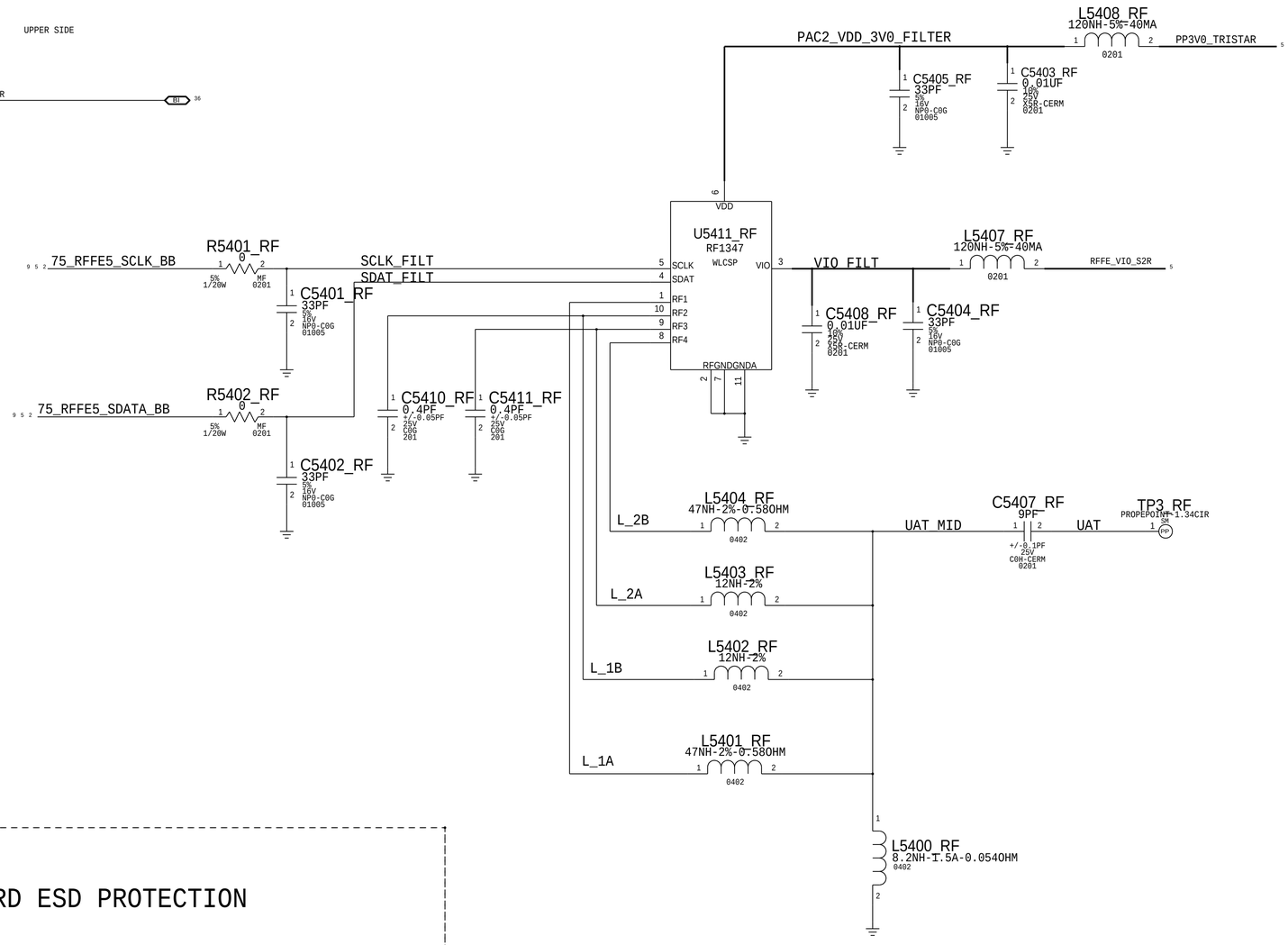
N66-SPECIFIC RADIO PAGE 3

ANTENNA FEEDS AND CONNECTORS

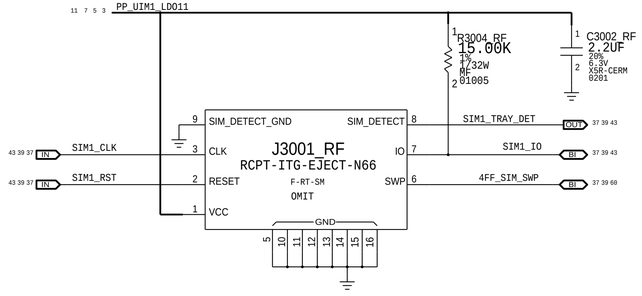




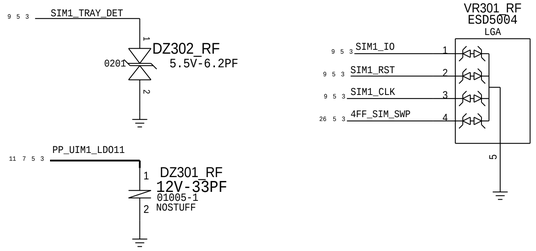
UAT TUNER



SIM CARD CONNECTOR



SIM CARD ESD PROTECTION



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PAGE TITLE
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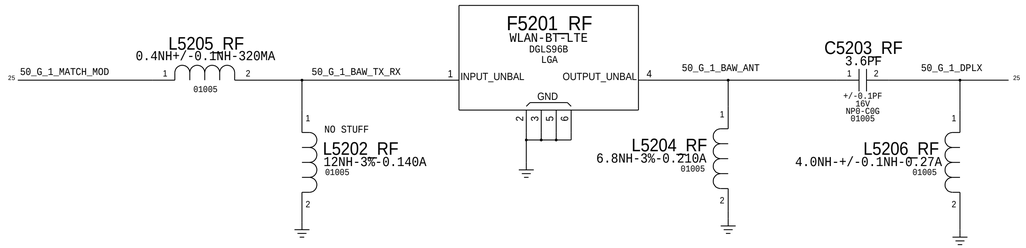
N66-SPECIFIC RADIO PAGE 4

WLAN LAT 2.4GHZ BAW BPF



PAGE TITLE: WLAN LAT 2.4GHZ BAW BPF

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AP TO BB/WLAN/BT/SH CONNECTIONS

BASEBAND

PP_VCC_MAIN
AP_TO_BBPMU_RADIO_ON_L
PMU_TO_BBPMU_RESET_L
AP_TO_BB_RST_L
BB_TO_AP_RESET_DET_L
BB_TO_AP_GSM_TXBURST_IND
AP_TO_BB_MESA_ON_L
BB_TO_AP_GPS_TIME_MARK
AP_TO_BB_COREDUMP_TRIG
AP_TO_BB_IPC_GPIO
TOUCH_TO_BBPMU_FORCE_PWM

UART0_BB_TO_OWL_TX
UART0_OWL_TO_BB_TX

PCIE0_AP_TO_BB_REFCLK_P
PCIE0_AP_TO_BB_REFCLK_N

PCIE0_AP_TO_BB_TX_P
PCIE0_AP_TO_BB_TX_N

PCIE0_BB_TO_AP_TX_P
PCIE0_BB_TO_AP_TX_N

PCIE0_AP_TO_BB_PERST_L
PCIE0_AP_TO_BB_CLKREQ_L
PCIE0_BB_TO_PMU_HOST_WAKE_L
PCIE0_AP_TO_BB_DEV_WAKE

I2S_AP_TO_BB_WS
I2S_AP_TO_BB_CLK
I2S_AP_TO_BB_TX
I2S_BB_TO_AP_TX

USB_BB_P
USB_BB_N
USB_BB_VBUS_DETECT

SWD_CLK_BB_JTAG_TCK
SWD_IO_BB_JTAG_TMS

RFFE_BUFFER_LAT_GPIO1
75_RFFE5_SDATA_BB
75_RFFE5_SCLK_BB
PP3V0_TRISTAR

BB_TO_PMU_AMUX_SMPS1
BB_TO_PMU_AMUX_SMPS3
BB_TO_PMU_AMUX_SMPS4
BB_TO_PMU_AMUX_LDO11_SIM1

WLAN/BT

PMU_TO_WLAN_32K_CLK
PMU_TO_WLAN_REG_ON
PMU_TO_BT_REG_ON
WLAN_TO_PMU_HOST_WAKE
BT_TO_PMU_HOST_WAKE
AP_TO_BT_WAKE

UART1_AP_TO_BT_TX
UART1_BT_TO_AP_TX
UART1_AP_TO_BT_RTS_L
UART1_BT_TO_AP_RTS_L

I2S_AP_TO_BT_BCLK
I2S_AP_TO_BT_LRCK
I2S_BT_TO_AP_DOUT
I2S_AP_TO_BT_DOUT

UART4_AP_TO_WLAN_TX
UART4_WLAN_TO_AP_TX
UART4_WLAN_TO_AP_RTS_L
UART4_AP_TO_WLAN_RTS_L

PCIE_WLAN_TO_AP_CLKREQ_L
PCIE_AP_TO_WLAN_PERST_L
PCIE_AP_TO_WLAN_DEV_WAKE
PCIE_AP_TO_WLAN_TX_P
PCIE_AP_TO_WLAN_TX_N
PCIE_AP_TO_WLAN_REFCLK_P
PCIE_AP_TO_WLAN_REFCLK_N
PCIE_WLAN_TO_AP_TX_P
PCIE_WLAN_TO_AP_TX_N

OWL_TO_WLAN_CONTEXT_A
OWL_TO_WLAN_CONTEXT_B

AP DEBUG

PP1V8
FORCE_DFU
DFU_STATUS
PMU_AMUX_AY
PMU_AMUX_BY
PMU_TO_SYSTEM_COLD_RESET_L
I2C0_AP_SDA
I2C0_AP_SCL
I2C1_AP_SDA
I2C1_AP_SCL
BUTTON_HOLD_KEY_L
BUTTON_MENU_KEY_L
BUTTON_VOL_DOWN_L
BUTTON_VOL_UP_L
BUTTON_RINGER_A
PMU_GPIO20
PMU_GPIO21
OWL_FUNC2
AP_RESERVED0
AP_RESERVED1
AP_RESERVED2

STOCKHOLM

PP1V8_SDRAM
AP_TO_STOCKHOLM_SIM_SEL
STOCKHOLM_TO_PMU_HOST_WAKE
AP_TO_STOCKHOLM_FW_DWLD_REQ
PMU_TO_STOCKHOLM_EN
AP_TO_STOCKHOLM_DEV_WAKE
UART3_AP_TO_STOCKHOLM_TXD
UART3_STOCKHOLM_TO_AP_TXD
UART3_AP_TO_STOCKHOLM_RTS_L
UART3_STOCKHOLM_TO_AP_RTS_L

ANT

STOCKHOLM_ANT

POWER

PP1V8_SDRAM
VOLTAGE=1.8V
MAKE_BASE=TRUE
PP_1V8_S2R_VDDIO_WLAN_BT
VOLTAGE=1.8V
PP_STOCKHOLM_1V8_S2R
VOLTAGE=1.8V
RFFE_VIO_S2R
VOLTAGE=1.8V

MLB PROBE POINTS

PCIE

PP3073_RF P2MM-NSM — PCIE0_AP_TO_BB_PERST_L — OMIT RADIO_DEBUG
PP3074_RF P2MM-NSM — PCIE0_BB_TO_PMU_HOST_WAKE_L — OMIT RADIO_DEBUG
PP3075_RF P2MM-NSM — PCIE0_AP_TO_BB_CLKREQ_L — OMIT
PP3076_RF P2MM-NSM — PCIE0_AP_TO_BB_DEV_WAKE — OMIT RADIO_DEBUG
PP3080_RF P2MM-NSM — PCIE0_AP_TO_BB_REFCLK_P — OMIT RADIO_DEBUG
PP3081_RF P2MM-NSM — PCIE0_AP_TO_BB_REFCLK_N — OMIT RADIO_DEBUG
PP3082_RF P2MM — PCIE0_BB_TO_AP_TX_P — OMIT RADIO_DEBUG
PP3083_RF P2MM — PCIE0_BB_TO_AP_TX_N — OMIT RADIO_DEBUG
PP3084_RF P2MM-NSM — PCIE0_AP_TO_BB_TX_P — OMIT RADIO_DEBUG
PP3085_RF P2MM-NSM — PCIE0_AP_TO_BB_TX_N — OMIT RADIO_DEBUG
PP3090_RF P2MM-NSM — BB_JTAG_SRST_L — OMIT RADIO_DEBUG
PP3091_RF P2MM-NSM — SWD_IO_BB_JTAG_TMS — OMIT RADIO_DEBUG

PMU

PP3032_RF P2MM — PMIC_RESOUT_L — OMIT RADIO_DEBUG
PP3033_RF P2MM — 50_SLEEP_CLK_32K — OMIT RADIO_DEBUG
PP3034_RF P2MM — XO_OUT_D0_EN — OMIT RADIO_DEBUG
PP3036_RF P2MM-NSM — SPMI_CLK — OMIT RADIO_DEBUG
PP3037_RF P2MM-NSM — SPMI_DATA — OMIT RADIO_DEBUG

BASEBAND

PP3017_RF P2MM-NSM — BB_DEBUG_ERROR — OMIT
PP3018_RF P2MM — 50_MDM_PCIE_CLK — OMIT RADIO_DEBUG
PP3019_RF P2MM-NSM — 50_BBPMU_TO_STOCKHOLM_19P2M_CLK — OMIT
PP3006_RF P2MM-NSM — STOCKHOLM_TO_BBPMU_CLK_REQ — OMIT RADIO_DEBUG
PP3007_RF P2MM — TOUCH_TO_BBPMU_FORCE_PWM — OMIT RADIO_DEBUG

PP3008_RF P2MM — I2S_AP_TO_BB_WS — OMIT RADIO_DEBUG
PP3009_RF P2MM — I2S_AP_TO_BB_CLK — OMIT RADIO_DEBUG
PP3010_RF P2MM — I2S_AP_TO_BB_TX — OMIT RADIO_DEBUG
PP3011_RF P2MM — I2S_BB_TO_AP_TX — OMIT RADIO_DEBUG
PP3012_RF P2MM — AP_TO_BB_MESA_ON_L — OMIT RADIO_DEBUG
PP3013_RF P2MM-NSM — BB_TO_AP_GSM_TXBURST_IND — OMIT RADIO_DEBUG
PP3014_RF P2MM — BB_TO_AP_GPS_TIME_MARK — OMIT RADIO_DEBUG
PP3015_RF P2MM — AP_TO_BB_COREDUMP_TRIG — OMIT RADIO_DEBUG
PP3016_RF P2MM-NSM — UART0_BB_TO_OWL_TX — OMIT RADIO_DEBUG
PP3020_RF P2MM-NSM — UART0_OWL_TO_BB_TX — OMIT RADIO_DEBUG

ANT TUNER

PP3001_RF P2MM-NSM — 75_RFFE5_SDATA_BB — OMIT RADIO_DEBUG
PP3002_RF P2MM-NSM — 75_RFFE5_SCLK_BB — OMIT RADIO_DEBUG
PP3003_RF P2MM-NSM — PP3V0_TRISTAR — OMIT RADIO_DEBUG
PP3004_RF P2MM-NSM — PP1V8_SDRAM — OMIT RADIO_DEBUG
PP3005_RF P2MM — PP_1V8_LDO15 — OMIT RADIO_DEBUG

RFFE

PP3056_RF P2MM — 75_RFFE1_SDATA_BB — OMIT RADIO_DEBUG
PP3077_RF P2MM — 75_RFFE4_SDATA_BB — OMIT RADIO_DEBUG
PP3051_RF P2MM — 75_RFFE5_SCLK_BB_BUFFER — OMIT RADIO_DEBUG
PP3052_RF P2MM-NSM — 75_RFFE5_SDATA_BB_BUFFER — OMIT
PP3053_RF P2MM — 75_RFFE2_SDATA_BB — OMIT RADIO_DEBUG
PP3054_RF P2MM-NSM — 75_RFFE3_SDATA_BB — OMIT

STOCKHOLM

PP3062_RF P2MM-NSM — STOCKHOLM_DWPM_DBG — OMIT
PP3063_RF P2MM-NSM — STOCKHOLM_DWPS_DBG — OMIT
PP3064_RF P2MM-NSM — UART3_AP_TO_STOCKHOLM_TXD — OMIT
PP3065_RF P2MM-NSM — UART3_STOCKHOLM_TO_AP_TXD — OMIT
PP3066_RF P2MM-NSM — UART3_AP_TO_STOCKHOLM_RTS_L — OMIT
PP3067_RF P2MM-NSM — UART3_STOCKHOLM_TO_AP_RTS_L — OMIT

DEBUG CONNECTOR

ESD CAPS
C5101_RF 100PF 5% 16V NP0-C0G 01005
C3503_RF 100PF 5% 16V NP0-C0G 01005
C3312_RF 100PF 5% 16V NP0-C0G 01005 RADIO_BB
C3408_RF 100PF 5% 16V NP0-C0G 01005 RADIO_BB

PCIE0_AP_TO_BB_PERST_L
BB_JTAG_SRST_L
PMU_TO_BBPMU_RESET_L
SIM2_RESET

NOSTUFF
J3000_RF AXE550124 F-ST-SM

UART_WLAN_TO_BB_COEX_TX
I2C0_AP_SDA
I2C0_AP_SCL
BUTTON_VOL_DOWN_L
BUTTON_VOL_UP_L
BUTTON_RINGER_A
SIM2_RESET
SIM2_DATA
UART_BB_TO_WLAN_COEX_TX
SIM2_DETECT
SIM2_DATA_R

SIM1_CLK
SIM1_RST
SIM1_IO
PP_UIM1_LDO11
SIM1_TRAY_DET
4FF_SIM_SWP
I2C1_AP_SDA
I2C1_AP_SCL
BUTTON_HOLD_KEY_L
BUTTON_MENU_KEY_L
PP1V8
FORCE_DFU
SIM2_CLK
PP_UIM2_LDO13

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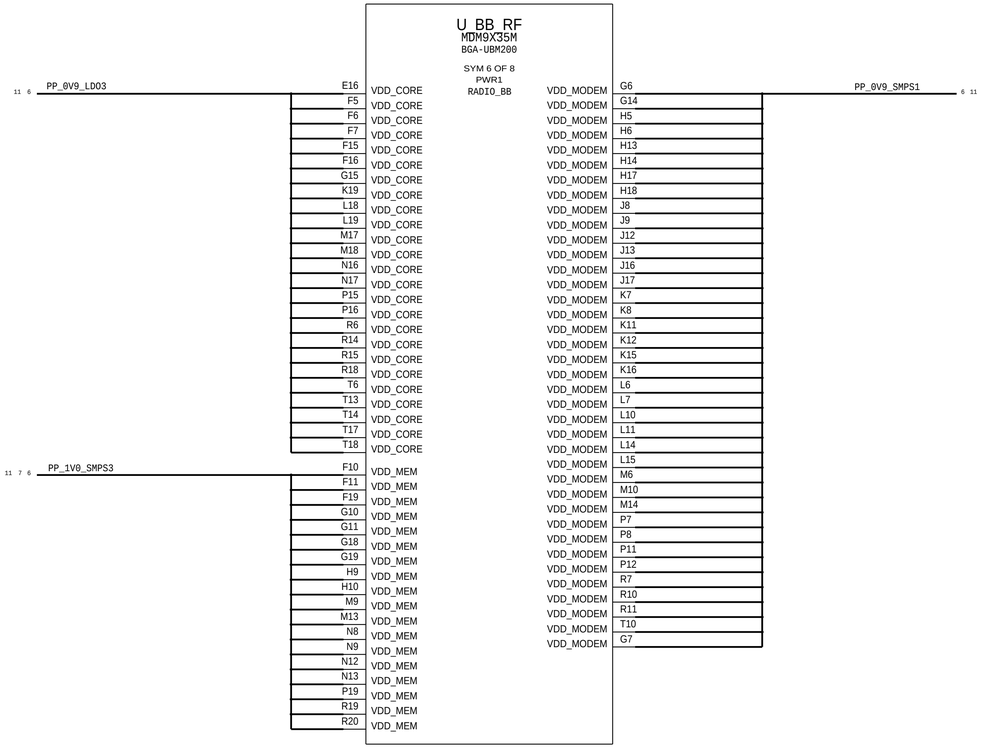
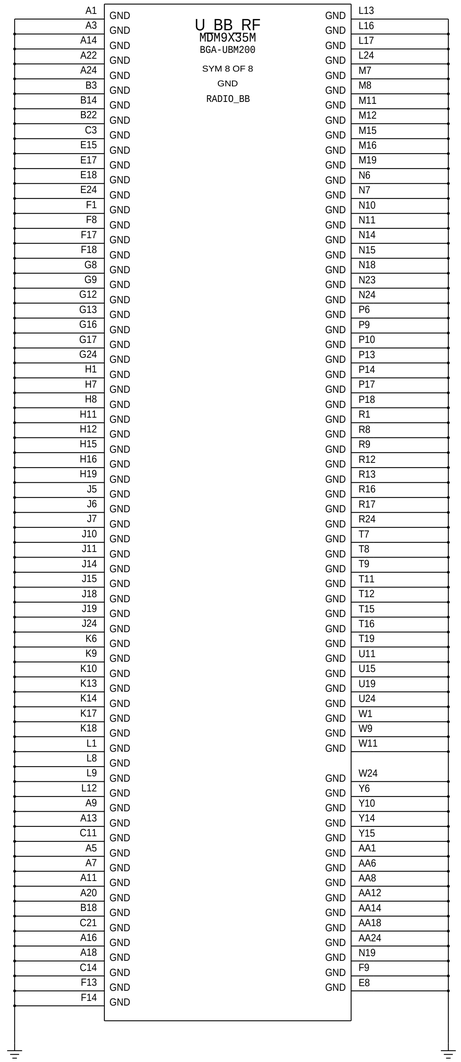
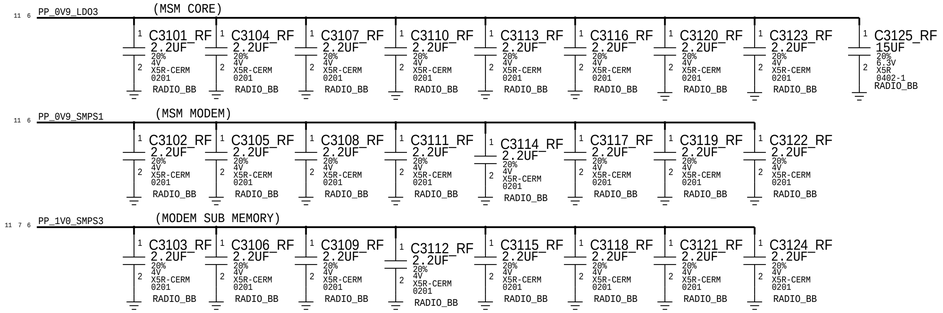
BASEBAND: POWER 1







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PAGE TITLE
CELLULAR BASEBAND: POWER1

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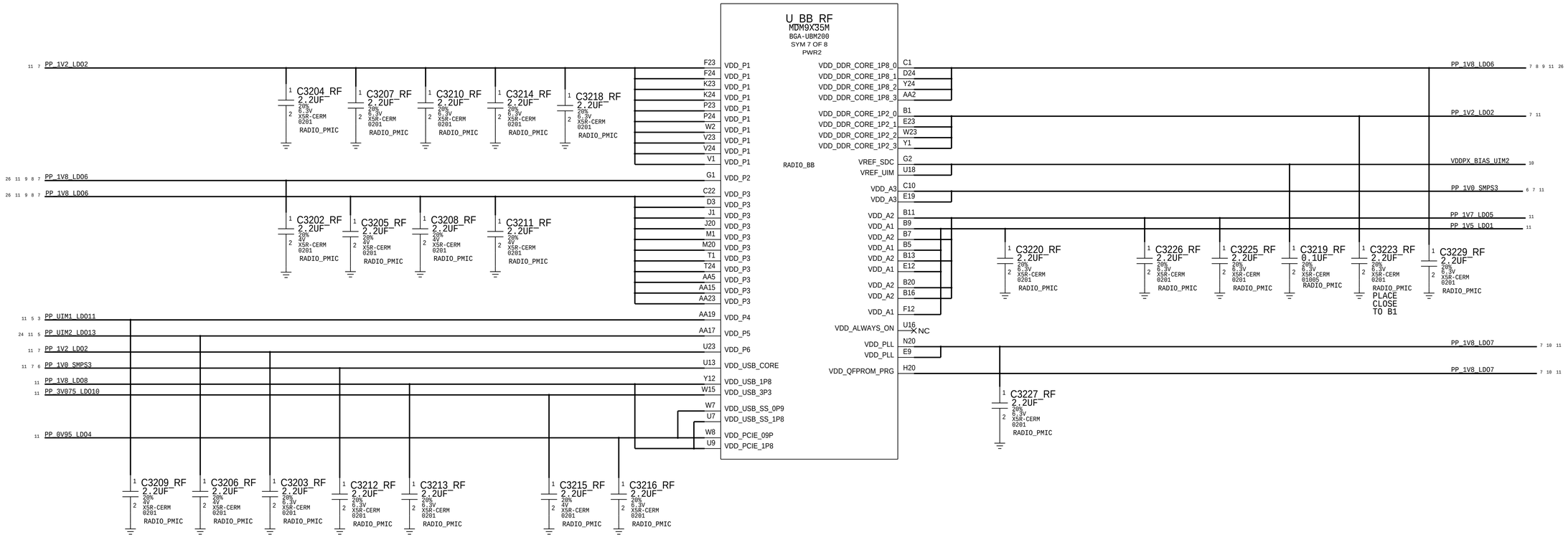
BASEBAND: POWER 2



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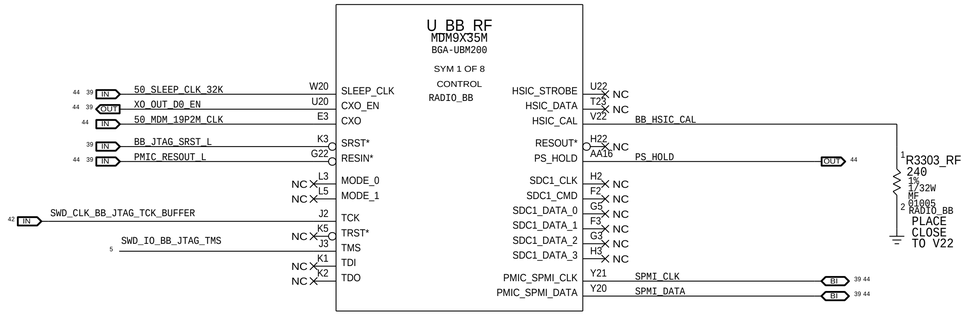
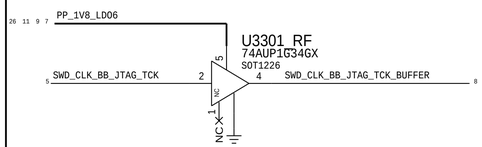
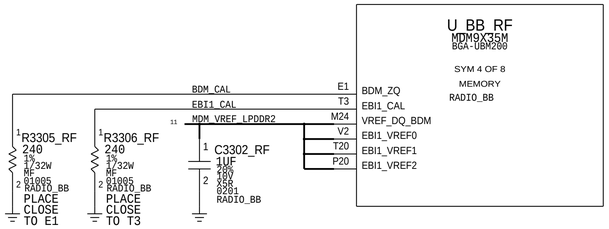
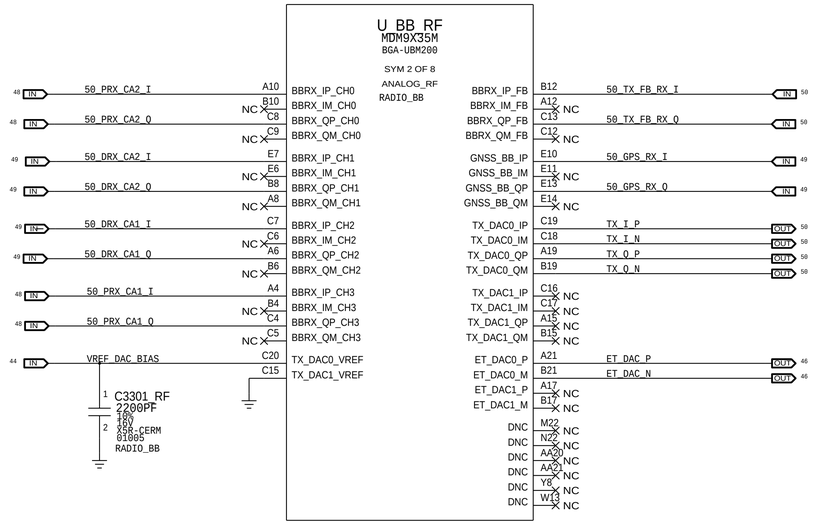
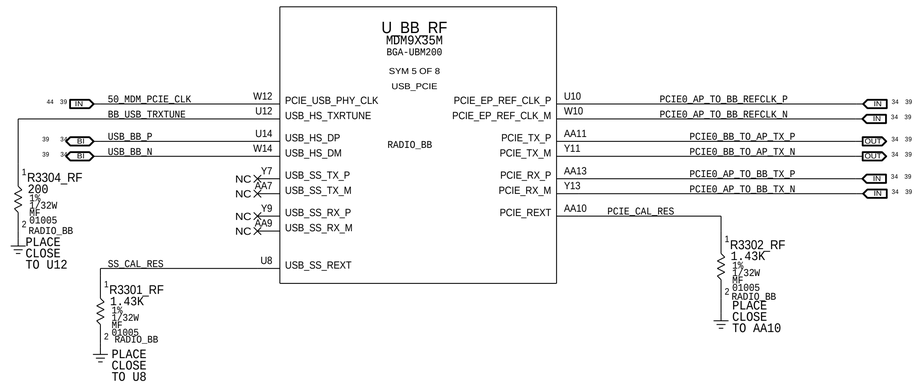
BASEBAND: CONTROL AND INTERFACES











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PAGE TITLE
CELLULAR BASEBAND: CONTROL AND INTERFACES

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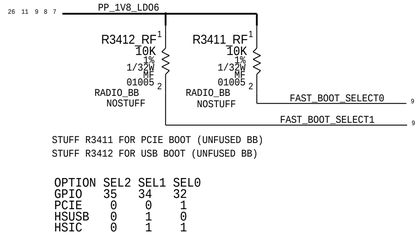
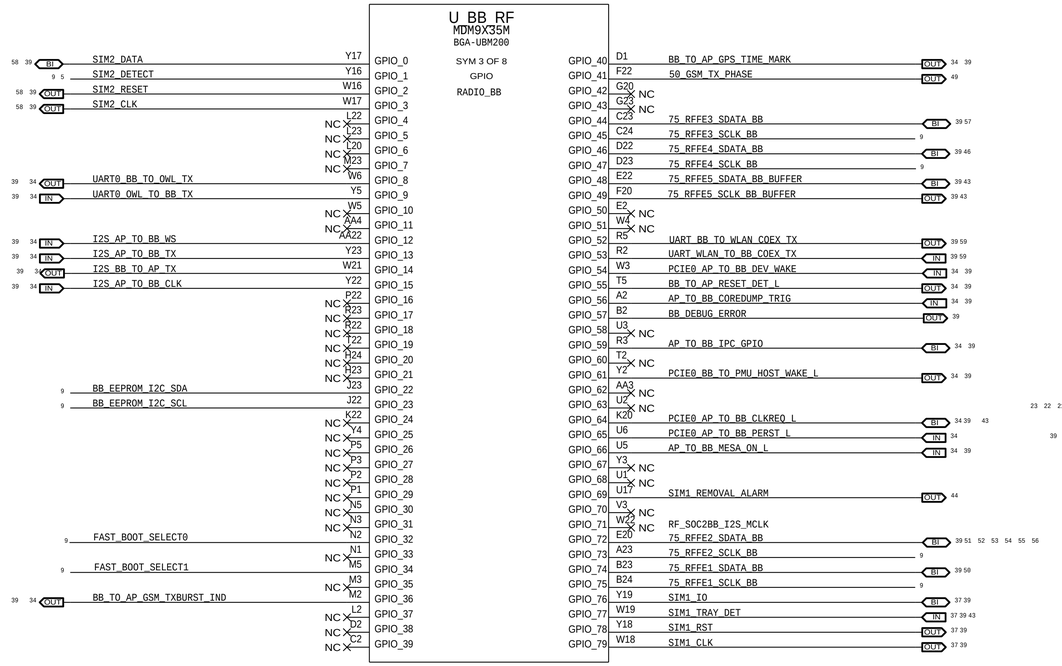
BASEBAND: GPIOS

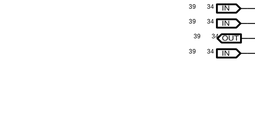


STUFF R3411 FOR PCIE BOOT (UNFUSED BB)
STUFF R3412 FOR USB BOOT (UNFUSED BB)

OPTION	SEL2	SEL1	SEL0
GPIO	35	34	32
PCIE	0	0	1
HSUSB	0	1	0
HSIC	0	1	1

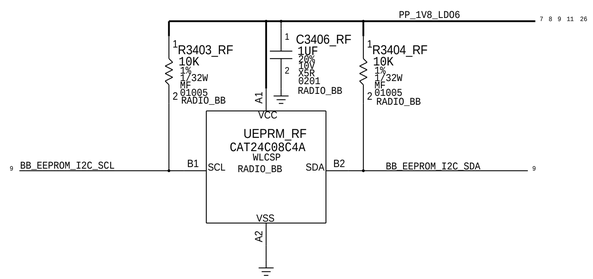


NOSTUFF R3402 WHEN VINLY PRESENT
STUFF R3402 WHEN VINLY NOT PRESENT

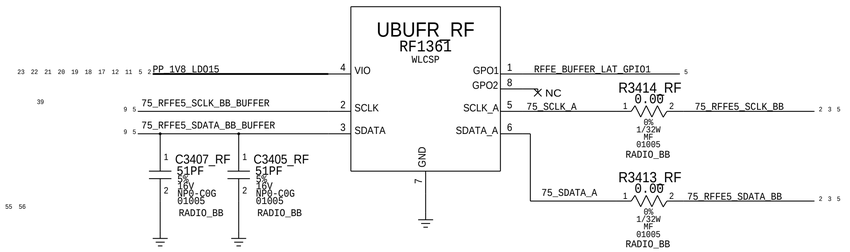


PCIE PULL-UPS TO BB RAIL

BB EEPROM

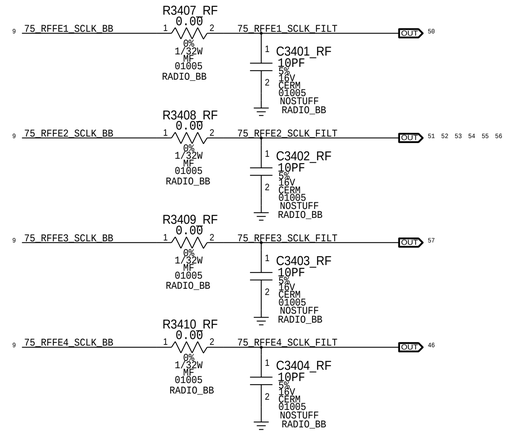


BUFFER ON RFFE5
SCLK/SDATA_A IS OUTPUT



PLACE C3405_RF CLOSE TO BUFFER
PLACE C3407_RF CLOSE TO MDM

RFFE CLOCK FILTERS



RFFE USAGE TABLE

RFFE1 WTR
RFFE2 LB/MB/HB PAD, 2G PA, LB/MB/HB ASM
RFFE3 DIV ASM
RFFE4 QPOET
RFFE5 DIV LNA, ANT TUNERS

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PAGE TITLE: CELLULAR BASEBAND: GPIOS

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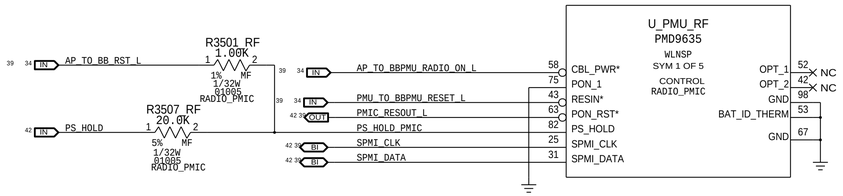
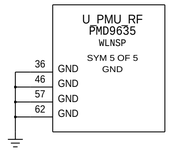
PMU: CONTROL AND CLOCKS

HW_REV2_ID	R3502	R3503	CONFIG
1.80V	698K	-	MLB
0.12V	698K	51.1K	SELF GEN

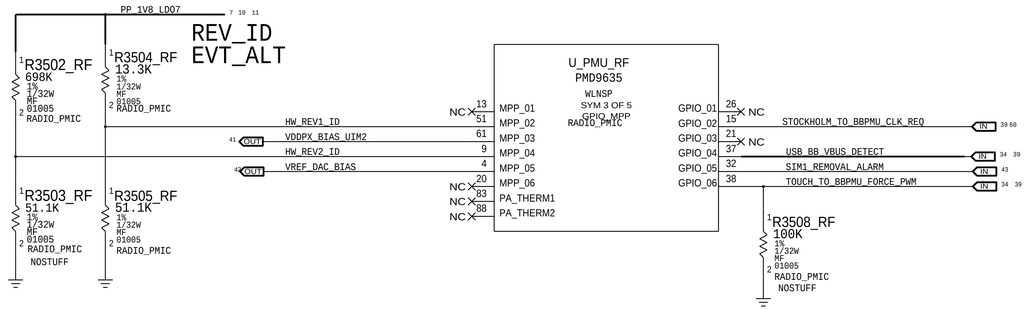
HW_REV_ID	R3504	R3505	REVISION
0.10V	887K	51.1K	DEV1
0.30V	255K	51.1K	DEV2
0.50V	124K	51.1K	DEV3
0.70V	82.5K	51.1K	DEV4/PROTOMLB1
0.90V	51.1K	51.1K	PROTOMLB2
1.10V	31.6K	51.1K	DEV5/PROTO1
1.20V	50K	100K	PROTO2
1.31V	39K	105K	EVT
1.43V	13.3K	51.1K	EVT_ALT
1.55V	8.25K	51.1K	CARRIER BUILD
1.63V	5.23K	51.1K	DVT
1.80V	10K	-	PVT

RESET AND CONTROL: PMU

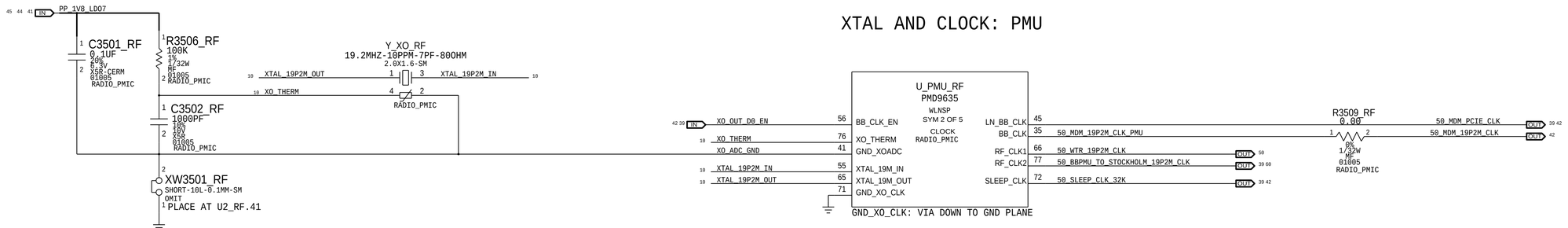




MPPS AND GPIOS: PMU



XTAL AND CLOCK: PMU



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PMU: SWITCHERS AND LDOS

SWITCHERS BULK CAPS

I296
PP_VCC_MAIN
VBATT_S1
C3640_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
C3616_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
XW3601_RF SHORT-10L-0.25MM-SM OMIT
XW3602_RF SHORT-10L-0.25MM-SM OMIT
XW3603_RF SHORT-10L-0.25MM-SM OMIT
S1_GND

I295
PP_VCC_MAIN
VBATT_S2
C3615_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
C3617_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
XW3604_RF SHORT-10L-0.25MM-SM OMIT
XW3605_RF SHORT-10L-0.25MM-SM OMIT
S2_GND

I279
PP_VCC_MAIN
VBATT_S3
C3634_RF 4.7UF 20% 6.3V CER-X5R 0402 RADIO_PMIC
C3618_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
XW3606_RF SHORT-10L-0.25MM-SM OMIT
XW3607_RF SHORT-10L-0.25MM-SM OMIT
XW3608_RF SHORT-10L-0.25MM-SM OMIT
S3_GND

I275
PP_VCC_MAIN
VBATT_S4
C3619_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
XW3609_RF SHORT-10L-0.25MM-SM OMIT
XW3610_RF SHORT-10L-0.25MM-SM OMIT
S4_GND

I274
PP_VCC_MAIN
VBATT_S5
C3620_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
XW3611_RF SHORT-10L-0.25MM-SM OMIT
XW3612_RF SHORT-10L-0.25MM-SM OMIT
S5_GND

U_PMU_RF
PMD9635
WLNSP
SYM 4 OF 5
POWER

VBATT_S1	5	VDD_S1	
	16	VDD_S1	
	6	GND_S1	
	17	GND_S1	
	28	GND_S1	
	33	GND_S1	
VBATT_S2	92	VDD_S2	
	103	VDD_S2	
S2_GND	102	GND_S2	
VBATT_S3	70	VDD_S3	
S3_GND	49	GND_S3	
	54	GND_S3	
VBATT_S4	8	VDD_S4	
	1	GND_S4	
	7	GND_S4	
VBATT_S5	94	VDD_S5	
S5_GND	93	GND_S5	
PP_1V225_SMPS2	86	VDD_L1_2_16	
PP_1V0_SMPS3	44	VDD_L3_4	
PP_1V85_SMPS4	14	VDD_L5_6_15	
	23	VDD_L7_8	
PP_1V0_SMPS5	89	VDD_L9	
PP_VCC_MAIN	90	VIN_VPH1	
	47	VIN_VPH2	
VDD_OTP	73	VDD_OTP	
MDM_VREF_LPDDR2	78	VREF_DDR	
AVDD_BYP	74	AVDD_BYP	
REF_BYP	79	REF_BYP	
	68	GND_REF	
	24	VDD_XO_RF	

VREG_S1	10		
VSW_S1	11		
VSW_S1	22		
VSW_S1	27		
VREG_S2	91		
VSW_S2	97		
VREG_S3	69		
VSW_S3	59		
VSW_S3	64		
VREG_S4	12		
VSW_S4	2		
VREG_S5	87		
VSW_S5	99		
VREG_L1	80	VOLTAGE=1.5V	MDM LOW VOLTAGE ANALOG
VREG_L2	81	VOLTAGE=1.2V	MDM EBI1, DDR CORE
VREG_L3	39	VOLTAGE=0.9V	MDM CORE
VREG_L4_16	48	VOLTAGE=0.95V	MDM PCIE
VREG_L5	19	VOLTAGE=1.7V	MDM HIGH VOLTAGE ANALOG
VREG_L6	3	VOLTAGE=1.8V	MDM 1.8V I/O, DDR, SHARED 1.8V VOLTAGE RAIL
VREG_L7	18	VOLTAGE=1.8V	MDM PLL
VREG_L8	29	VOLTAGE=1.8V	MDM LOW VOLTAGE USB
VREG_L9	100	VOLTAGE=1.0V	WTR
VREG_L10	84	VOLTAGE=3.075V	MDM HIGH VOLTAGE USB
VREG_L11	95	VOLTAGE=1.8V	UIM1
VREG_L12	85	VOLTAGE=2.7V	GPS LNA
VREG_L13	96	VOLTAGE=1.8V	UIM2
VREG_L14	101	VOLTAGE=2.8V	FRONT END SUPPLY
VREG_L15	30	VOLTAGE=1.8V	RFFE VIO
VREG_XO	34	VREG_XO	
GND_XO	40	VREG_XO_GND	
VREG_RF	60	VREG_RF_CLK	
GND_RF_CLK	50	VREG_RF_CLK_GND	

TCXO SHUTDOWN: ON	PP_1V5_LDO1		
TCXO SHUTDOWN: ON	PP_1V2_LDO2		
TCXO SHUTDOWN: ON	PP_0V9_LDO3		
TCXO SHUTDOWN: OFF	PP_0V95_LDO4		
TCXO SHUTDOWN: ON	PP_1V7_LDO5		
TCXO SHUTDOWN: ON	PP_1V8_LDO6		
TCXO SHUTDOWN: OFF	PP_1V8_LDO7		
TCXO SHUTDOWN: ON	PP_1V8_LDO8		
TCXO SHUTDOWN: OFF	PP_1V0_LDO9		
TCXO SHUTDOWN: ON	PP_3V075_LDO10		
TCXO SHUTDOWN: ON	PP_UIM1_LDO11		
TCXO SHUTDOWN: OFF	PP_2V7_LDO12		
TCXO SHUTDOWN: ON	PP_UIM2_LDO13		
TCXO SHUTDOWN: OFF	PP_2V8_LDO14		
TCXO SHUTDOWN: OFF	PP_1V8_LDO15		

L3601_RF 1UH-20%-0.054OHM-3.4A 2520 RADIO_PMIC
PP_VSW_S1 VOLTAGE=0.9V
C3609_RF 43UF 20% 4V X5R 0603 S1_GND
C3614_RF 43UF 20% 4V X5R 0603 NOSTUFF
MDM MODEM TCXO SHUTDOWN: ON 3400MA VOLTAGE=0.9V PP_0V9_SMPS1

L3602_RF 2.2UH-20%-0.14OHM-1.6A 0806 RADIO_PMIC
PP_VSW_S2 VOLTAGE=1.225V
C3610_RF 43UF 20% 4V X5R 0603 S2_GND
LOW VOLTAGE LDOS TCXO SHUTDOWN: ON 587MA PP_1V225_SMPS2 VOLTAGE=1.225V

L3603_RF 1.0UH-20%-2.7A-0.056OHM 0806 RADIO_PMIC
PP_VSW_S3 VOLTAGE=1.0V
C3611_RF 43UF 20% 4V X5R 0603 S3_GND
MDM MEMORY, MDM USB TCXO SHUTDOWN: ON 2234MA PP_1V0_SMPS3 VOLTAGE=1.0V

L3604_RF 2.2UH-20%-0.14OHM-1.6A 0806 RADIO_PMIC
PP_VSW_S4 VOLTAGE=1.85V
C3612_RF 43UF 20% 4V X5R 0603 S4_GND
HIGH VOLTAGE LDOS TCXO SHUTDOWN: ON 653MA PP_1V85_SMPS4 VOLTAGE=1.85V

L3605_RF 2.2UH-20%-0.14OHM-1.6A 0806 RADIO_PMIC
PP_VSW_S5 VOLTAGE=1.0V
C3613_RF 43UF 20% 4V X5R 0603 S5_GND
LDO9->WTR TCXO SHUTDOWN: OFF 700MA PP_1V0_SMPS5 VOLTAGE=1.0V

C3621_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3622_RF 0.1UF 20% 6.3V X5R-CERM 01005 RADIO_PMIC
REF_BYP_GND
XW3613_RF SHORT-10L-0.1MM-SM OMIT
R3603_RF 0.00 0% 1/32W MF 01005

C3630_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
VREG_XO_GND
XW3614_RF SHORT-10L-0.1MM-SM OMIT
XO_GND

C3631_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
VREG_RF_CLK_GND
XW3615_RF SHORT-10L-0.1MM-SM OMIT
RF_CLK_GND

C3624_RF 1UF 20% 10V X5R 0201 RADIO_PMIC NOSTUFF
C3625_RF 10UF 20% 6.3V CERM-X5R 0402-9 RADIO_PMIC
C3632_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
C3635_RF 4.7UF 20% 6.3V CER-X5R 0402 RADIO_PMIC NOSTUFF
C3633_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
C3636_RF 4.7UF 20% 6.3V CER-X5R 0402 RADIO_PMIC NOSTUFF
C3603_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3626_RF 4.7UF 20% 6.3V CER-X5R 0402 RADIO_PMIC
C3627_RF 10UF 20% 6.3V CERM-X5R 0402-9 RADIO_PMIC
C3605_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3606_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3629_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3608_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3607_RF 1UF 20% 10V X5R 0201 RADIO_PMIC

PLACE XW CLOSE TO PMU
VIA XW DOWN TO THE GND PLANE

XW3616_RF OMIT SHORT-10L-0.25MM-SM PP_0V9_SMPS1 BB_TO_PMU_AMUX_SMPS1
XW3617_RF OMIT SHORT-10L-0.25MM-SM PP_1V0_SMPS3 BB_TO_PMU_AMUX_SMPS3
XW3618_RF OMIT SHORT-10L-0.25MM-SM PP_1V85_SMPS4 BB_TO_PMU_AMUX_SMPS4
XW3619_RF OMIT SHORT-10L-0.25MM-SM PP_UIM1_LDO11 BB_TO_PMU_AMUX_LDO11_SIM1

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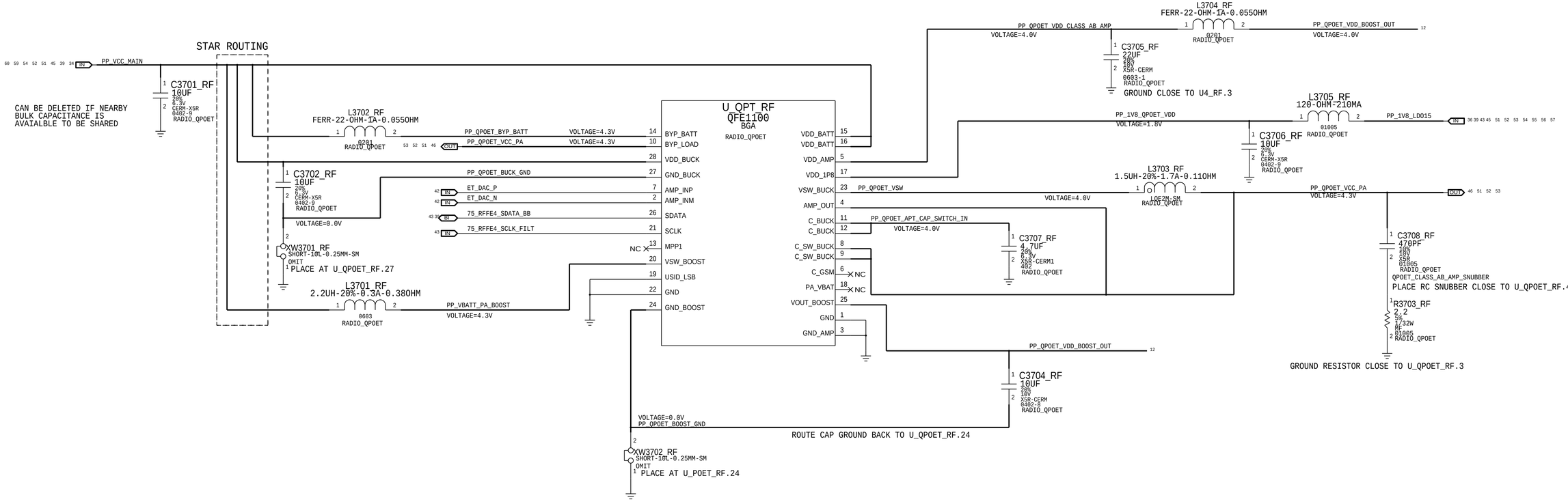
PMU: ET MODULATOR



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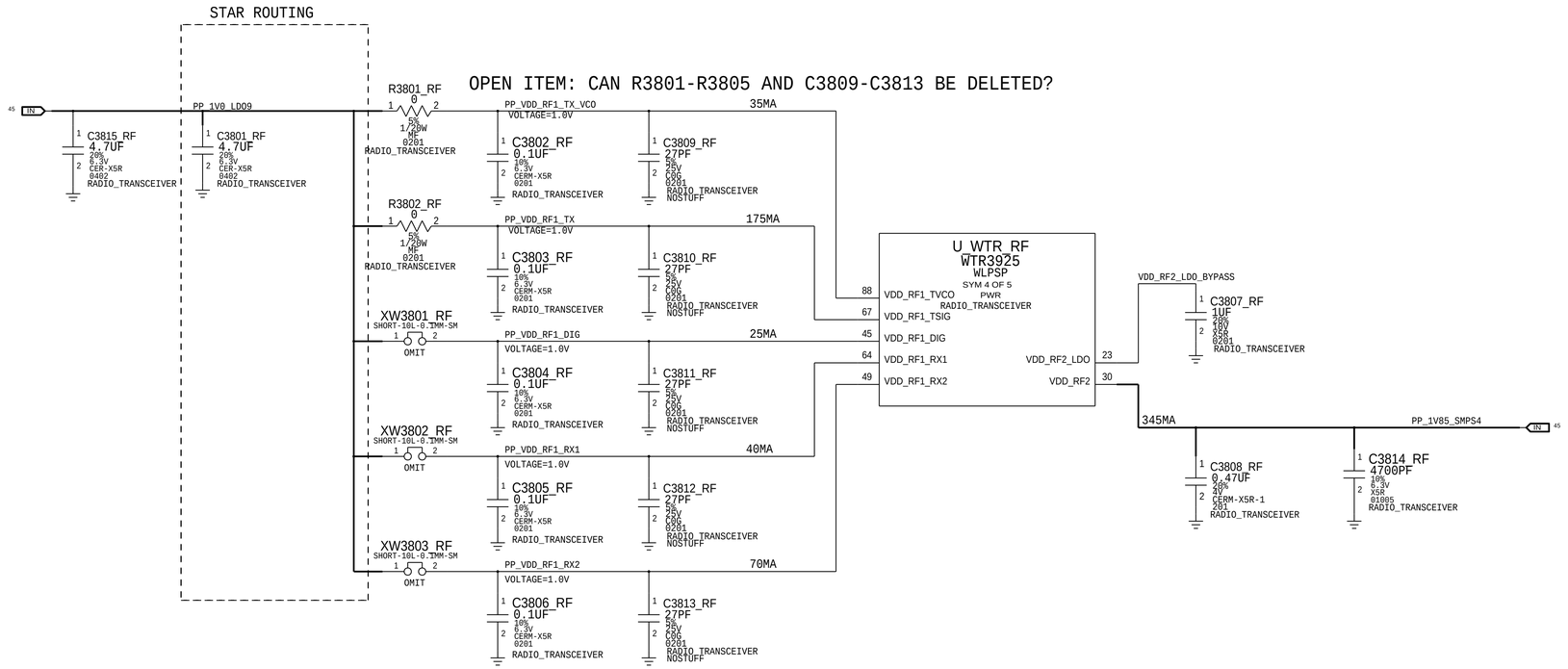

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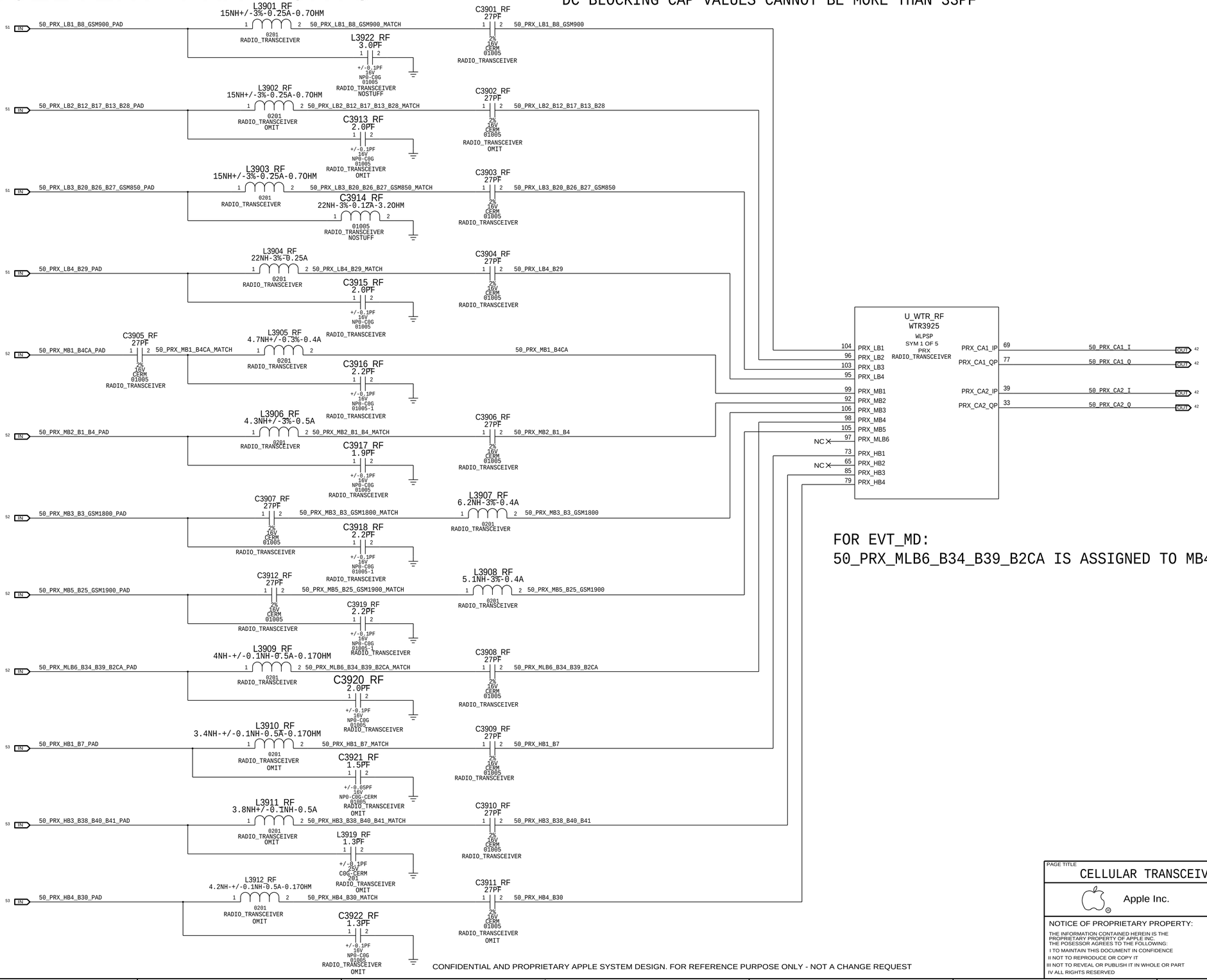
TRANSCEIVER: PRX PORTS

DC BLOCKING CAP VALUES CANNOT BE MORE THAN 33PF



FOR EVT_MD:
50_PRX_MLB6_B34_B39_B2CA IS ASSIGNED TO MB4

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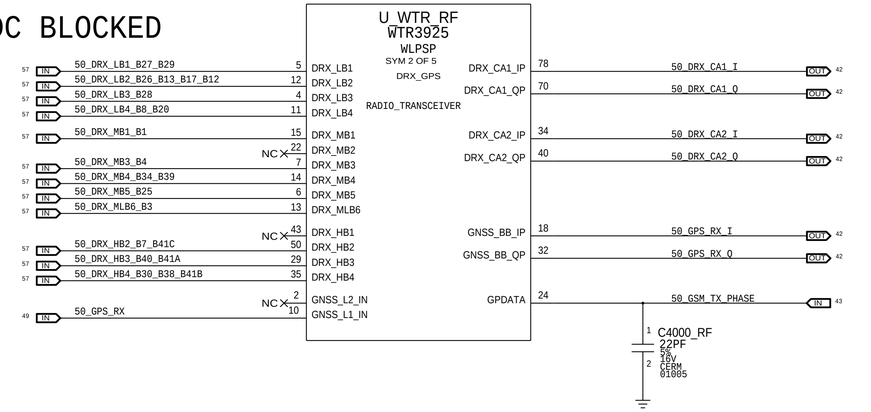
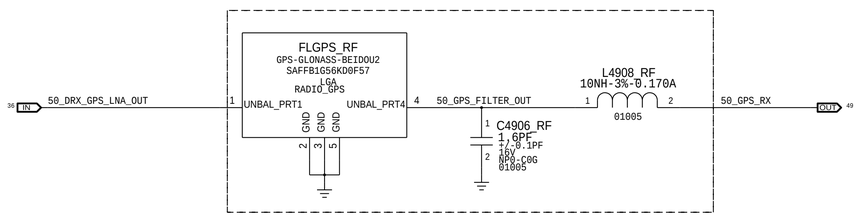
TRANSCEIVER: DRX/GPS PORTS

DRX MODULE PORTS ARE DC BLOCKED



GPS FILTER

PLACE NEAR U_WTR



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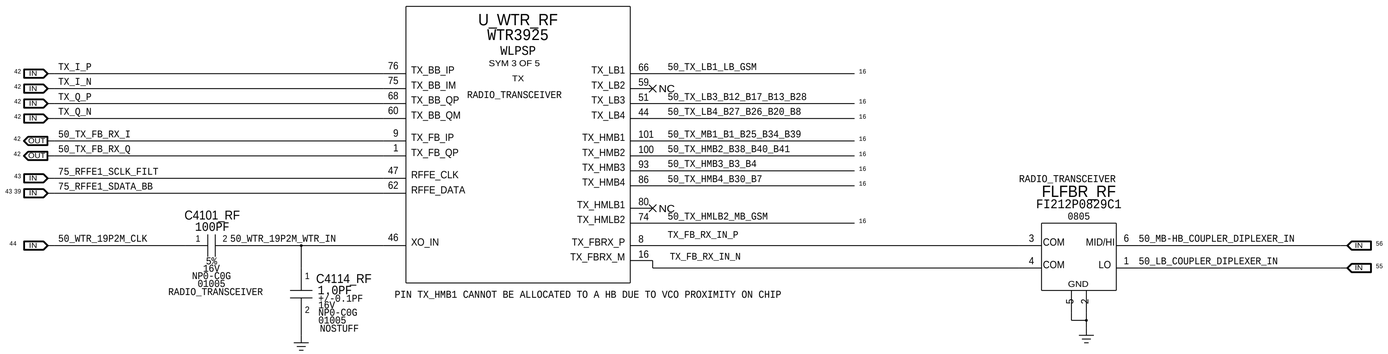
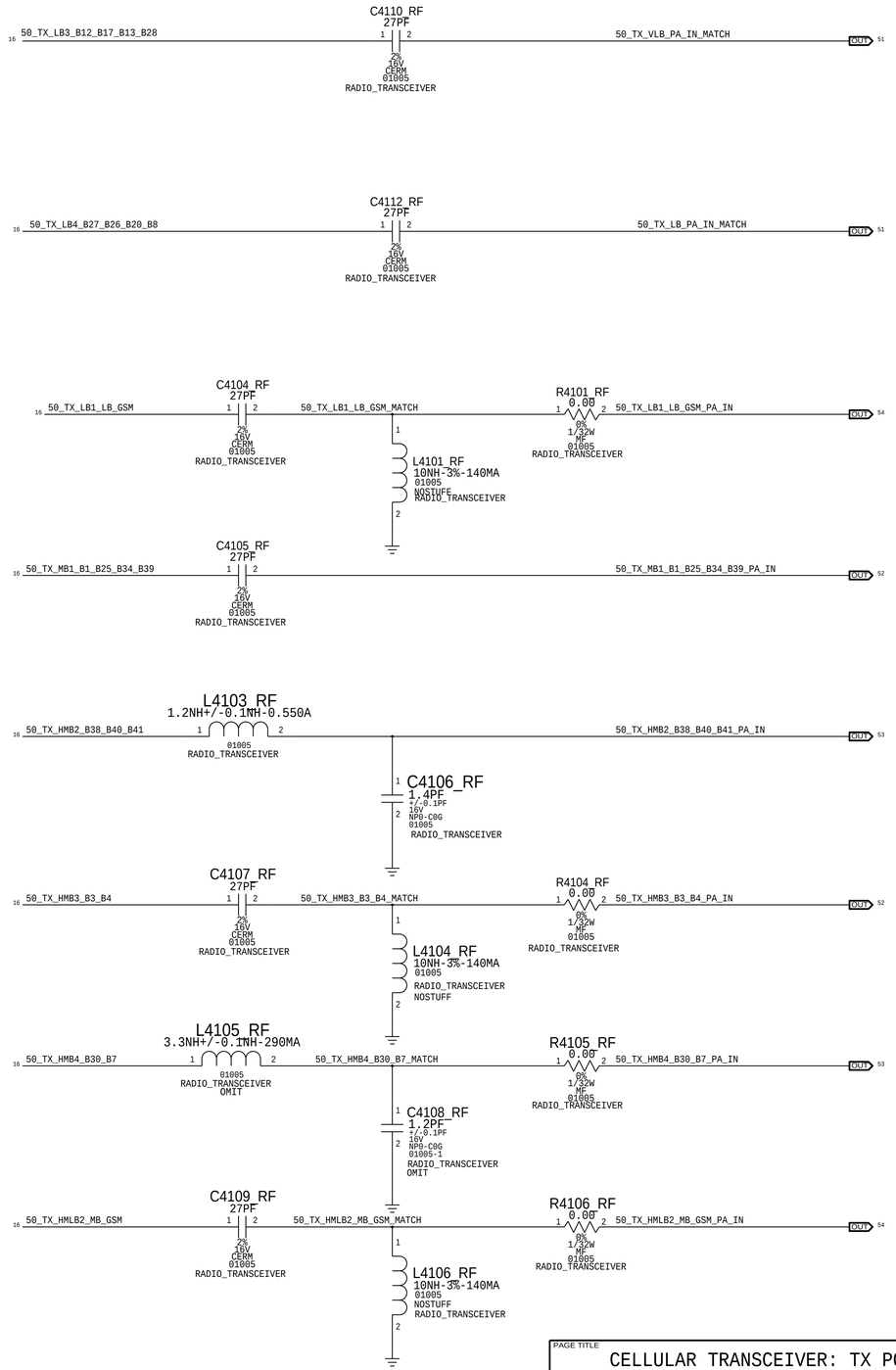
TRANSCEIVER: TX PORTS

B12/13 TX INTERSTAGE FILTER REMOVED





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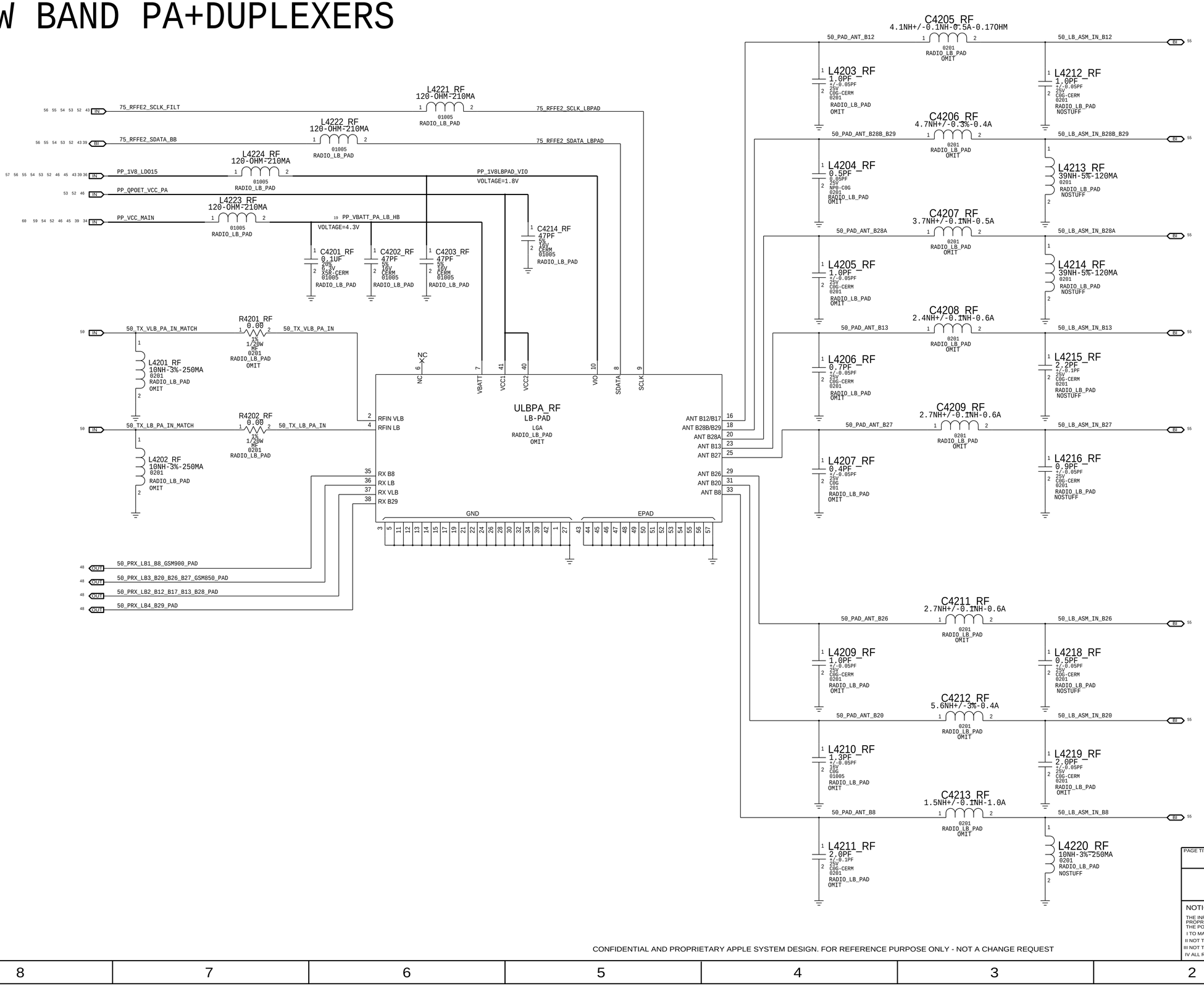
LOW BAND PA+DUPLEXERS



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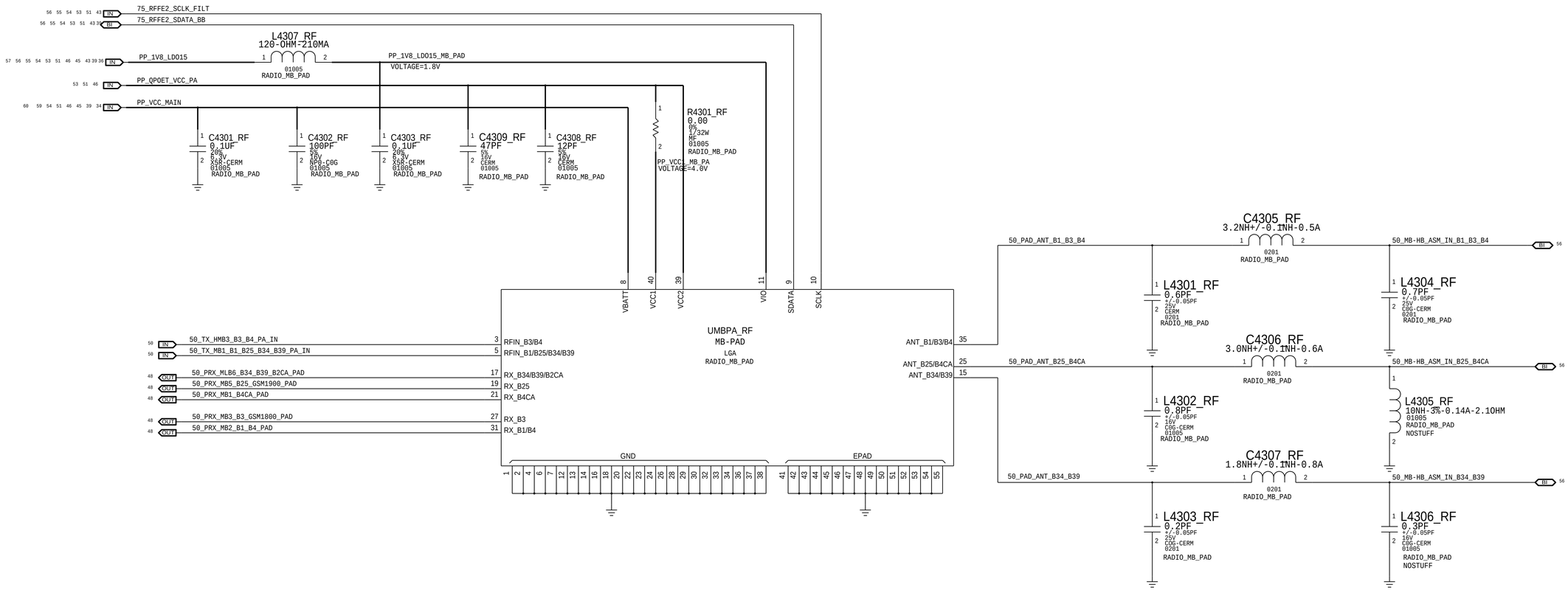
MID BAND PA+DUPLEXERS



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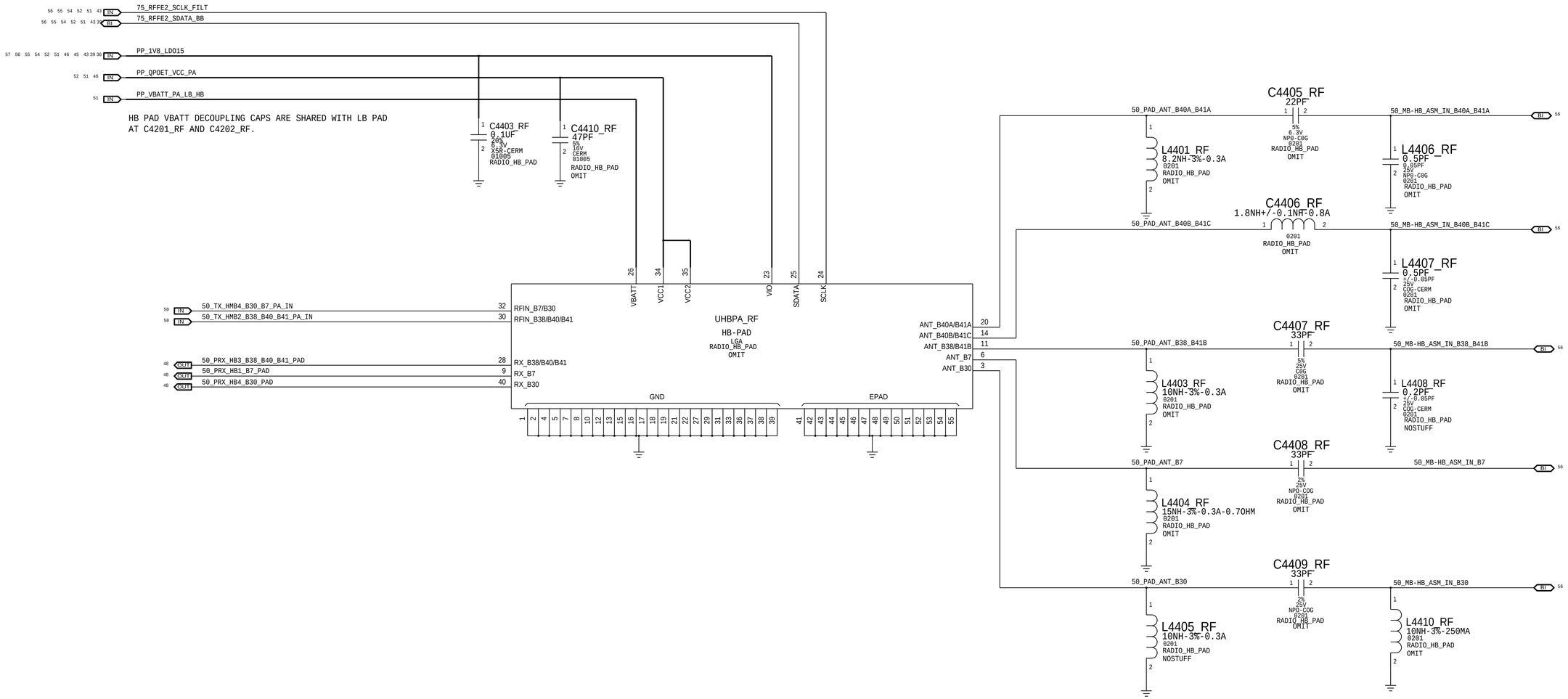
HIGH BAND PA+DUPLEXERS



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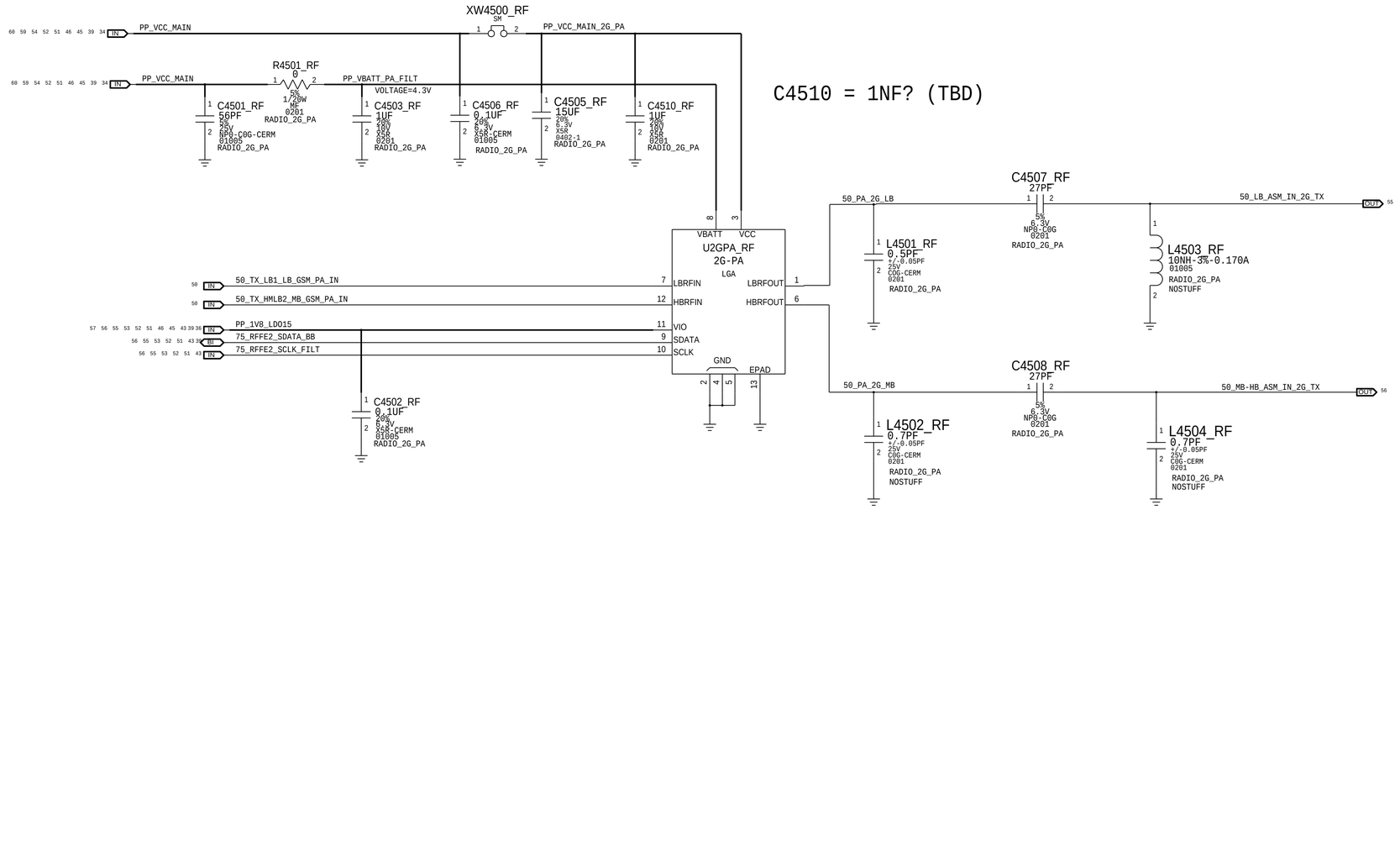
2G PA



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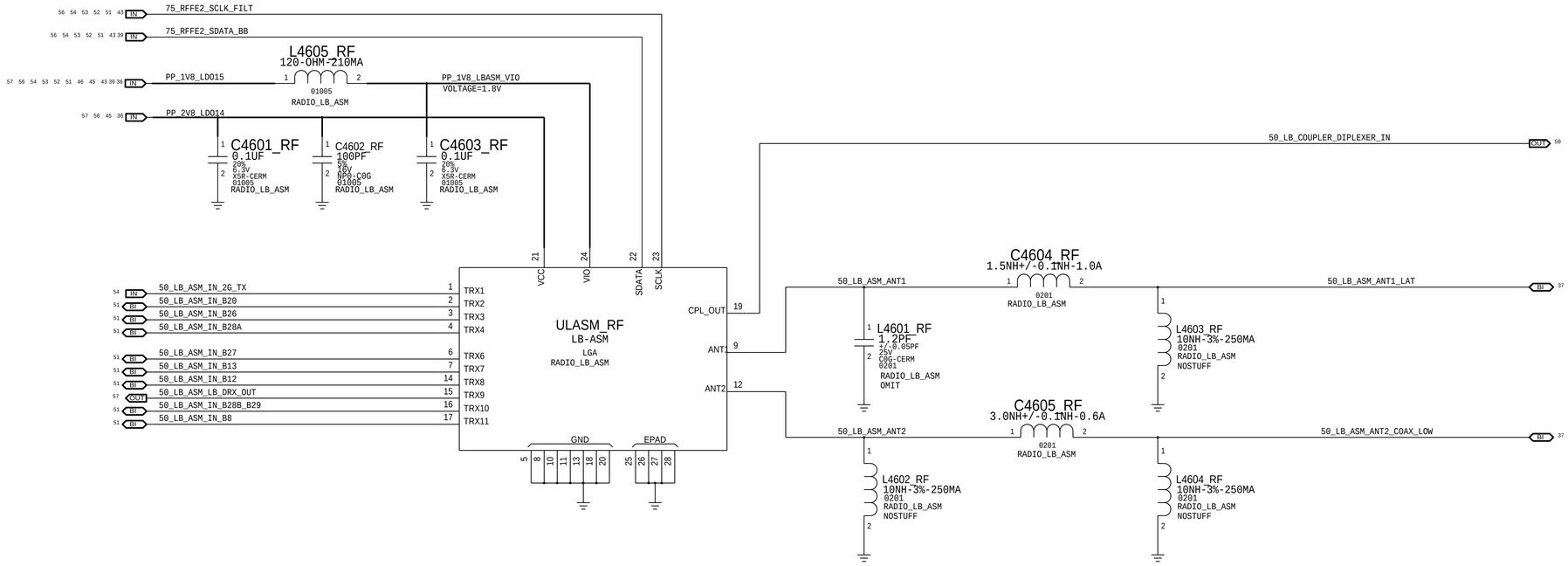
LOW BAND ANTENNA SWITCH MODULE



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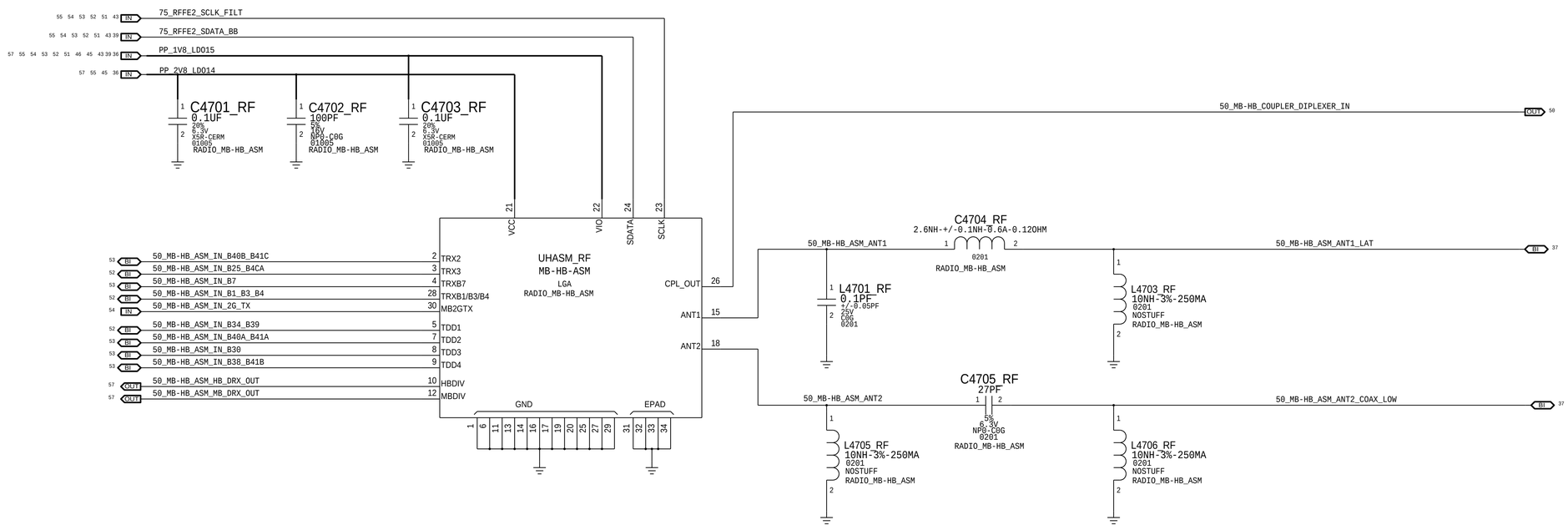
MID-HIGH BAND ANTENNA SWITCH MODULE

EVT ASM ASSIGNMENT:
B40B/B41C - TRX2
B30 - TDD3



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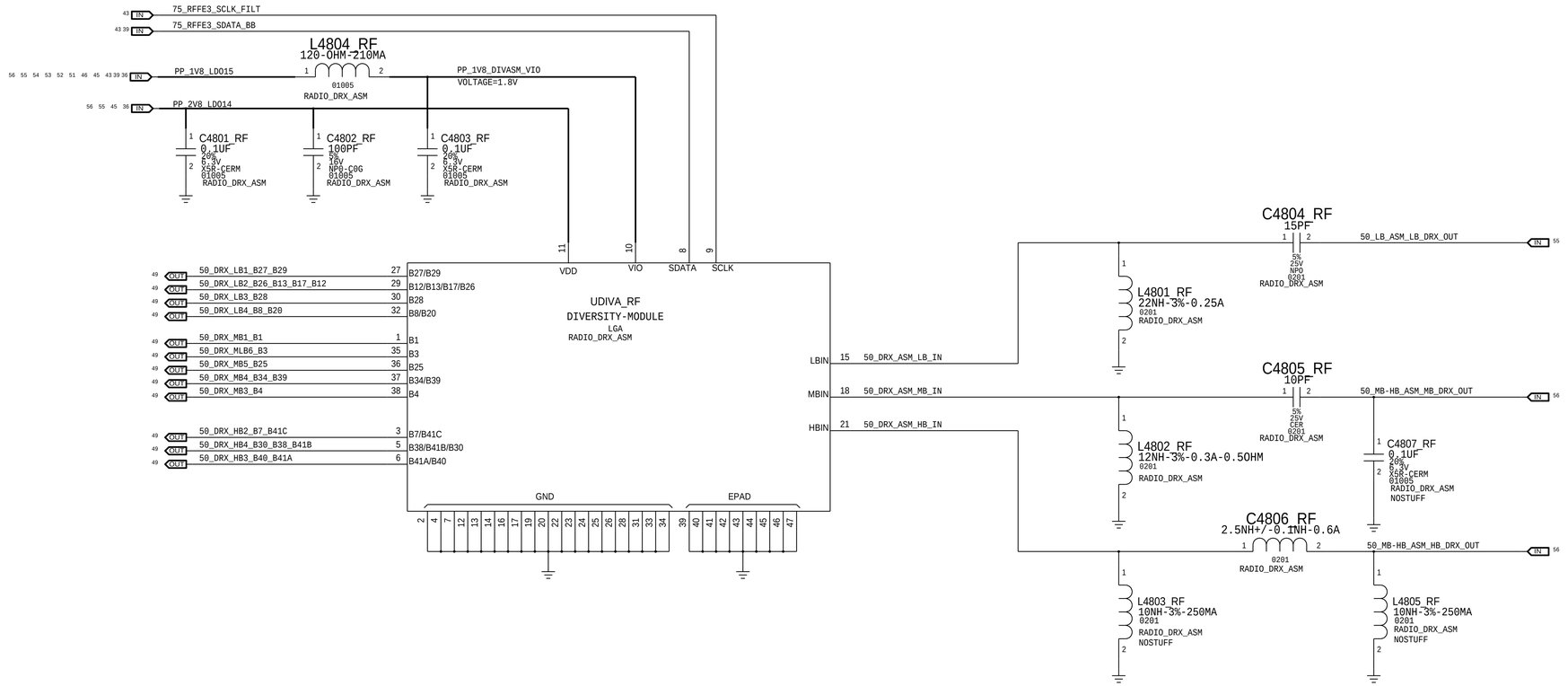
DIVERSITY MODULE



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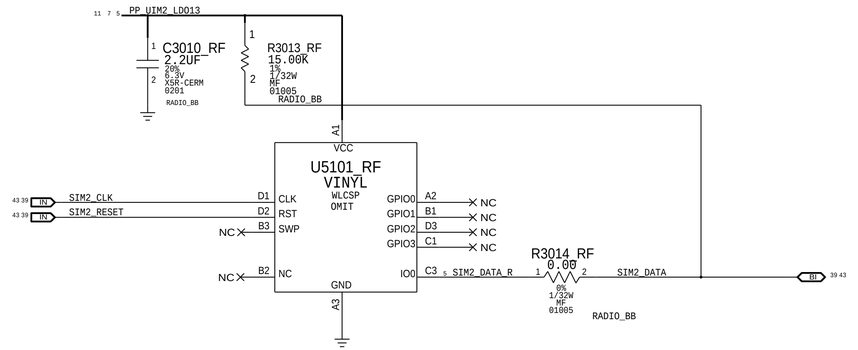
SIM



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WIFI/BT

U5200_RF
LBEE5UM1EE-775
LGA
SYM 2 OF 2

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25	GND	THRM_PAD	108
27	GND	THRM_PAD	109
32	GND	THRM_PAD	110
34	GND	THRM_PAD	111
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101	THRM_PAD	THRM_PAD	159
102	THRM_PAD	THRM_PAD	160
103	THRM_PAD	THRM_PAD	161
104	THRM_PAD	THRM_PAD	162
105	THRM_PAD		

R5213_RF 0.00 0% 1/32W MF 01005
PP_1V8_S2R_VDDIO_WLAN_BT → PP_WL_VDDIO (VOLTAGE=1.8V)
C5201_RF 27PF 5% 16V NP0-C0G 01005
C2500_RF 0.01UF 10% 6.3V X5R 01005

PP_VCC_MAIN (VOLTAGE=4.3V)
C5283_RF 4.7UF 20% 6.3V X5R-CERM1 402
C5284_RF 4.7UF 20% 6.3V X5R-CERM1 402

PP_WL_VDDIO
NO STUFF
R5200_RF 10K 5% 1/32W MF 01005
JTAG_WLAN_SEL

U5200_RF
LBEE5UM1EE-775
LGA
SYM 1 OF 2

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C5200_RF 4.7UF 20% 6.3V X5R-CERM1 402

WIFI LAT COAX CONNECTOR

WLAN LAT 2.4GHZ BAW BPF ON CSA 4

F5202_RF LFD212G45MJCD900 LLP
R5205_RF 0.00 0% 1/32W MF 01005
C5209_RF 0.2PF +/-0.1PF 16V NP0-C0G 01005 NO STUFF
C5210_RF 0.2PF +/-0.1PF 16V NP0-C0G 01005 NO STUFF
JWLAT_RF MM5829-2700 F-ST-SM1
R5202_RF 0.00 0% 1/32W MF 01005
C5215_RF 0.2PF +/-0.1PF 16V NP0-C0G 01005 NO STUFF
C5205_RF 0.3PF +/-0.05PF 16V C0G-CERM 01005

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PP5290_RF OWL_TO_WLAN_CONTEXT_A
PP5291_RF OWL_TO_WLAN_CONTEXT_B
PP5292_RF GPIO_13_WLAN_THROTTLE
PP5293_RF GPIO_2_JTAG_TCK
PP5294_RF PCIE_PME
PP5295_RF GPIO_3_JTAG_TMS
PP5296_RF GPIO_6_JTAG_TRST
PP5297_RF GPIO_4_JTAG_TDI
PP5298_RF GPIO_5_JTAG_TDO
PP5288_RF PMU_TO_WLAN_32K_CLK
PP5285_RF WLAN_TO_PMU_HOST_WAKE
PP5289_RF PCIE_AP_TO_WLAN_REFCLK_P
PP5299_RF PCIE_AP_TO_WLAN_REFCLK_N
PP5300_RF PCIE_AP_TO_WLAN_TX_P
PP5301_RF PCIE_AP_TO_WLAN_TX_N
PP5287_RF PMU_TO_WLAN_REG_ON
PP5286_RF PMU_TO_BT_REG_ON
PP5200_RF UART1_AP_TO_BT_TX
PP5201_RF UART1_BT_TO_AP_TX
PP5202_RF UART1_AP_TO_BT_RTS_L
PP5203_RF UART1_BT_TO_AP_RTS_L
PP5302_RF PCIE_AP_TO_WLAN_DEV_WAKE
PP5303_RF BT_TO_PMU_HOST_WAKE
PP5305_RF PCIE_AP_TO_WLAN_PERST_L
PP5306_RF UART4_AP_TO_WLAN_TX
PP5307_RF UART4_WLAN_TO_AP_TX

STOCKHOLM

ALL NETNAMES NEED TO BE CHECKED

INSTALL R5312 AND REMOVE R5311
WHEN VINYL PRESENT

U5302_RF
WLCSP
FAN48614BUC50X

L5303_RF
1.8UH-0.7A
0603

L5301_RF
160NH-10%-0.48A-0.330HM
0402

L5302_RF
160NH-10%-0.48A-0.330HM
0402

T5301_RF
ATB2012D6E-20011
0805

U5301_RF
PN66V
UFLGA

Q5301_RF
DMP22D4UFA
DFN0806

TP5301_RF
TP-P55

TP5303_RF
TP-P55

TP5304_RF
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