

D

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A

PDF	PAGE	CSA	PAGE	CONTENTS	SYNC	MASTER	DATE
2	2	H6P	JTAG,USB,PLL,HSIC,XTAL	N/A	N/A		
3	3	H6P	DIGITAL I/O,BOOTSTRAPPING	N/A	N/A		
4	4	H6P	VDDCA,VDD1/2,VDD,VDD_CPU,VDD_GPU	N/A	N/A		
5	5	H6P	GND,VDDIO18,VDDIOD,VDD_SRAM,VDD_SOC	N/A	N/A		
6	6	H6P	NAND,NAND 12X17	N/A	N/A		
7	7	H6P	HIGH SPEED DIG (CAM,LCM,DP)	N/A	N/A		
8	8		BUTTON FLEX B2B	N/A	N/A		
9	9	L67	AUDIO CODEC (1/2)	N/A	N/A		
10	10	L67	AUDIO CODEC (2/2)	N/A	N/A		
11	11		FRONT CAM FLEX B2B	N/A	N/A		
12	12	AMBER	PMU(1/2)	N/A	N/A		
13	13	AMBER	PMU(2/2)	N/A	N/A		
14	14	CHESTNUT	BACKLIGHT DRIVER,MESA BOOST	N/A	N/A		
15	15	SPKR	AMP + STROBE DRIVER	N/A	N/A		
16	16	TRISTAR	,EEPROM	N/A	N/A		
17	17		DOCKFLEX B2B	N/A	N/A		
18	18	D403	(TOUCH B2B, DRIVER ICS)	N/A	N/A		
19	19	LCM	B2B	N/A	N/A		
20	20	OSCAR	+ SENSORS	N/A	N/A		
21	21	REAR	CAM B2B	N/A	N/A		
22	22	BATT	B2B, TPS, PD FEATURES	N/A	N/A		
23	23		VOLTAGE PROPERTIES				
24	24	RADIO_MLB	HIERARCH. SYMBOL	N/A	N/A		
25	25		Cross Reference Page				
26	26		Cross Reference Page				
27	27		Cross Reference Page				

SCH051-9681

BRD820-3382

MCO056-5179

BOM639-4159

BOM639-4160

BOM639-3973

{16GB}

{32GB}

{64GB}

X152

X152

X152

COMPASS BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
639-4269	1	COMPASS INTERPOSER X152/X145	U16	Y	COMPASS_INTERPOSER

HORIZONTAL AND OTHER CAP BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
138S0801	5	HRZNTL CAPS_1: 10UF,0402,6.3V	C422,C399,C405,C417,C418	Y	HRZNTL_CAP_GRP1
138S0801	5	HRZNTL CAPS_2: 10UF,0402,6.3V	C250,C251,C325,C357,C358	Y	HRZNTL_CAP_GRP2
138S0801	5	HRZNTL CAPS_3: 10UF,0402,6.3V	C260,C263,C267,C270,C261	Y	HRZNTL_CAP_GRP3
138S0801	4	HRZNTL CAPS_4: 10UF,0402,6.3V	C264,C268,C271,C385	Y	HRZNTL_CAP_GRP4
138S0801	4	HRZNTL CAPS_5: 10UF,0402,6.3V	C398,C411,C252,C297	Y	HRZNTL_CAP_GRP5
138S0801	5	HRZNTL CAPS_6: 10UF,0402,6.3V	C386,C387,C333,C332,C335	Y	HRZNTL_CAP_GRP6
138S0801	3	HRZNTL CAPS_7: 10UF,0402,6.3V	C42_RF,C43_RF,C44_RF	Y	HRZNTL_CAP_GRP7
138S0801	1	HRZNTL CAPS_8: 10UF,0402,6.3V	C1281_RF	Y	HRZNTL_CAP_GRP8
138S0801	1	HRZNTL CAPS_9: 10UF,0402,6.3V	C103_RF	Y	HRZNTL_CAP_GRP9
138S0801	4	HRZNTL CAPS_10: 10UF,0402,6.3V	C182,C307,C209,C187	Y	HRZNTL_CAP_GRP10
138S0794	2	HRZNTL CAPS_11: 10UF,0402,10V	C52,C156	Y	HRZNTL_CAP_GRP11

INDUCTOR BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152S1785	3	BUCK0 SLAVE IND: 0.47UH, TFA-A TDK	L10,L12,L14	Y	IND_BUCK0_SLV_P47UH_TFA-A_TDK
152S1834	3	BUCK0 SLAVE IND: 0.47UH, CYNTEC	L10,L12,L14	Y	IND_BUCK0_SLV_P47UH_CYNTEC
152S1839	3	BUCK0 SLAVE IND: 0.47UH, TAIYO	L10,L12,L14	Y	IND_BUCK0_SLV_P47UH_TAIYO
152S1807	6	AMBER BUCKXX IND: 1UH TFA-A TDK	L9,L11,L13,L15,L16,L17	Y	IND_BUCKXX_1UH_TFA-A_TDK
152S1801	6	AMBER BUCKXX IND: 1UH CYNTEC	L9,L11,L13,L15,L16,L17	Y	IND_BUCKXX_1UH_CYNTEC
152S1840	6	AMBER BUCKXX IND: 1UH TAIYO	L9,L11,L13,L15,L16,L17	Y	IND_BUCKXX_1UH_TAIYO
152S1807	1	STROBE IND: 1UH TFA-A TDK	L5	Y	IND_STROBE_1UH_TFA-A_TDK
152S1801	1	STROBE IND: 1UH CYNTEC	L5	Y	IND_STROBE_1UH_CYNTEC
152S1840	1	STROBE IND: 1UH TAIYO	L5	Y	IND_STROBE_1UH_TAIYO
152S1809	1	BUCK5 2012 IND: 1UH TFA-A TDK	L18	Y	IND_BUCK5_1UH_TFA-A_TDK
152S1835	1	BUCK5 2012 IND: 1UH CYNTEC	L18	Y	IND_BUCK5_1UH_CYNTEC
152S1843	1	BUCK5 2012 IND: 1UH TAIYO	L18	Y	IND_BUCK5_1UH_TAIYO
152S1836	1	SPKR AMP IND: 1.2UH CYNTEC	L4	Y	IND_SPKRAMP_1P2UH_CYNTEC
152S1844	1	SPKR AMP IND: 1.2UH TAIYO	L4	Y	IND_SPKRAMP_1P2UH_TAIYO
152S1721	1	CHARGER IND: 2.2UH TAIYO	L8	Y	IND_CHGR_2P2UH_TAIYO

FOR CHESTNUT BOMTABLE - SEE PG 14

FOR RADIO BOMTABLE - SEE PG 24

FOR MISC R/L/C ALTS - SEE PG 2

I2C ADDRESS MAP

I2C0	DEVICE	BINARY	7-BIT HEX	8-BIT HEX
	AMBER PMU:	11010100X	0X74	0XE8
	CS35L19B AMP:	10000000X	0X40	0X80
	LM3534 BL DRIVER:	11000111X	0X63	0XC6
	TRISTAR:	00110101X	0X1A	0X34
	CHESTNUT:	01001111X	0X27	0X4E
I2C1	CT814 ALS:	01010011X	0X29	0X52
RCAM I2C	OPEL STROBE DRIVER:	11000111X	0X63	0XC6
	REAR FACING CAM:	00100000X	0X10	0X20
	ADI VCM AF DRIVER:	00011101X	0X0E	0X1C
	ROHM VCM AF DRIVER:	00011001X	0X0C	0X18
FCAM I2C	FRONT FACING CAM:	01101101X	0X36	0X6C

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

X152 BOM CALLOUTS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-9681	1	SCH, SINGLE_BRD, X152	SCH	Y	?
820-3382	1	PCBF, SINGLE_BRD, X152	PCB	Y	?
825-6838	1	EEEE FOR 639-4159 16GB	EEEE_F7V1	Y	EEEE_16G
825-6838	1	EEEE FOR 639-4160 32GB	EEEE_F7V2	Y	EEEE_32G
825-6838	1	EEEE FOR 639-3973 64GB	EEEE_F4LR	Y	EEEE_64G
339S0206	1	H6P + 1GB SAMSUNG	U1	Y	H6P_1GB_SAMSUNG
339S0207	1	H6P + 1GB ELPIDA	U1	Y	H6P_1GB_ELPIDA
339S0208	1	H6P + 1GB HYNIX	U1	Y	H6P_1GB_HYNIX

OSCAR BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
337S4370	1	OSCAR CSP	U9	Y	OSCAR_CSP
337S4417	1	OSCAR FCLGA	U9	Y	OSCAR_FCLGA

OPEL BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
353S8399	1	TI OPEL	U17	Y	OPEL_TI

NAND BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S0930	1	NAND,19NM,16GX8,MLC,PPN1.5	U4	Y	NAND_16G_HYNIX
335S0931	1	NAND,19NM,32GX8,MLC,PPN1.5	U4	Y	NAND_32G_HYNIX
335S0932	1	NAND,19NM,64GX8,MLC,PPN1.5	U4	Y	NAND_64G_HYNIX

NAND BOM ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S0921	335S0930	NAND_16G_TOSH	U4	?
335S0933	335S0930	NAND_16G_SAND	U4	?
335S0922	335S0931	NAND_32G_TOSH	U4	?
335S0934	335S0931	NAND_32G_SAND	U4	?
335S0923	335S0932	NAND_64G_TOSH	U4	?
335S0935	335S0932	NAND_64G_SAND	U4	?

USB GOLDENEYE BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
155S0583	2	E75 COMMON MODE CHOKES	L20,L22	Y	CMC_E75_D1FFPFAIRS
152S1737	2	USB TX 10UH SERIES INDUCTORS	R163,R164	Y	USB_TX_SERIES_IND

TRISTAR BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
343S0614	1	CBTL1608A1UK,WCSF,TRISTAR	U2	Y	TRISTAR
343S0639	1	CBTL1610A0UK,WCSF,TRISTAR2	U2	Y	TRISTAR2
117S0202	2	RES 20OHM 01005 5%, TRISTAR2	R102,R103	Y	TRISTAR2
118S0671	2	RES 15OHM 01005 5%, TRISTAR	R102,R103	Y	TRISTAR

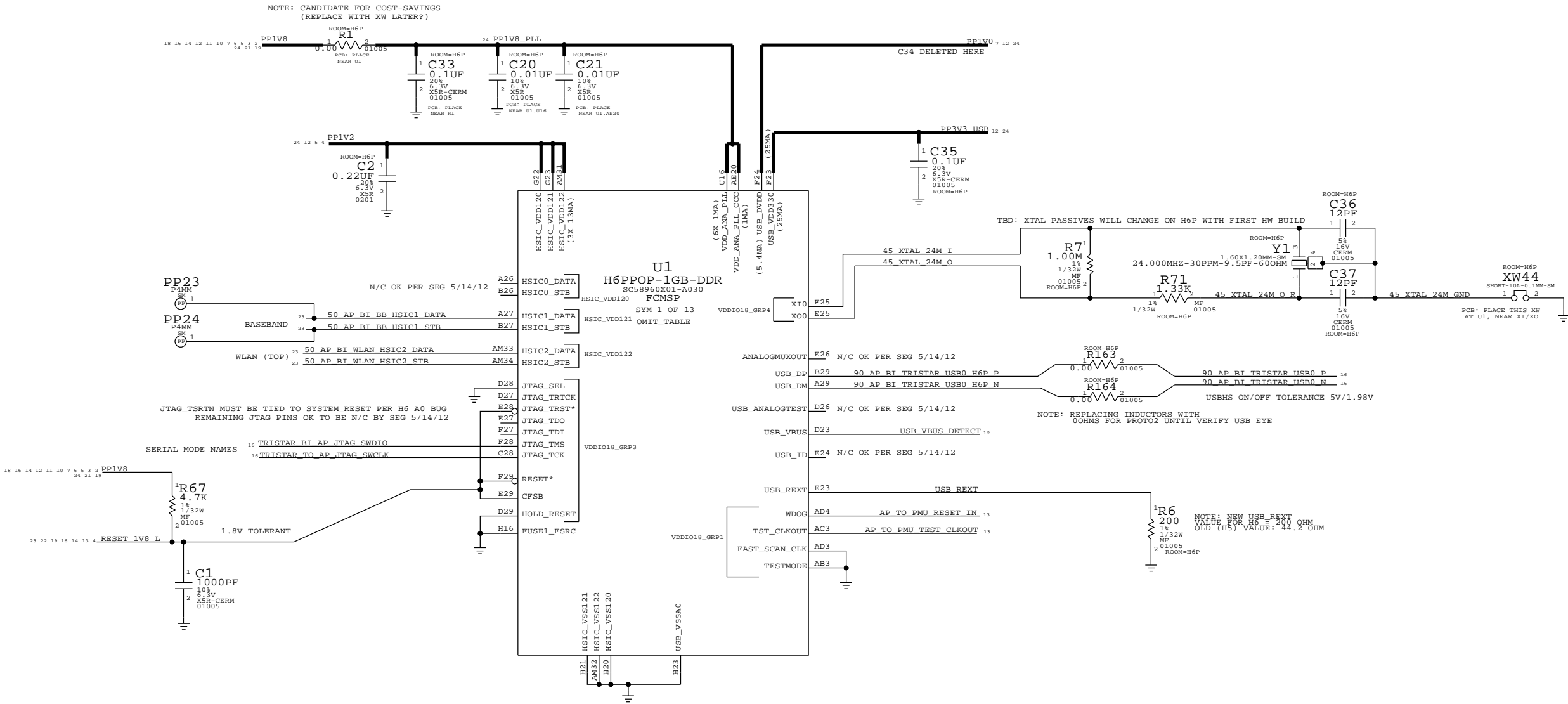
AUDIO BOM OPTION

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
155S0556	2	FERRITE 0402 P14OHM 1A	FL6, FL9	Y	SPKAMP_FERRITE_REG
155S0731	2	FERRITE 0402 P060HM 1P8A	FL6, FL9	Y	SPKAMP_FERRITE_LOWDCR
116S0004	2	RESISTOR 0402 00HM 1A	FL6, FL9	Y	SPKAMP_FERRITE_00HM
132S0396	2	CAP 01005 10V 1000PF	C500, C501	Y	SPKAMP_CAPFILT_1000PF
132S0437	2	CAP 01005 10V 150PF	C500, C501	Y	SPKAMP_CAPFILT_150PF
131S0283	2	CAP 01005 10V 100PF	DZ13, DZ14	Y	SPKAMP_ESDFILT_100PF
338S1077	1	CLASSD AMP, L19	U22	Y	SPKAMP_IC_L19
338S1161	1	CLASSD AMP, L20	U22	Y	SPKAMP_IC_L20
117S0002	1	0201 00HM	R128	Y	SPKAMP_SENSE_R_L20
118S0583	1	0201 0.10HM	R128	Y	SPKAMP_SENSE_R_L19

H6P: JTAG, USB, PLL, HSIC, XTAL

MISC COMPONENTS ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
107S0146	107S0208			ALT FOR THERMISTOR
138S0702	138S0657			?
138S0697	138S0695			?
138S0746	138S0705			?
138S0739	138S0706			?
155S0773	155S0453			?
155S0667	155S0583			?
335S0895	335S0874			?
138S0703	138S0648			?



D



B

A

PCB: PLACE THIS TOP SIDE,
NORTH END OF SINGLE BRD

PCB: PLACE THIS BOTTOM SIDE,
SOUTH END OF SINGLE BRD



NOTE: AMBER HAS 100K (MIN)
INT PU FOR RESET_IN3.
NEED PU TO BE 10K OR LOWER

The image shows a complex PCB layout for the H6P board, divided into three main power planes: VDDCA, VDD1/2, VDDQ (left); VDD (center); and VDD_CPU, VDD_GPU (right). The layout is oriented with a coordinate system (A, B, C, D) on the left and (1, 2, 3, 4, 5, 6, 7, 8) on the top and bottom.

VDDCA, VDD1/2, VDDQ Section (Left):

- VDDCA:** Contains components like C41, R73, R72, and U1 (H6PPPOP-1GB-DDR). It includes a note: "NOTE: CKEIN CONFIRMED 1.8V TOLERANT ON 5/6/12, BY MANU G".
- VDD1/2:** Contains components like C285, C53, C49, C59, and U1 (H6PPPOP-1GB-DDR).
- VDDQ:** Contains components like C57, C500, C302, C43, C40, C48, C60, and U1 (H6PPPOP-1GB-DDR).

VDD Section (Center):

- Contains components like C177, C141, C160, C174, C166, C100, C124, C121, C112, and U1 (H6PPPOP-1GB-DDR).
- Includes a note: "VDD BALLS = VDD_SOC PWR DOMAIN".

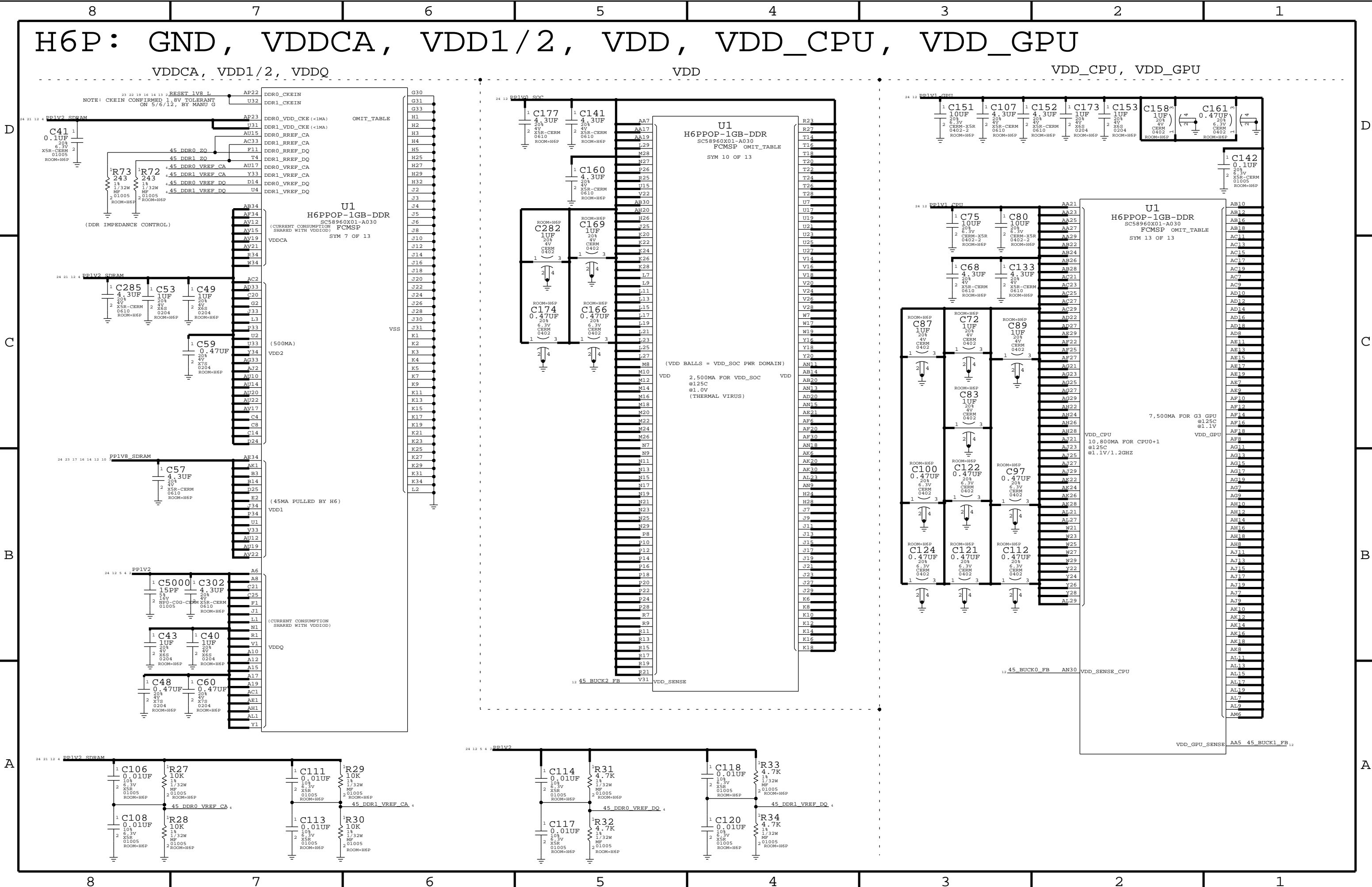
VDD_CPU, VDD_GPU Section (Right):

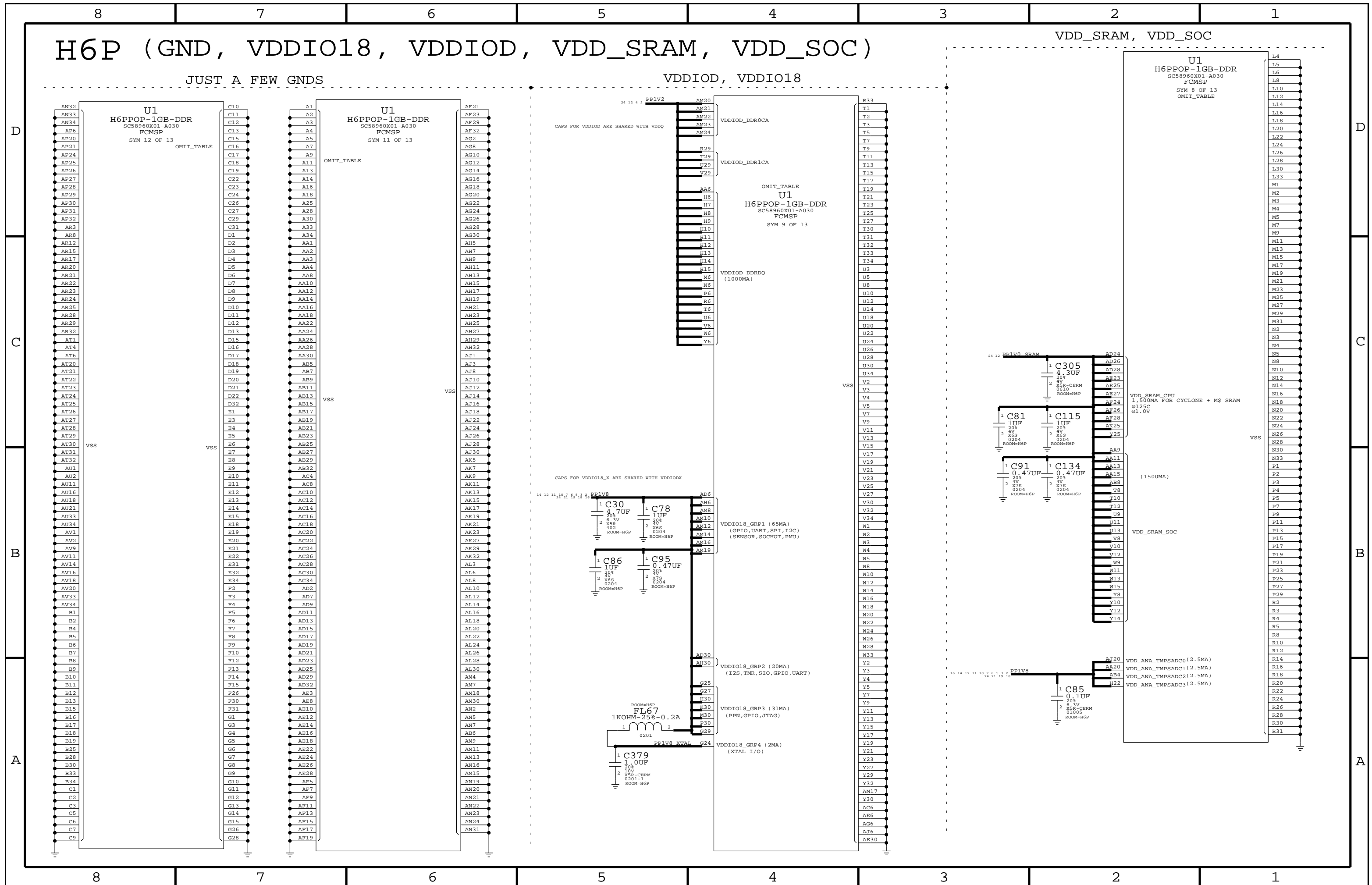
- VDD_CPU:** Contains components like C151, C107, C152, C173, C153, C158, C161, C142, C75, C80, C68, C133, C87, C83, C100, C122, C97, C124, C121, C112, and U1 (H6PPPOP-1GB-DDR).
- VDD_GPU:** Contains components like C151, C107, C152, C173, C153, C158, C161, C142, C75, C80, C68, C133, C87, C83, C100, C122, C97, C124, C121, C112, and U1 (H6PPPOP-1GB-DDR).

The layout also includes various other components like resistors (R73, R72, R29, R30, R31, R32, R33, R34), capacitors (C41, C285, C53, C49, C59, C57, C500, C302, C43, C40, C48, C60, C177, C141, C160, C174, C166, C100, C124, C121, C112, C151, C107, C152, C173, C153, C158, C161, C142, C75, C80, C68, C133, C87, C83, C100, C122, C97, C124, C121, C112), and integrated circuits (U1, U2, U3, U4, U5, U6, U7, U8, U9, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, U26, U27, U28, U29, U30, U31, U32, U33, U34, U35, U36, U37, U38, U39, U40, U41, U42, U43, U44, U45, U46, U47, U48, U49, U50, U51, U52, U53, U54, U55, U56, U57, U58, U59, U60, U61, U62, U63, U64, U65, U66, U67, U68, U69, U70, U71, U72, U73, U74, U75, U76, U77, U78, U79, U80, U81, U82, U83, U84, U85, U86, U87, U88, U89, U90, U91, U92, U93, U94, U95, U96, U97, U98, U99, U100).

The image shows a detailed PCB layout for the H6P board, oriented with a grid from 1 to 8 horizontally and A to D vertically. The layout is divided into several functional sections:

- VDDCA, VDD1/2, VDDQ:** This section (left side) includes components like C41, R73, R72, C285, C53, C49, C59, C57, C500, C302, C43, C40, C48, C60, C106, R27, C111, R29, C108, R28, C113, R30, C114, R31, C117, R32, C118, R33, C120, R34, C124, C121, C112, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145, C146, C147, C148, C149, C150, C151, C152, C153, C154, C155, C156, C157, C158, C159, C160, C161, C162, C163, C164, C165, C166, C167, C168, C169, C170, C171, C172, C173, C174, C175, C176, C177, C178, C179, C180, C181, C182, C183, C184, C185, C186, C187, C188, C189, C190, C191, C192, C193, C194, C195, C196, C197, C198, C199, C200, C201, C202, C203, C204, C205, C206, C207, C208, C209, C210, C211, C212, C213, C214, C215, C216, C217, C218, C219, C220, C221, C222, C223, C224, C225, C226, C227, C228, C229, C230, C231, C232, C233, C234, C235, C236, C237, C238, C239, C240, C241, C242, C243, C244, C245, C246, C247, C248, C249, C250, C251, C252, C253, C254, C255, C256, C257, C258, C259, C260, C261, C262, C263, C264, C265, C266, C267, C268, C269, C270, C271, C272, C273, C274, C275, C276, C277, C278, C279, C280, C281, C282, C283, C284, C285, C286, C287, C288, C289, C290, C291, C292, C293, C294, C295, C296, C297, C298, C299, C300, C301, C302, C303, C304, C305, C306, C307, C308, C309, C310, C311, C312, C313, C314, C315, C316, C317, C318, C319, C320, C321, C322, C323, C324, C325, C326, C327, C328, C329, C330, C331, C332, C333, C334, C335, C336, C337, C338, C339, C340, C341, C342, C343, C344, C345, C346, C347, C348, C349, C350, C351, C352, C353, C354, C355, C356, C357, C358, C359, C360, C361, C362, C363, C364, C365, C366, C367, C368, C369, C370, C371, C372, C373, C374, C375, C376, C377, C378, C379, C380, C381, C382, C383, C384, C385, C386, C387, C388, C389, C390, C391, C392, C393, C394, C395, C396, C397, C398, C399, C400, C401, C402, C403, C404, C405, C406, C407, C408, C409, C410, C411, C412, C413, C414, C415, C416, C417, C418, C419, C420, C421, C422, C423, C424, C425, C426, C427, C428, C429, C430, C431, C432, C433, C434, C435, C436, C437, C438, C439, C440, C441, C442, C443, C444, C445, C446, C447, C448, C449, C450, C451, C452, C453, C454, C455, C456, C457, C458, C459, C460, C461, C462, C463, C464, C465, C466, C467, C468, C469, C470, C471, C472, C473, C474, C475, C476, C477, C478, C479, C480, C481, C482, C483, C484, C485, C486, C487, C488, C489, C490, C491, C492, C493, C494, C495, C496, C497, C498, C499, C500, C501, C502, C503, C504, C505, C506, C507, C508, C509, C510, C511, C512, C513, C514, C515, C516, C517, C518, C519, C520, C521, C522, C523, C524, C525, C526, C527, C528, C529, C530, C531, C532, C533, C534, C535, C536, C537, C538, C539, C540, C541, C542, C543, C544, C545, C546, C547, C548, C549, C550, C551, C552, C553, C554, C555, C556, C557, C558, C559, C560, C561, C562, C563, C564, C565, C566, C567, C568, C569, C570, C571, C572, C573, C574, C575, C576, C577, C578, C579, C580, C581, C582, C583, C584, C585, C586, C587, C588, C589, C590, C591, C592, C593, C594, C595, C596, C597, C598, C599, C600, C601, C602, C603, C604, C605, C606, C607, C608, C609, C610, C611, C612, C613, C614, C615, C616, C617, C618, C619, C620, C621, C622, C623, C624, C625, C626, C627, C628, C629, C630, C631, C632, C633, C634, C635, C636, C637, C638, C639, C640, C641, C642, C643, C644, C645, C646, C647, C648, C649, C650, C651, C652, C653, C654, C655, C656, C657, C658, C659, C660, C661, C662, C663, C664, C665, C666, C667, C668, C669, C670, C671, C672, C673, C674, C675, C676, C677, C678, C679, C680, C681, C682, C683, C684, C685, C686, C687, C688, C689, C690, C691, C692, C693, C694, C695, C696, C697, C698, C699, C700, C701, C702, C703, C704, C705, C706, C707, C708, C709, C710, C711, C712, C713, C714, C715, C716, C717, C718, C719, C720, C721, C722, C723, C724, C725, C726, C727, C728, C729, C730, C731, C732, C733, C734, C735, C736, C737, C738, C739, C740, C741, C742, C743, C744, C745, C746, C747, C748, C749, C750, C751, C752, C753, C754, C755, C756, C757, C758, C759, C760, C761, C762, C763, C764, C765, C766, C767, C768, C769, C770, C771, C772, C773, C774, C775, C776, C777, C778, C779, C780, C781, C782, C783, C784, C785, C786, C787, C788, C789, C790, C791, C792, C793, C794, C795, C796, C797, C798, C799, C800, C801, C802, C803, C804, C805, C806, C807, C808, C809, C810, C811, C812, C813, C814, C815, C816, C817, C818, C819, C820, C821, C822, C823, C824, C825, C826, C827, C828, C829, C830, C831, C832, C833, C834, C835, C836, C837, C838, C839, C840, C841, C842, C843, C844, C845, C846, C847, C848, C849, C850, C851, C852, C853, C854, C855, C856, C857, C858, C859, C860, C861, C862, C863, C864, C865, C866, C867, C868, C869, C870, C871, C872, C873, C874, C875, C876, C877, C878, C879, C8

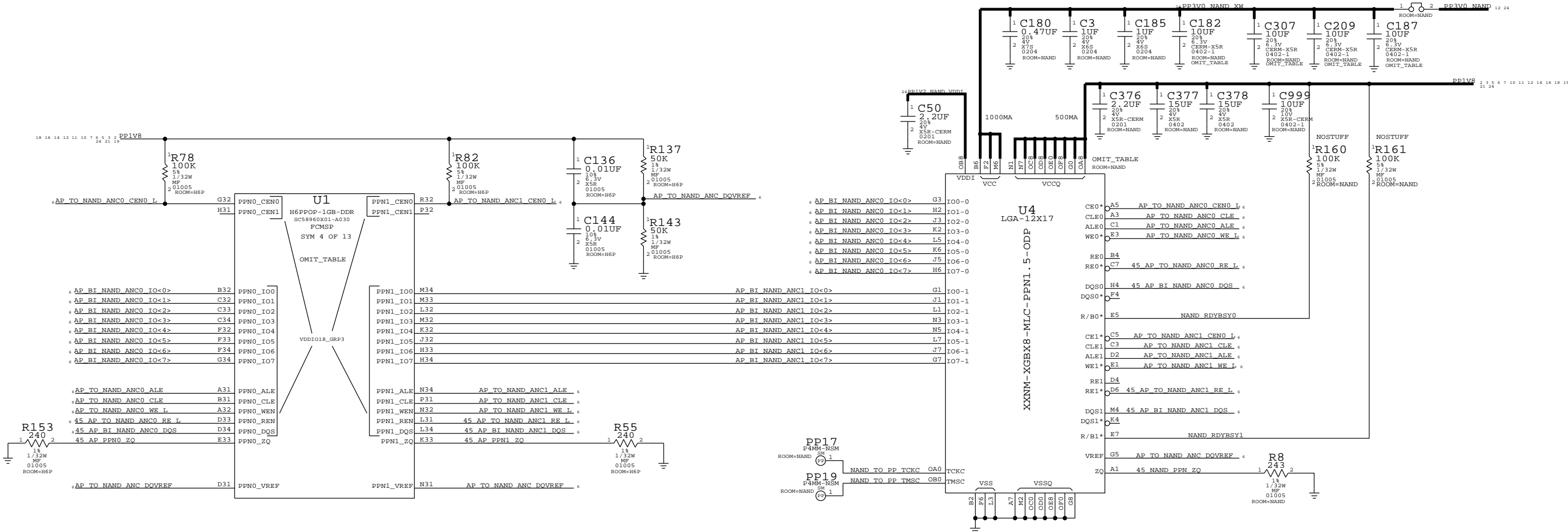




H6P NAND + 12X17 NAND PKG

SUPPORT FOR PPN1.5 (1.8V IO) ONLY

PCB: THIS XW ON OUTER LAYER, ACCESSIBLE FOR REWORK



NOTE: NAND PADS SHOULD BE SHIELDED FROM TRACES WITH A GROUND PLANE

NOTE: IO<6> PREFERRED BY MATT BYOM
(IS A STATUS READY BIT)

PP2
P4MM-NSM
ROOM=H6P
1 45 AP BI NAND ANCI IO<6> L

PP3
P4MM-NSM
ROOM=H6P
1 45 AP TO NAND ANCI RE L

PP10
P4MM-NSM
ROOM=H6P
1 45 AP BI NAND ANCI DQS

D



A

D



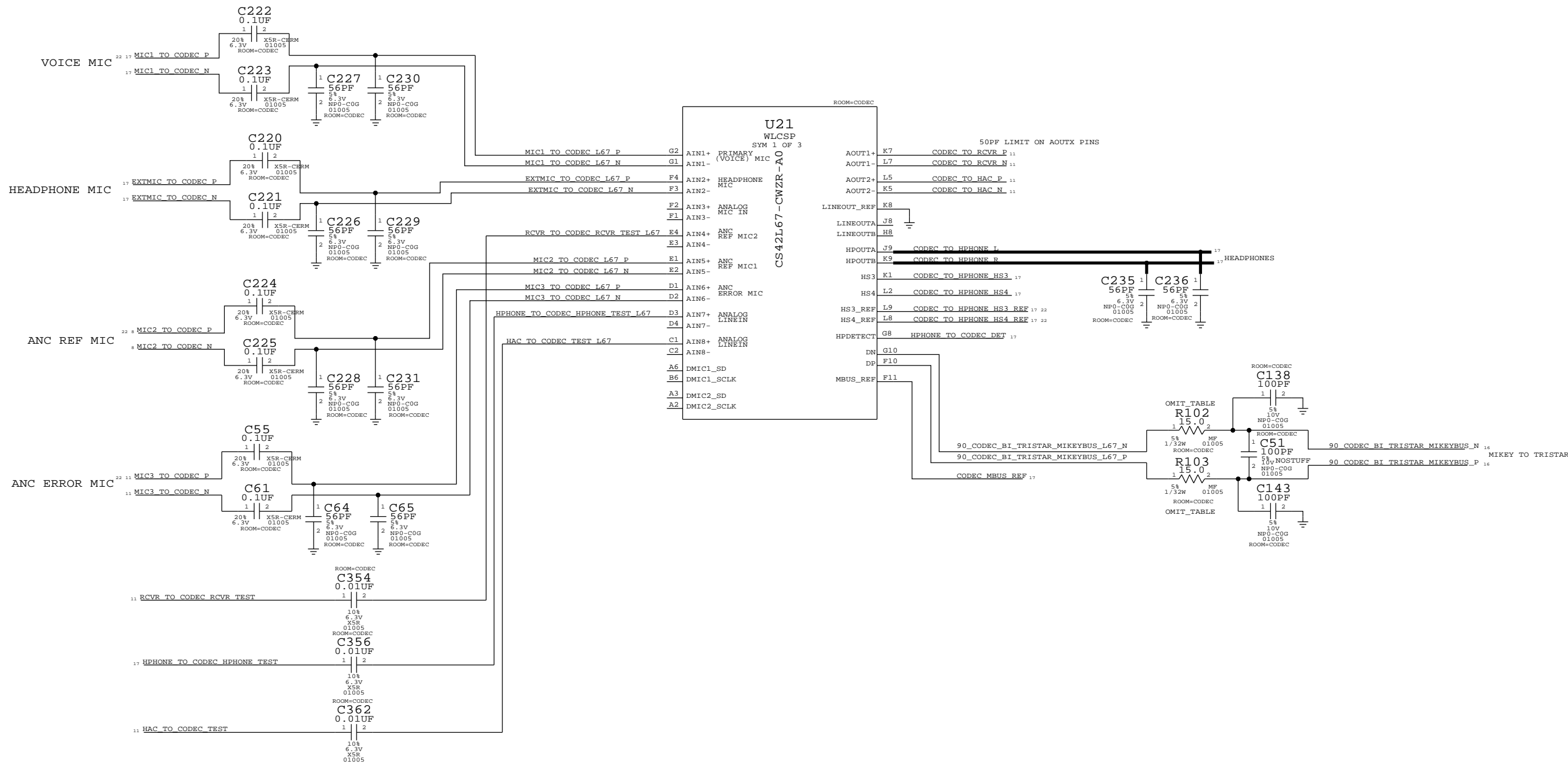
B

A

L67 AUDIO CODEC

AUDIO I/O

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



D

C

C



A

A

RECEIVER

J1 ROOM=CG_B2B
AA22L-S034VA1
F-ST-SM



Diagram of a three-pin connector. The top pin is labeled 39. The bottom left pin is labeled 35. The bottom right pin is labeled 36.

```

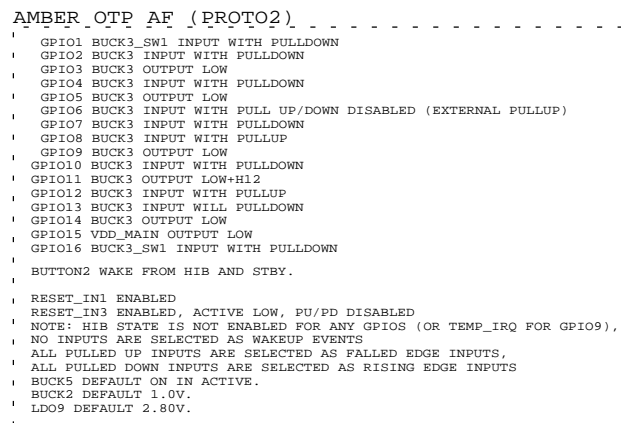
      20%
      6.3V    SPECIAL Z = 0.60 MM MAX
      X5R
      402
B2B      ROOM=CG_B2B

```

PROX: PWR, TX EN


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

A

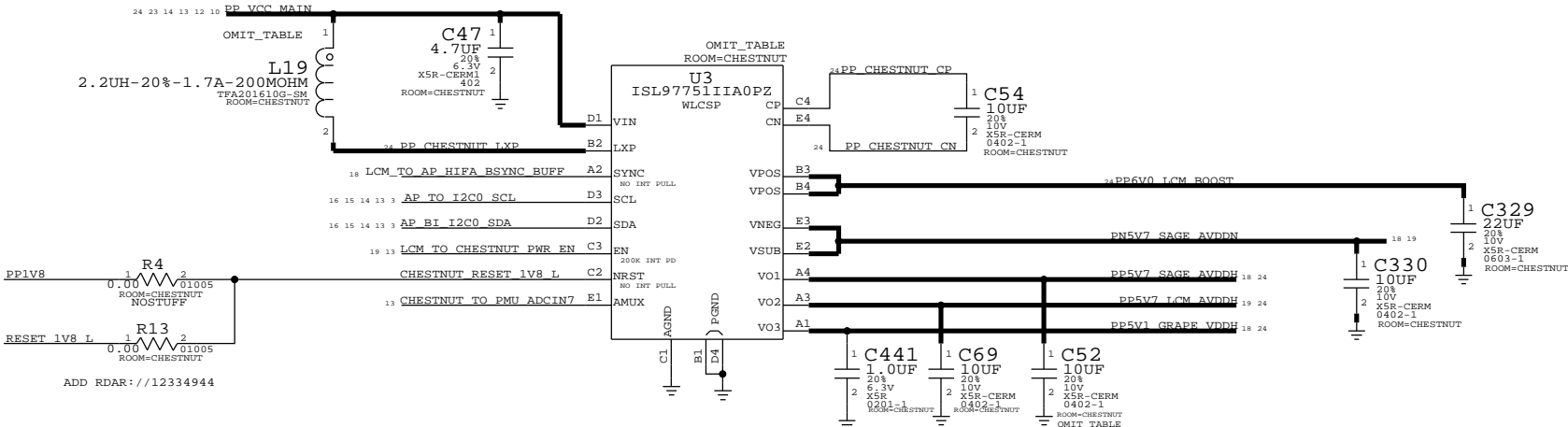


CHESTNUT, BACKLIGHT DRIVER, MESA BOOST

CHESTNUT BOM OPTIONS

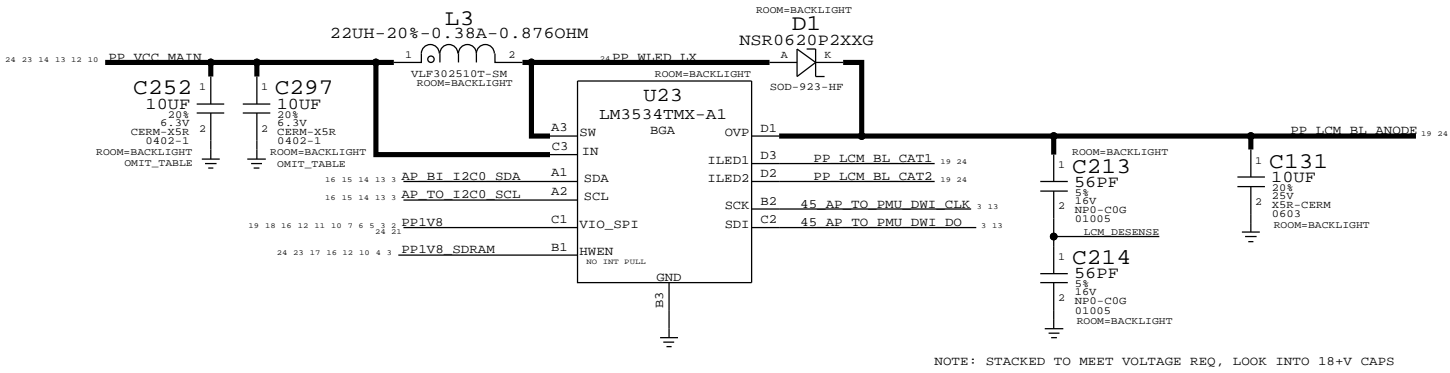
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
338S1172	1	TI CHESTNUT	U3	Y	CHESTNUT_TI
152S1842	1	TI CHESTNUT IND - 1.5UH TAIYO	L19	Y	CHESTNUT_TI_TAIYO
152S1802	1	TI CHESTNUT IND - 1.5UH CYNTEC	L19	Y	CHESTNUT_TI_CYNTEC
338S1168	1	INTERSIL CHESTNUT	U3	Y	CHESTNUT_INTERSIL
152S1805	1	INTERSIL CHESTNUT IND - 2.2UH TFA-A	L19	Y	CHESTNUT_INTERSIL_TFA-A

D403 DISPLAY PMU (INTERSIL CHESTNUT, 338S1148)
(TI CHESTNUT, 338S1149)

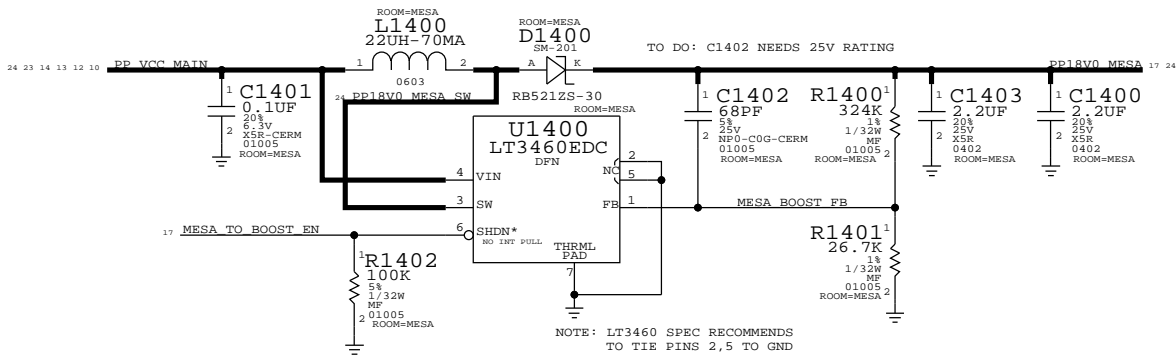


SAGE NEG BOOST TIMING INFO:
2 MS NOMIAL START UP DELAY FOR LCM POWER SEQUENCING
0 MS DELAY AT SHUTDOWN
ACTIVE DISCHARGE 2MS TO RAIL DOWN

D403 BACKLIGHT DRIVER

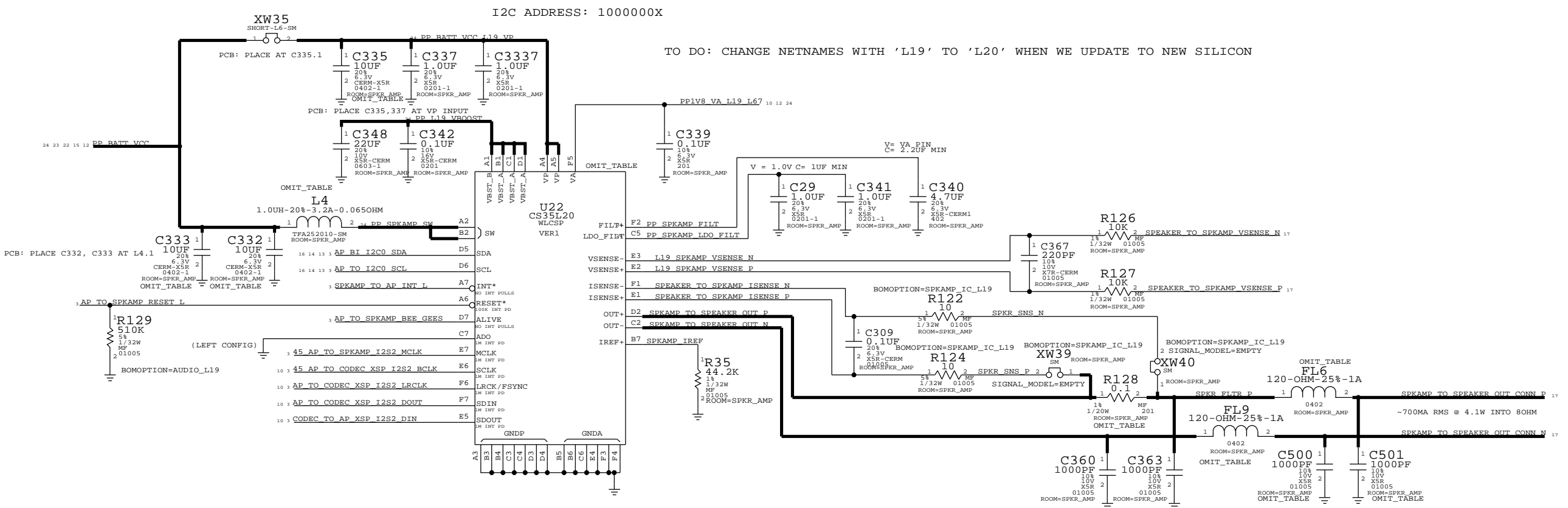


MESA BOOST



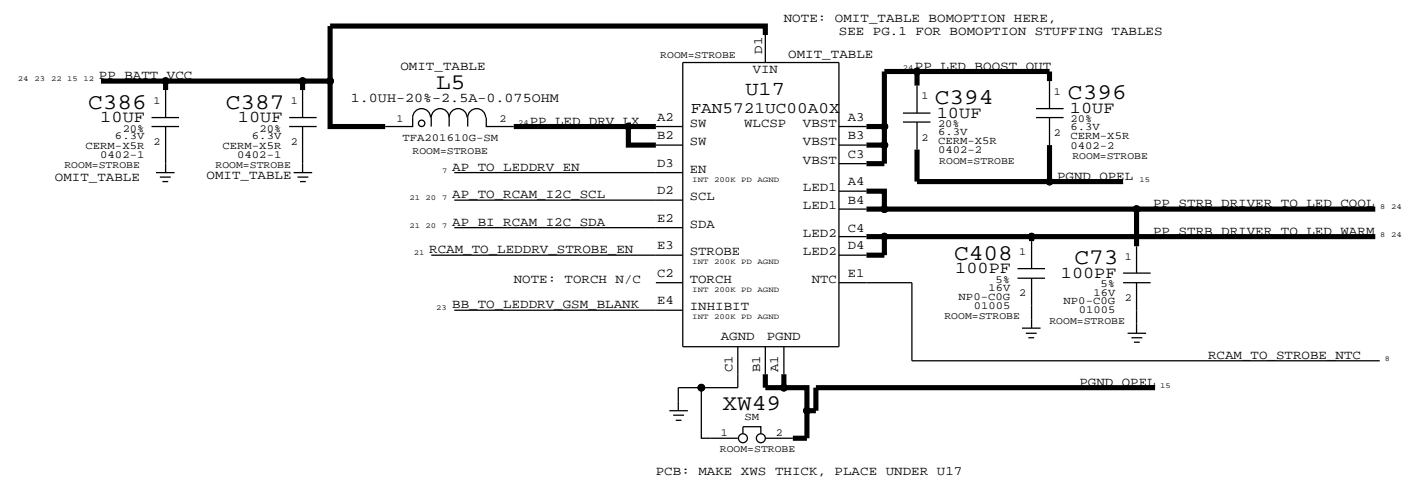
SPEAKER AMP, LED DRIVER

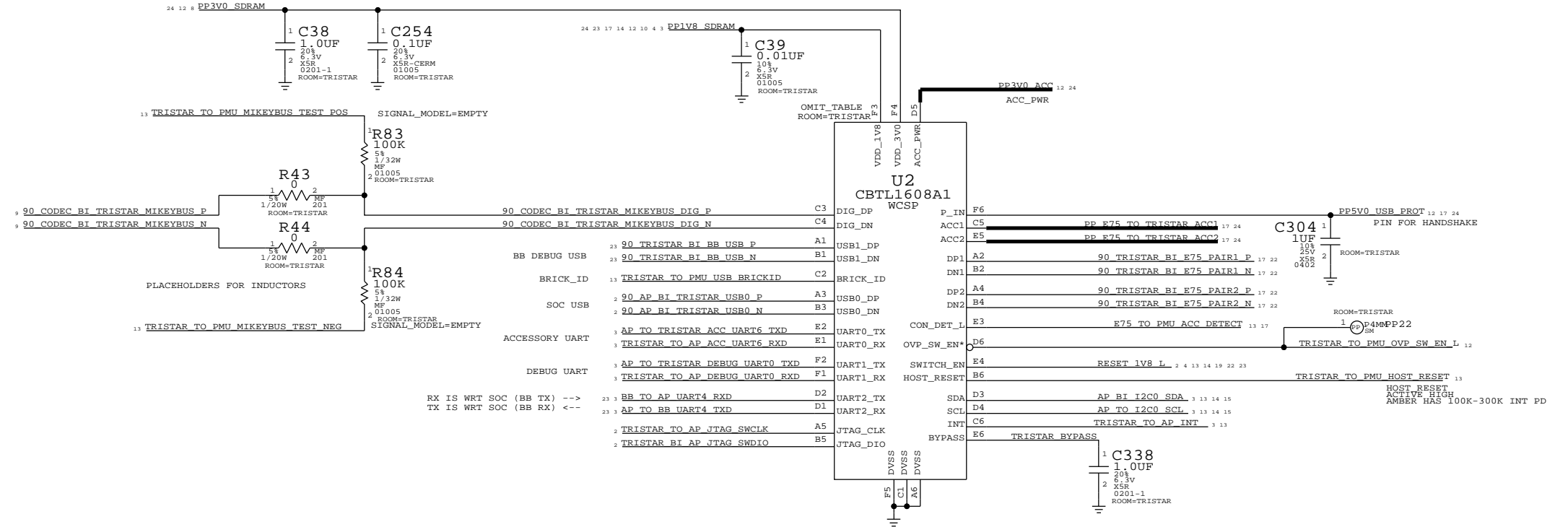
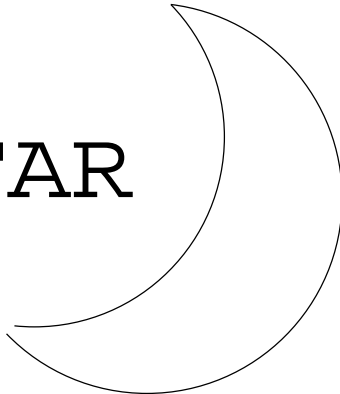
SPEAKER AMP (TO BE REPLACED WITH L20)



STROBE DRIVER (OPEL)

TI: APN 353S3899
FAIRCHILD: APN 353S3839





EEPROM

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

NAVAJO:
VDD (1.8V)
VBOOST (18V)
BOOST_EN

HPHONE:
HS3/HS4,
HPDET,
HS3/HS4 REF,
(+EXTMIC)
HS3/HS4 CTRL

MENU BUTTON

MIC1
(PRIMARY MIC)

ANTENNA:
PAC 2.65V

SPEAKER:
SPEAKER LEADS
VSENSE,

USB VBUS

NAVAJO:
VDD (3.0V)
SPI

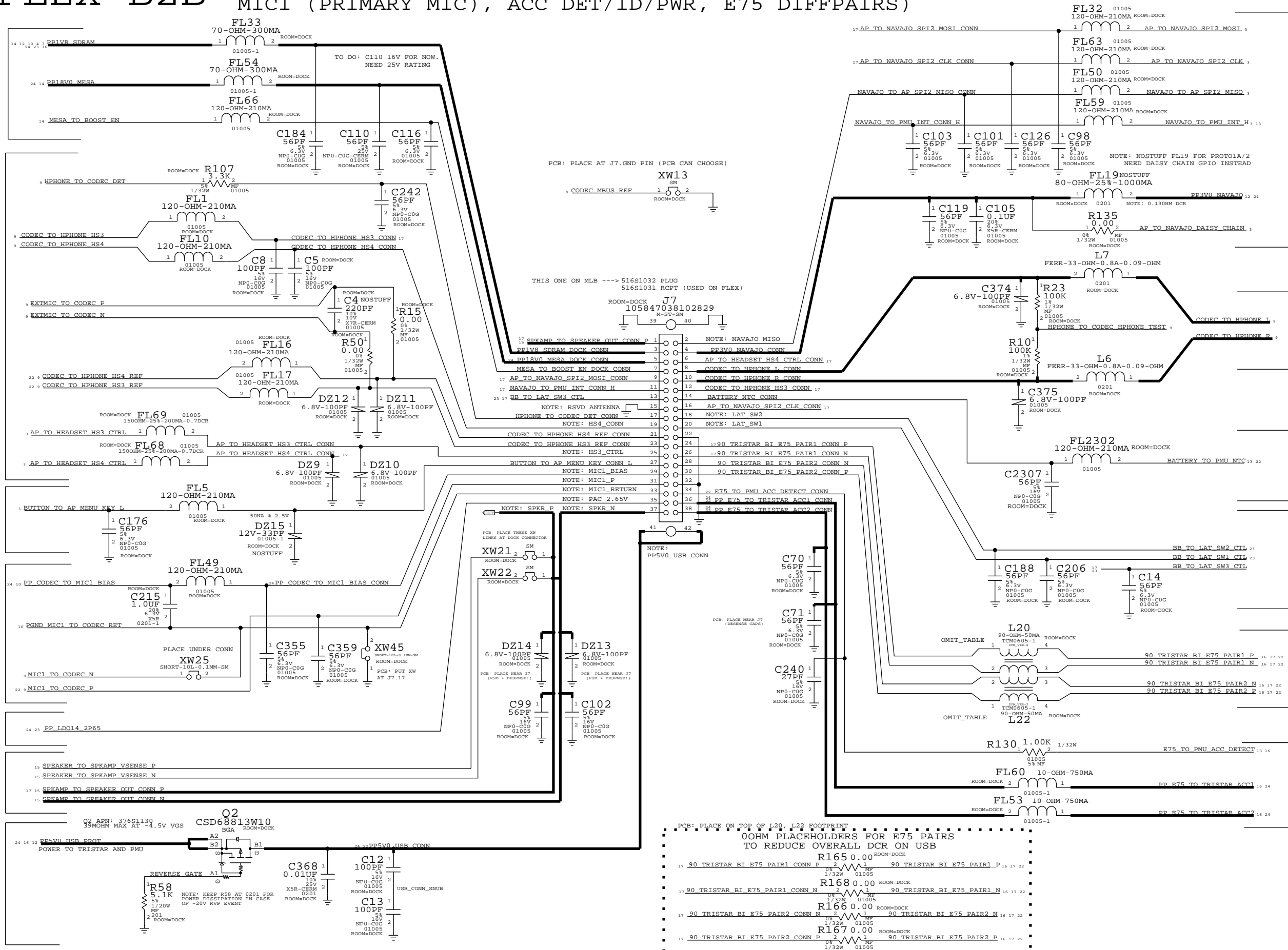
HPHONE AUDIO

BATTERY NTC

ANTENNA:
LAT SW CTRL

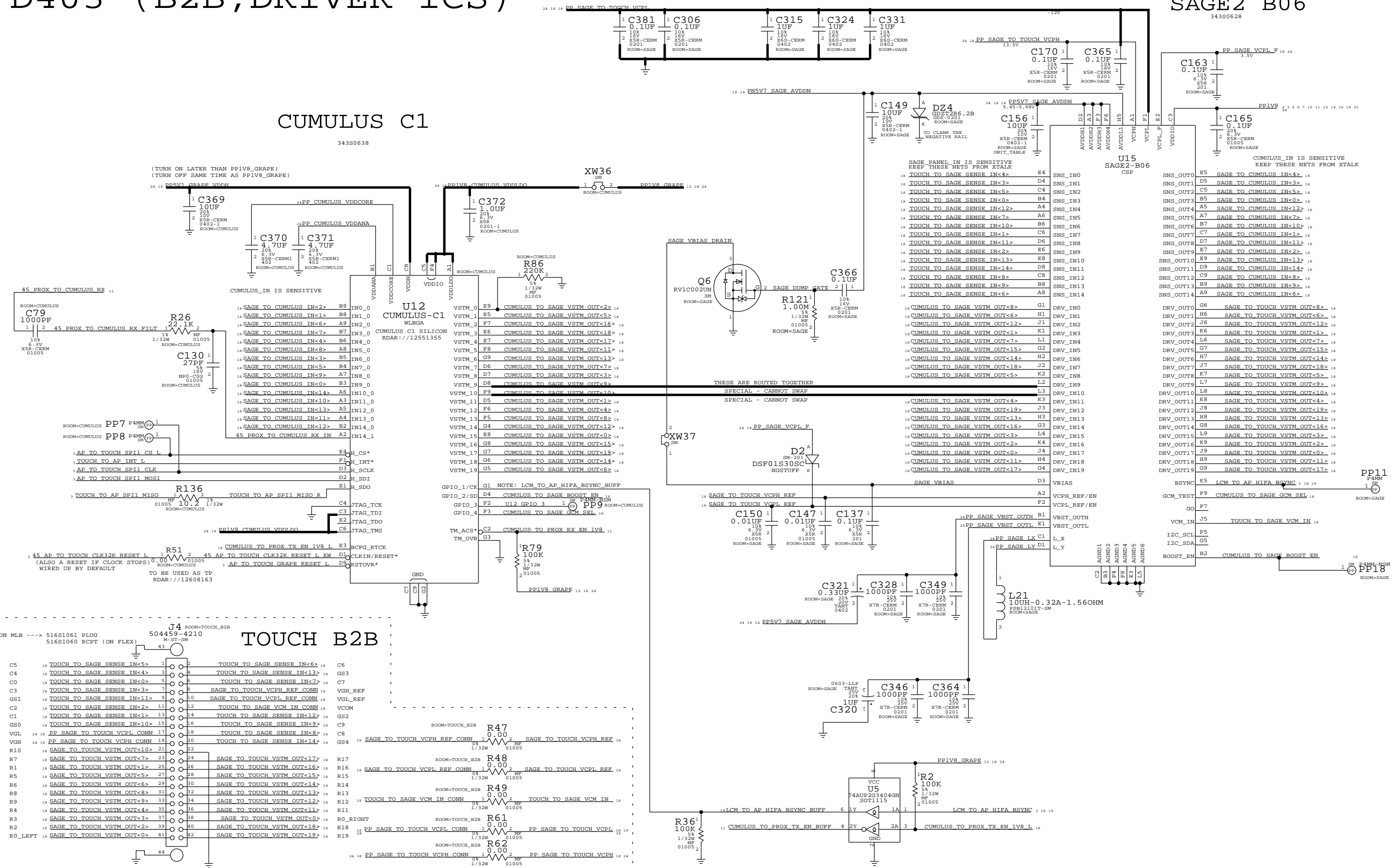
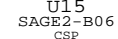
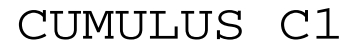
E75 DIFFPAIRS

ACCESSORY:
DETECT,
ID, PWR



D403 (B2B, DRIVER ICS)

SAGE2 B06
343S0628



LCM B2B

LCM:
2-LANE MIPI

LCM:
POWER
(1.8V DVDD)
(+5.7V AVDD)
(-5.7V AVDD)

LCM:
DIGITAL I/F
(PWR_EN, RESET
PIFA, BSYNC)

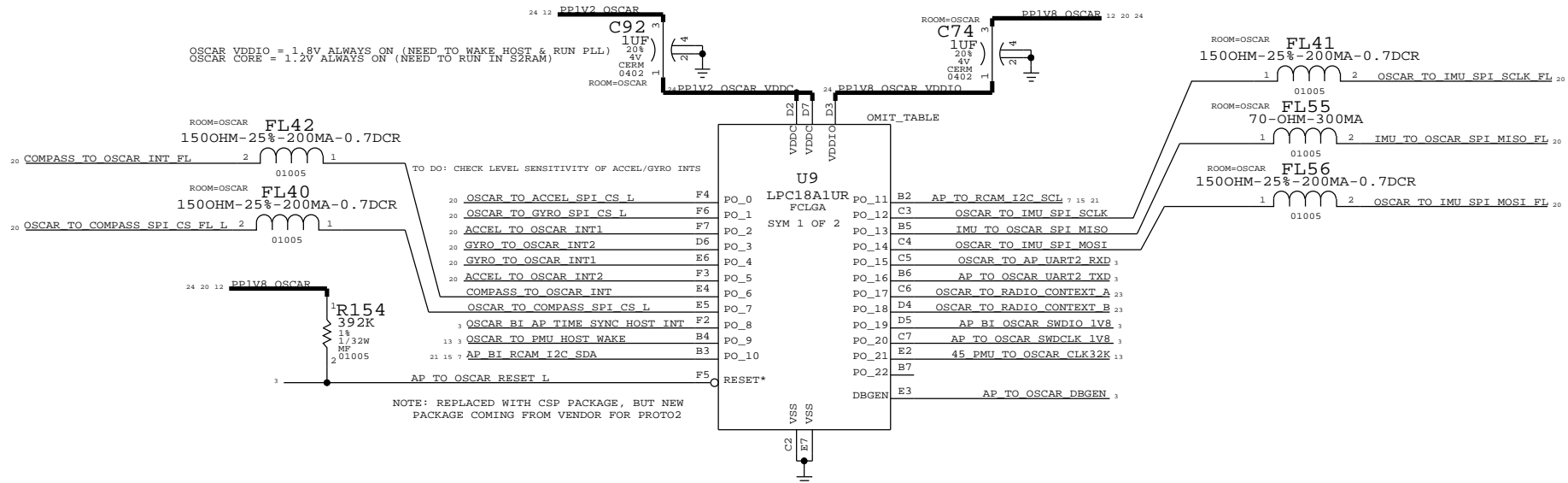
LCM:
BACKLIGHT

PCB: ALL 56PF CAPS GO AT CONN

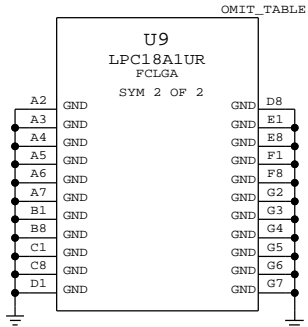
OSCAR + SENSORS

OSCAR MODULE (CONFORMAL COATED)

APN 337S4417



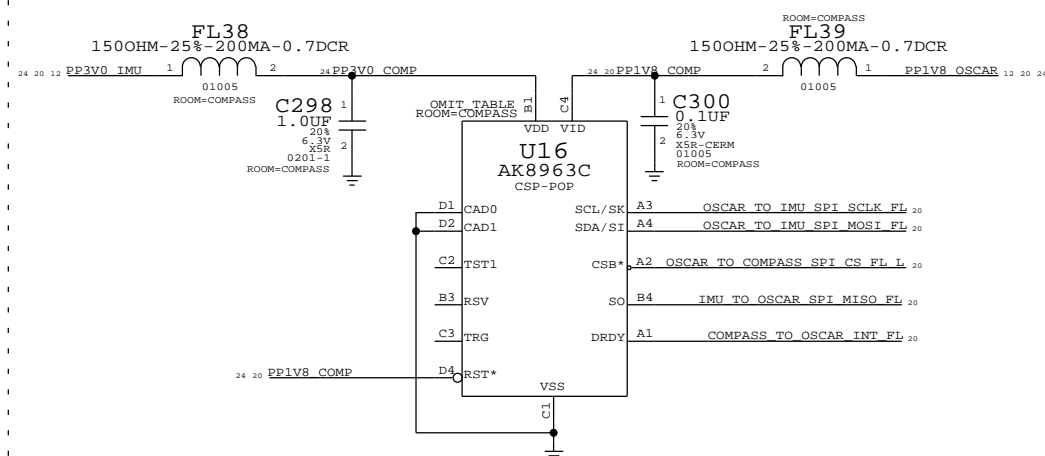
OSCAR MODULE GND BALLS (THIS SYMBOL DOES NOT EXIST ON OSCAR CSP)



THIS PART OUTSIDE OF SHIELD

COMPASS

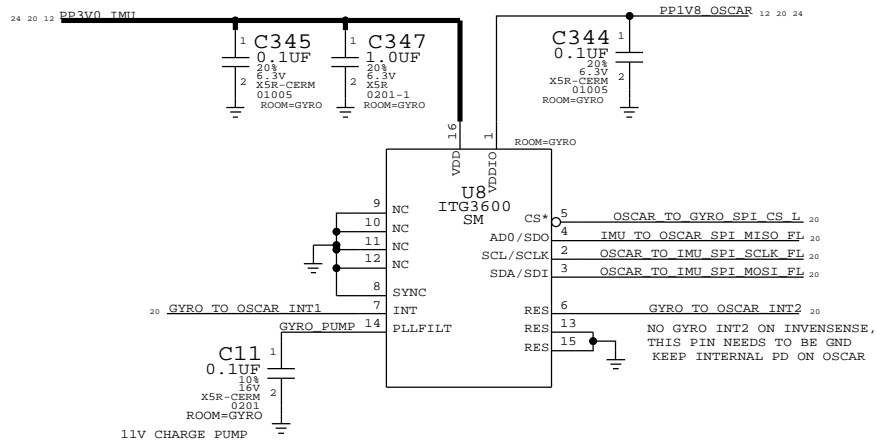
COMPASS CSP: 338S1014
COMPASS INTERPOSER (FOOTPRINT ONLY): 998-5120
COMPASS INTERPOSER MODULE: 639-4269



THESE PARTS INSIDE OF SHIELD

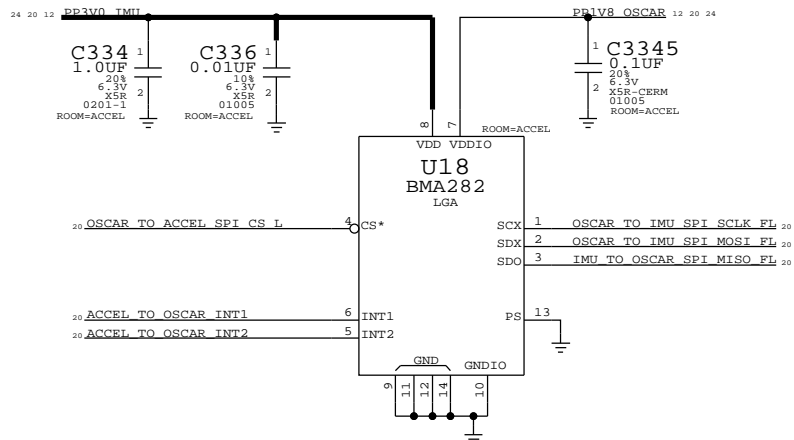
GYRO

X152: INVENSENSE ITG-3600, APN 338S1135



ACCELEROMETER

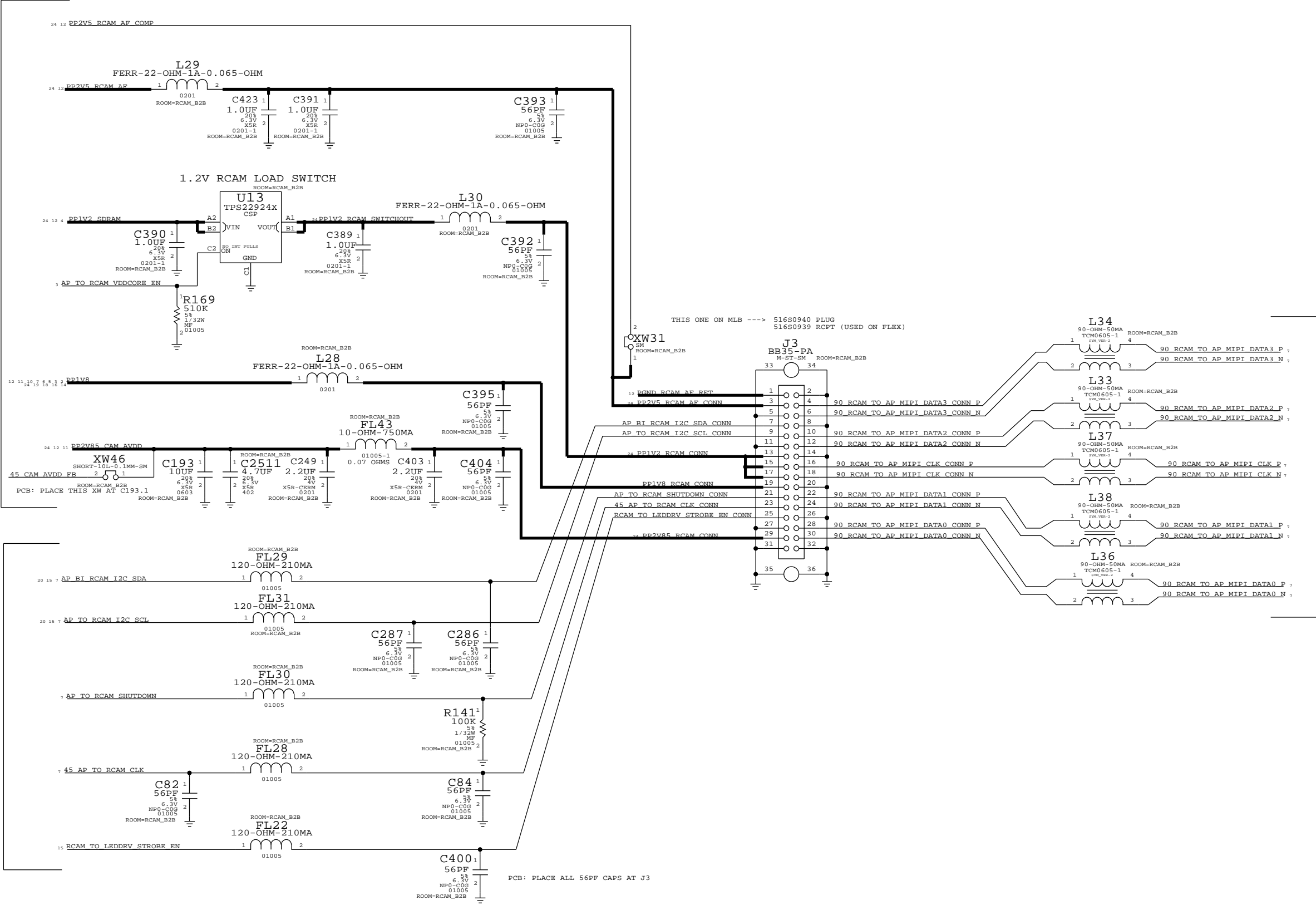
X152: BOSCH BMA282, APN 338S1163



RCAM B2B (REAR CAMERA CONNECTOR)

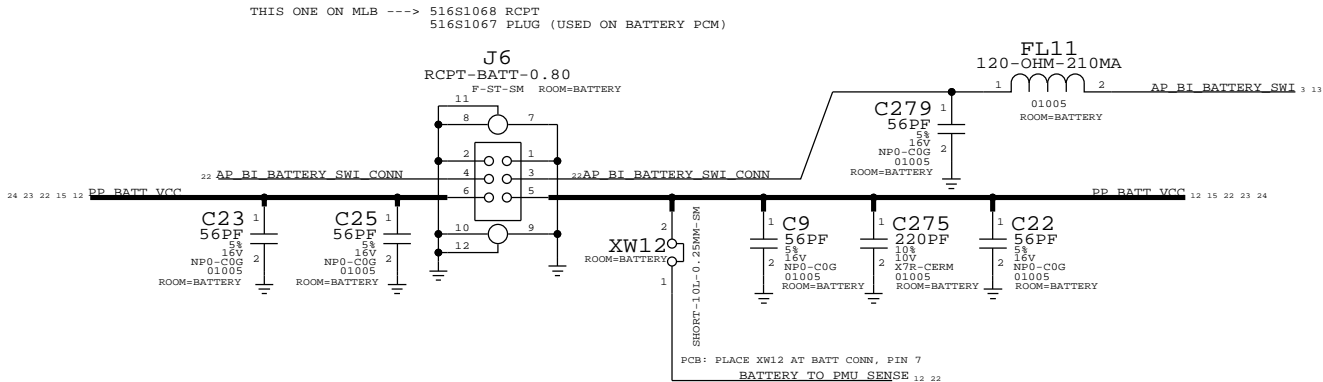
RCAM:
POWER:
(1.8V DVDD)
(2.8V AVDD)
(1.2V VCC)
(2.5V AF)

RCAM:
DIGITAL I/F
(I2C, CTRL, CLK)

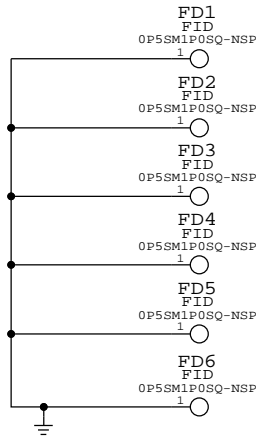


BATT CONN, TPS, STANDOFFS/SHIELDS/FIDUCIALS

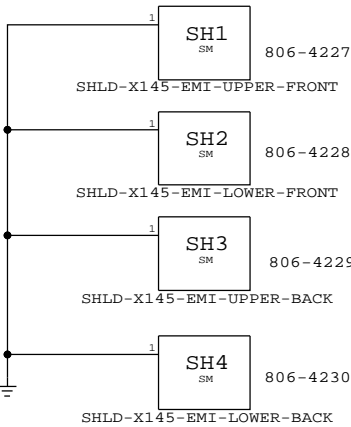
BATTERY CONN



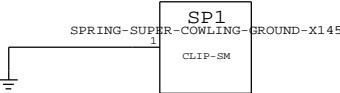
FIDUCIALS



SHIELDS

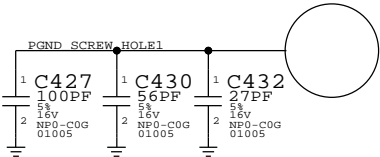


COWLING

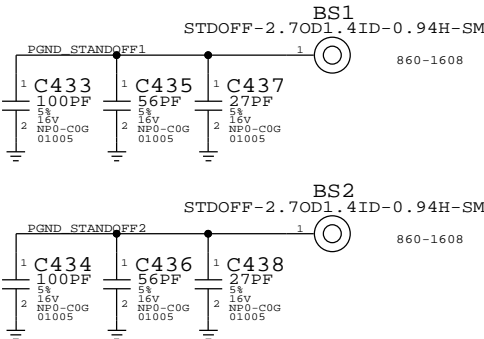


AC COUPLED SCREW HOLES + STANDOFFS
(ON NORTH END OF SINGLE_BRD, TO MITIGATE COMPASS RETURN CURRENTS)

SCREW HOLES

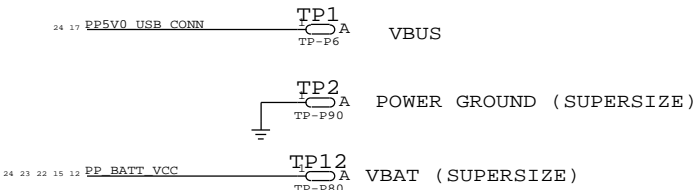


STANDOFFS

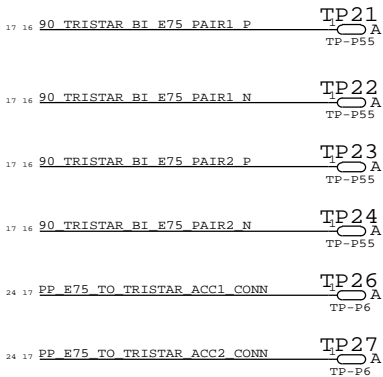


TESTPOINTS

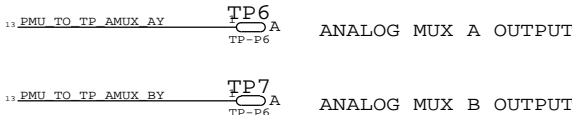
POWER TP



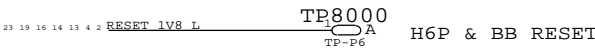
E75 - USB/UART/ID/POWER



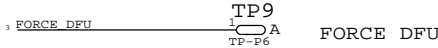
SUPER TP



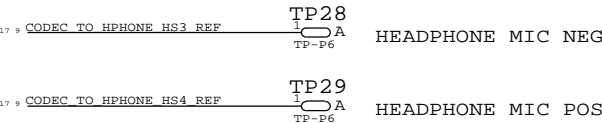
RESET



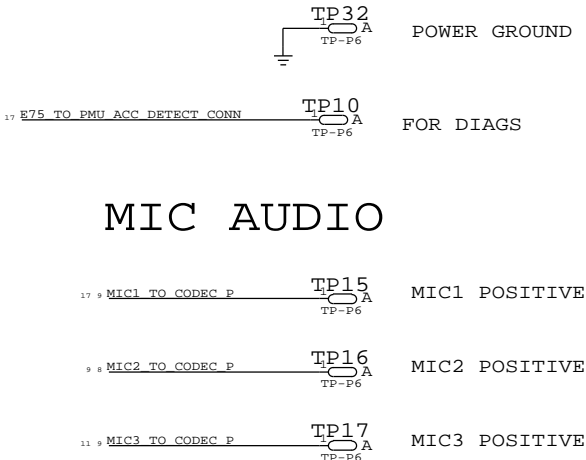
DFU



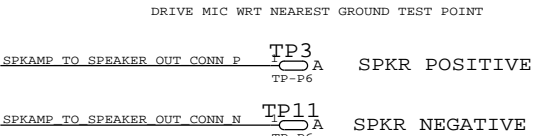
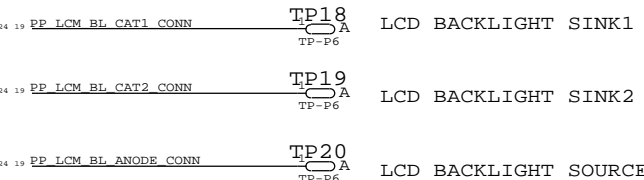
HEADPHONE MIC



MIC AUDIO



LCM BACKLIGHT



ADDED PER
RDAR://12460740

[illegible]

D

C

B

A



C

B

D

C

B

A

PDF PAGE	CSA PAGE	CONTENTS
2	2	AP INTERFACE & DEBUG CONNECTORS
3	3	PMU (1 OF 2)
4	4	PMU (2 OF 2)
5	5	BASEBAND (1 OF 2)
6	6	BASEBAND (2 OF 2)
7	7	RF TRANSCEIVER (1 OF 2)
8	8	RF TRANSCEIVER (2 OF 2)
9	9	RX MATCHING
10	10	TX INTERSTAGE FILTERS
11	11	BAND 1/34/39/38/40 TX
12	12	BAND 2/3 PAD
13	13	BAND 7/20 PAD
14	14	BAND 5/8 PAD
15	15	2G PA
16	16	PA DCDC CONVERTER
17	17	PRIMARY ASM
18	18	RX DIVERSITY
19	19	GPS
20	20	ANTENNA FEEDS
21	21	SWITCH LOGIC
22	22	BLANK
23	23	WIFI/BT

SCH : 951-2770
BOM : 639-3973
BOARD : 820-3382

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
951-2445	1	X152_RADIO_MLB	SCH	Y	
825-2029	1	EEE FOR 939-0308	EEEE_???	Y	NA

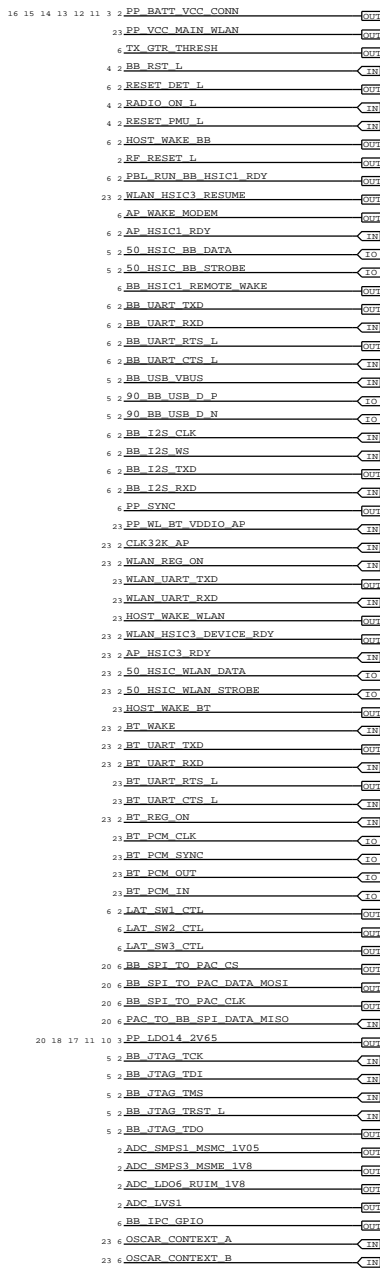
BOARD_ID BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
118S0621	1	1.00M 1% 01005	R25_RF	Y	N51_CFG_A
118S0732	1	50K 1% 01005	R26_RF	Y	N51_CFG_A
117S0159	1	470K 5% 01005	R25_RF	Y	N51_CFG_B
118S0626	1	100K 1% 01005	R26_RF	Y	N51_CFG_B
118S0626	1	100K 1% 01005	R25_RF	Y	N53_CFG_A
118S0726	1	162K 1% 01005	R26_RF	Y	N53_CFG_A
118S0626	1	100K 1% 01005	R25_RF	Y	N53_CFG_B
118S0623	1	267K 1% 01005	R26_RF	Y	N53_CFG_B
118S0659	1	255K 1% 01005	R25_RF	Y	N48_CFG_A
118S0626	1	100K 1% 01005	R26_RF	Y	N48_CFG_A
118S0689	1	147K 1% 01005	R26_RF	Y	N48_CFG_B
118S0626	1	100K 1% 01005	R26_RF	Y	N48_CFG_B
118S0626	1	100K 1% 01005	R25_RF	Y	N49_CFG_A
118S0650	1	499K 1% 01005	R26_RF	Y	N49_CFG_A
118S0732	1	50K 1% 01005	R25_RF	Y	N49_CFG_B
118S0621	1	1.00M 1% 01005	R26_RF	Y	N49_CFG_B

AP INTERFACE & DEBUG CONNECTORS

AP CONNECTIONS

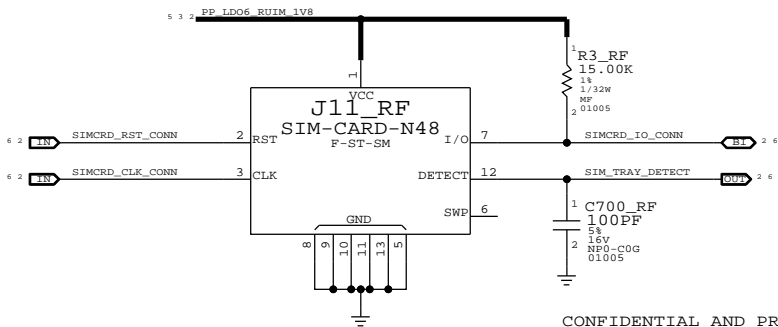
IN = FROM AP
OUT = TO AP



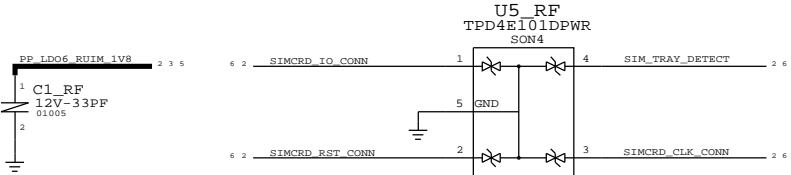
PROBE POINTS



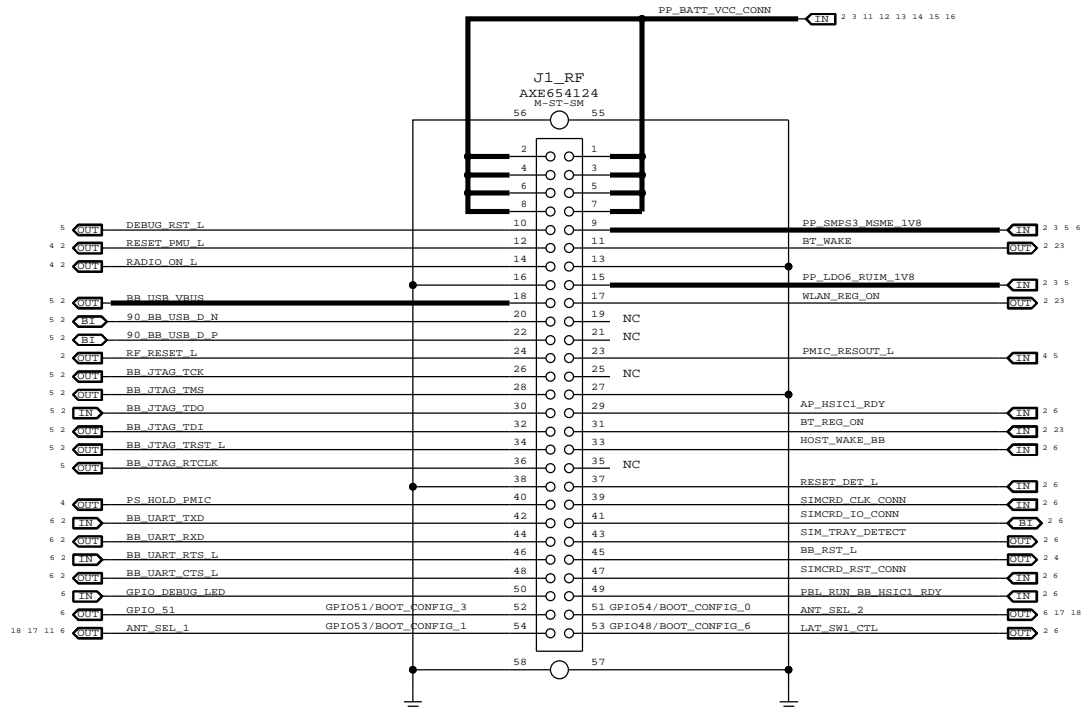
SIM CARD CONNECTOR



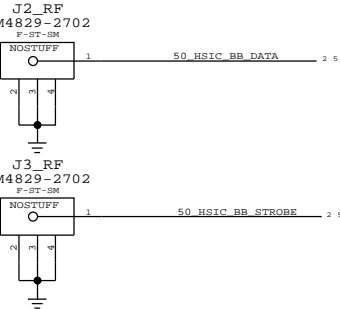
SIM CARD ESD PROTECTION



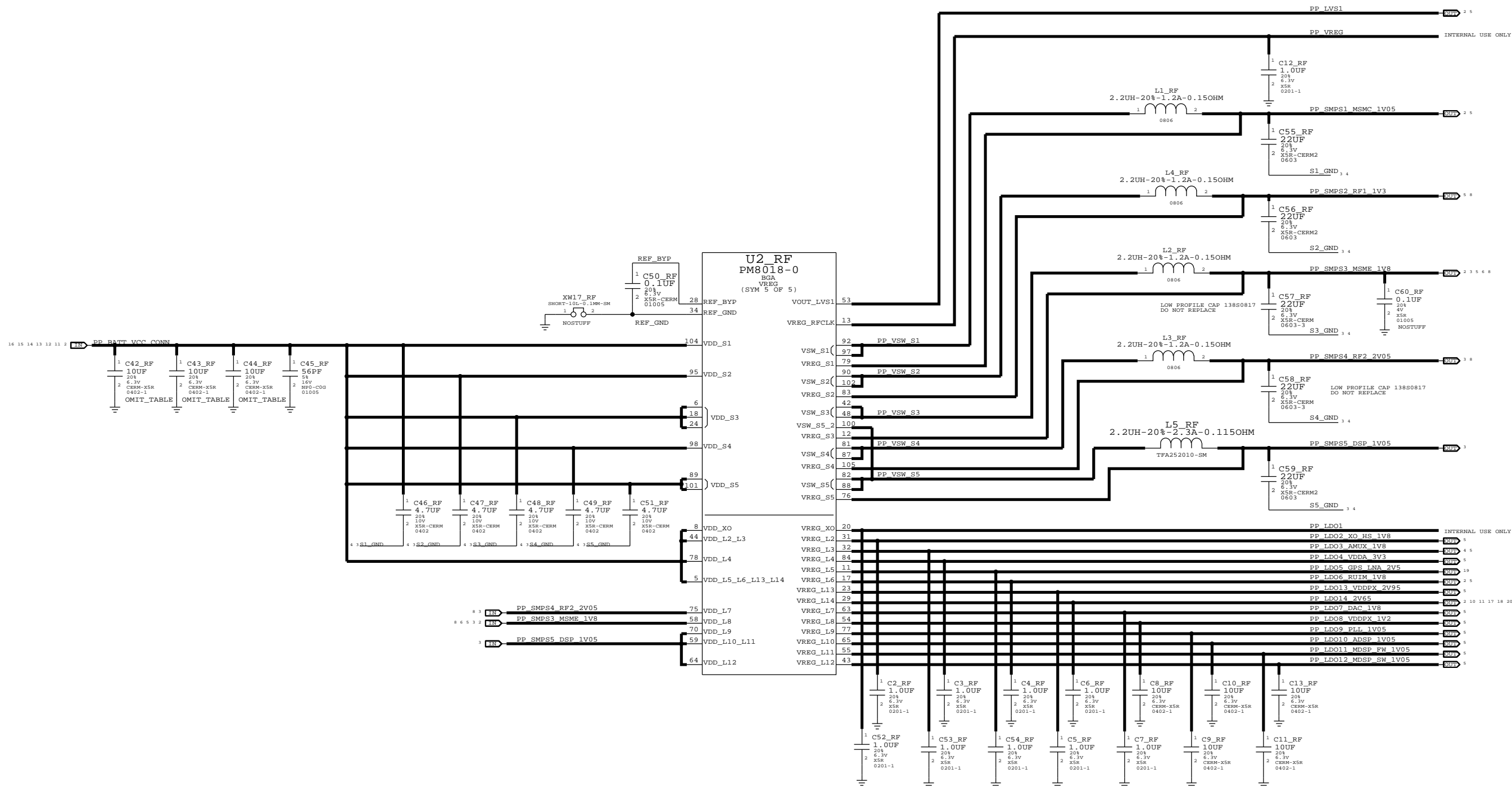
DEBUG CONNECTOR



BOOT OPTIONS	BOOT_CONFIG SW REGISTER VALUE	GPIO/BOOT_CONFIG CONFIGURATION							
		6	5	4	3	2	1	0	
BOOT_DEFAULT_OPTION	0x00	X	0	0	0	0	0	0	X
BOOT_NAND_OPTION	0x01	X	1	0	0	0	0	0	1
BOOT_HSIC_OPTION	0x02	X	1	0	0	0	0	1	0
BOOT_USB_OPTION	0x03	X	1	0	0	0	0	1	1
ENABLE SAHARA PROTOCOL	0x08	X	1	0	0	1	0	X	X



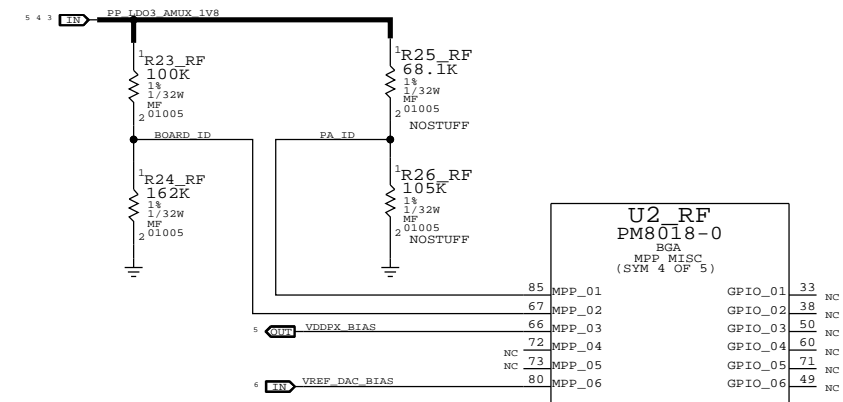
PMU (1 OF 2)



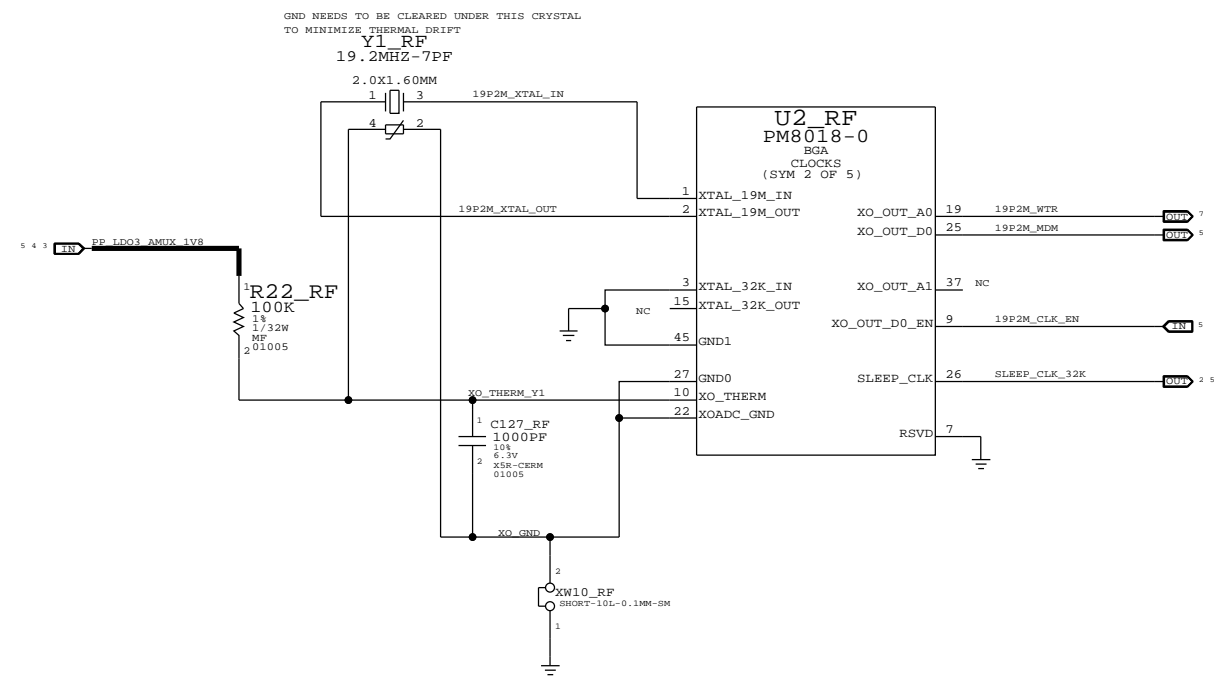
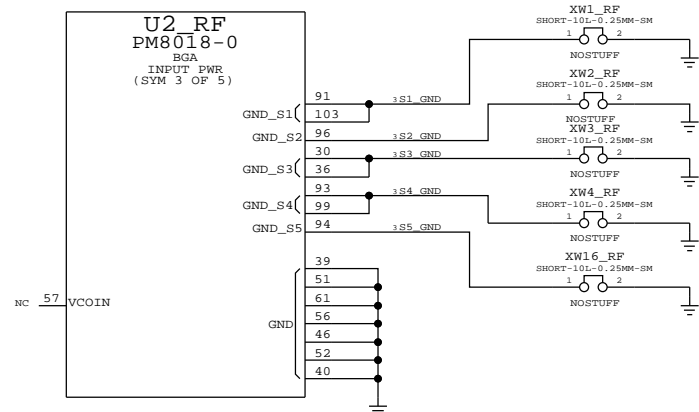
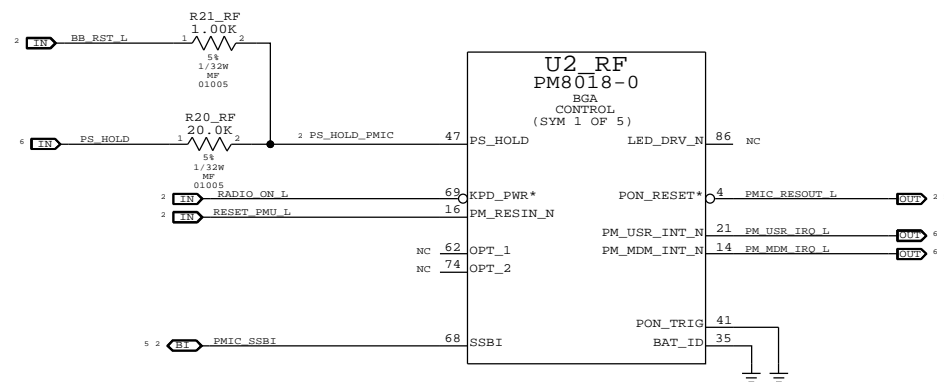
PMU (2 OF 2)

PA_ID	CONFIG
1.1V	CONFIG A
1.3V	CONFIG B
1.5V	CONFIG C
1.7V	CONFIG D

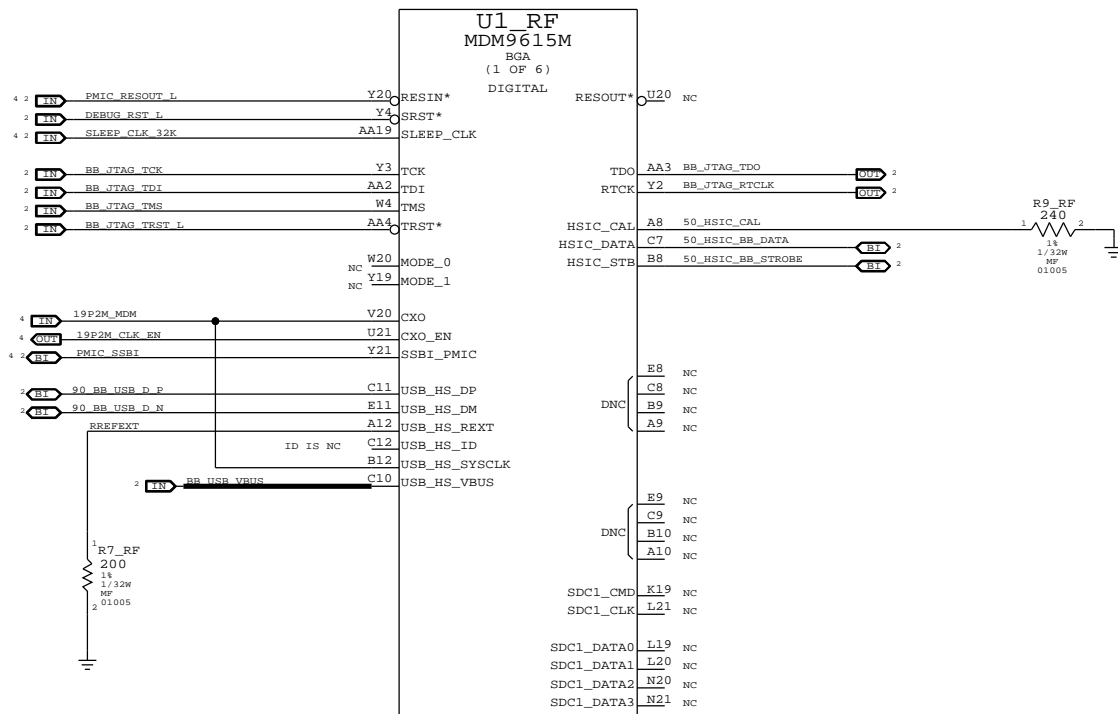
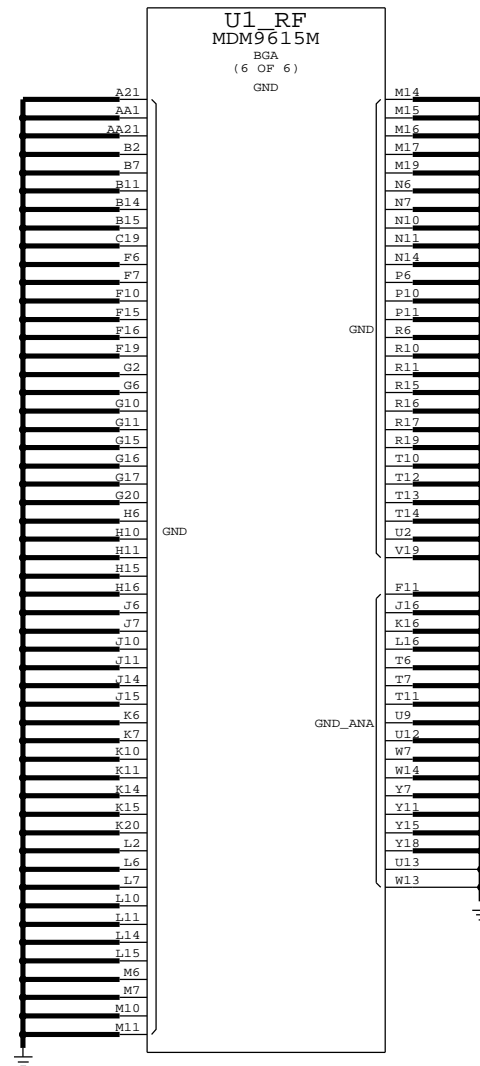
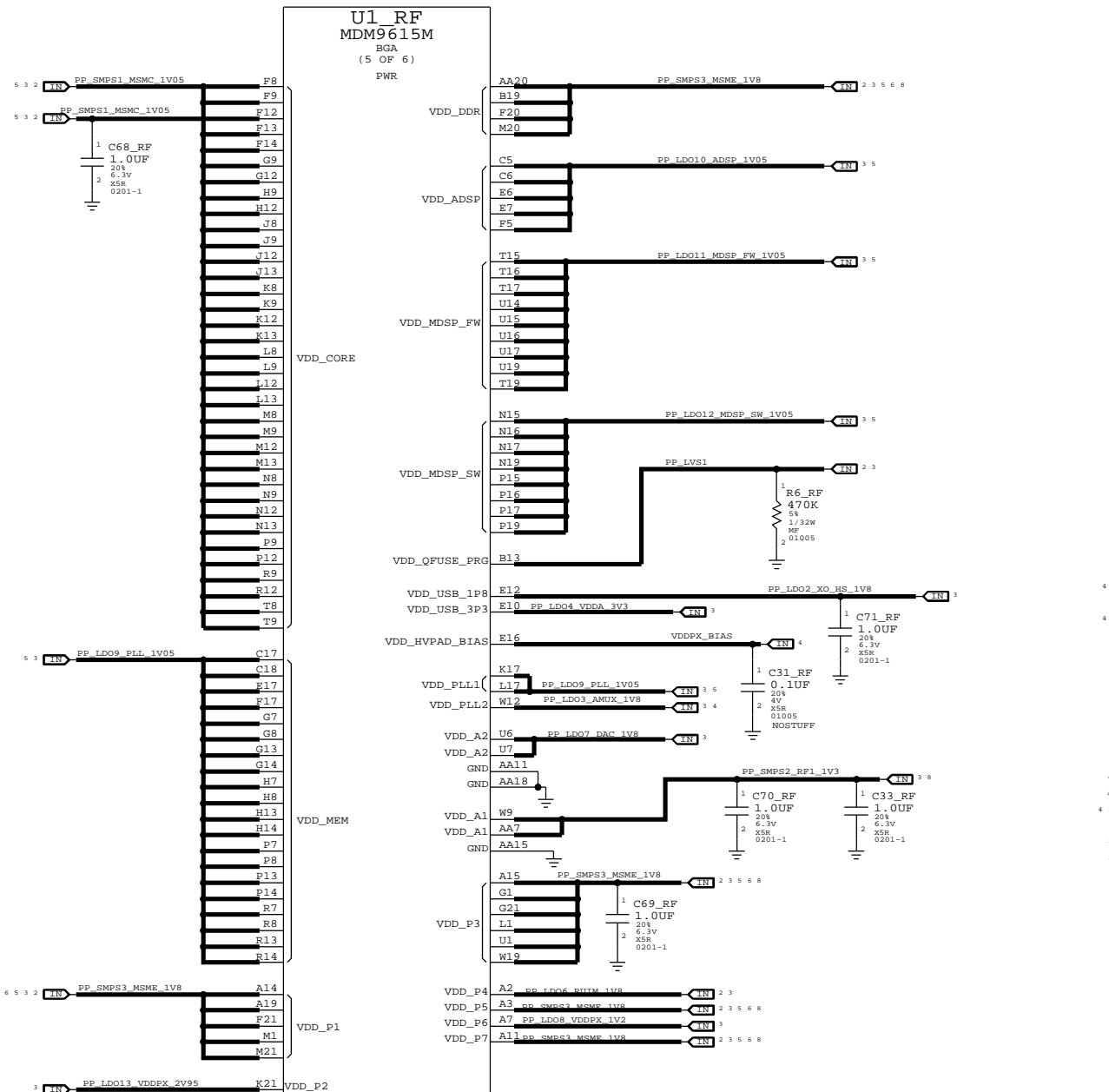
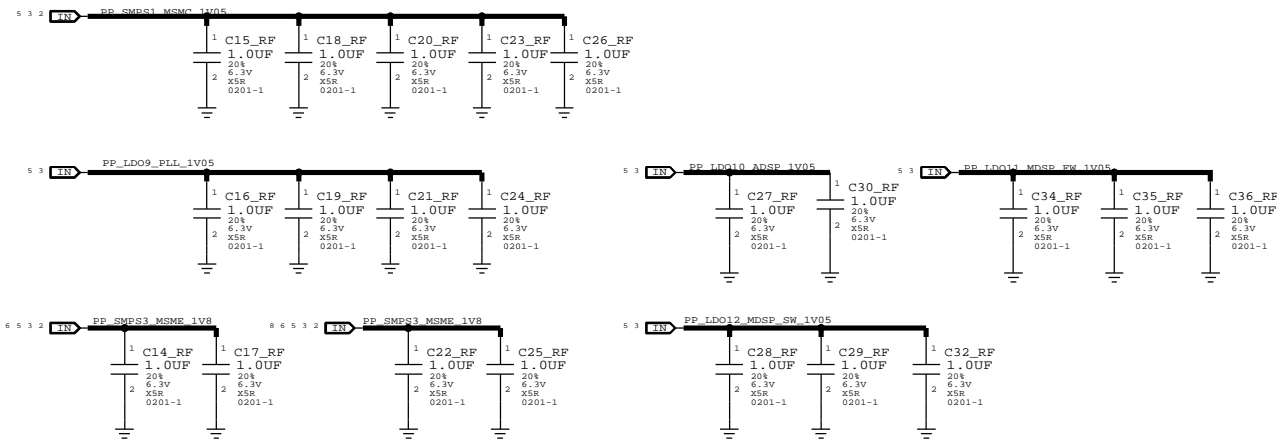
BOARD_ID	REVISION
0.7V	PROTO1
0.9V	PROTO2
1.1V	EVT1
1.3V	EVT2
1.5V	DVT
1.7V	PVT



AP SECTION NEEDS ITS OWN THERMISTOR PLACED NEAR THE PA'S.

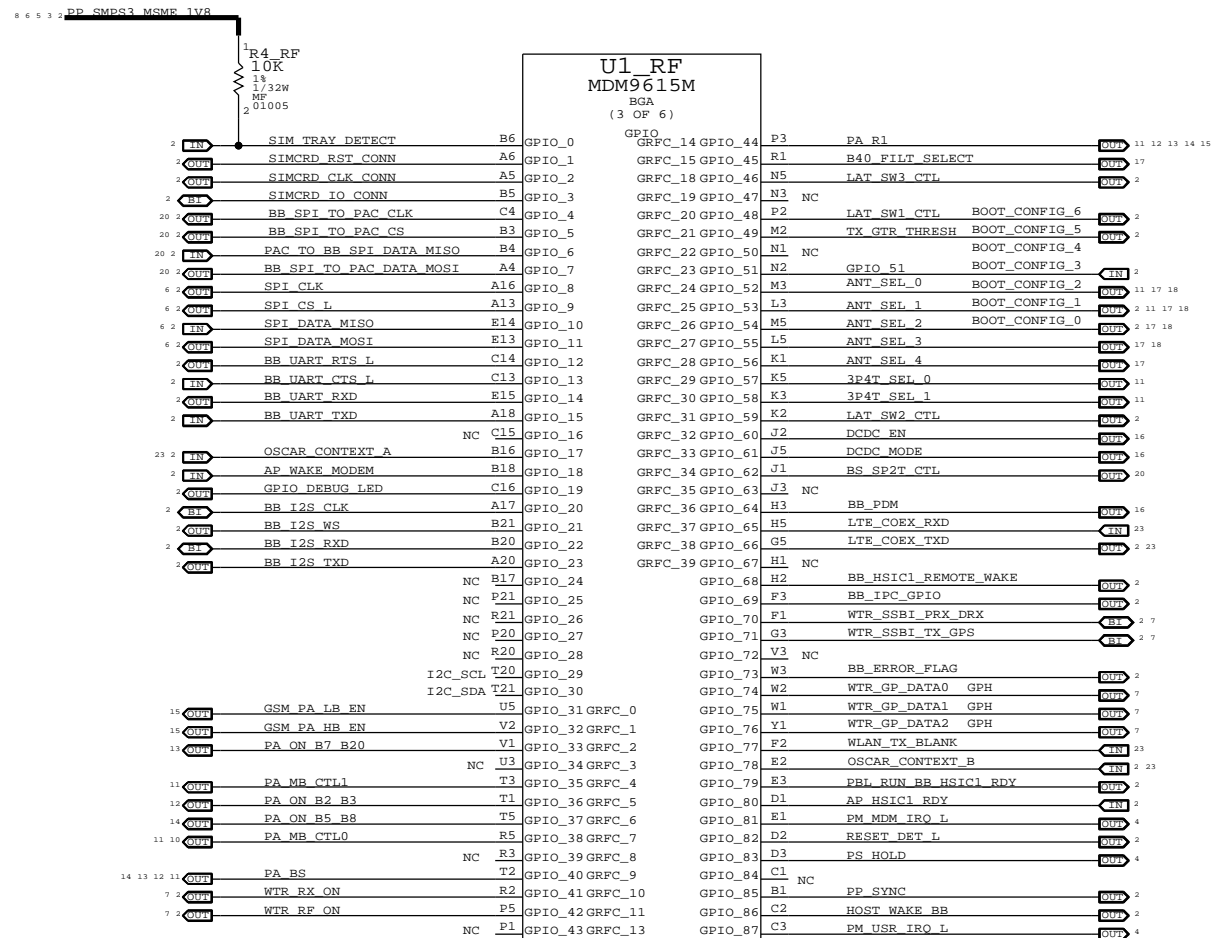
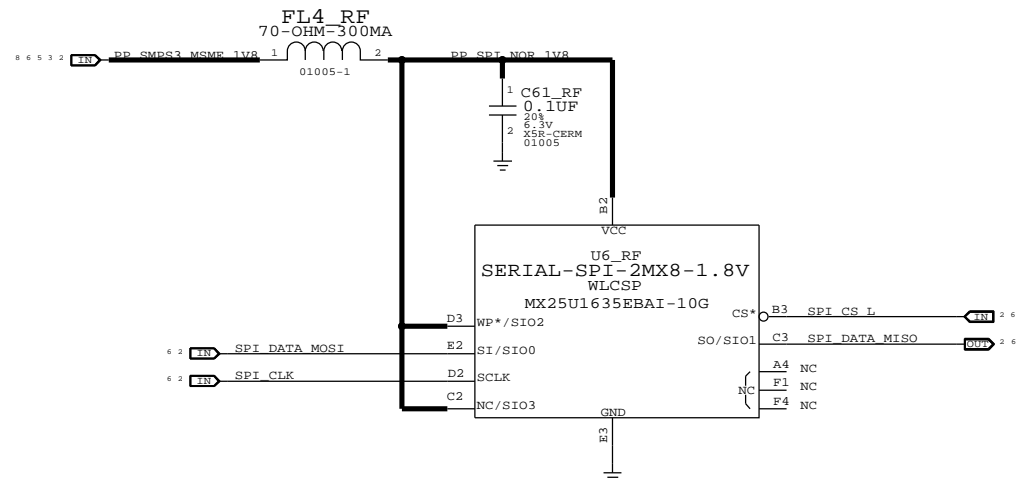
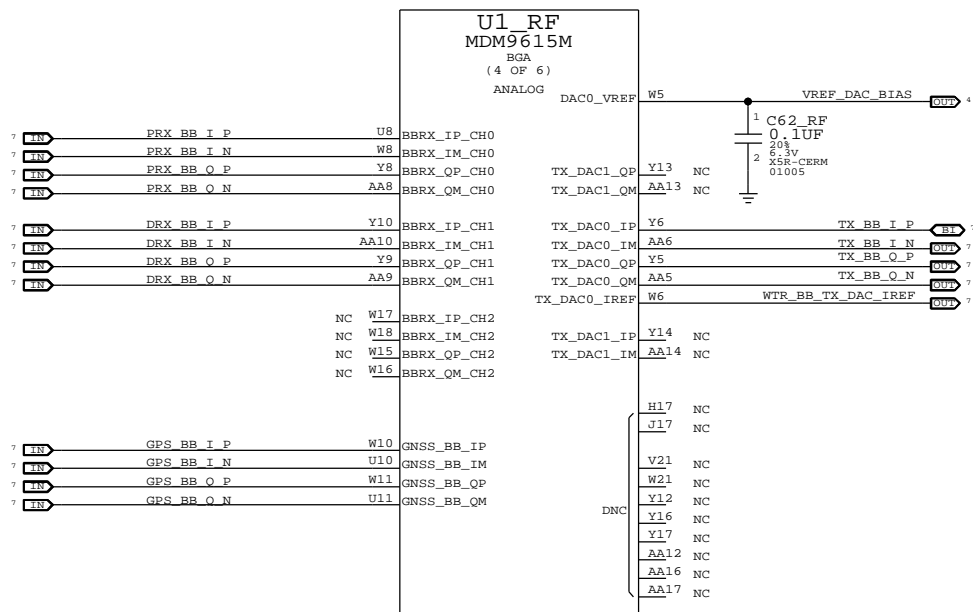


BASEBAND (1 OF 2)



CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE PURPOSE ONLY - NOT A CHANGE REQUEST

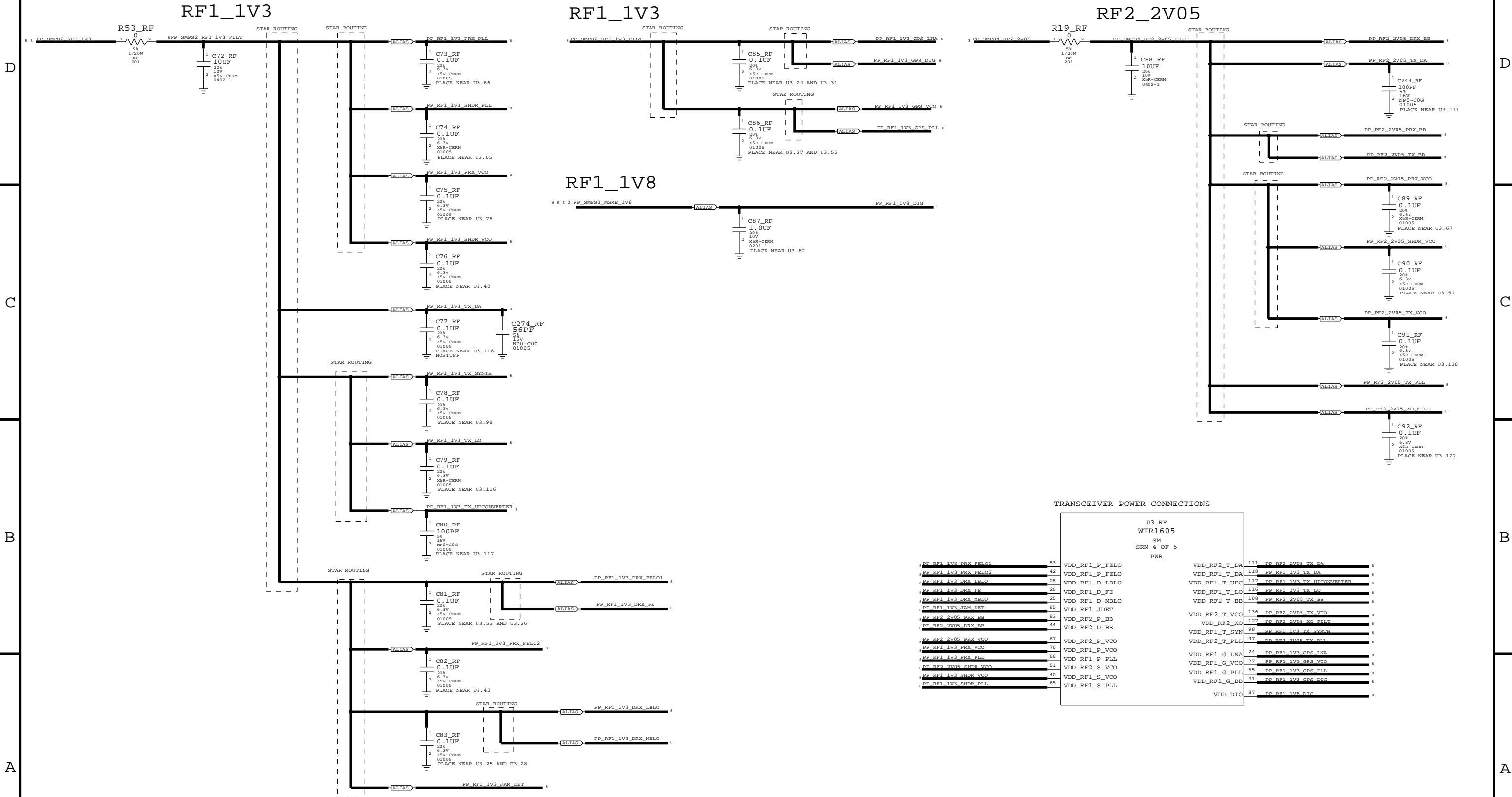
BASEBAND (2 OF 2)



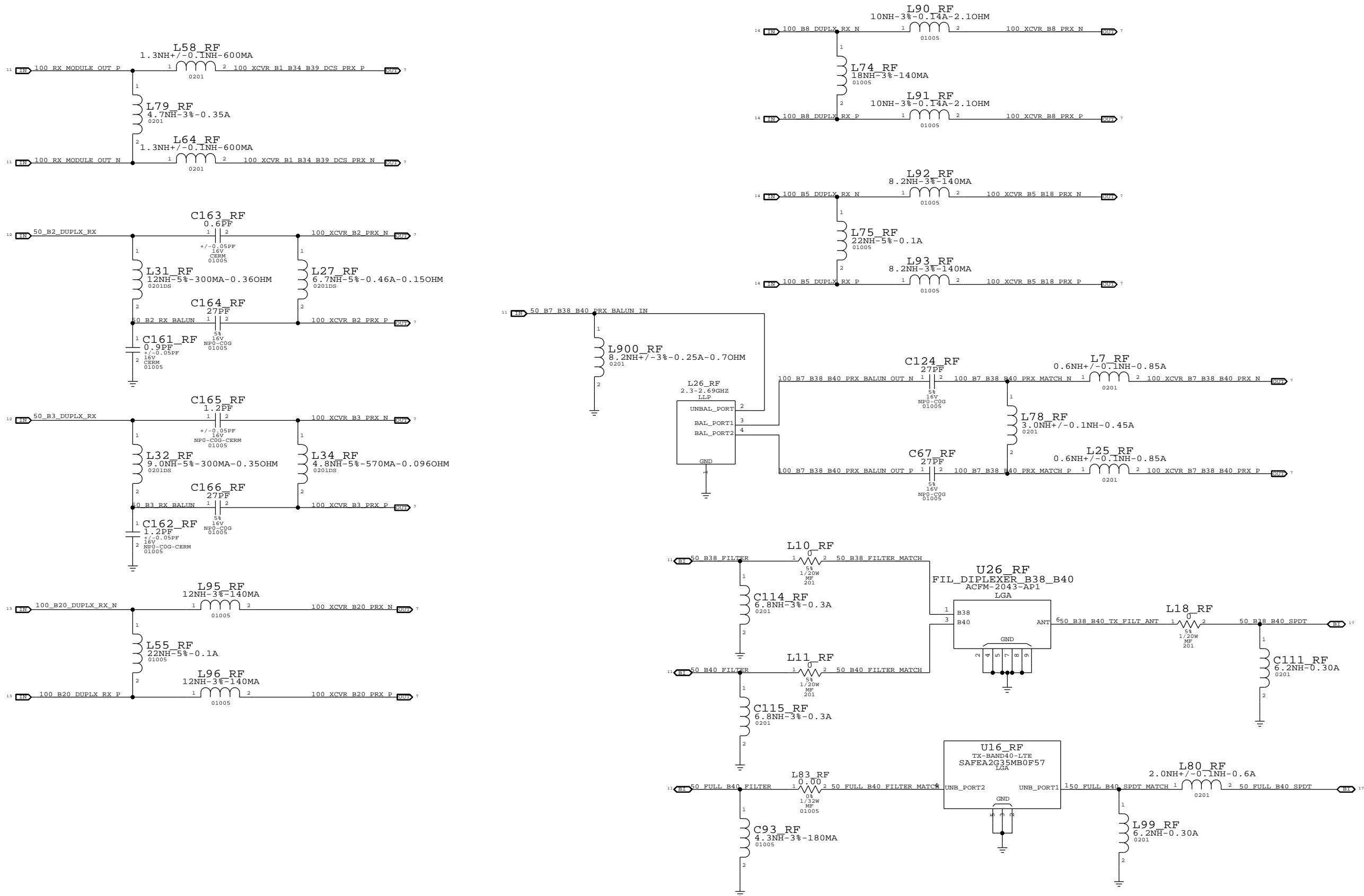
A



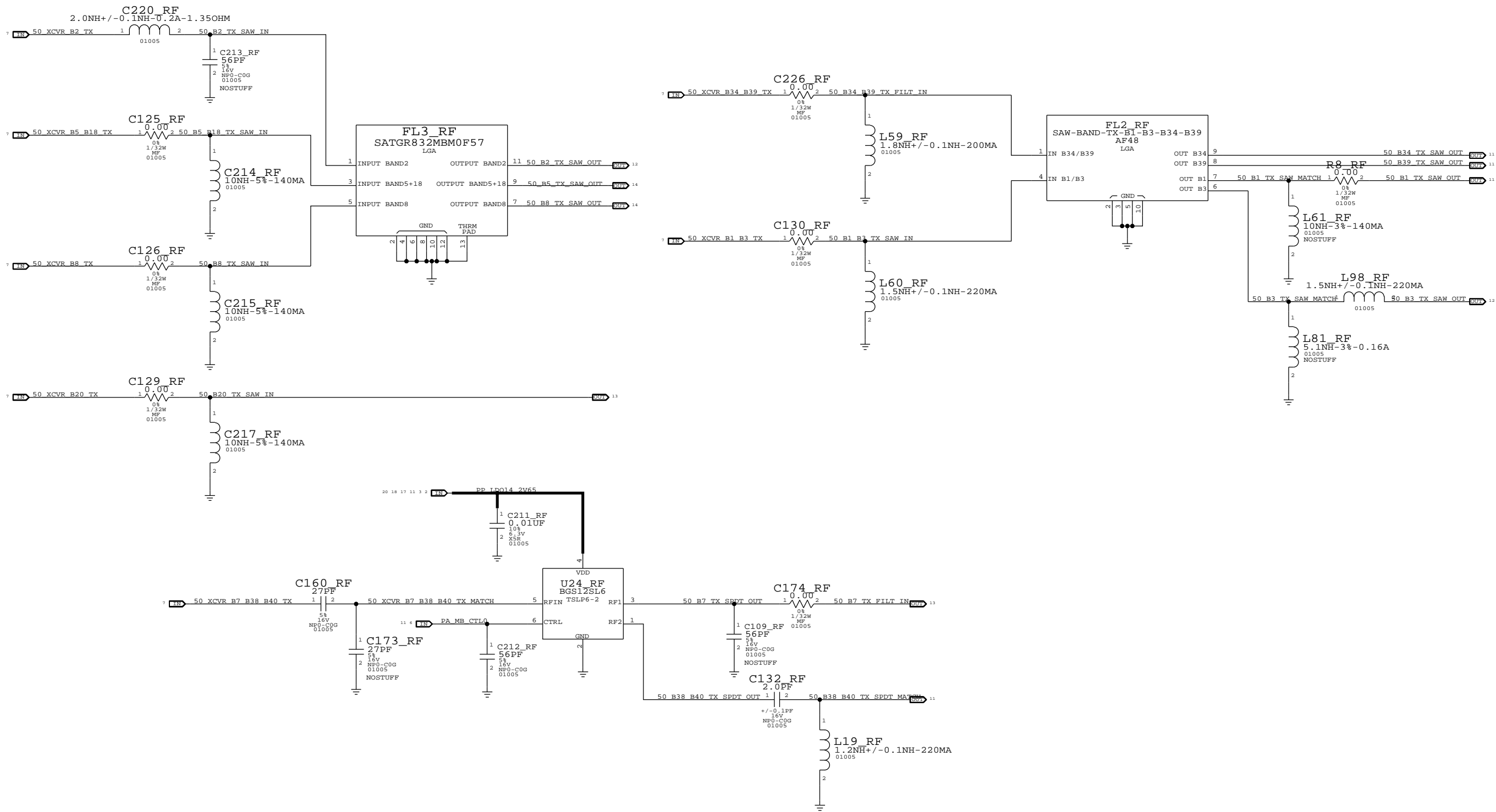
RF TRANSCEIVER (2 OF 2)



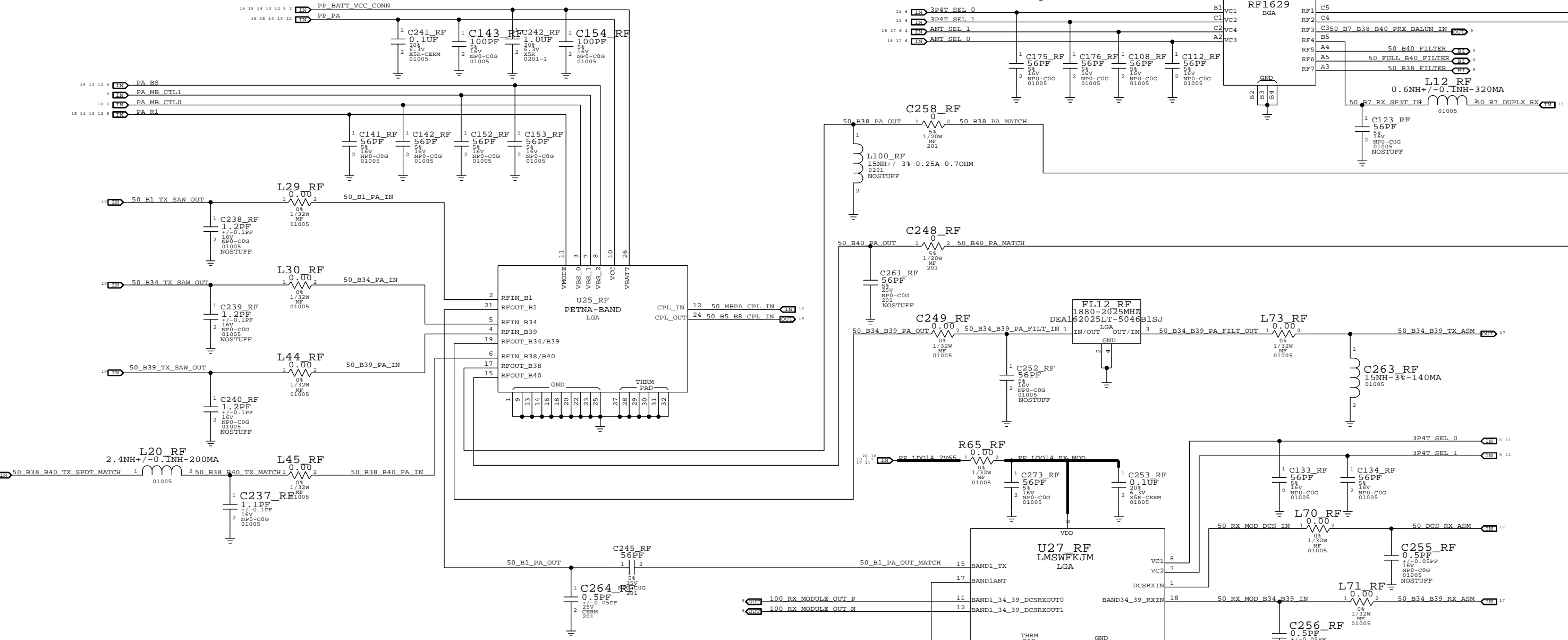
RX MATCHING



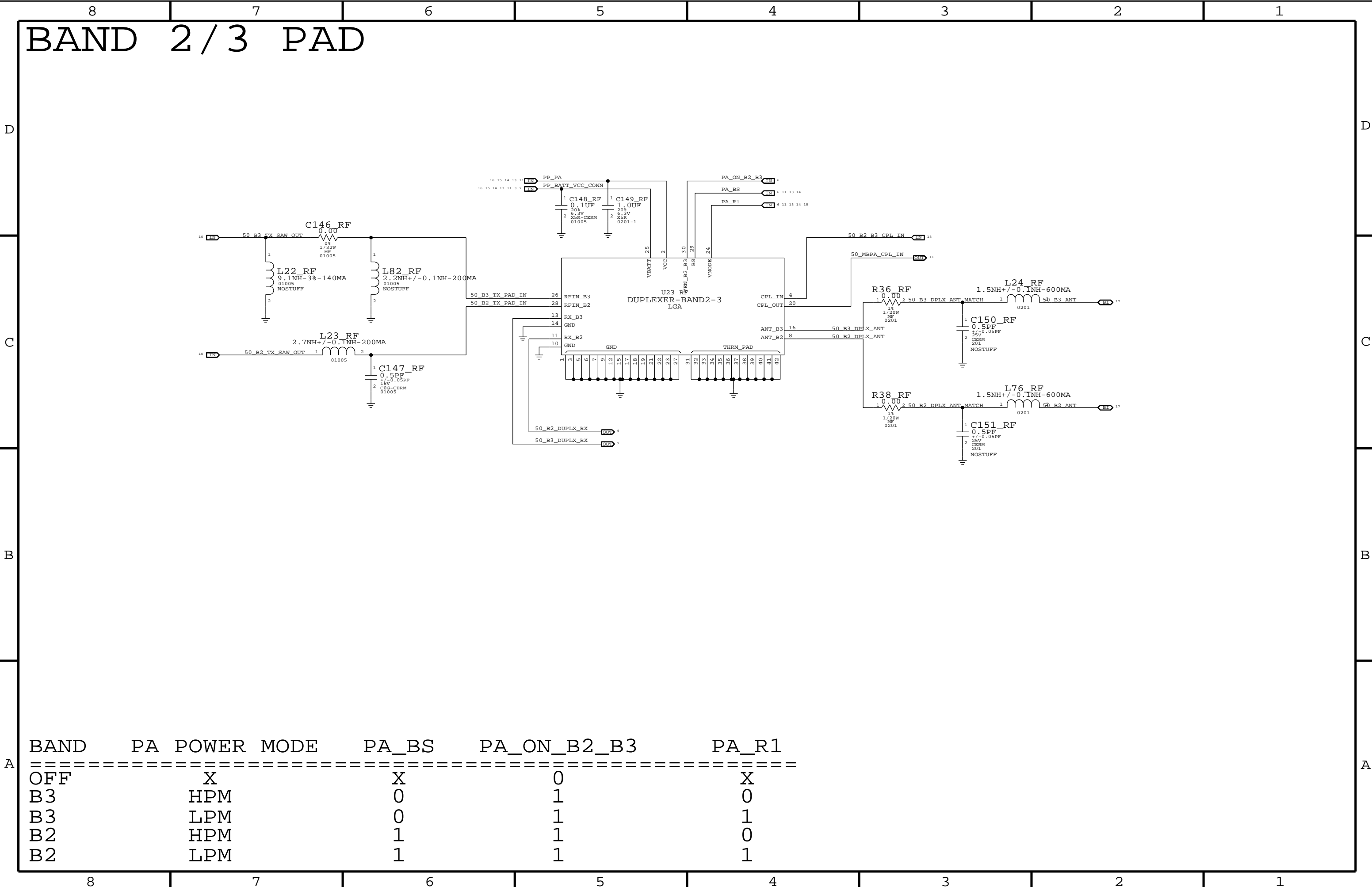
TX INTERSTAGE FILTERS



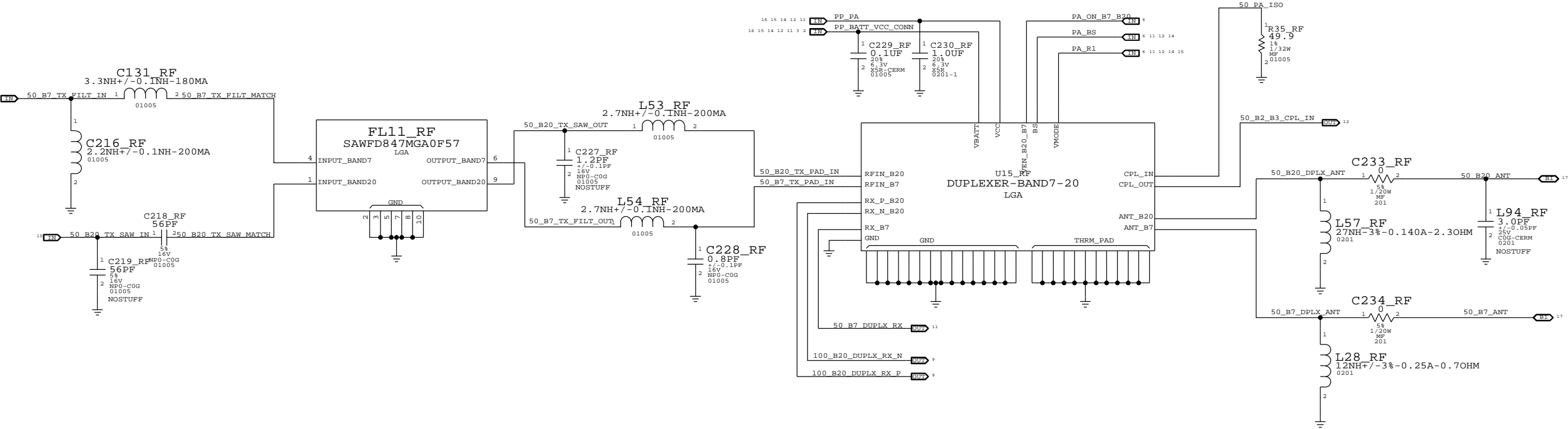
BAND 1 / 34 / 39 / 38 / 40 TX



BAND	PA	POWER	MODE	PA_BS	PA_CTL1	PA_CTL0	PA_R1
=====	=====	=====	=====	=====	=====	=====	=====
OFF		X		X	0	0	0
B1		HPM		X	1	0	0
B1		LPM		X	1	0	1
B34		HPM		1	0	1	0
B34		LPM		1	0	1	1
B39		HPM		0	0	1	0
B39		LPM		0	0	1	1
B38		HPM		1	1	1	0
B38		LPM		1	1	1	1
B40		HPM		0	1	1	0
B40		LPM		0	1	1	1

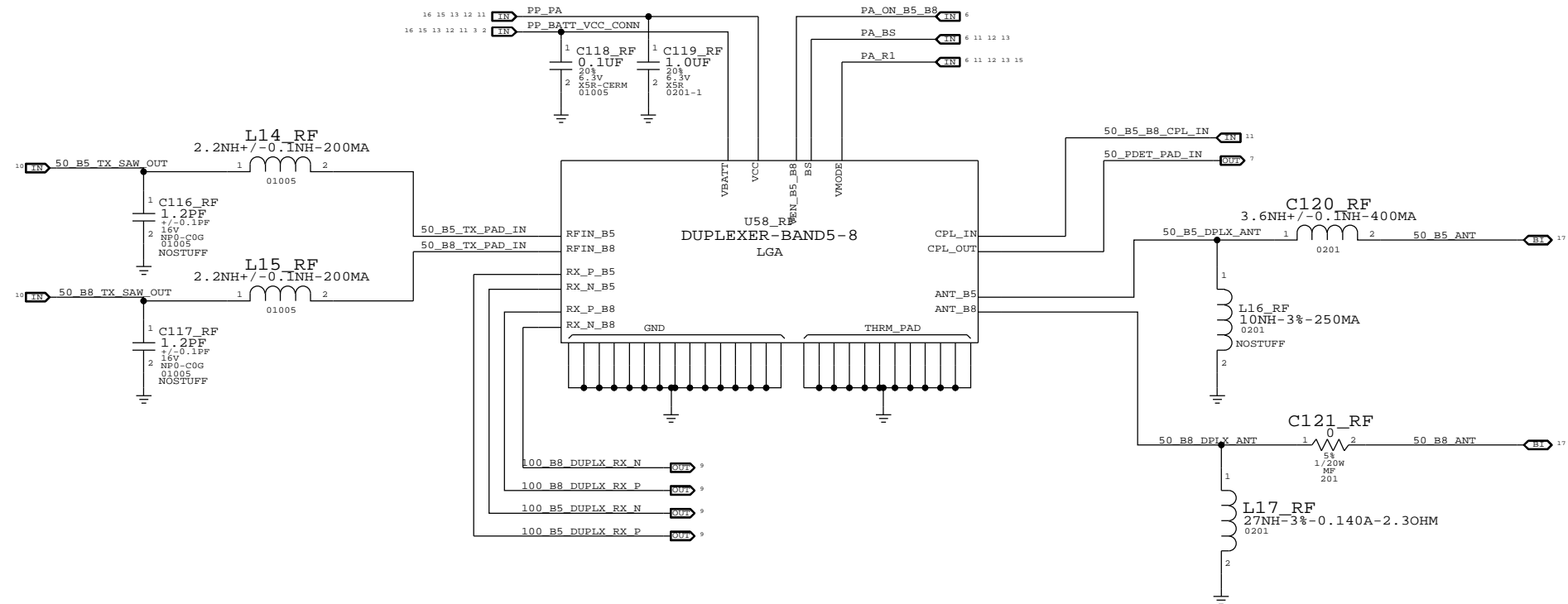


BAND 20/7 PAD



BAND	PA	POWER	MODE	PA_BS	PA_ON_B20_B7	PA_R1
=====	=====	=====	=====	=====	=====	=====
OFF		X		X	0	X
B20		HPM		0	1	0
B20		LPM		0	1	1
B7		HPM		1	1	0
B7		LPM		1	1	1

BAND 5 / 8 PAD



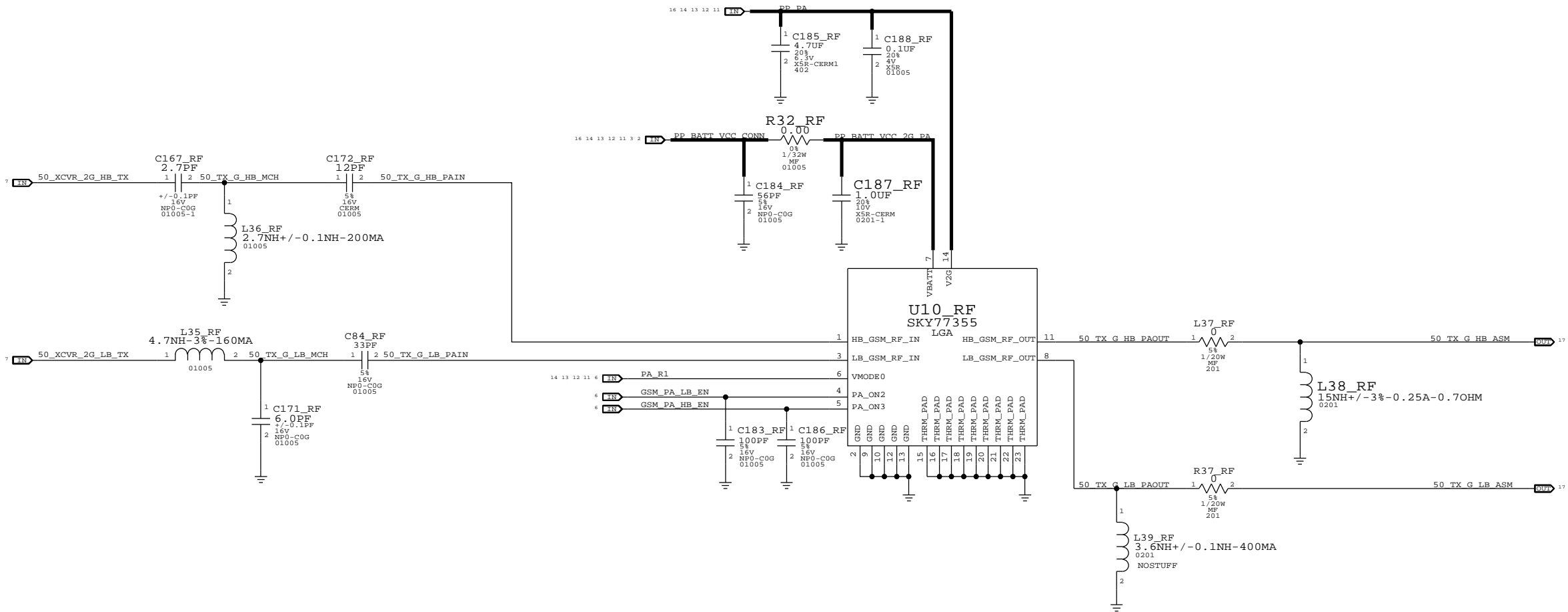
BAND	PA	POWER	MODE	PA_BS	PA_ON_B5_B8	PA_R1
OFF		X		X	0	X
B5		HPM		0	1	0
B5		LPM		0	1	1
B8		HPM		1	1	0
B8		LPM		1	1	1

2G PA

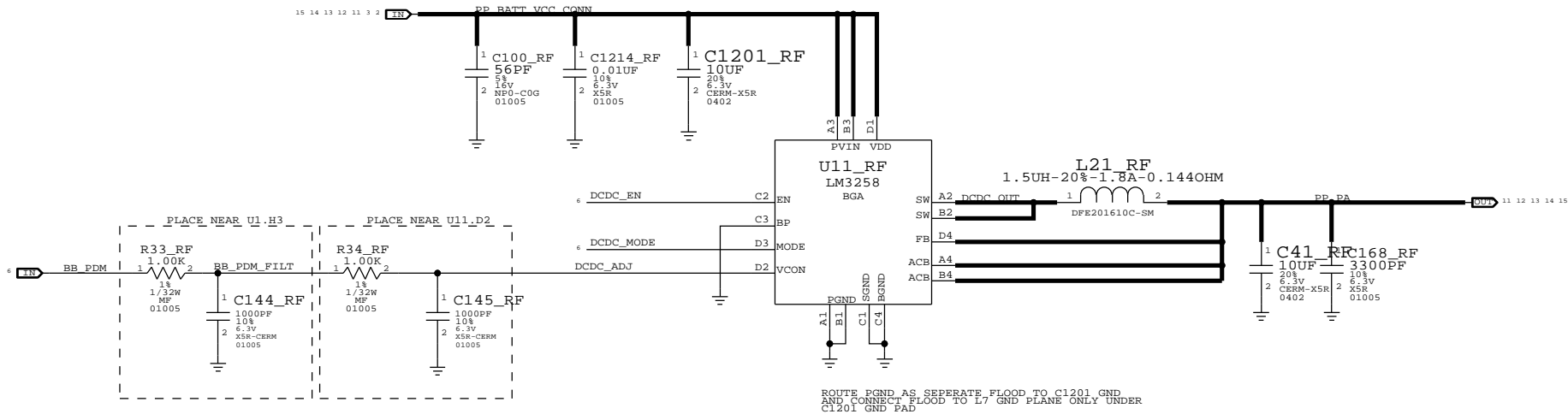
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2G PA GAIN MODES

BAND	MODE	GAIN MODE	PA_R1	PCL RANGE
LOW BAND	GSM	ULTRA LOW	HIGH	16 TO 19
LOW BAND	GSM	LOW	HIGH	14 TO 15
LOW BAND	GSM	MEDIUM	LOW	7 TO 13
LOW BAND	GSM	HIGH	LOW	5 TO 6
HIGH BAND	GSM	ULTRA LOW	HIGH	10 TO 15
HIGH BAND	GSM	LOW	HIGH	7 TO 9
HIGH BAND	GSM	HIGH	LOW	0 TO 6
LOW BAND	EDGE	LOW	HIGH	15 TO 19
LOW BAND	EDGE	MEDIUM	LOW	10 TO 14
LOW BAND	EDGE	HIGH	LOW	8 TO 9
HIGH BAND	EDGE	LOW	HIGH	9 TO 15
HIGH BAND	EDGE	HIGH	LOW	2 TO 8

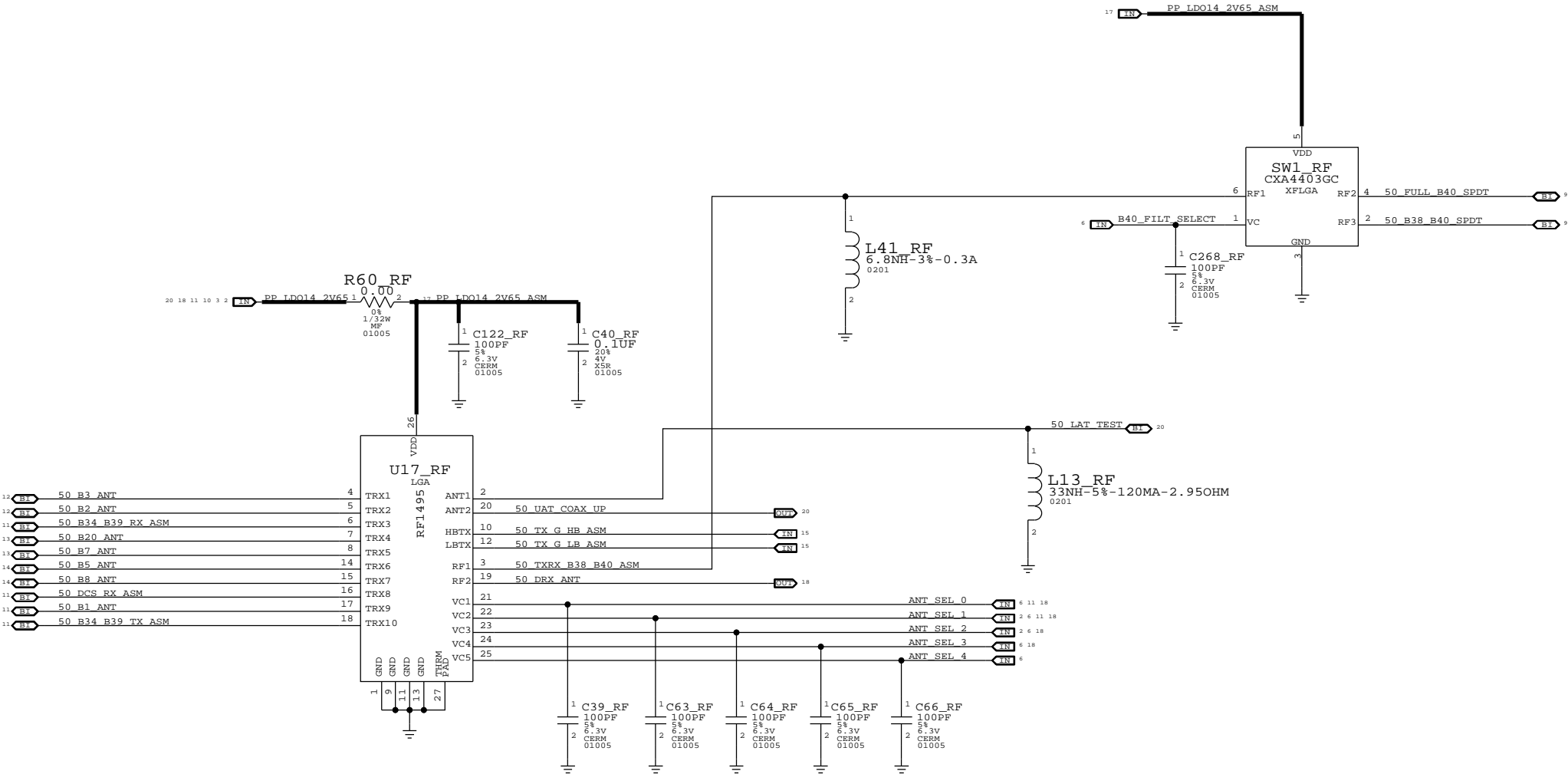


PA DC/DC CONVERTER



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PRIMARY ASM



D



B

A

D

C

B

A

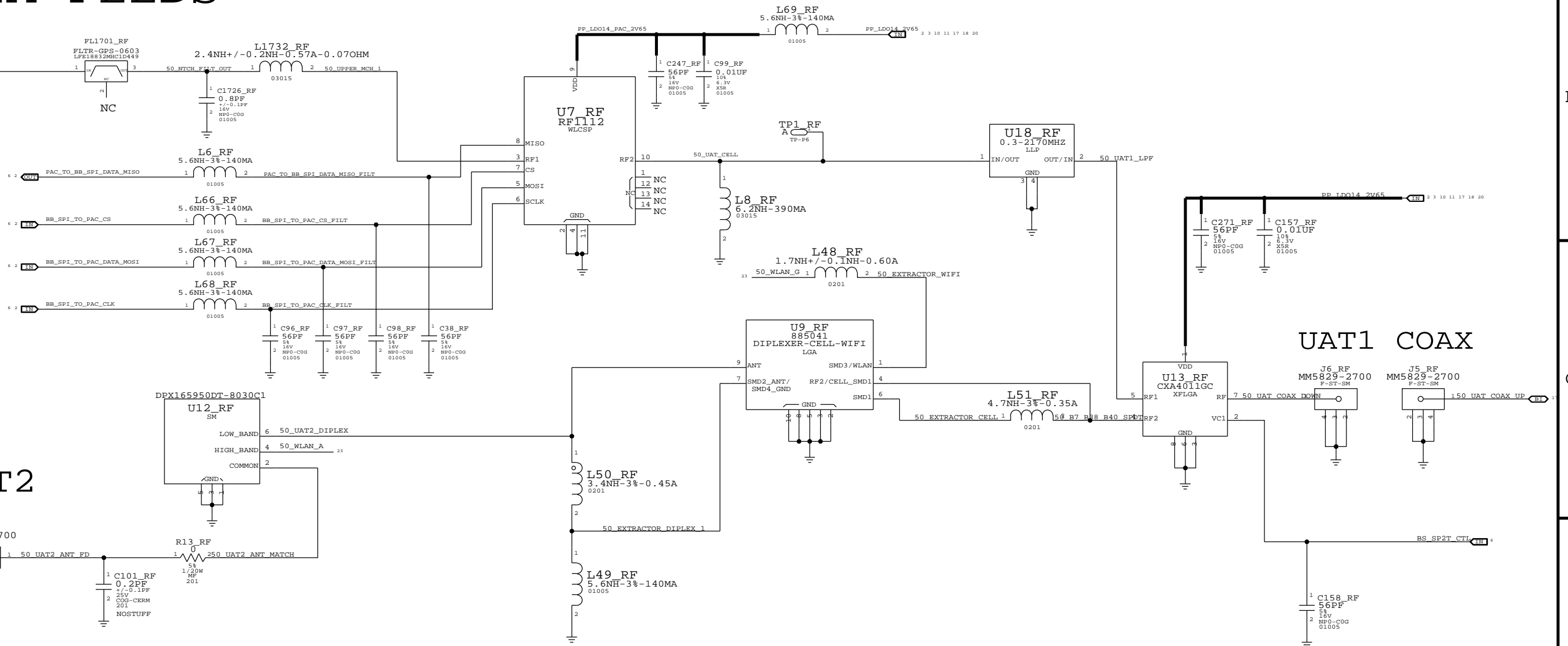
The schematic diagram illustrates the internal components and signal flow of a GPS module. The main components and their connections are as follows:

- GPS FEED:** The input signal enters through a connector labeled **SP2_RF** (1.6X1.21MM SM-NSP).
- Matching Network:** The signal passes through a series of components:
 - C282_RF** (0.8PF, +/-0.05PF, 25V, COG-CERM, 0201).
 - R72_RF** (6.2NH-0.30A, 0201) in shunt to ground.
 - R75_RF** (1.6PF, +/-0.1PF, 25V, COG-CERM, 0201) in series.
- Antenna Feed:** The signal is labeled **50_GPS_ANT_FEED** and enters the **U20_RF** module.
- RF Module (U20_RF):** A SKY65716-11 LGA module.
 - VDD:** Connected to a power source labeled **PP_LDO5_GPS_LNA_2V5** with a note "BYPASSING INCLUDED IN MODULE".
 - GND:** Multiple pins (1-12) connected to ground.
 - THRM_PAD:** Thermal pad connected to ground.
 - RFOUT:** Output signal labeled **50_GPS_LNA_OUT**.
- Other Components:**
 - SP3_RF** (CLIP-SM) is connected to **SPRING-OVERPASS-GND-NORTH-X145**.
 - SP1_RF** is shown as a component without a specific footprint.

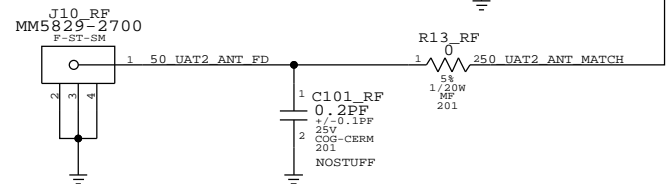
The diagram uses standard electronic symbols for capacitors, inductors, resistors, and integrated circuits, with labels indicating component values, footprints, and part numbers.

ANTENNA FEEDS

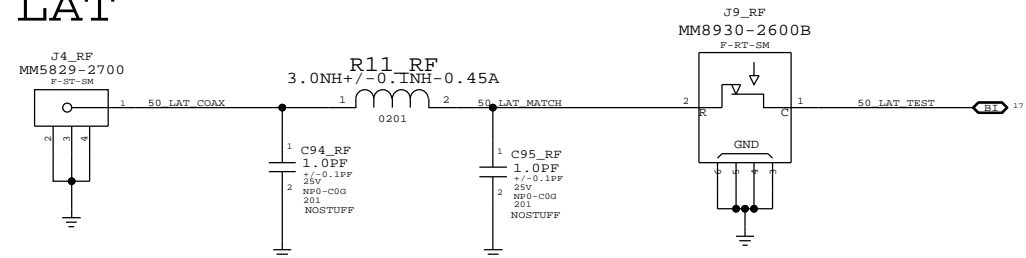
UAT1



UAT2



LAT



D



B

A