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N2_MASTER_REV0.5

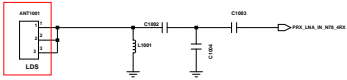
2020.10.12

- sheet01 : RF(1/2)
- sheet02 : RF (2/2)
- sheet03 : UFS, NFC
- sheet04 : BT/WIFI, GPS, SENSOR HUB
- sheet05 modAP(Olympus) & System Clock
- sheet06 : modAP(Olympus) Power_decoupling capacitor
- sheet07 : Power management IC(modAP / Peri) & Charging
- sheet08 : AUDIO
- sheet09 : CAMERA
- sheet11 : DISPLAY PMIC
- sheet12 : mmW IC
- sheet13 : INTERPOSER (Master)

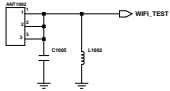
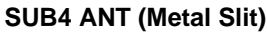
MASTER

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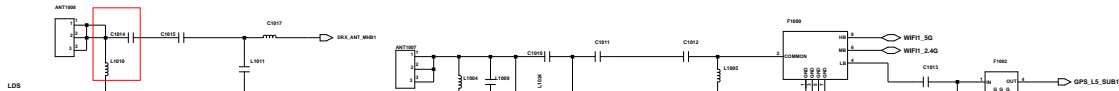
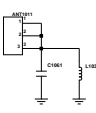
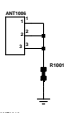
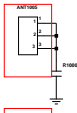
RF2 - SUB ANT



SUB6 ANT (LDS)



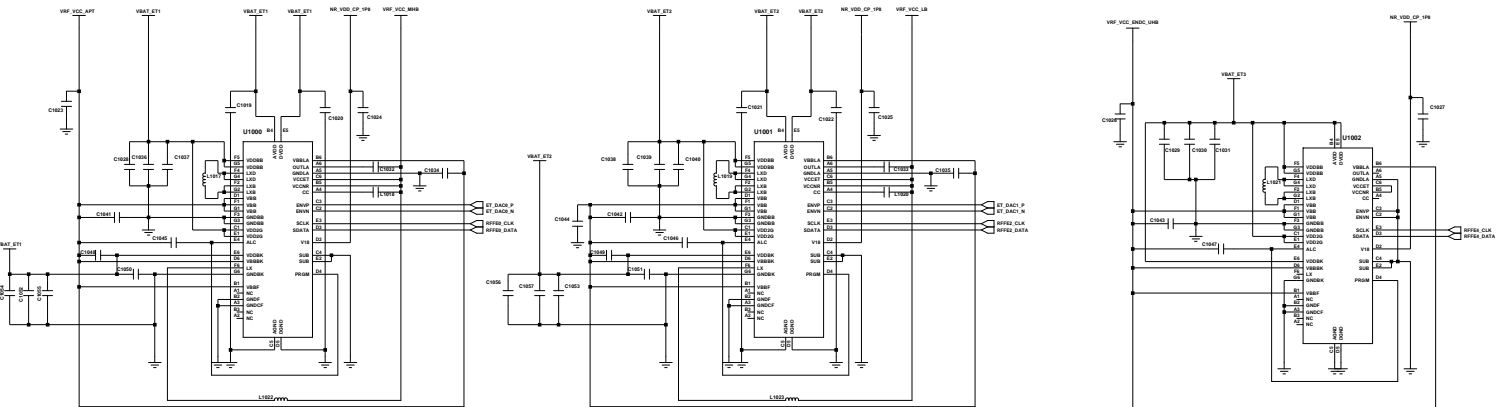
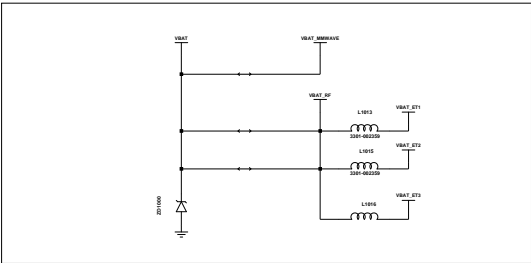
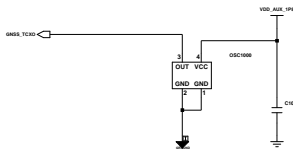
CCP



SUB7 ANT (Deco Slit)

SUB3 ANT (Metal Slit)



GPS (BCM4775) TCXO

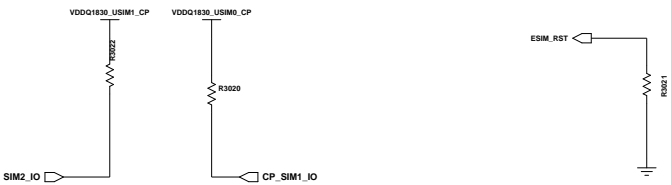


ET #1 2G/3G/LTE/NR MHB(OMH LPAMID)

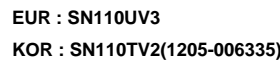
ET#2 3G/LTE/NR LB(LB LPAMID)

ET#3 NR MHB/UHB(ENDC MOD,UHB MOD)

ENGINEER:	
DESIGN BY:	
READ CHK:	
DOC CTRL CHK:	
WFG ENGE CHK:	
TITLE:	
	

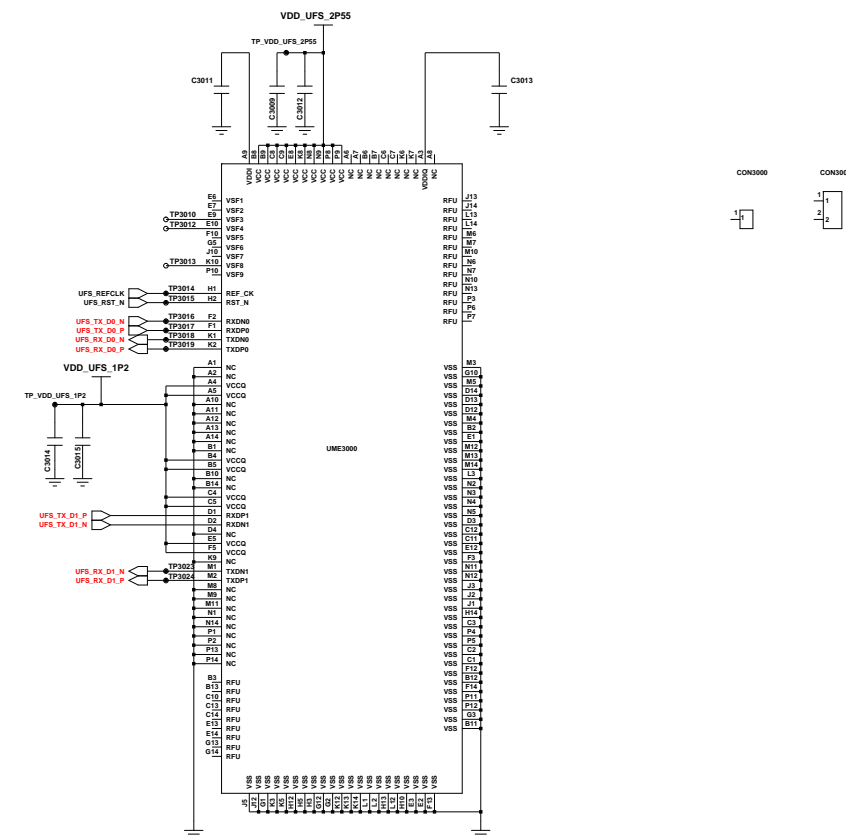


NFC + eSIM Combo (SN110U)





EUR : NC
KOR : Short

UFS BUCK BOOSTER

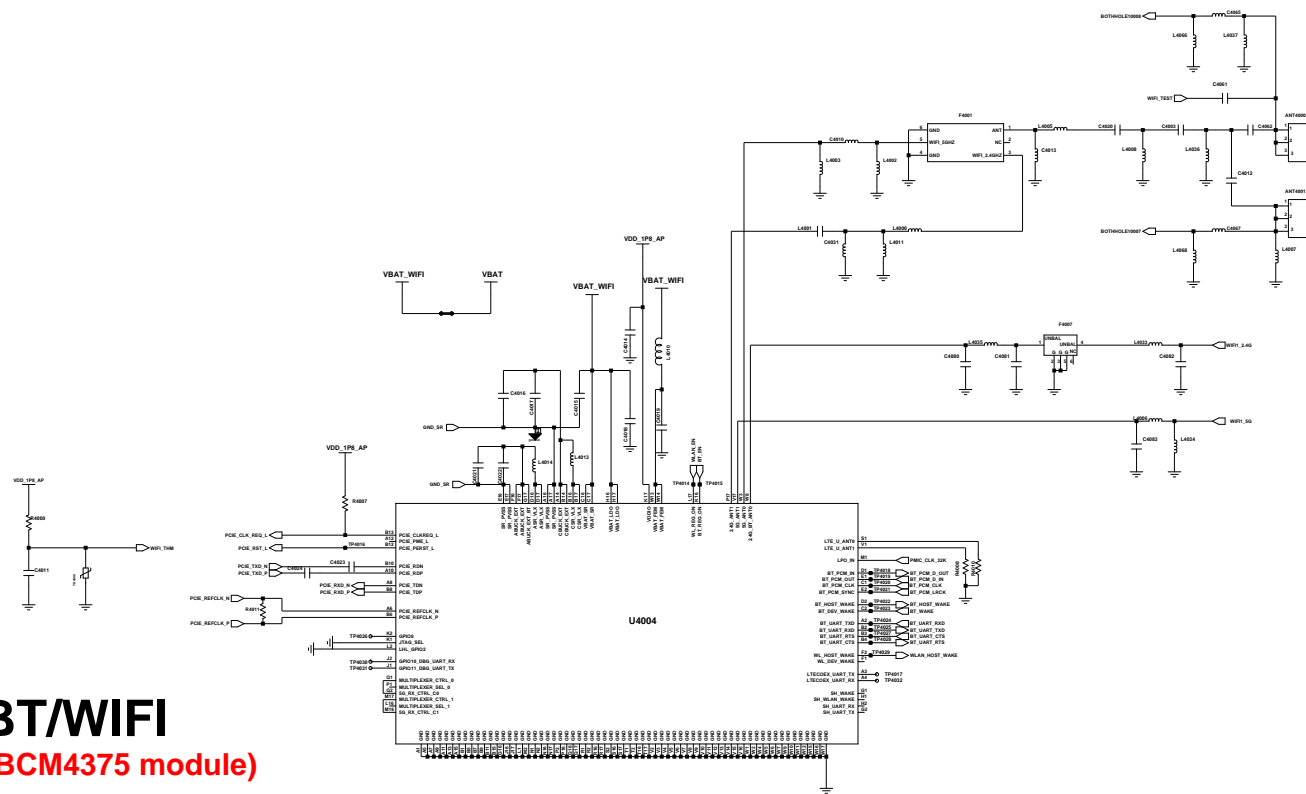


MEMORY

R3003		128G
R3004		256G
R3008		512G

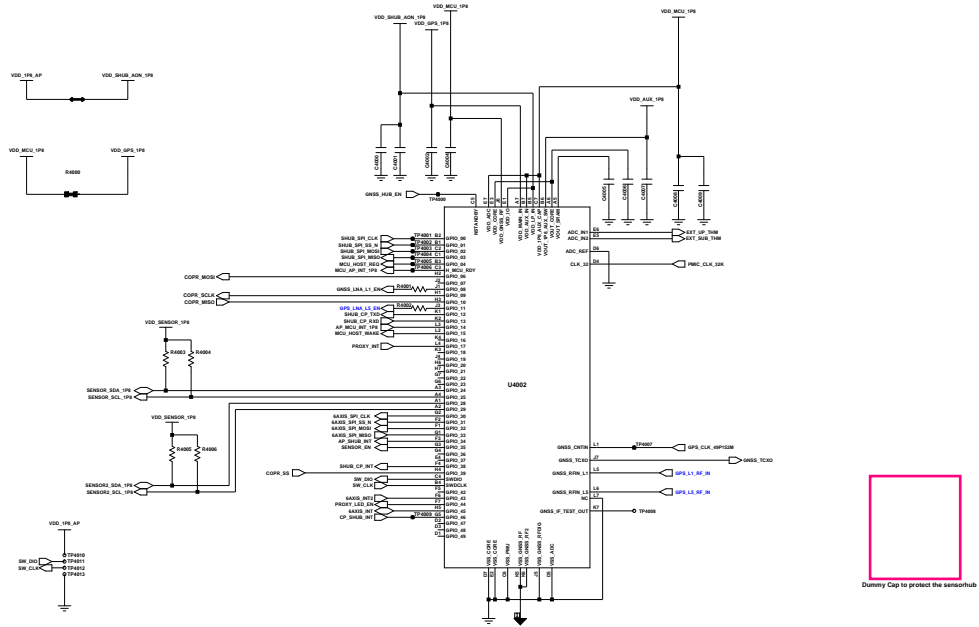
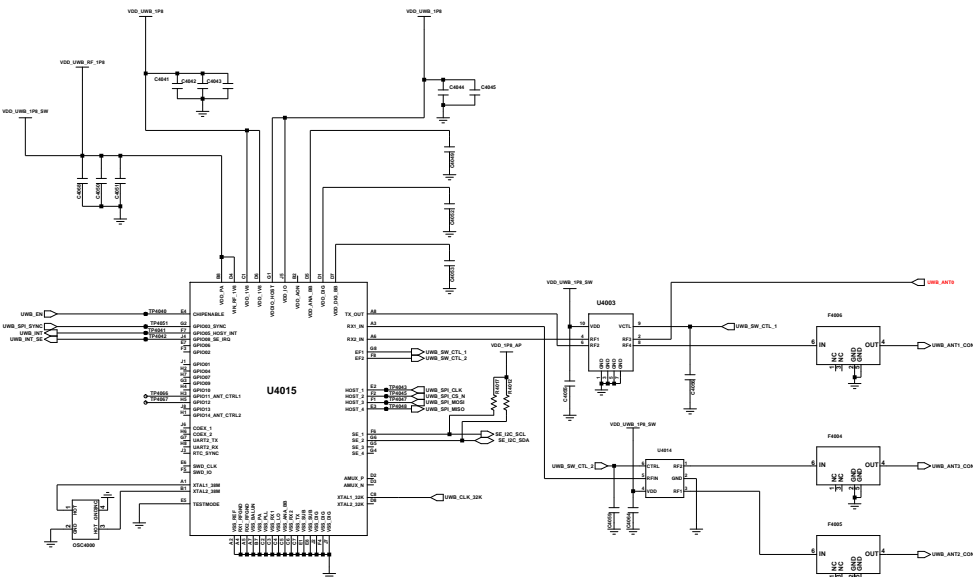
MASTER

4. CONNECTIVITY / SENSOR



BT/WIFI

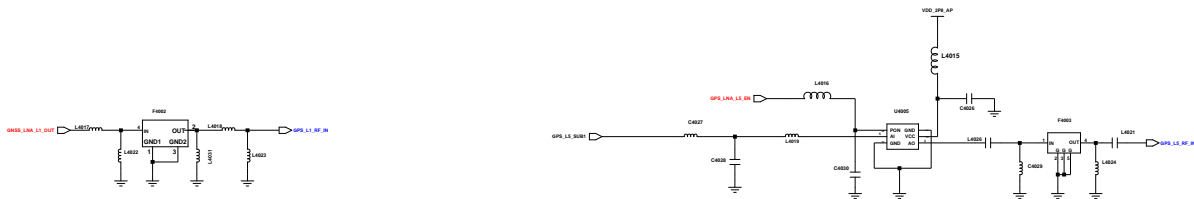
UWB(For U2)



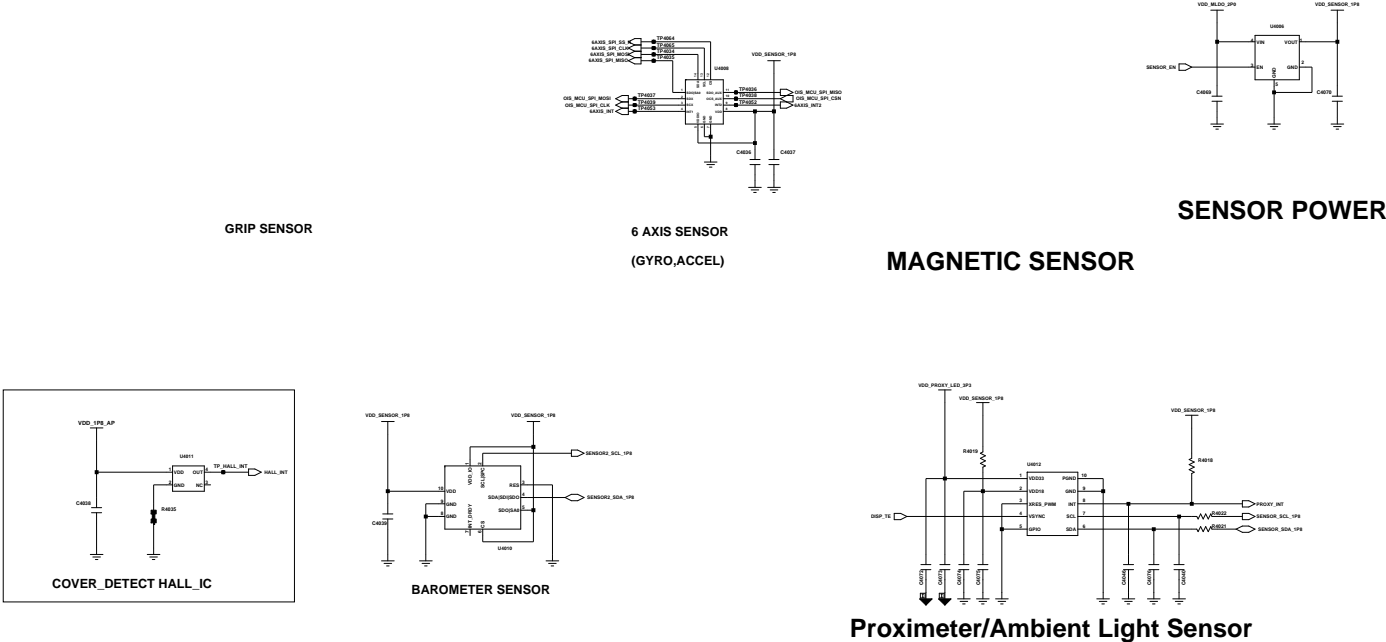
GPS + SENSOR HUB(BCM4775)

GPS L1

GPS L5



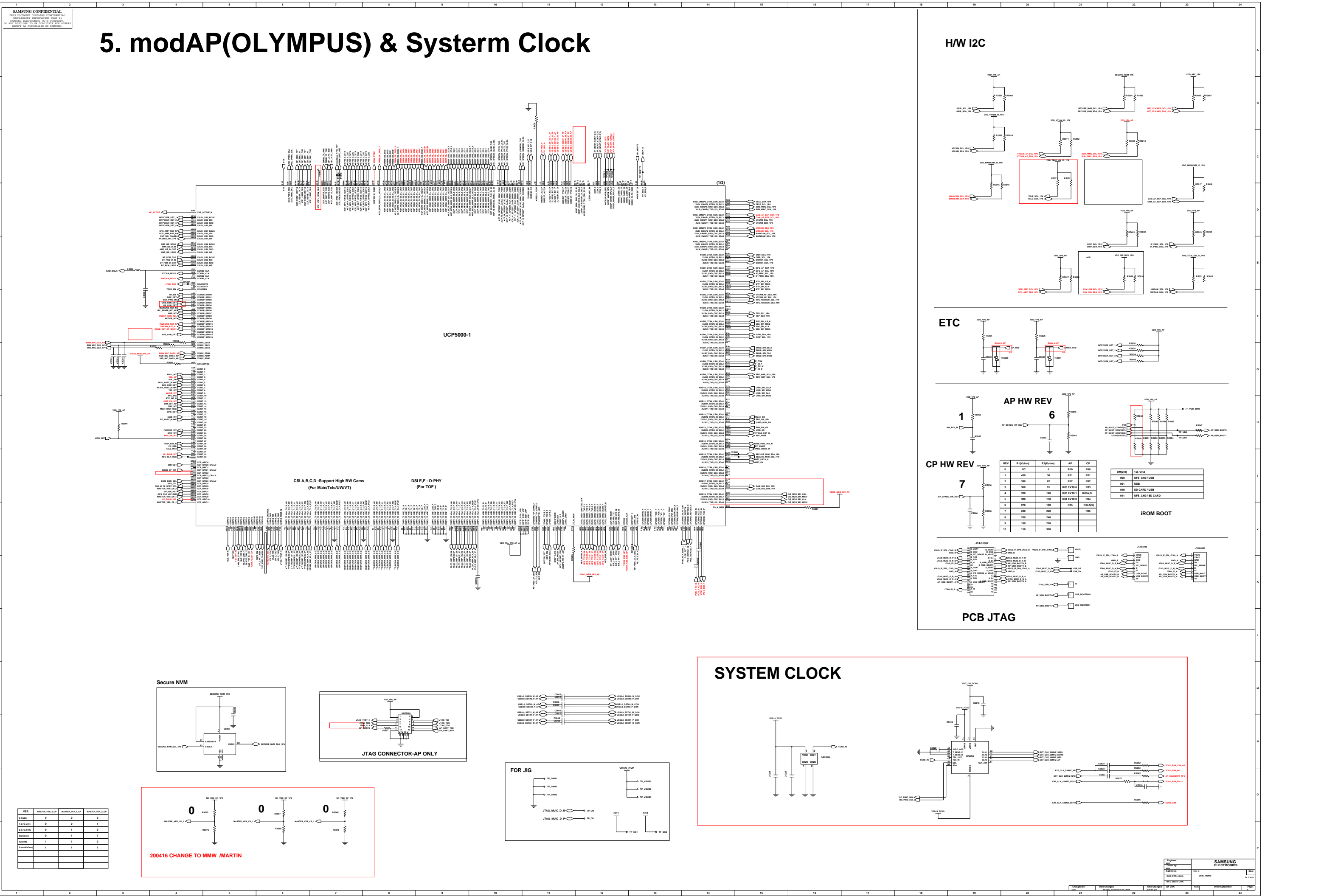
SENSORS



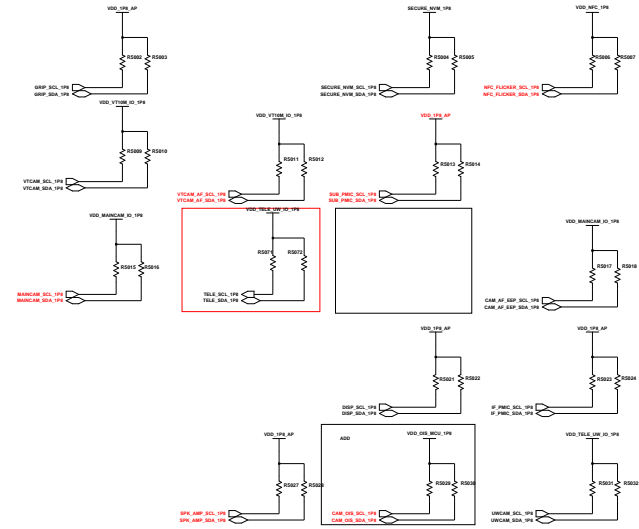
SENSOR POWER

MAGNETIC SENSOR

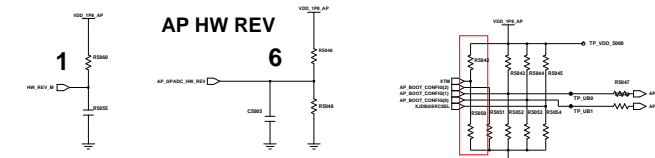
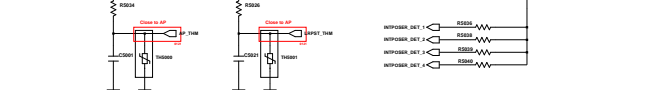
Proximeter/Ambient Light Sensor



H/W I2C



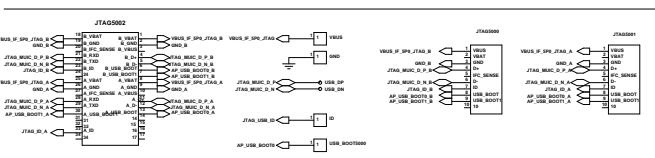
ETC



REV	R1(Kohm)	R2(Kohm)	AP	CP
0	NC	30	R00	R00
1	430	30	R01	R01
2	300	62	R02	R02
3	300	61	R03	R03
4	330	120	R04	R04
5	300	150	R05	R05
6	270	180	R06	R06
7	240	220	R07	R07
8	200	240	R08	R08
9	180	270	R09	R09
10	150	300	R10	R10

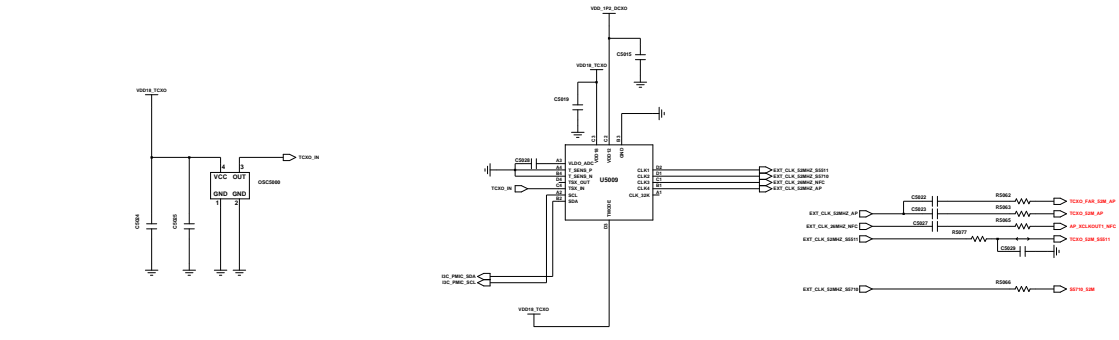
CMOS(1)	1st / 2nd
000	UFS_CH0 / USB
001	USB
010	SD_CARD / USB
011	UFS_CH0 / SD_CARD

IR0M BOOT



PCB JTAG

SYSTEM CLOCK

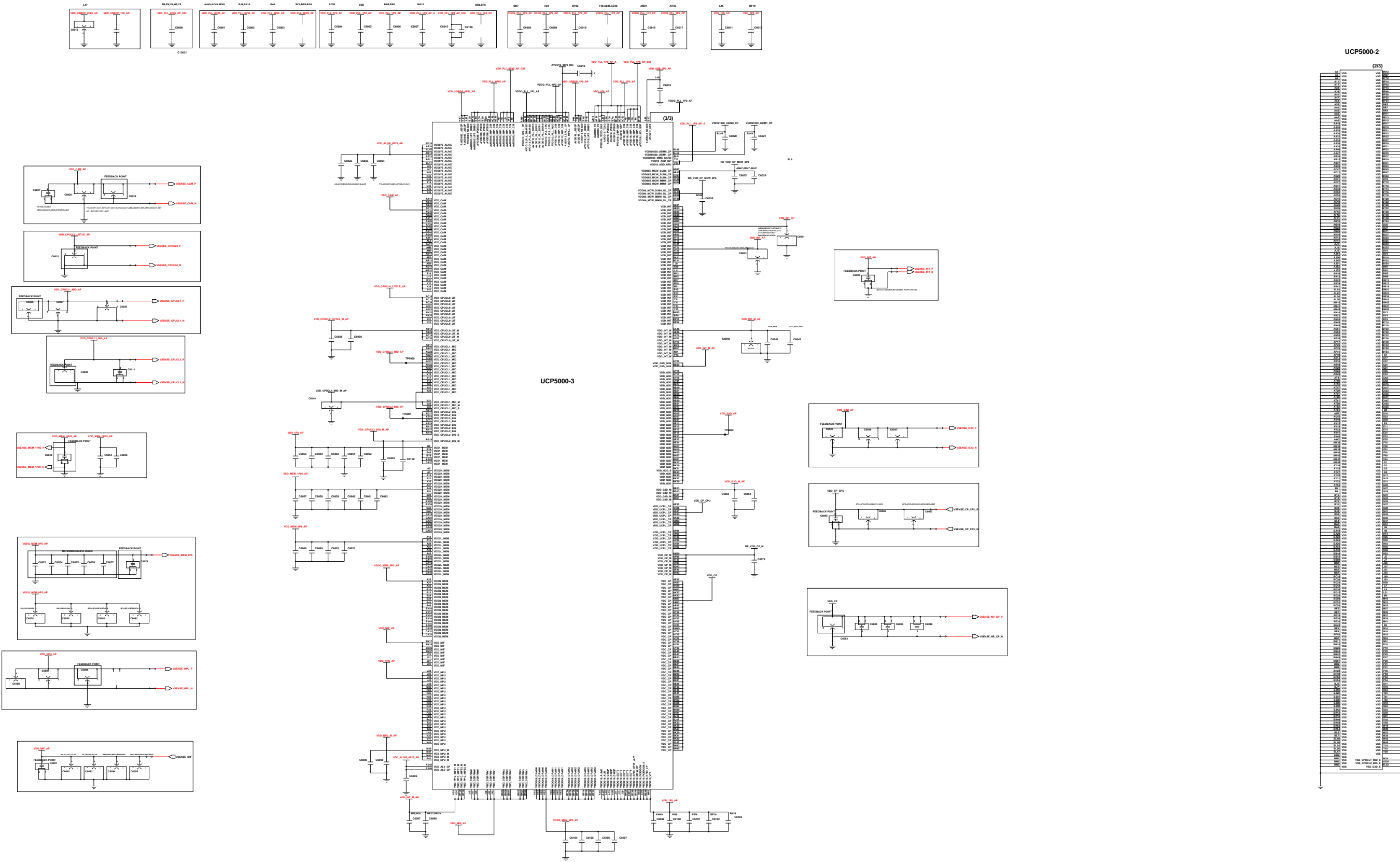


REV	MASTER_VDD_A_CP	MASTER_VDD_1_CP	MASTER_VDD_2_CP
0	0	0	0
1	0	0	1
2	0	1	0
3	0	1	1
4	1	1	0
5	1	1	1

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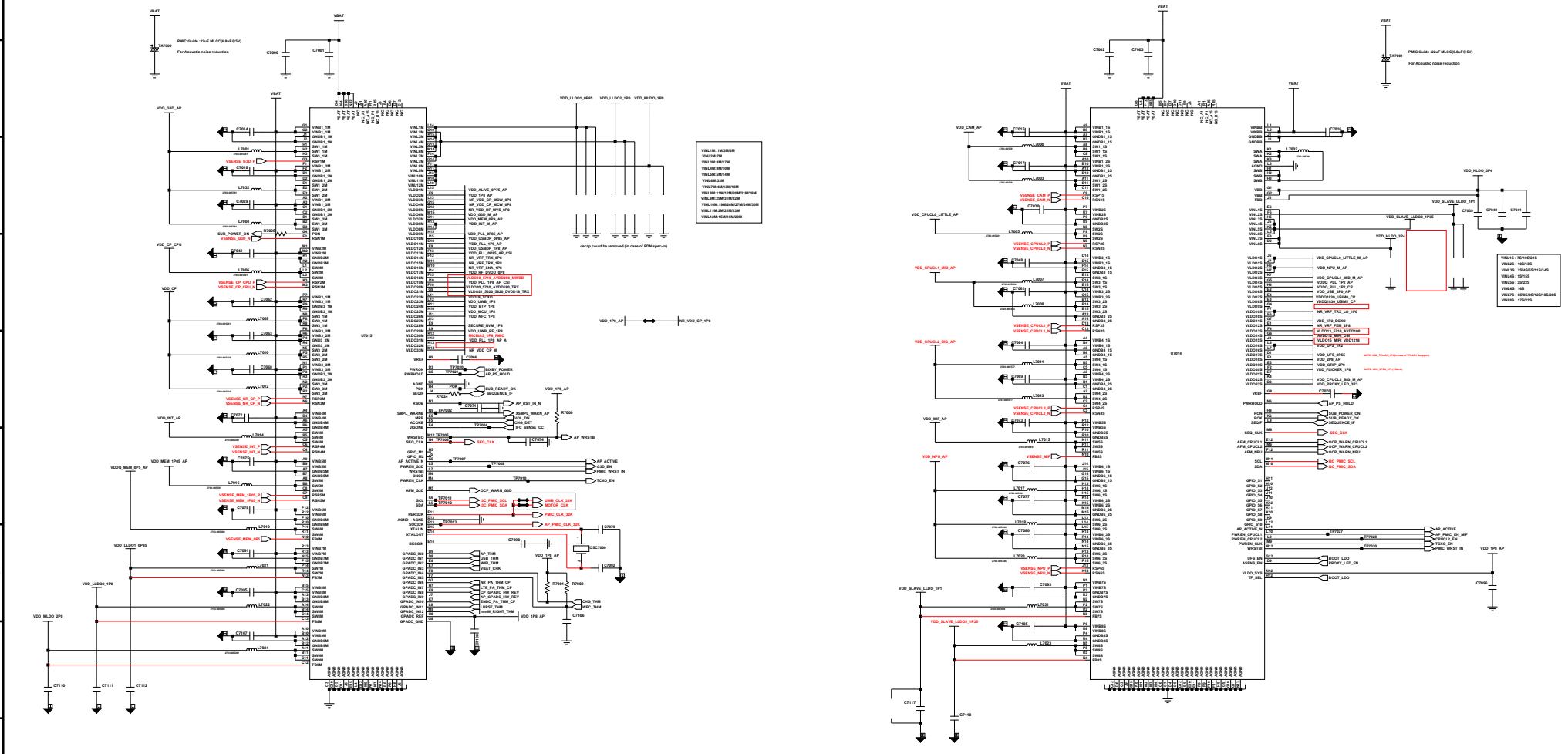
6. modAP(OLYMPUS) Power_decoupling capacitor

- 1. Place de-caps around assigned pins
- 2. De_caps could be removed(For powers that meet the Remote_cap specification)

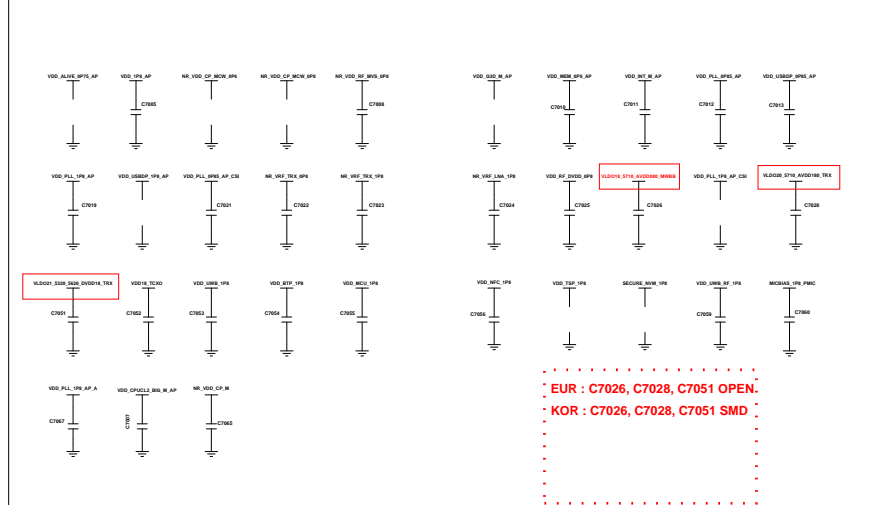


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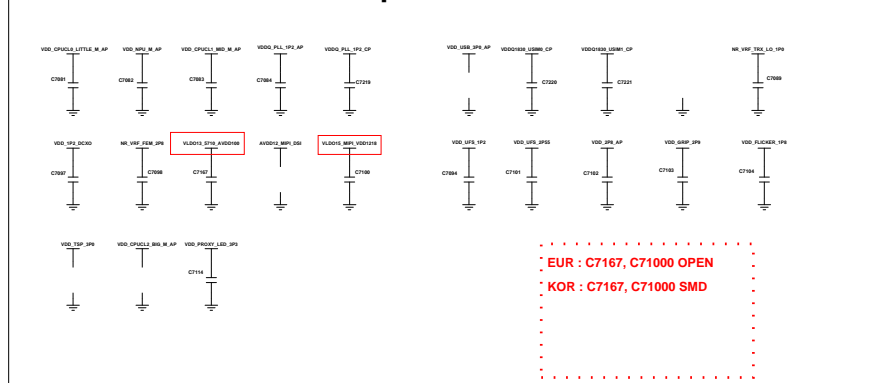
7. Power management IC (modAP/peri) & Charging



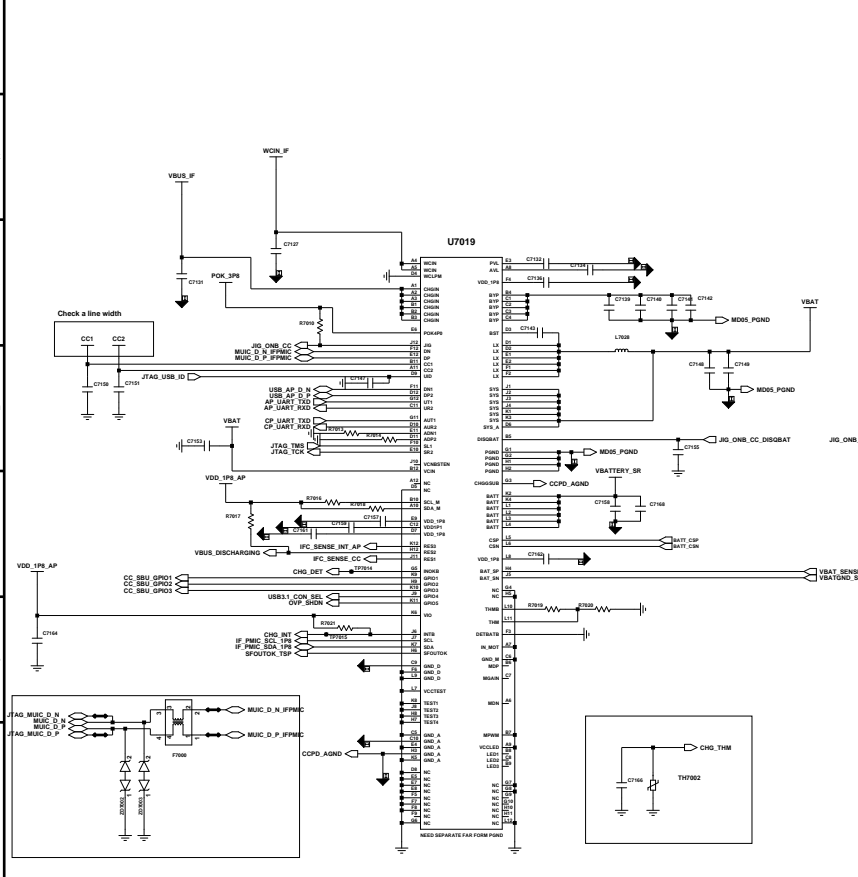
S2MPS23 PMIC LDO Cap



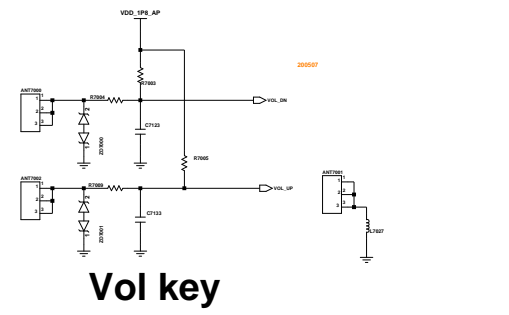
S2MPS24 PMIC LDO Cap



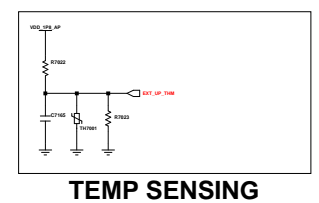
Interface PMIC



Direct charger

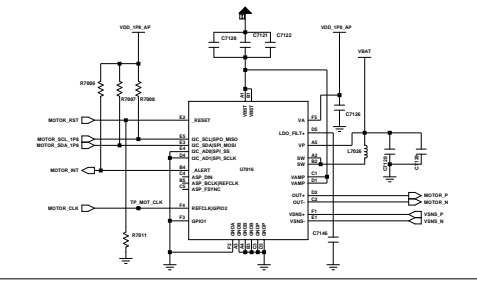


Vol key

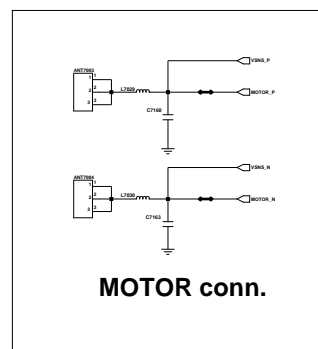


TEMP SENSING

HAPTIC DRIVER



MOTOR conn.



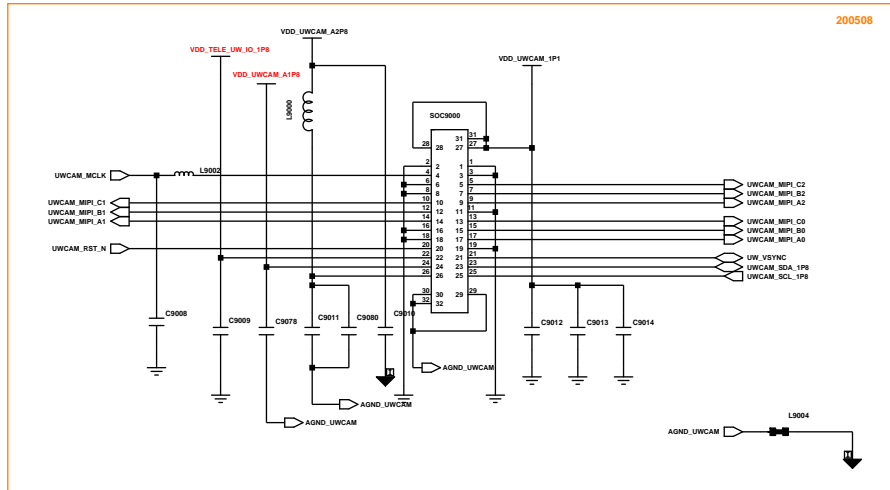
8. AUDIO

The schematic diagram illustrates the internal circuitry of the U8001 module. Key components and connections include:

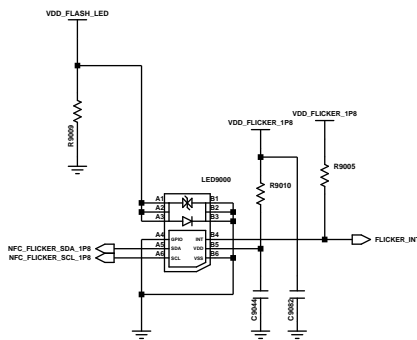
- Power and Ground Connections:**
 - VDD_1P8_AP:** Connected to the RESET pin (E2) via resistor R8000.
 - VBAT:** Connected to the VBAT pin (A1) and the SW pin (B2) via a diode.
 - Grounding:** Pins A1, B1, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D48, D49, D50, D51, D52, D53, D54, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64, D65, D66, D67, D68, D69, D70, D71, D72, D73, D74, D75, D76, D77, D78, D79, D80, D81, D82, D83, D84, D85, D86, D87, D88, D89, D90, D91, D92, D93, D94, D95, D96, D97, D98, D99, D100, D101, D102, D103, D104, D105, D106, D107, D108, D109, D110, D111, D112, D113, D114, D115, D116, D117, D118, D119, D120, D121, D122, D123, D124, D125, D126, D127, D128, D129, D130, D131, D132, D133, D134, D135, D136, D137, D138, D139, D140, D141, D142, D143, D144, D145, D146, D147, D148, D149, D150, D151, D152, D153, D154, D155, D156, D157, D158, D159, D160, D161, D162, D163, D164, D165, D166, D167, D168, D169, D170, D171, D172, D173, D174, D175, D176, D177, D178, D179, D180, D181, D182, D183, D184, D185, D186, D187, D188, D189, D190, D191, D192, D193, D194, D195, D196, D197, D198, D199, D200, D201, D202, D203, D204, D205, D206, D207, D208, D209, D210, D211, D212, D213, D214, D215, D216, D217, D218, D219, D220, D221, D222, D223, D224, D225, D226, D227, D228, D229, D230, D231, D232, D233, D234, D235, D236, D237, D238, D239, D240, D241, D242, D243, D244, D245, D246, D247, D248, D249, D250, D251, D252, D253, D254, D255, D256, D257, D258, D259, D260, D261, D262, D263, D264, D265, D266, D267, D268, D269, D270, D271, D272, D273, D274, D275, D276, D277, D278, D279, D280, D281, D282, D283, D284, D285, D286, D287, D288, D289, D290, D291, D292, D293, D294, D295, D296, D297, D298, D299, D300, D301, D302, D303, D304, D305, D306, D307, D308, D309, D310, D311, D312, D313, D314, D315, D316, D317, D318, D319, D320, D321, D322, D323, D324, D325, D326, D327, D328, D329, D330, D331, D332, D333, D334, D335, D336, D337, D338, D339, D340, D341, D342, D343, D344, D345, D346, D347, D348, D349, D350, D351, D352, D353, D354, D355, D356, D357, D358, D359, D360, D361, D362, D363, D364, D365, D366, D367, D368, D369, D370, D371, D372, D373, D374, D375, D376, D377, D378, D379, D380, D381, D382, D383, D384, D385, D386, D387, D388, D389, D390, D391, D392, D393, D394, D395, D396, D397, D398, D399, D400, D401, D402, D403, D404, D405, D406, D407, D408, D409, D410, D411, D412, D413, D414, D415, D416, D417, D418, D419, D420, D421, D422, D423, D424, D425, D426, D427, D428, D429, D430, D431, D432, D433, D434, D435, D436, D437, D438, D439, D440, D441, D442, D443, D444, D445, D446, D447, D448, D449, D450, D451, D452, D453, D454, D455, D456, D457, D458, D459, D460, D461, D462, D463, D464, D465, D466, D467, D468, D469, D470, D471, D472, D473, D474, D475, D476, D477, D478, D479, D480, D481, D482, D483, D484, D485, D486, D487, D488, D489, D490, D491, D492, D493, D494, D495, D496, D497, D498, D499, D500, D501, D502, D503, D504, D505, D506, D507, D508, D509, D510, D511, D512, D513, D514, D515, D516, D517, D518, D519, D520, D521, D522, D523, D524, D525, D526, D527, D528, D529, D530, D531, D532, D533, D534, D535, D536, D537, D538, D539, D540, D541, D542, D543, D544, D545, D546, D547, D548, D549, D550, D551, D552, D553, D554, D555, D556, D557, D558, D559, D560, D561, D562, D563, D564, D565, D566, D567, D568, D569, D570, D571, D572, D573, D574, D575, D576, D577, D578, D579, D580, D581, D582, D583, D584, D585, D586, D587, D588, D589, D590, D591, D592, D593, D594, D595, D596, D597, D598, D599, D600, D601, D602, D603, D604, D605, D606, D607, D608, D609, D610, D611, D612, D613, D614, D615, D616, D617, D618, D619, D620, D621, D622, D623, D624, D625, D626, D627, D628, D629, D630, D631, D632, D633, D634, D635, D636, D637, D638, D639, D640, D641, D642, D643, D644, D645, D646, D647, D648, D649, D650, D651, D652, D653, D654, D655, D656, D657, D658, D659, D660, D661, D662, D663, D664, D665, D666, D667, D668, D669, D670, D671, D672, D673, D674, D675, D676, D677, D678, D679, D680, D681, D682, D683, D684, D685, D686, D687, D688, D689, D690, D691, D692, D693, D694, D695, D696, D697, D698, D699, D700, D701, D702, D703, D704, D705, D706, D707, D708, D709, D710, D711, D712, D713, D714, D715, D716, D717, D718, D719, D720, D721, D722, D723, D724, D725, D726, D727, D728, D729, D730, D731, D732, D733, D734, D735, D736, D737, D738, D739, D740, D741, D742, D743, D744, D745, D746, D747, D748, D749, D750, D751, D752, D753, D754, D755, D756, D757, D758, D759, D760, D761, D762, D763, D764, D765, D766, D767, D768, D769, D770, D771, D772, D773, D774, D775, D776, D777, D778, D779, D780, D781, D782, D783, D784, D785, D786, D787, D788, D789, D790, D791, D792, D793, D794, D795, D796, D797, D798, D799, D800, D801, D802, D803, D804, D805, D806, D807

The schematic diagram illustrates the U8002 audio amplifier circuit. The U8002 chip is connected to a VDD_1P8_AP supply and ground. The input signals are connected to the chip's pins: RCV_AMP_RST_N (TP8000) to RESET, SPK_AMP_SCL_1P8 to I2C_SCL/SPI_MISO, SPK_AMP_SDA_1P8 to I2C_SDA/SPI_MOSI, AMP_I2S_D_IN to ASP_DOUT, AMP_I2S_D_OUT to ASP_DIN, AMP_I2S_BCLK to ASP_BCLK, AMP_I2S_LRCK to ASP_FSYNC, AMP_INT to INT(GPIO2), and AMP_SYNC to SYNC(GPIO1). The output stage includes a feedback network with capacitors C8024, C8023, and C8025, and an inductor L8001. The output is connected to a VBAT supply.

[illegible]



Ultra WIDE CAM CONN

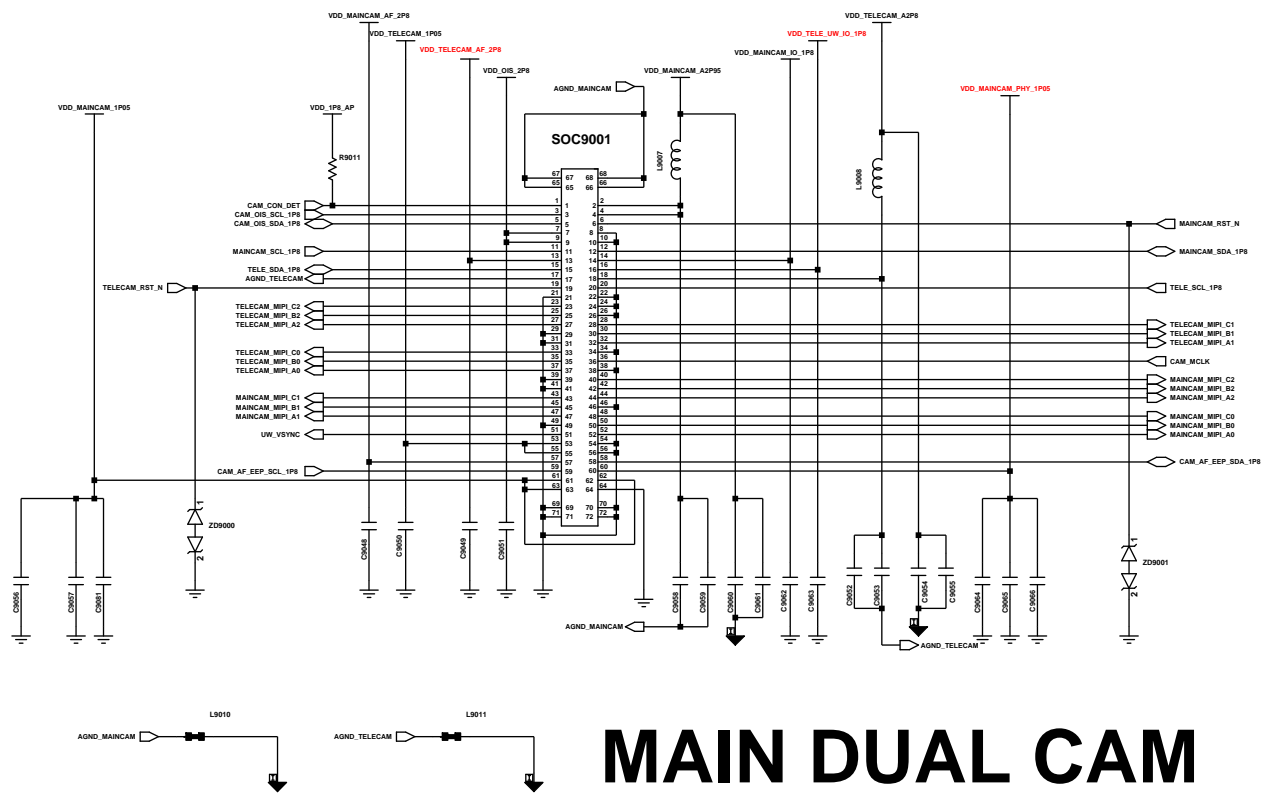


MainCAM LDO

Flash LED

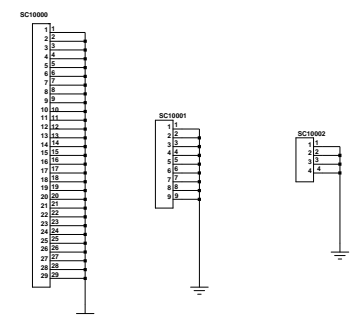
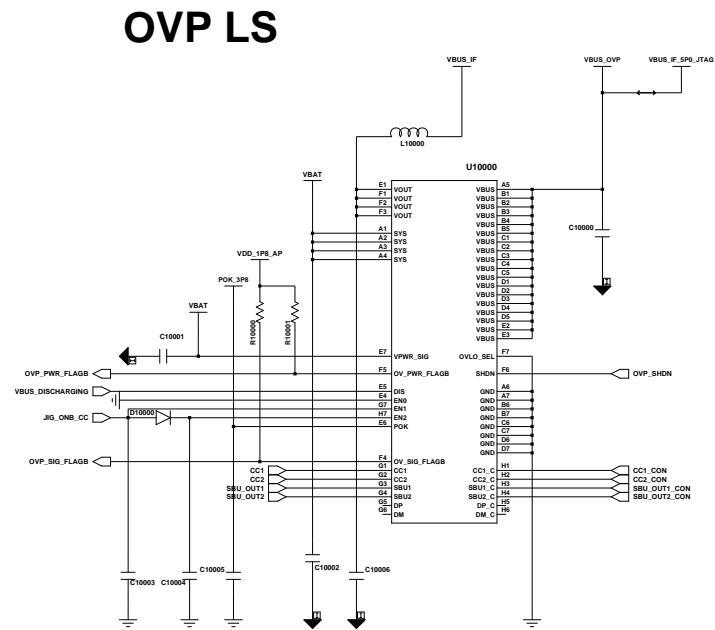


FRONT CAM(10M SINGLE)

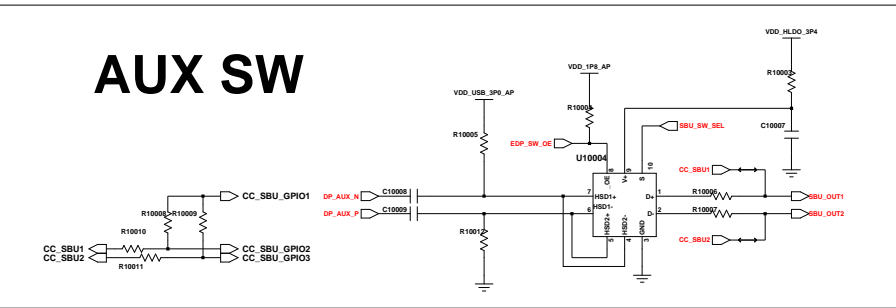
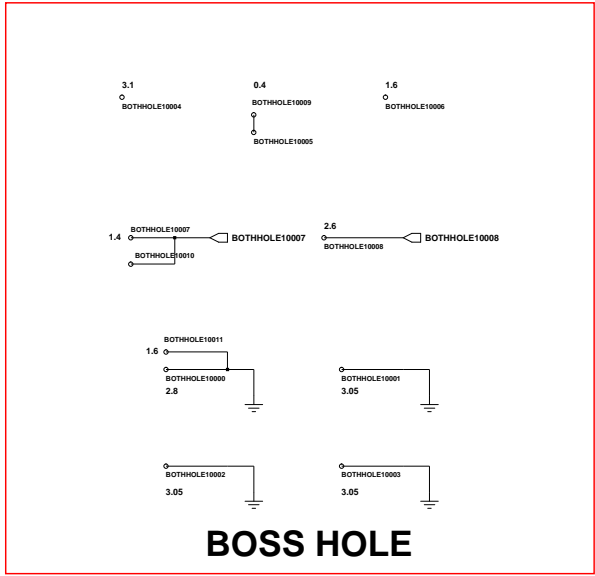



MAIN DUAL CAM

MASTER



Shieldcan

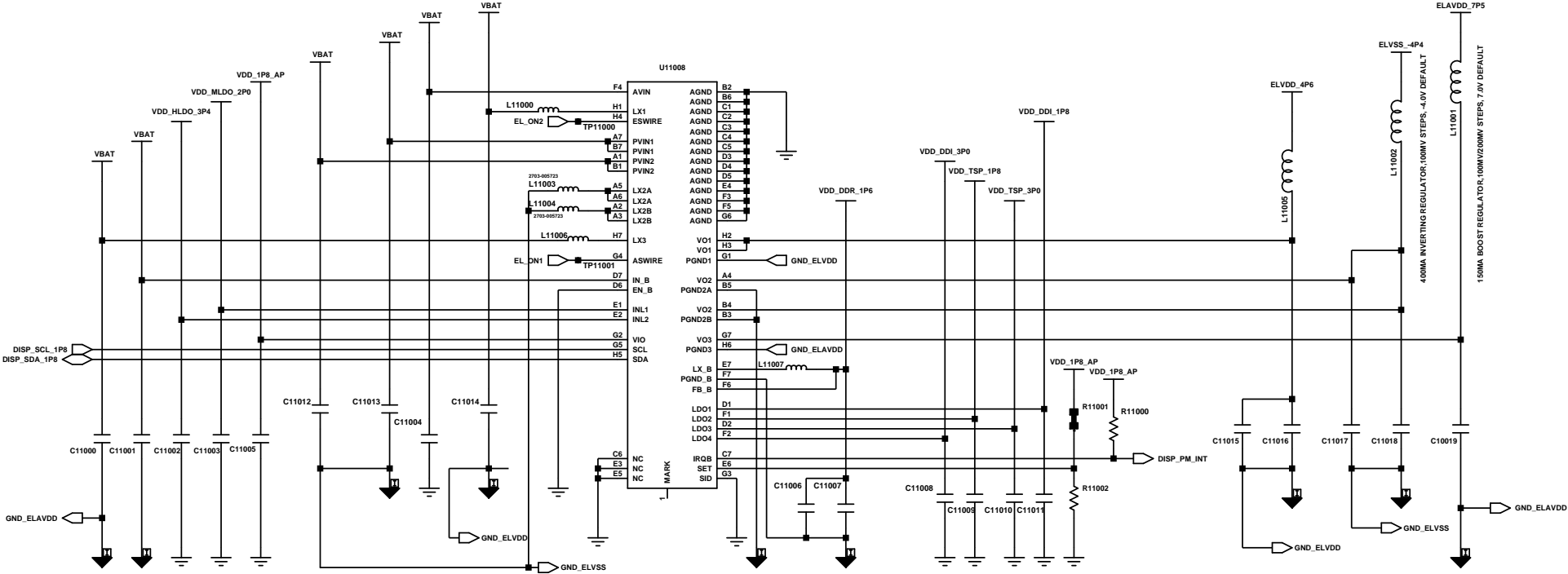


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cad			
Drawn by:			
cad			
R&D CHK:			
DOC CTRL CHK:	TITLE:		Size:
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QA CHK:	REV:	Drawing Number:	Page:
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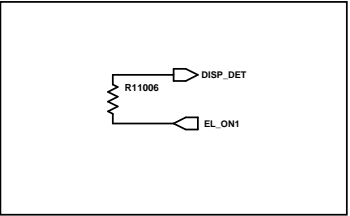
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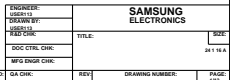
11.DISPLAY

DISPLAY PMIC



Power line is quite noisy, so lines must be shielded by GND plane
.EVLDD,AVDD : Output > Input > Inductor
ELVSS : Output = Input > Inductor





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
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																B
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

SM-G996B SLAVE PCB REV0.5A

2020.10.26

sheet01 : RF (1/2)

sheet02 : RF (2/2), NFC, SENSOR, SIDEKEY FPCB CONN

sheet03 : LOWER SUB CONN, DISPLAY CONN, Audio part

sheet04 : CHARGER part, MST/NFC/WPC CONN, BAT CONN

sheet05 : INTERPOSER

Engineer:

Drawn by:

REQ CHK:

DOC CTRL CHK:

MFG ENGGR CHK:

TITLE:

Size:

Changed by:

Date Changed:

Time Changed:

QA CHK:

REV:

Drawing Number:

Page:

SM-G996B SLAVE PCB REV0.5A

2020.10.26

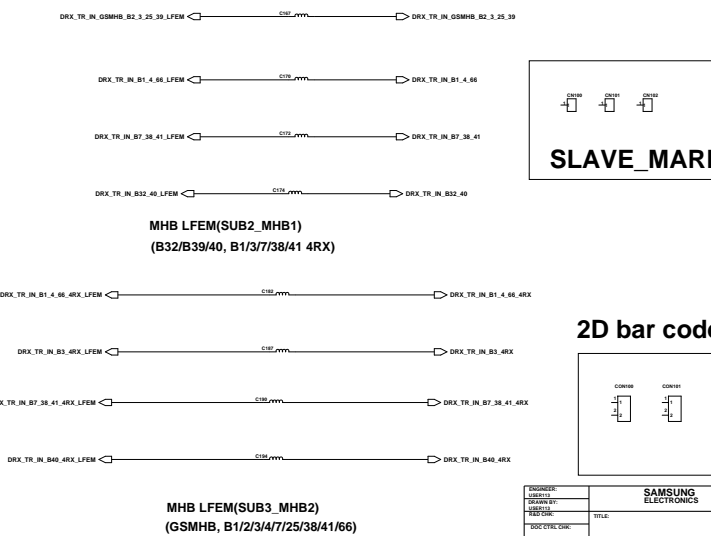
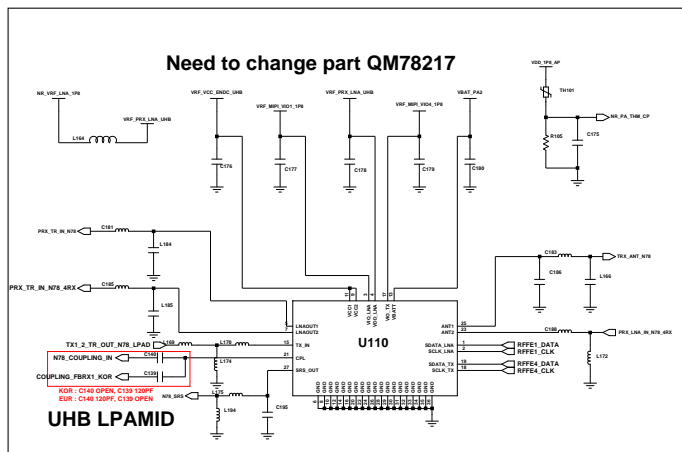
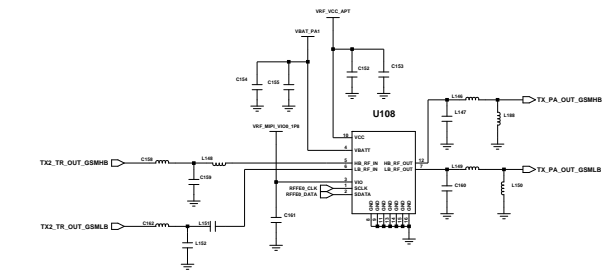
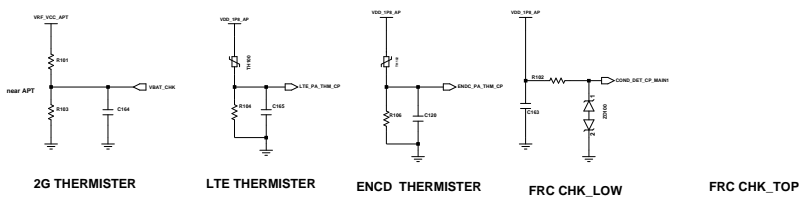
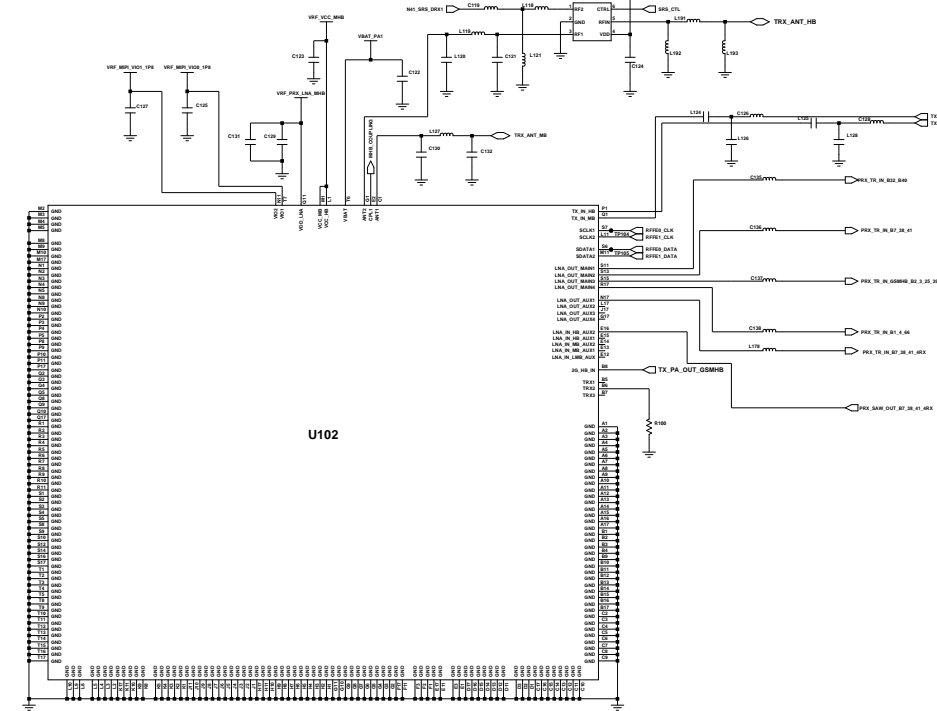
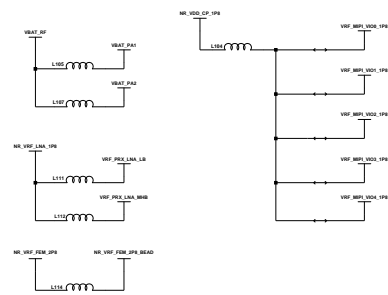
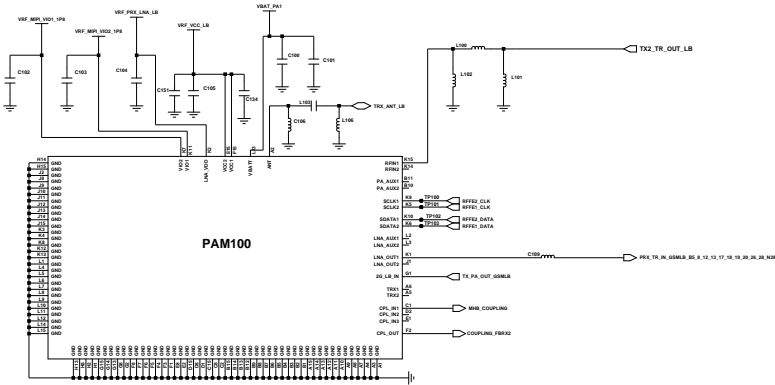
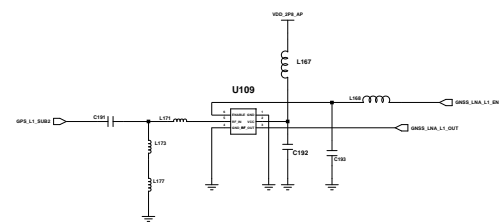
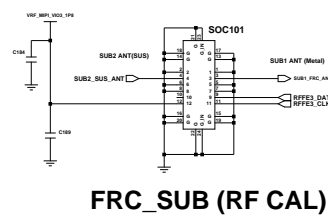
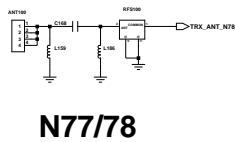
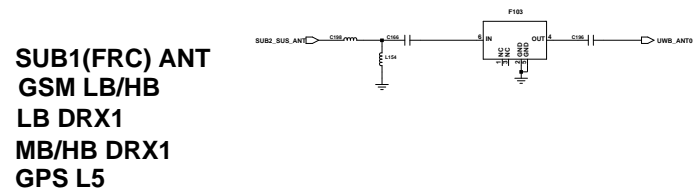
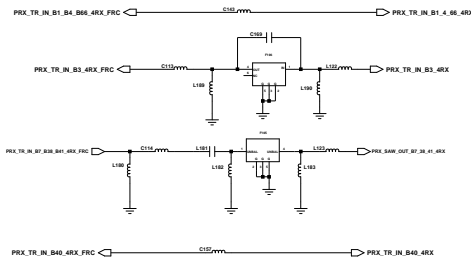
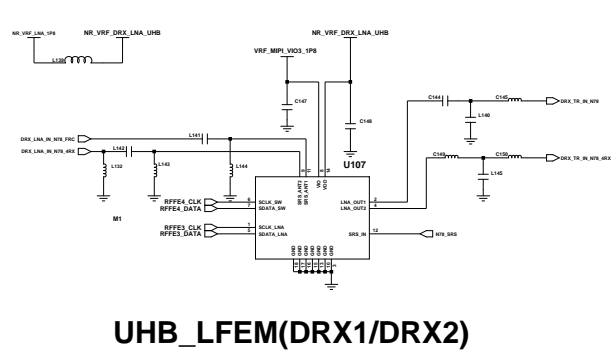
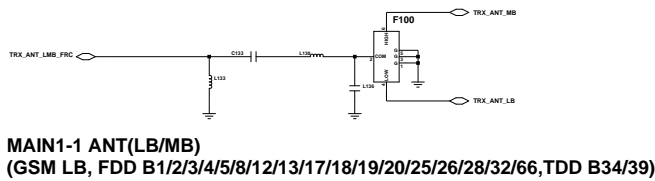
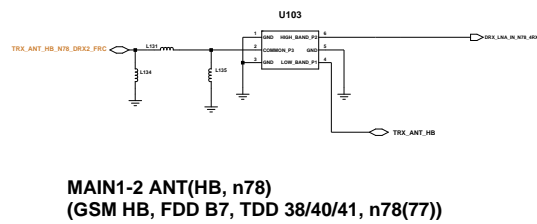
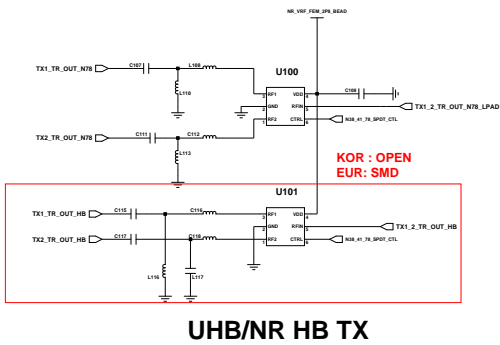
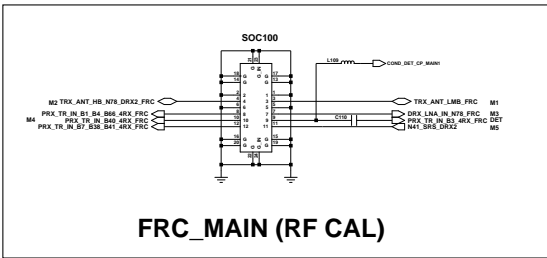
- sheet01 : RF (1/2)
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Engineer:			
Drawn by:			
RDG CHK:	TITLE:		Size:
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QA CHK:	REV:	Drawing Number:	Page:

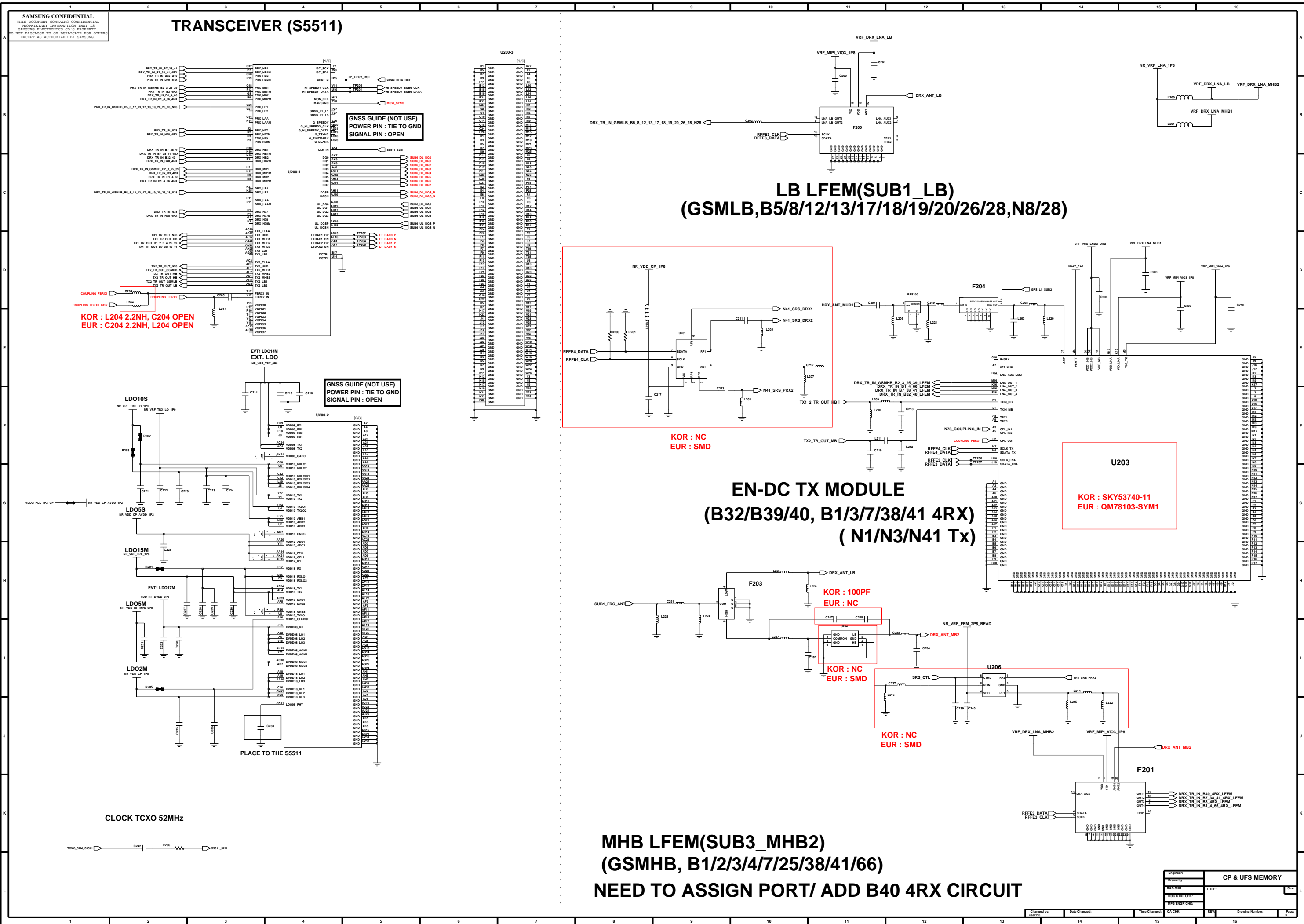
SLAVE

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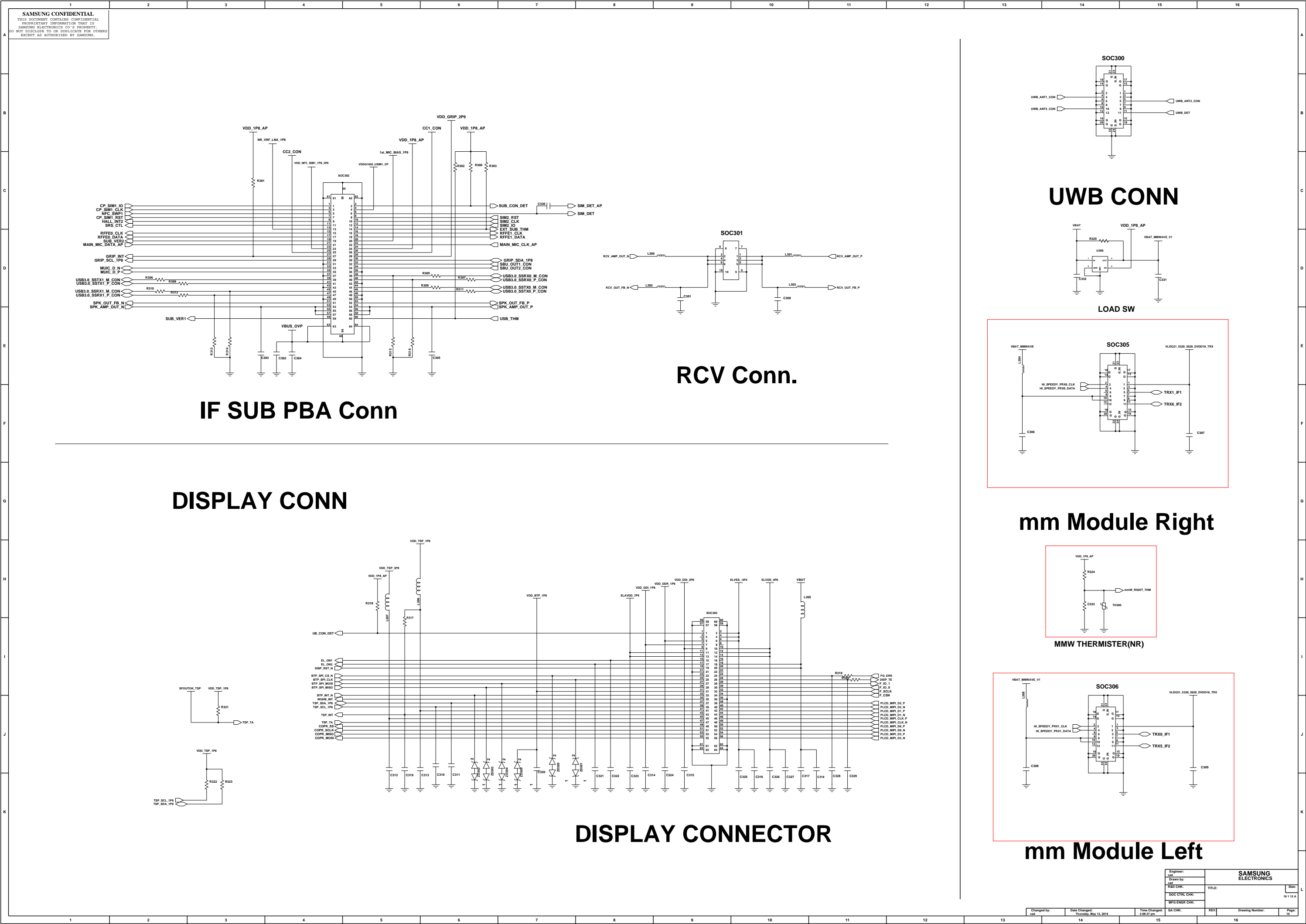
RF1 - MAIN_ANT



SLAVE



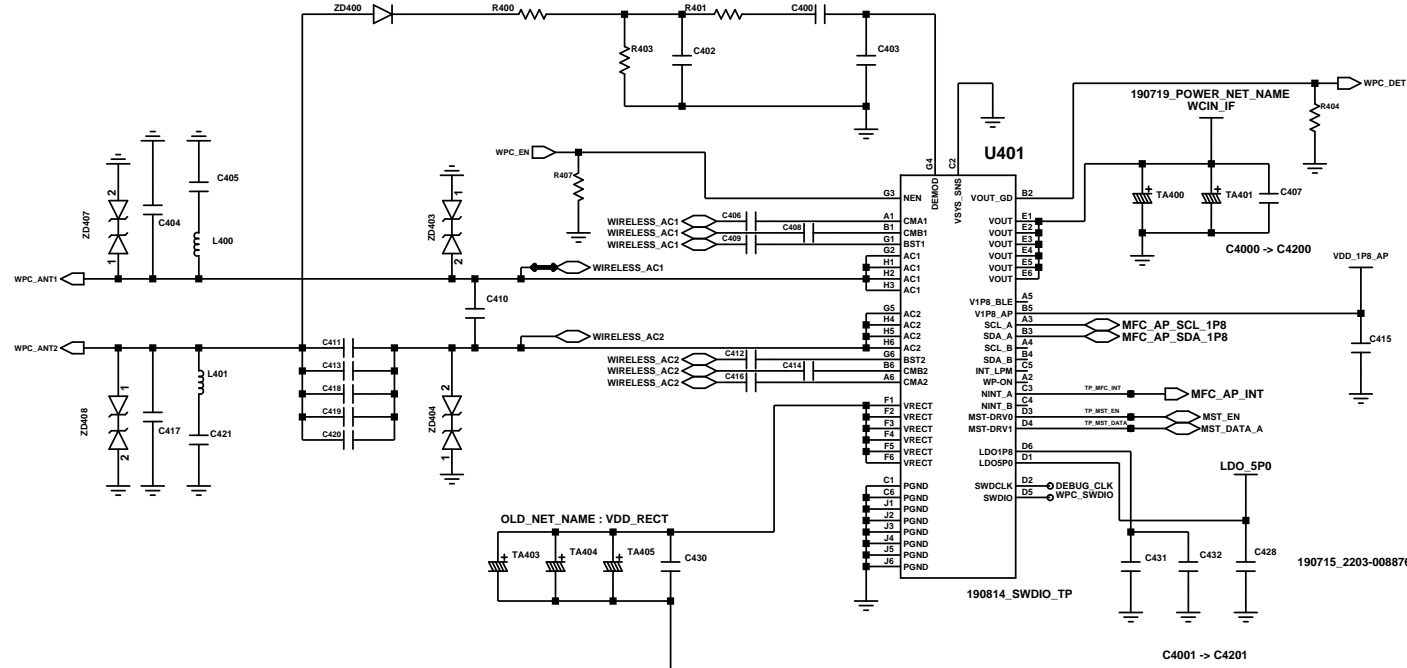
SLAVE



SLAVE

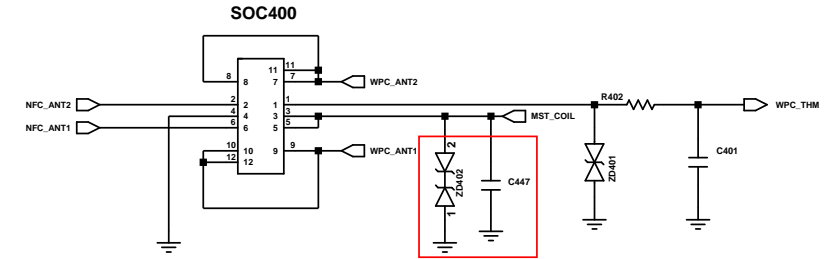
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CHARGER



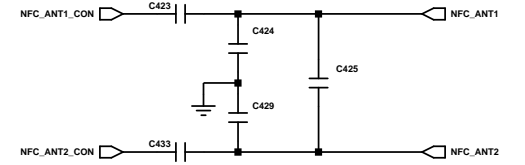
WIRELESS CHARGER IC

MST,NFC,WPC Conn



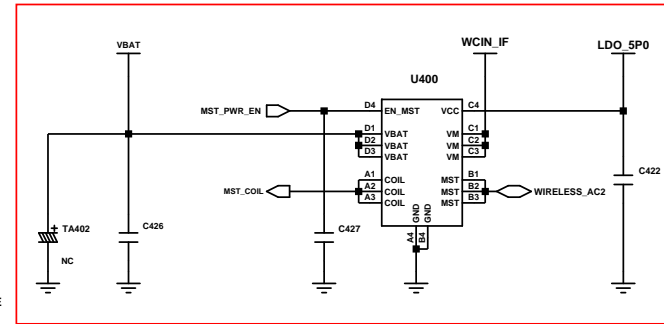
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EUR : ZD402, C447 NC

FOR NFC



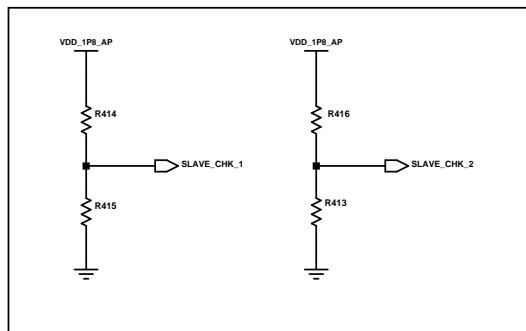
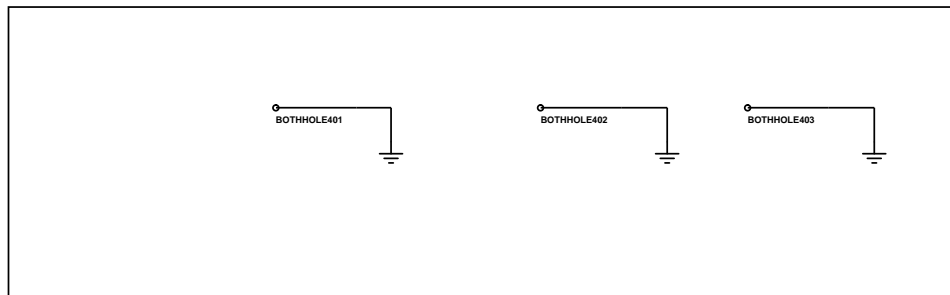
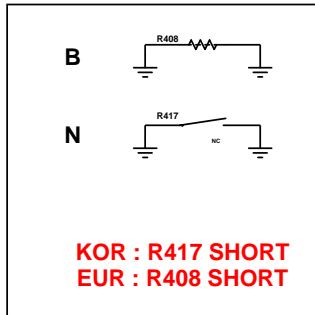
KOR : C424, C429 12PF
EUR : NC

MST SWITCH

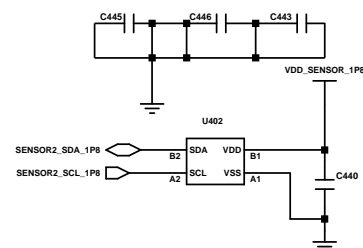


KOR : SMD
EUR : NC

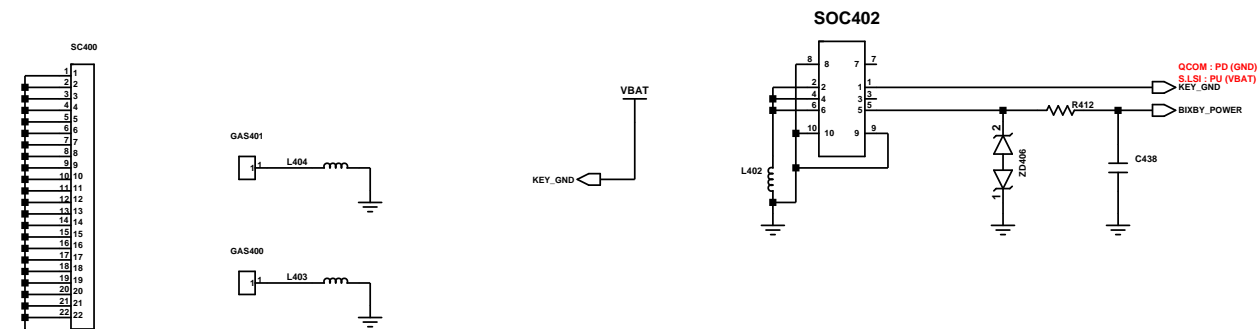
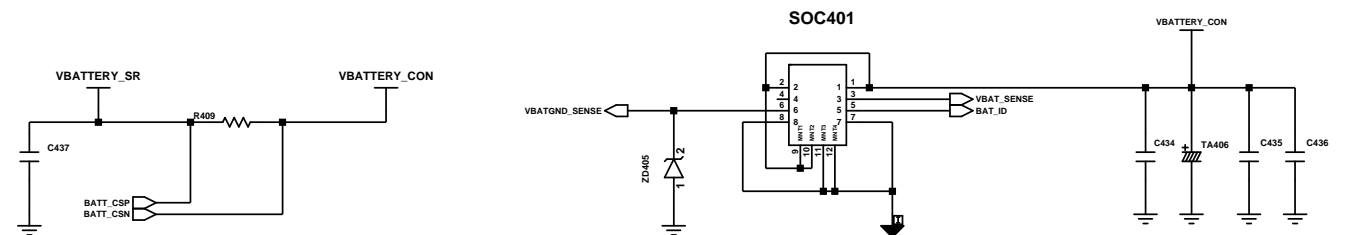
Boss Hole



MAGNETIC SENSOR



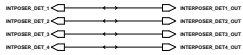
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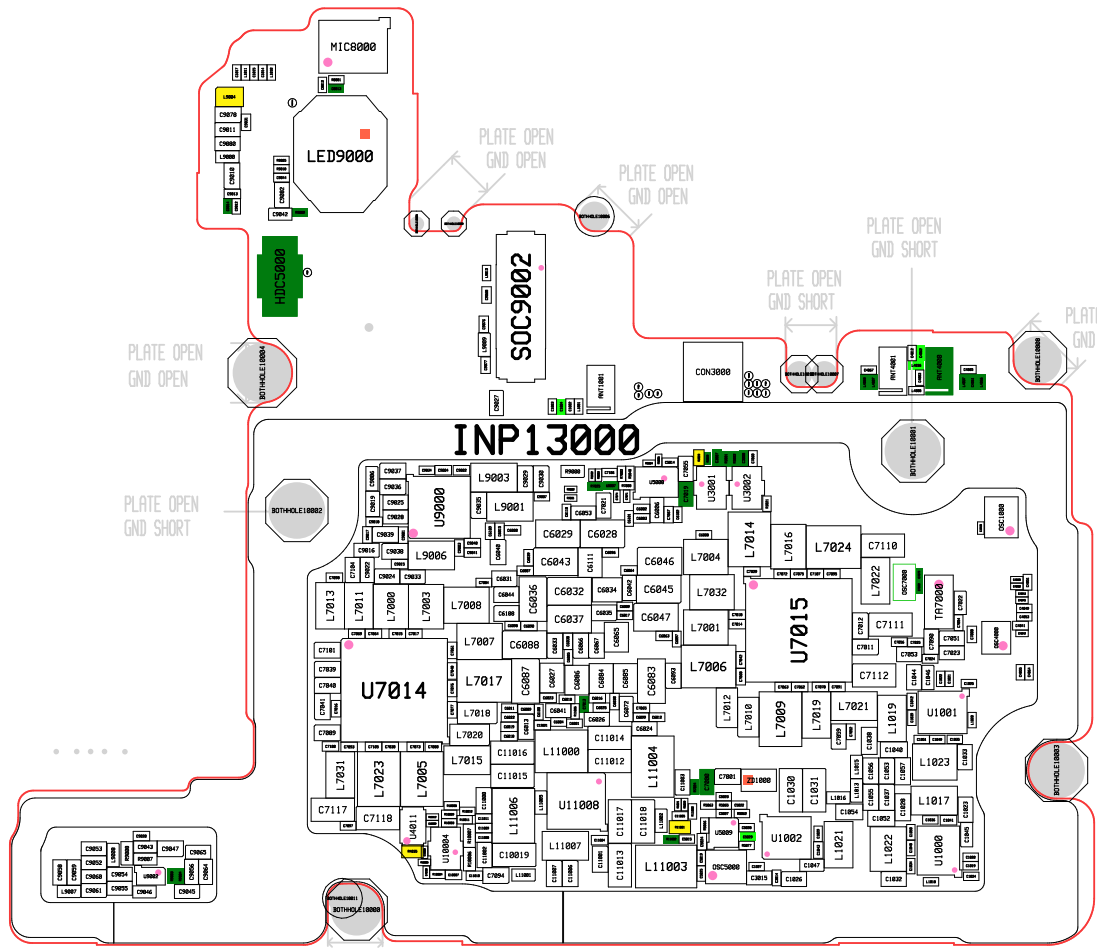


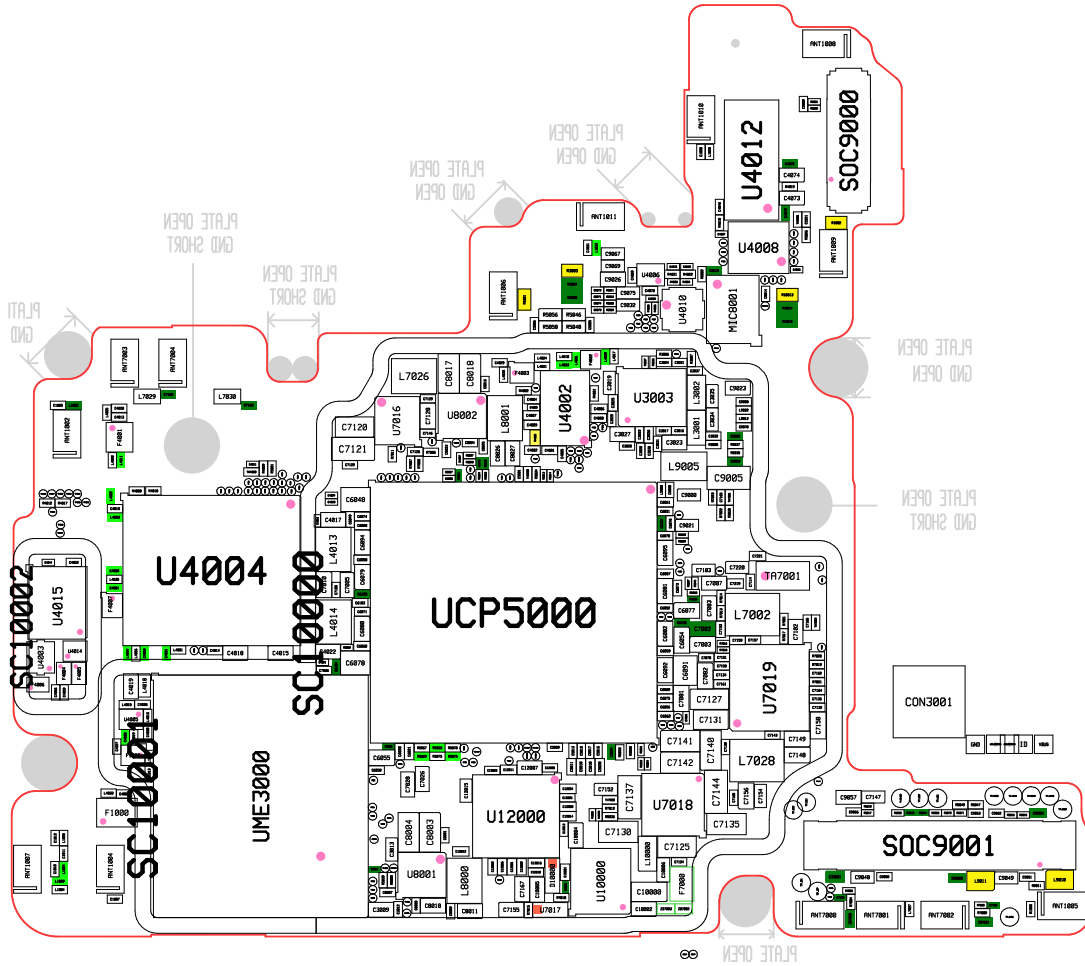
ESD PORON Power Key

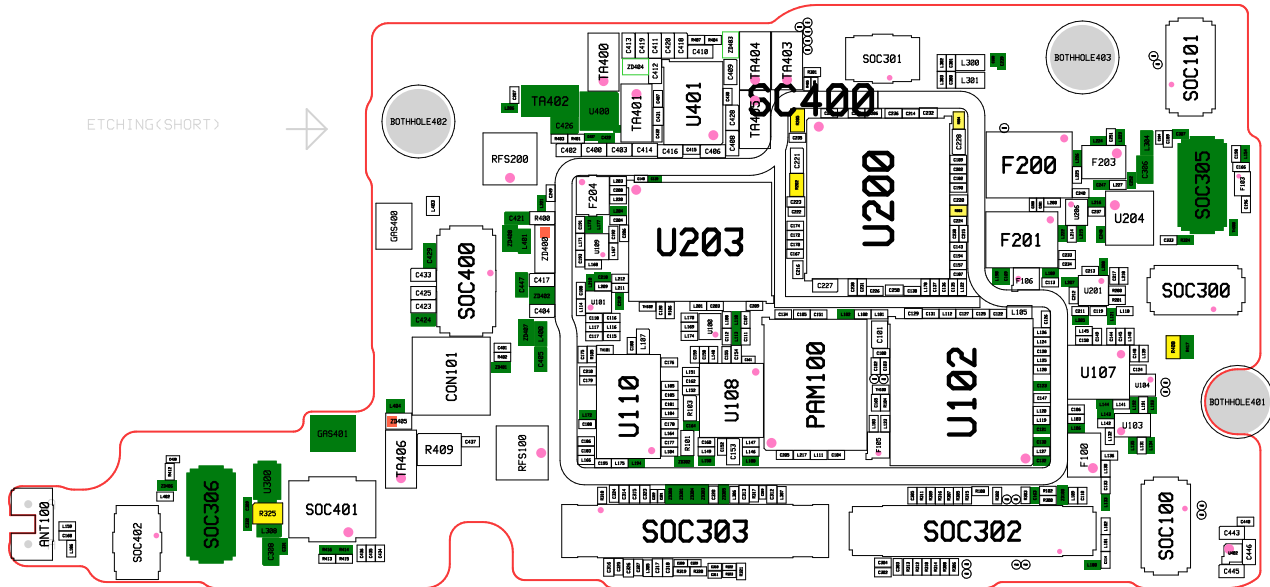
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Drawn by: cad					
R&D CHK:				TITLE:	Size: 16 x 12 A
DOC CTRL CHK:					
MFG ENGR CHK:					
QA CHK:	REV	Drawing Number:	Page: 19		

INP500









INP500

ETCHING(SHORT)

CN100

CN100

CN101

CN102

A

A