

|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |   |
|--|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|---|
| 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |   |
| <div><div>SAMSUNG CONFIDENTIAL<br/>THIS DOCUMENT CONTAINS CONFIDENTIAL<br/>PROPRIETARY INFORMATION THAT IS<br/>SAMSUNG ELECTRONICS CO.'S PROPERTY.<br/>DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS<br/>EXCEPT AS AUTHORIZED BY SAMSUNG.</div></div> |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | A |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | B |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | C |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | D |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | E |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | F |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | G |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | H |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | I |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | J |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | K |
|  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | L |
| 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |   |

SM-S901U\_M\_REV0.7E

SM-S901U Common

2021.11.29

sheet01 : RF (1/2), FRC, ET

sheet02 : RF (2/2), TRCV\_SDR735, GPS, CCP

sheet03 : WIFI

sheet04 : PMR735A, mmWAVE Conn., W/C Conn., Battery Conn.

sheet05 : Audio, IF SUB conn. , PCB JIG

sheet06 : Sensor, UW/VT Camera, Display pmic

sheet07 : Interposer, Shieldcan

Engineer:

Drawn by:

RED CHK:

DOC CTRL CHK:

WFS ENGR CHK:

TITLE:

U\_SMB350

Size:

Changed by: sznd

Date Changed:

Time Changed:

QA CHK:

REV

Drawing Number:

Page: 6

# SM-S901U\_M\_REV0.7E

SM-S901U Common

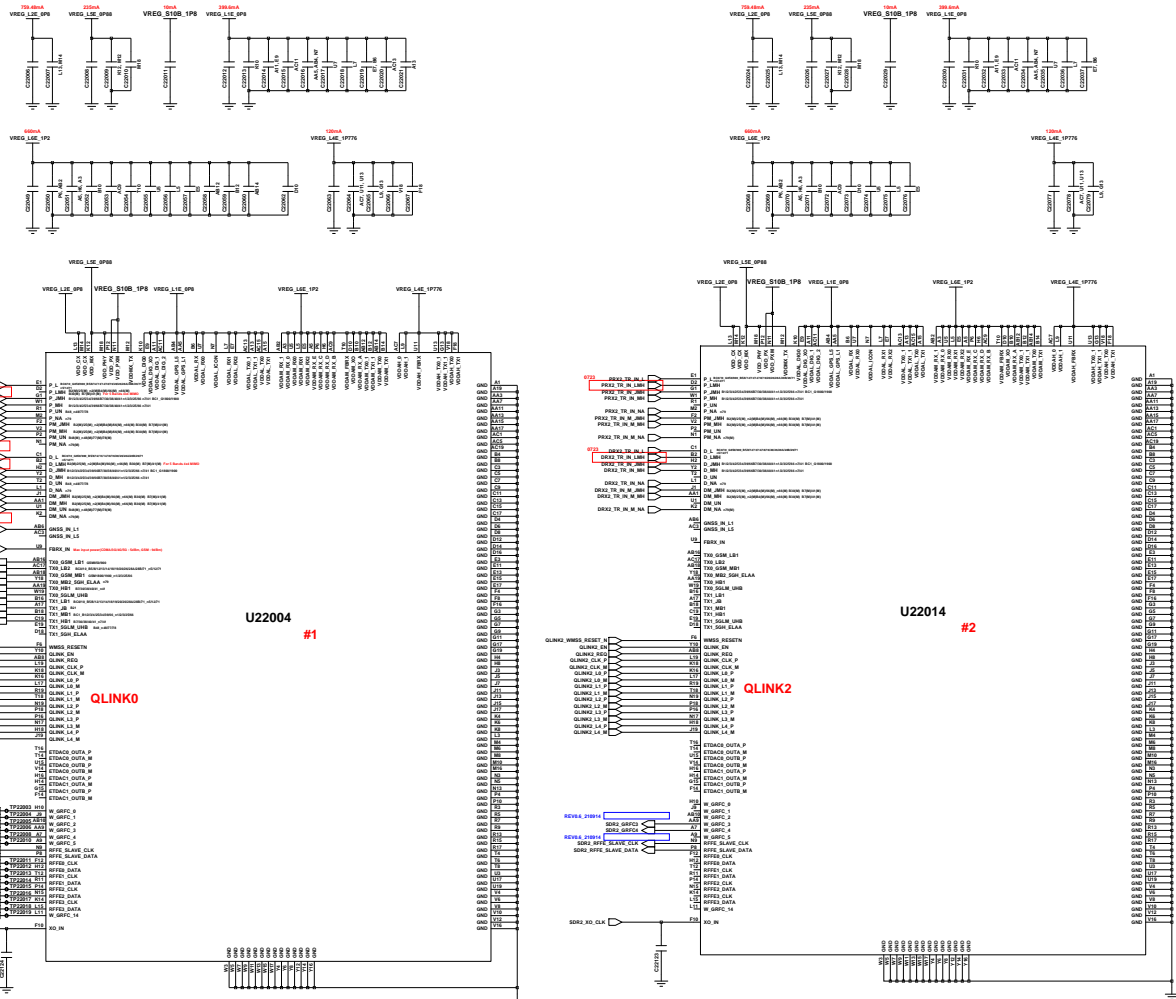
2021.11.29

- sheet01 : RF (1/2), FRC, ET
- sheet02 : RF (2/2), TRCV\_SDR735, GPS, CCP
- sheet03 : WIFI
- sheet04 : PMR735A, mmWAVE Conn., W/C Conn., Battery Conn.
- sheet05 : Audio, IF SUB conn. , PCB JIG
- sheet06 : Sensor, UW/VT Camera, Display pmic
- sheet07 : Interposer, Shieldcan

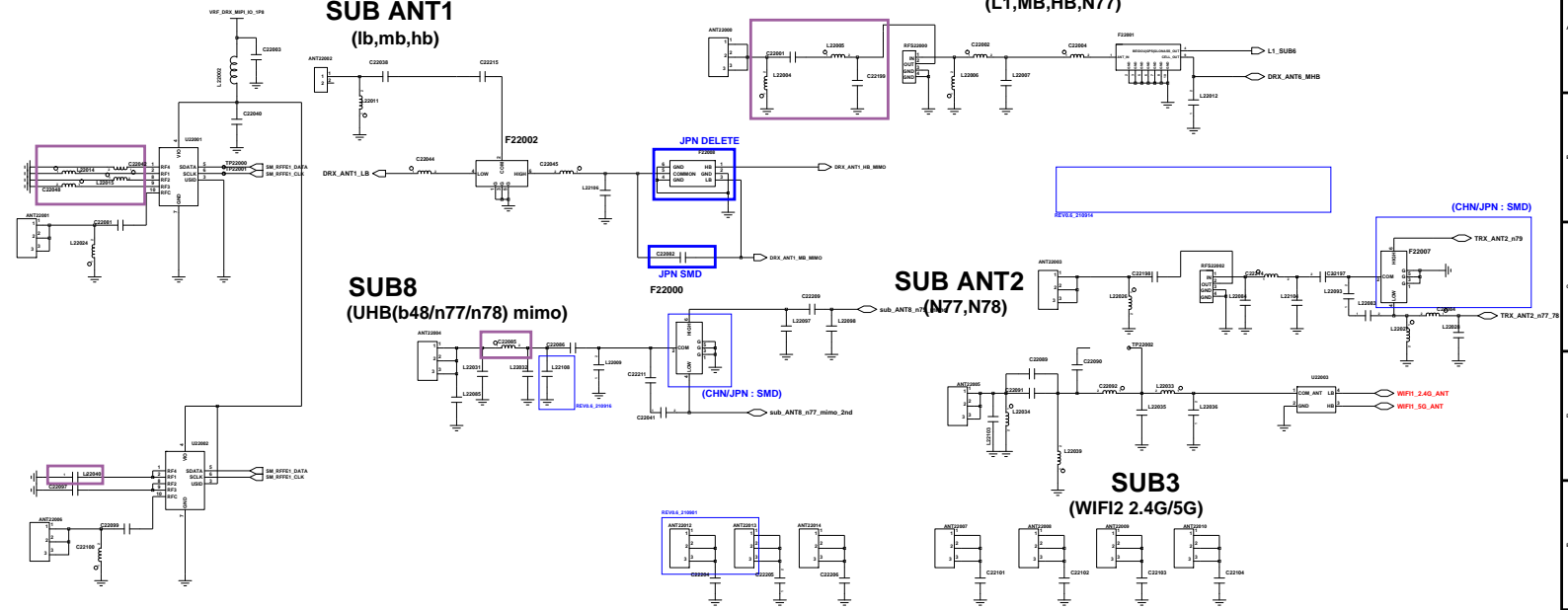
|               |          |                 |       |
|---------------|----------|-----------------|-------|
| Engineer:     |          |                 |       |
| Drawn by:     |          |                 |       |
| RDG CHK:      | TITLE:   |                 | Size: |
| DOC CTRL CHK: | U_SMB250 |                 |       |
| MFG ENGR CHK: |          |                 |       |
| QA CHK:       | REV:     | Drawing Number: | Page: |



# TRANSCEIVER(Dual SDR735)

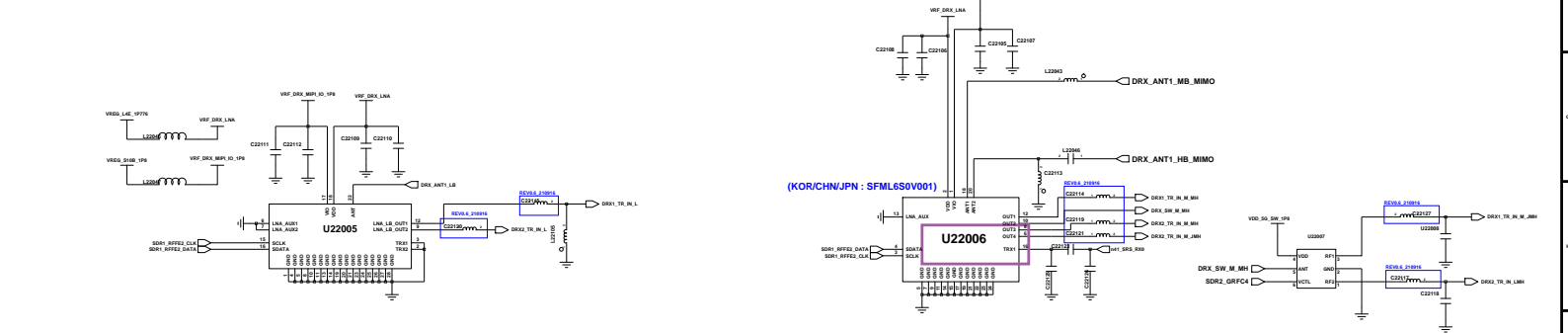


## DRX\_ANT

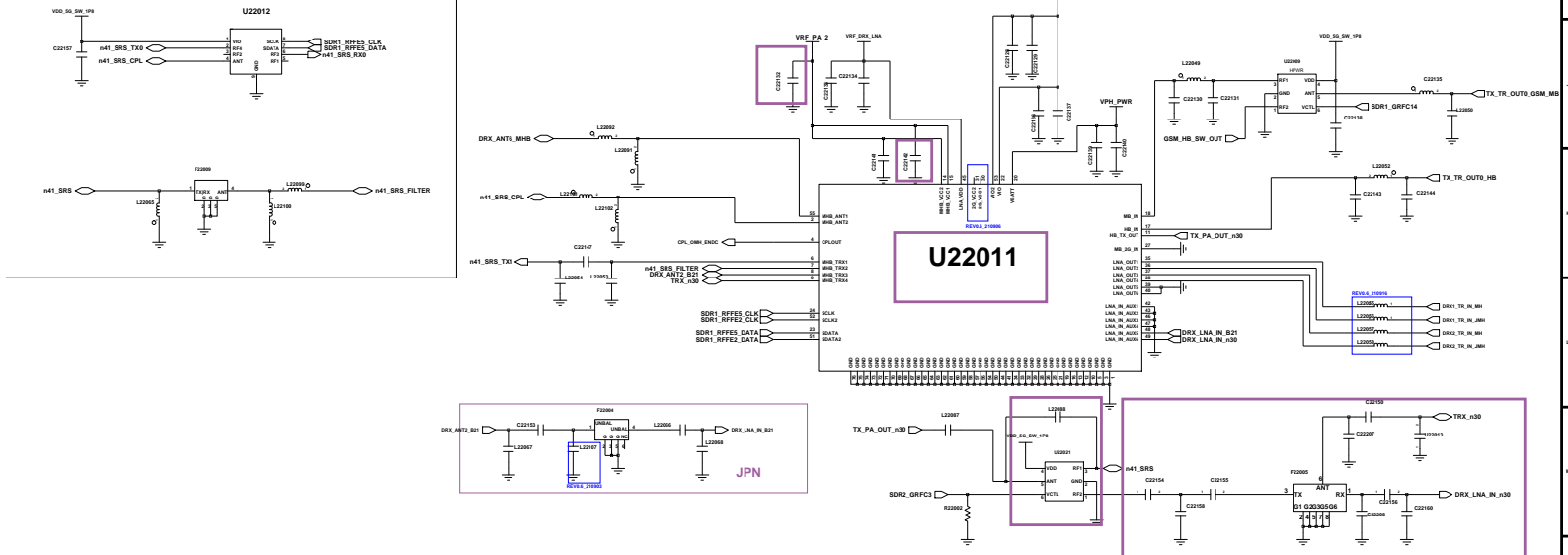


## DRX\_LB (B5/8/12/13/14/17/18/19/20/26/28/29/71\_BC0/10\_G850/900)

## DRX\_MHB\_2 (B2/4/7/25/30/41/66)



## ENDC module (B1/2/3/4/7/25/30/39/41/66\_BC1\_DCS/PCS)

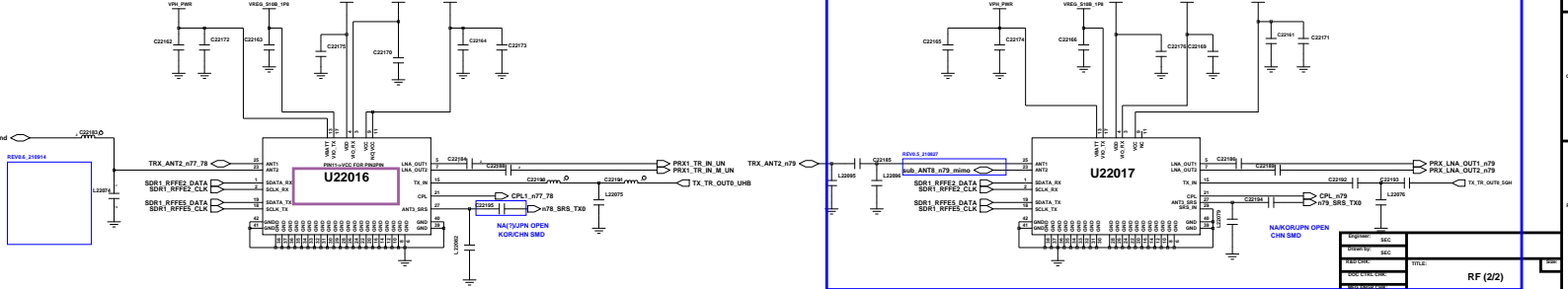


## GPS\_L1(for SUB4 opt)

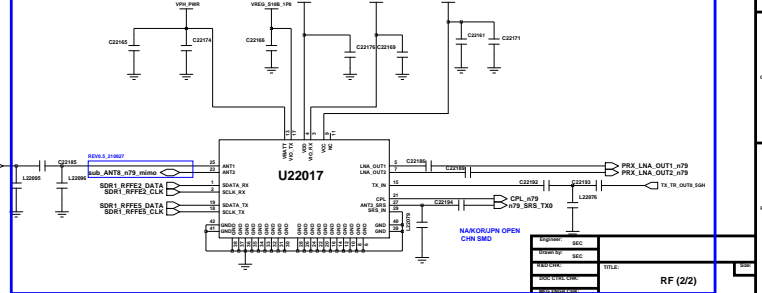
## GPS\_L5



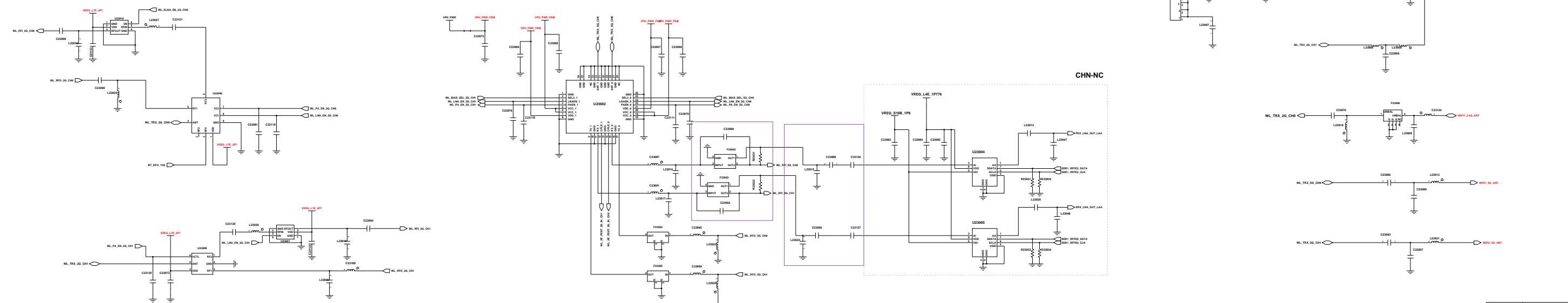
## UHB (B48, n77/n78)



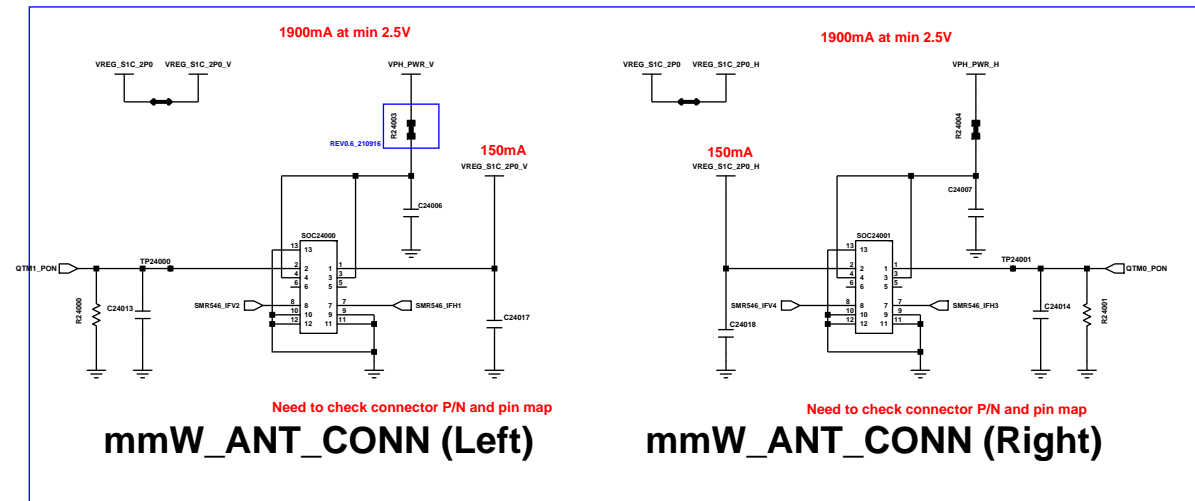
## UHB NA/KOR OPEN CHN/JPN SMD (n79)



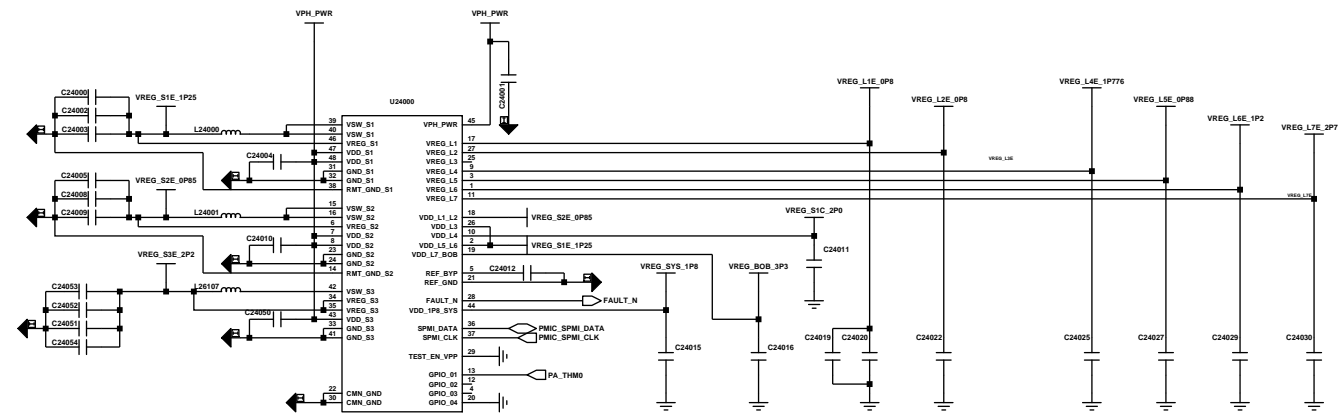
# UWB



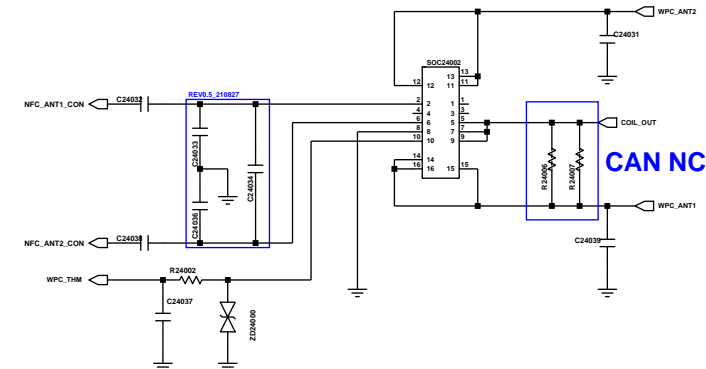
# Radiation



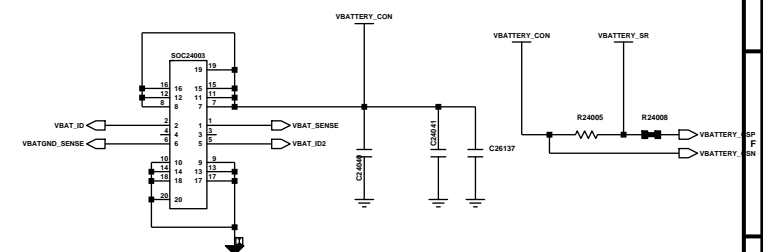
**CAN OPEN**



**PMR735A**

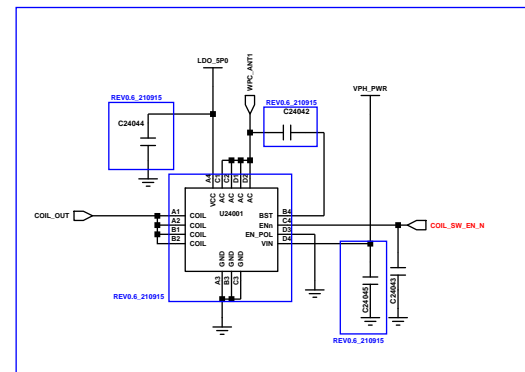


**CAN NC**



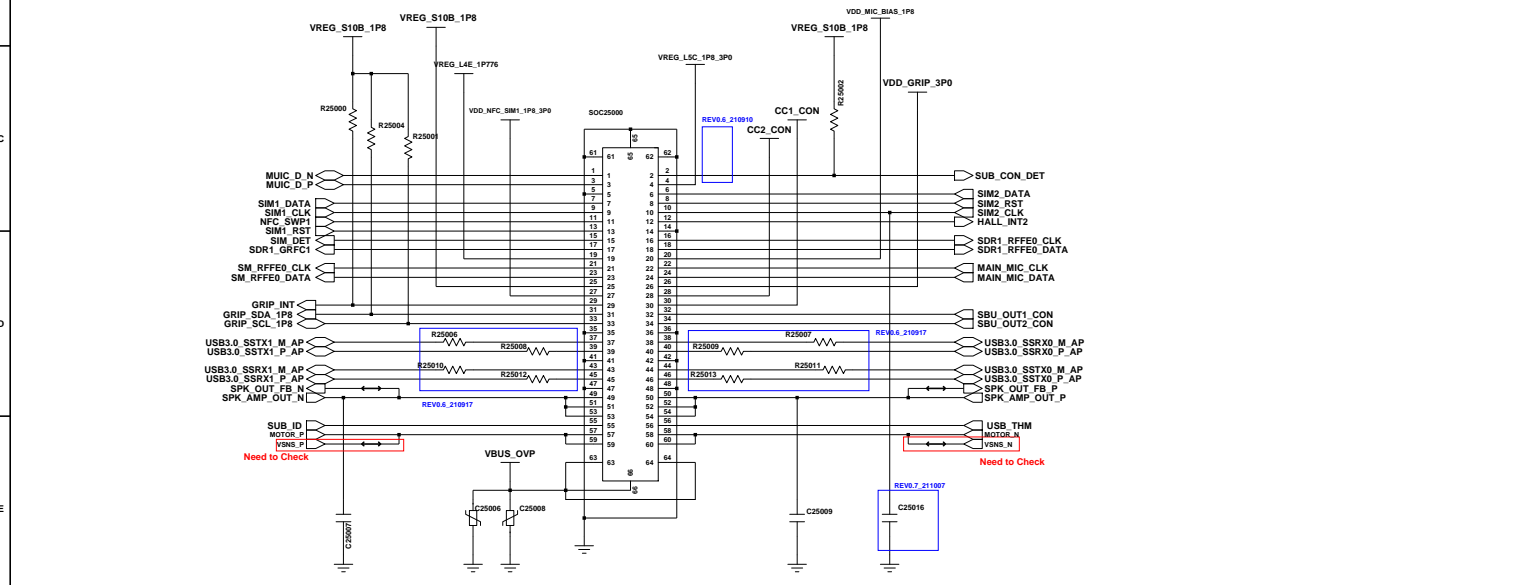
## Battery Connector

## CAN SMD

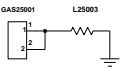


## W/C CONNECTOR

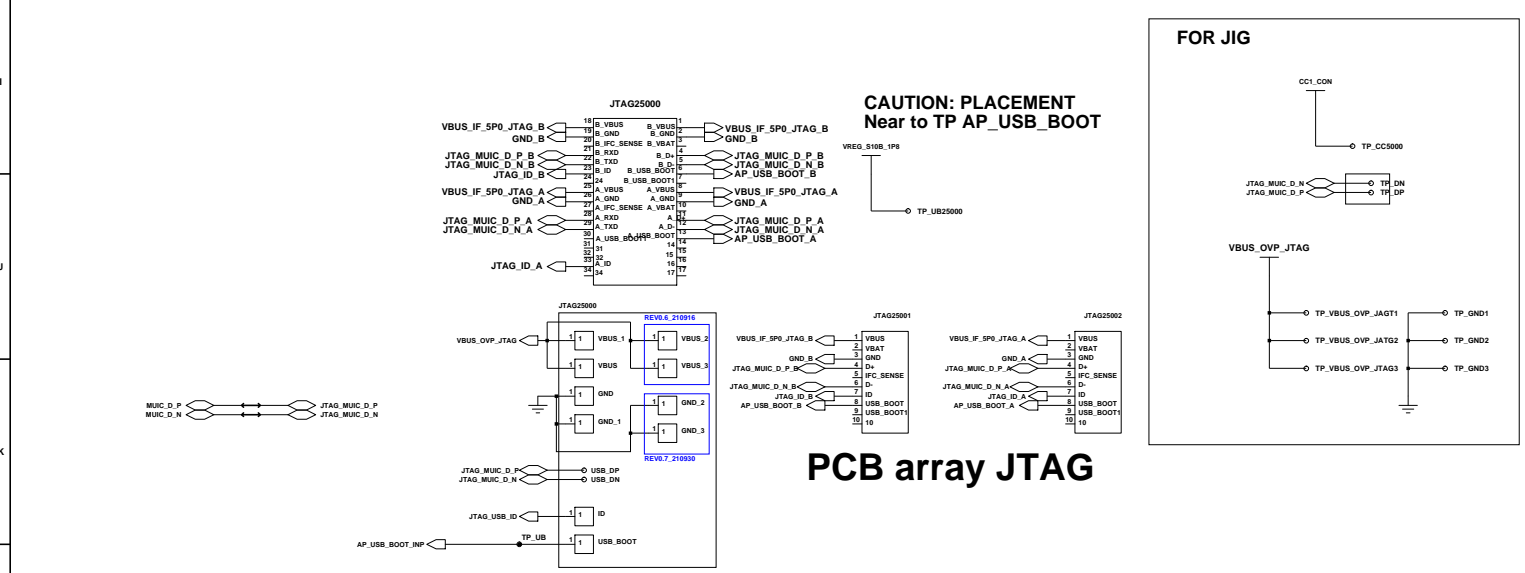
# System



## IF SUB PBA Conn

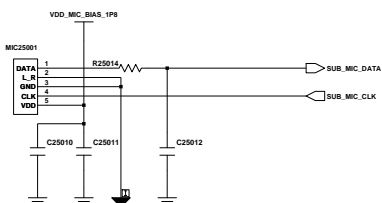
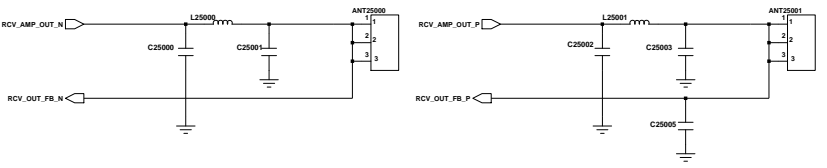


# ESD PORON

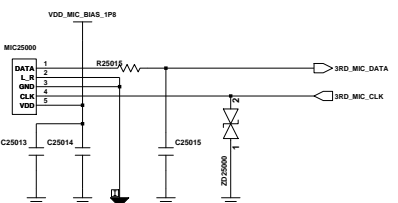


# AUDIO

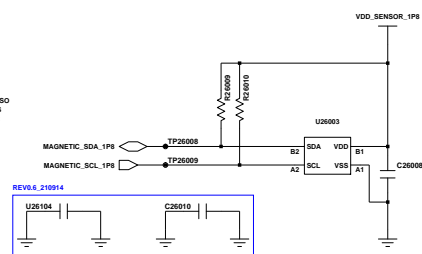
## RCV Conn.



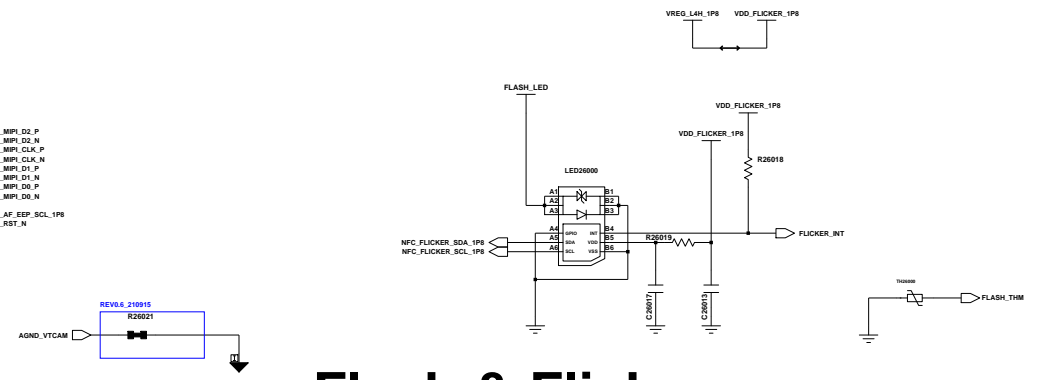
## 2nd MIC



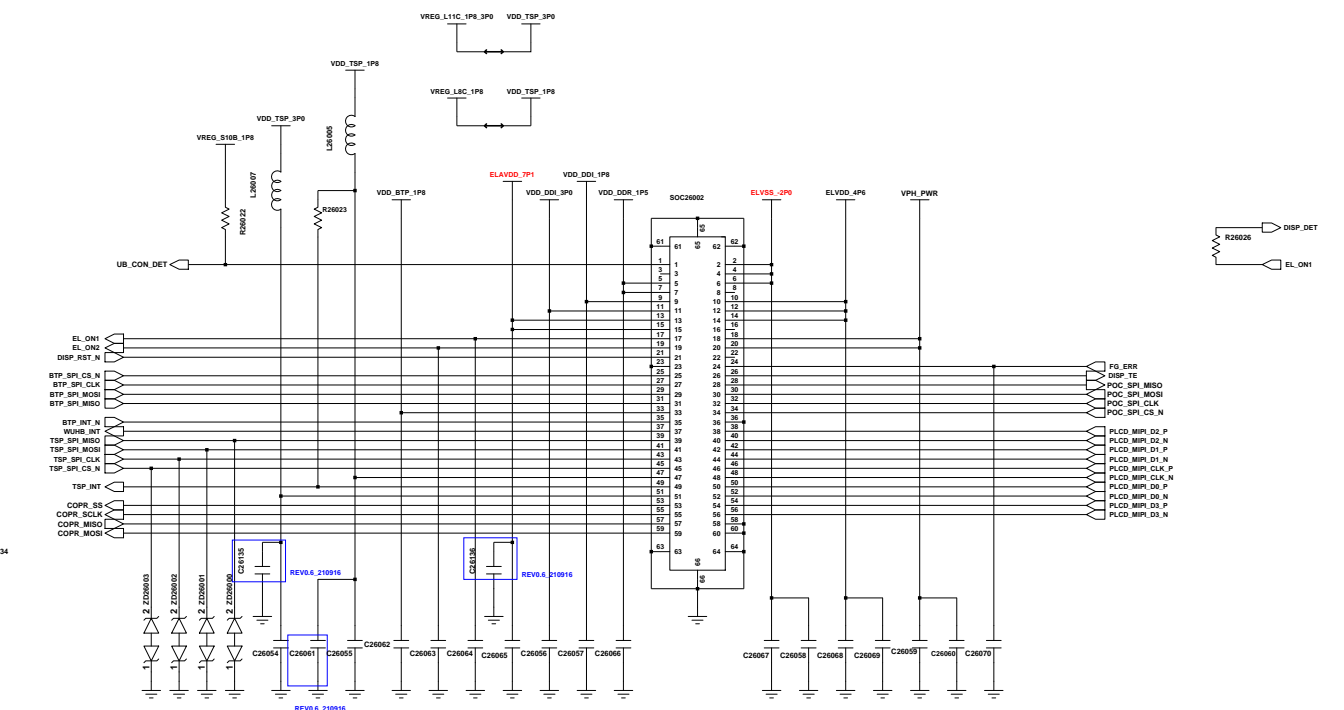
### 3rd MIC



## Magnetic SENSOR



## Flash & Flicker sensor



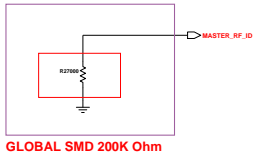
## DISPLAY CONNECTOR



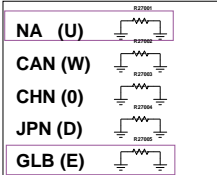
# INTERPOSER

Design

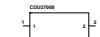
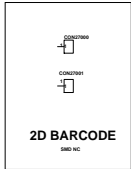
INP270



| SLAVE_TYPE     |      |
|----------------|------|
| NA_mmW         | 68K  |
| NA_CAN_Sub6    | 100K |
| CHN_Sub6       | 150K |
| GLOBAL         | 200K |
| JPN_mmW        | 270K |
| For JIG BINARY | OPEN |
|                |      |
|                |      |
|                |      |
|                |      |
|                |      |
|                |      |

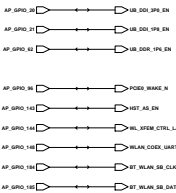


SHIELDCAN



BOSS HOLE

| R0       |                     | G0             |  |
|----------|---------------------|----------------|--|
| GPIO_20  | UB_DDI_3P0_EN       | DISP_SDA_1P8   |  |
| GPIO_21  | UB_DDI_1P8_EN       | DISP_SCL_1P8   |  |
| GPIO_62  | UB_DDR_1P6_EN       | DISPLAY_PM_INT |  |
|          |                     |                |  |
| GPIO_96  | PCIE0_WAKE_N        | UWB_INT        |  |
| GPIO_143 | HST_AS_EN           | UWB_EN         |  |
| GPIO_144 | WL_XFEM_CTRL_LAA_RX | LAA_RX_EN      |  |
| GPIO_148 | WLAN_COEX_UART_RX   | BT_HOST_WAKE   |  |
| GPIO_184 | BT_WLAN_SB_CLK      | UWB_SPI_SYNC   |  |
| GPIO_185 | BT_WLAN_SB_DATA     | WLAN_HOST_WAKE |  |





ing(open)

open)

Side\_etchin

Side

MIC25001

LED26000

SM-S901U Common

SOC26001

SC27000

U22011

U23006

RF22002

F22002

F23003

U22006

RF522002

RF22001

RF22000

RF22002

CIN27000

GPS25001

U2011

SOC24002

RF522000

RF522000

U22014

U21004

U21009

U21008

F21004

F21000

U21000

U26001

SOC24001

SOC24003

R24005

U22004

L26107

U24000

L24001

L21077

L21076

C21007

C21008

C21009

U21005

F21002

U21001

SOC24003

RF22002

SOC26002

SOC25000

SOC21000



# SM-S901U/S906U SECONDARY REV0.7A

SM-S901UCommon

2021. 11. 10

- SHEET01 : RF (1/2)
- SHEET02 : RF (2/2)
- SHEET03 : BT/WIFI, UWB
- SHEET04 : NFC IC, MFC IC, SENSOR, MOTOR DRIVER IC, AUX SW, SIDE KEY
- SHEET05 : AP(1/2), UFS, NVM
- SHEET06 : AP(2/2)
- SHEET07 : AP PMIC, IF PMIC, Direct Charger, OVP IC
- SHEET08 : SPK AMP, MIC
- SHEET09 : CAM PMIC, CAM Conn., CAM MCU, DISPLAY PMIC, DISPLAY Conn.
- SHEET10 : RF PMIC, IF IC
- SHEET11 : SECONDARY INTERPOSER

## MAIN FRC

**MAIN1 ANT**  
**(LB,MB,JPN B21)**

**MAIN2 ANT**  
**(HB\_n41)**

## MHB MIMO\_LNA OUT

### MAIN ANT3 (B48\_n77/78/79)

## THERMISTERS

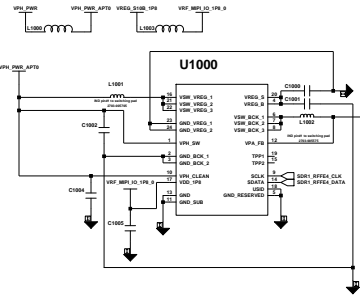
### MAIN ANT4 (n77/78/79)

## on MASTER PCB

# Conduction

## ET Modulator(QET6105#0)

## ET Modulator(QET5100#1)



## on MASTER PCB

**LB LPAMID**  
(B5/8/12/13/14/17/20/26/28/29/71, G850/900, BC0/10)

## on MASTER PCB

**OMH LPAMID**  
**(B1/2/3/4/7/25/30/34/38/39/40/41/66, G1800/1900, BC1)**

## on MASTER PCB

## on MASTER PCB

## 2G\_PA

## on MASTER PCB

## DRX\_ANT

**SUB6**  
(L1,MB,HB,N79)

## on MASTER PCB

**SUB2**  
(N77,N78)



**SUB4**  
(WIFI1 2.4G/5G, GPS L5)

**DRX\_MHB\_2**  
(B2/4/7/25/30/41/66)

## on MASTER PCB

## on MASTER PCB

# Conduction

## ENDC module

**GPS\_L5**

## on MASTER PCB

**UHB**  
(n79)

## on MASTER PCB

# WIFI (BCM4389 CoB) Radiation

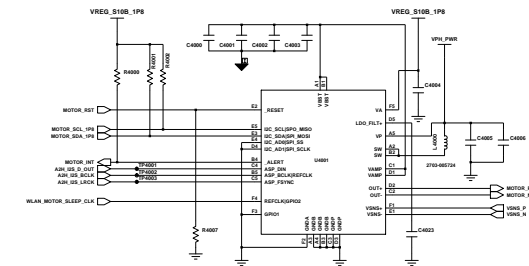
# UWB

on MASTER PCB

UWB Conn.

[illegible]

# System

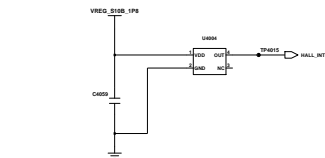


**AUX sw**

# MFC

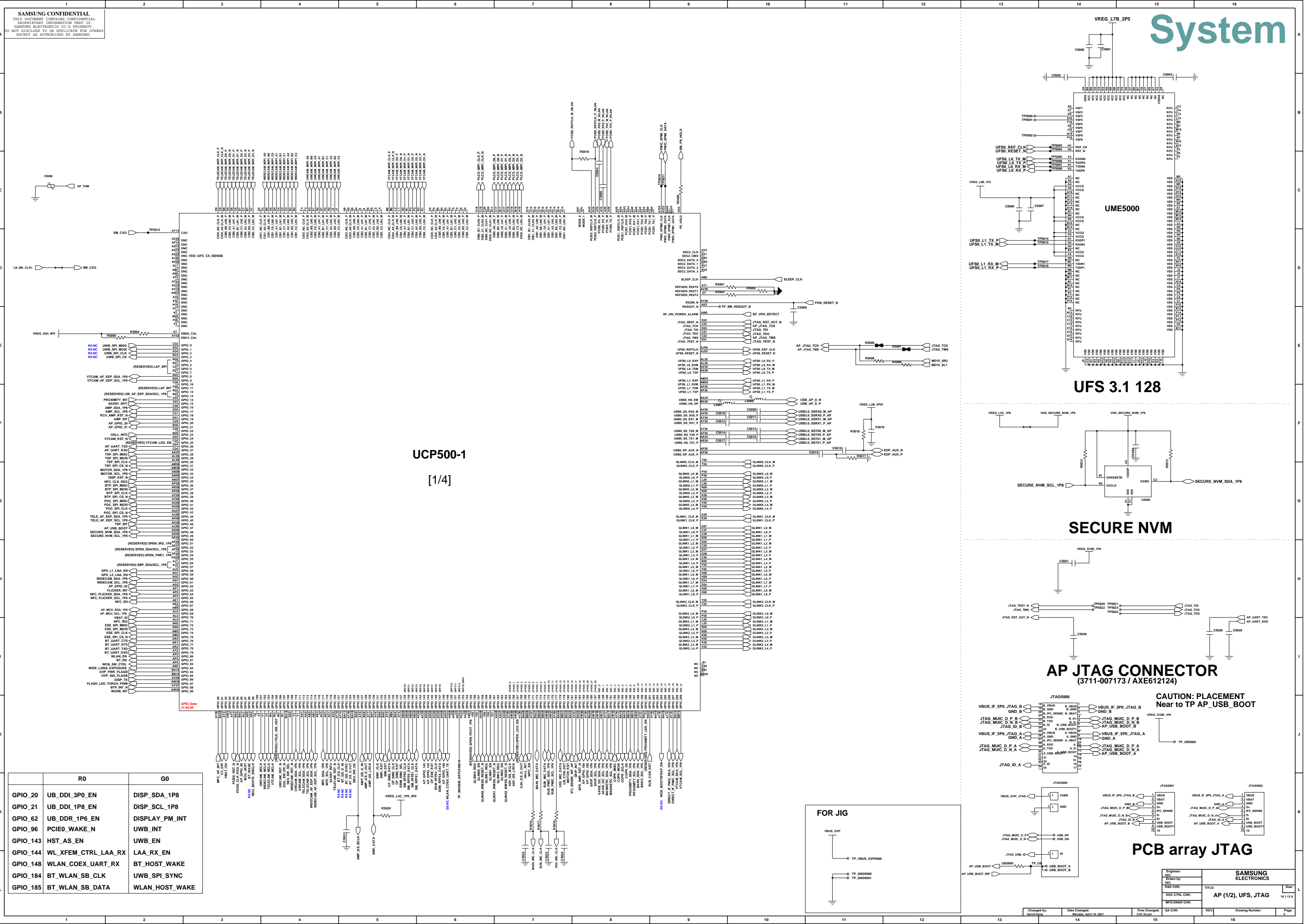


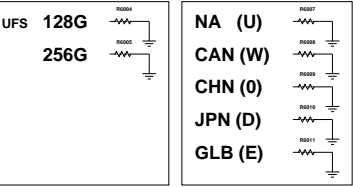
## on MASTER PCB



COVER\_DET HALL\_IC



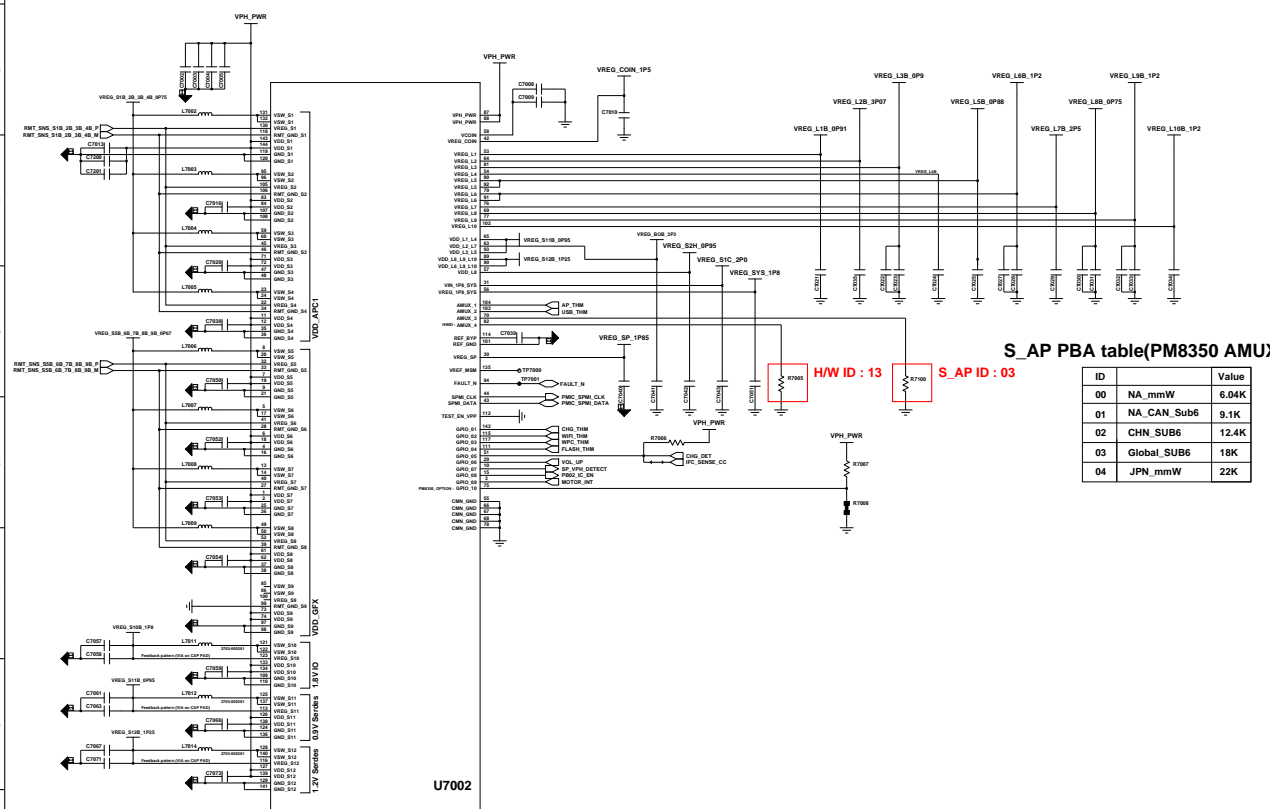




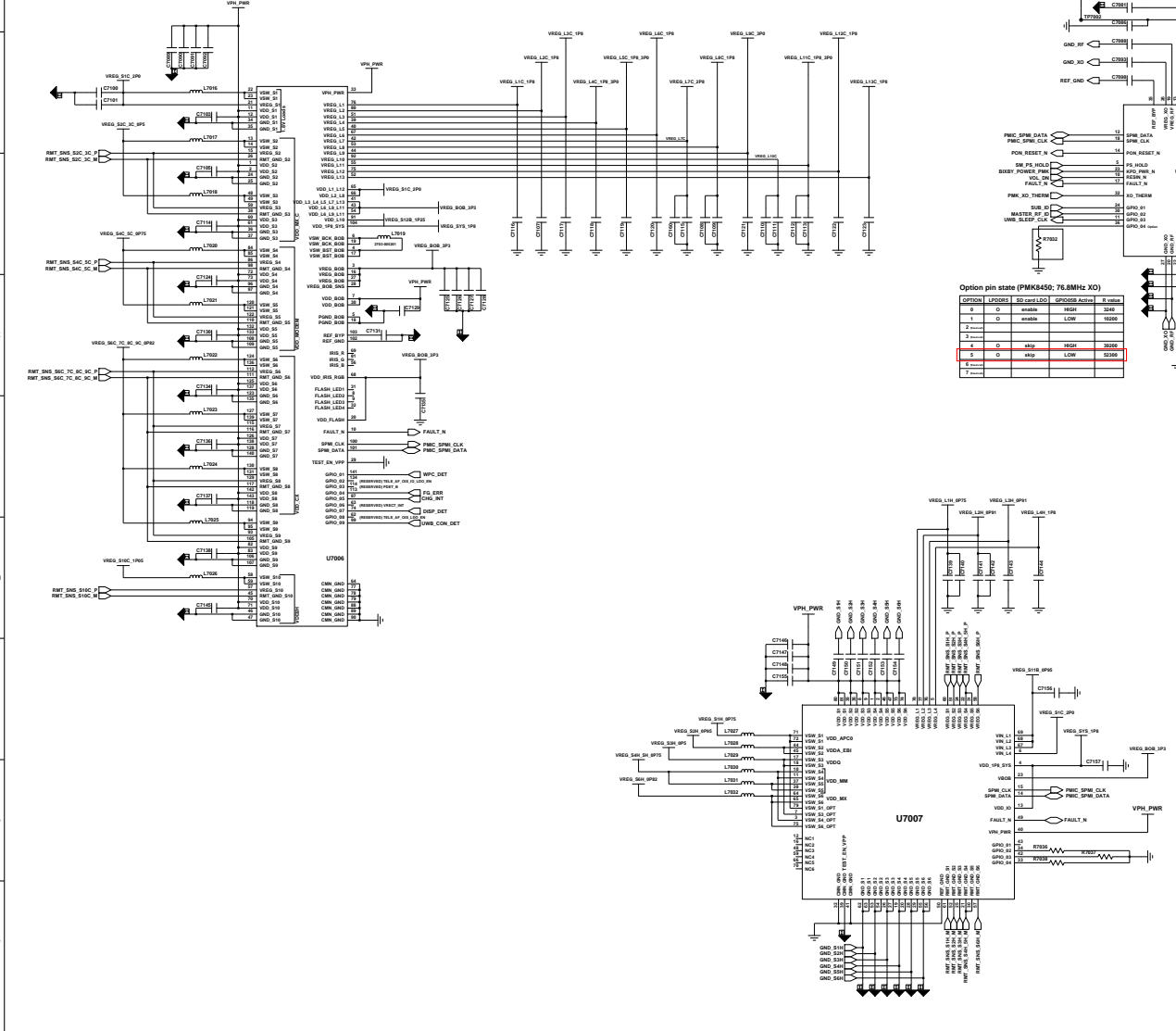
# AP PMIC set & CLK Generator

## Power System

**!! CAUTION !!**  
Place Cin 10uF Bulk Caps at corner of PM8350 and as close to PM8350 as possible to achieve this requirement.



**!! CAUTION !!**  
Place Cin 10uF Bulk Caps at corner of PM8350C and as close to PM8350C as possible to achieve this requirement.



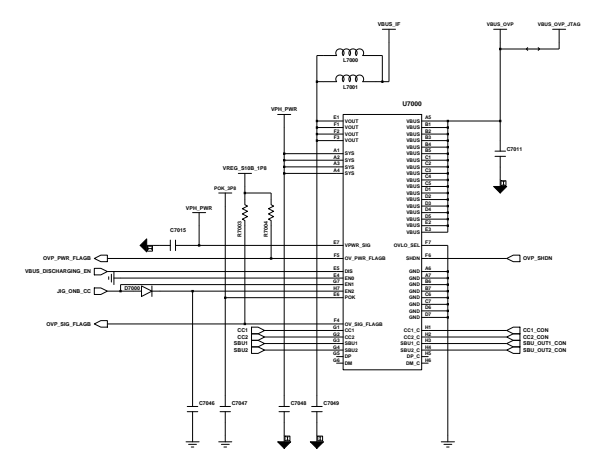
H/W ID table(PM8350 AMUX\_4)

| HW ID | BOARD REVISION                | Value | Mech |
|-------|-------------------------------|-------|------|
| 00    | Next P SW bring-up A-Type     | 6.04K |      |
| 01    | R0/G0 PCB REV0.0              | 9.1K  | KR10 |
| 02    | R0/G0 PCB REV0.1              | 12.4K | KR20 |
| 03    | G0 CURRENT PCB                | 18K   |      |
| 04    | R0/G0 PCB REV0.2              | 22K   | KR30 |
| 05    | R0/G0 PCB REV0.3              | 30K   | KR40 |
| 06    | R0/G0 PCB REV0.3              | 39K   | KR40 |
| 07    | R0 PCB REV0.3                 | 47K   | KR40 |
| 08    | R0/G0 PCB REV0.4              | 56K   | KR50 |
| 09    | R0/G0 PCB REV0.5              | 68K   | KR60 |
| 10    | R0/G0 PCB REV0.5G             | 82K   | KR60 |
| 11    | R0/G0 PCB REV0.6              | 100K  | VR70 |
| 12    | R0/G0 PCB REV0.7/0.7A         | 120K  | VR80 |
| 13    | R0/G0 PCB REV0.7/0.7A(GLOBAL) | 150K  |      |
| 14    |                               | 180K  |      |
| 15    |                               | 200K  |      |
| 16    |                               | 240K  |      |
| 17    |                               | 280K  |      |
| 18    |                               | 330K  |      |
| 19    |                               | 430K  |      |
| 20    |                               | 560K  |      |
| 21    |                               | 750K  |      |
| 22    |                               | 1000K |      |
| 23    |                               | 1500K |      |
| 24    |                               | 3000K |      |

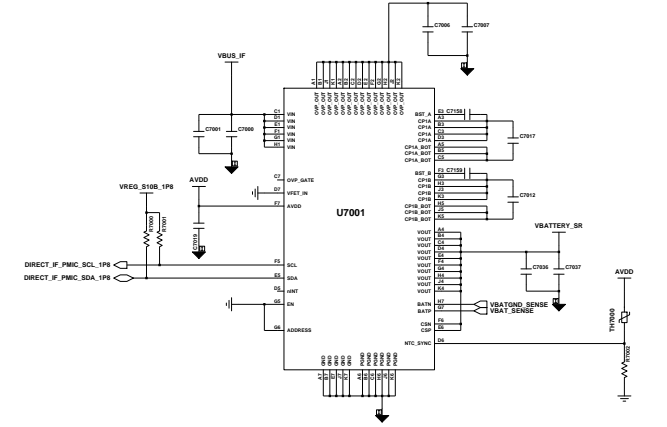
S AP PBA table(PM8350 AMUX\_3)

| ID | Value       |
|----|-------------|
| 00 | NA_mmW      |
| 01 | NA_CAN_Sub6 |
| 02 | CHN_Sub6    |
| 03 | Global_Sub6 |
| 04 | JPN_mmW     |

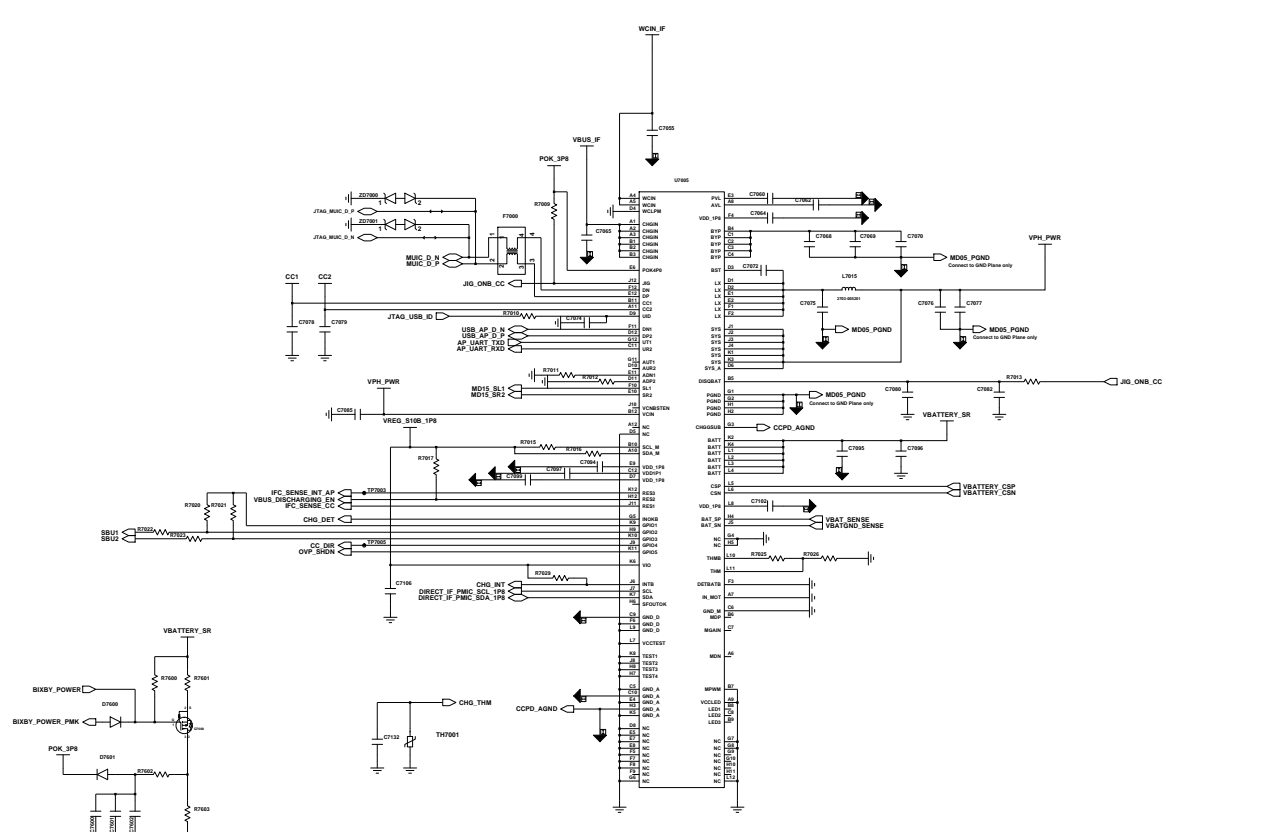
H/W ID : 13  
S AP ID : 03



OVP LS



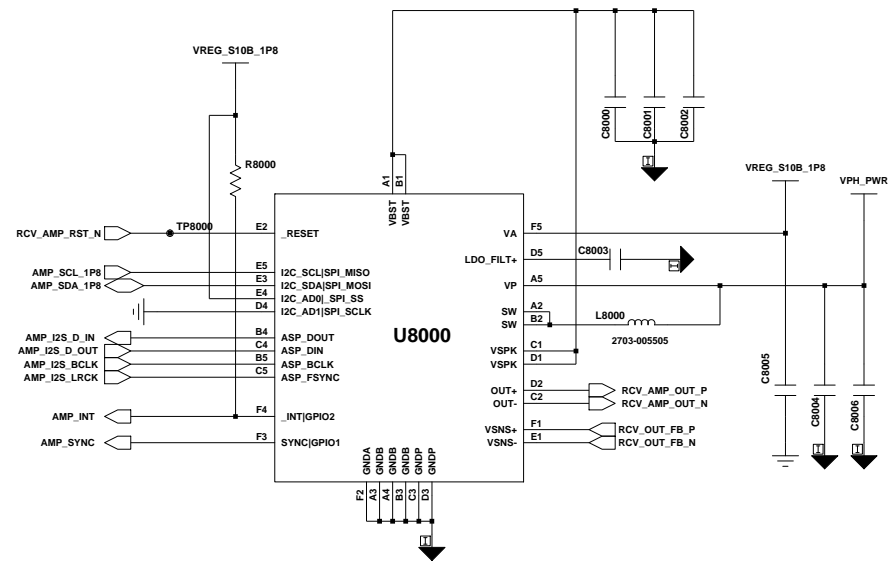
Direct Charging



IF PMIC

RCV Conn.  
on MASTER PCB

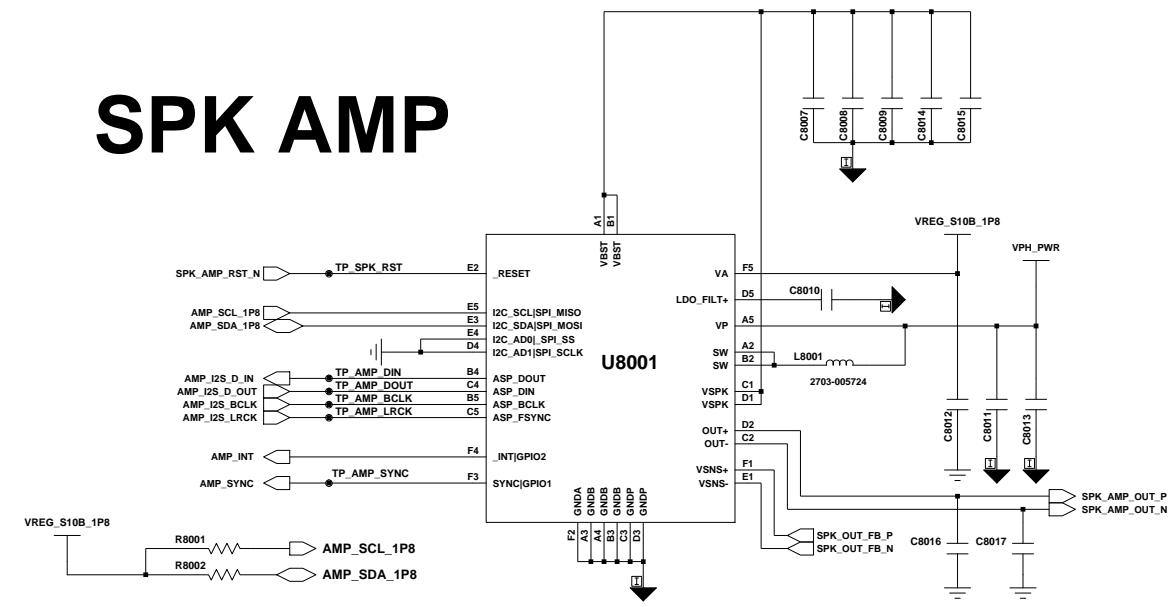
RCV AMP



2nd MIC

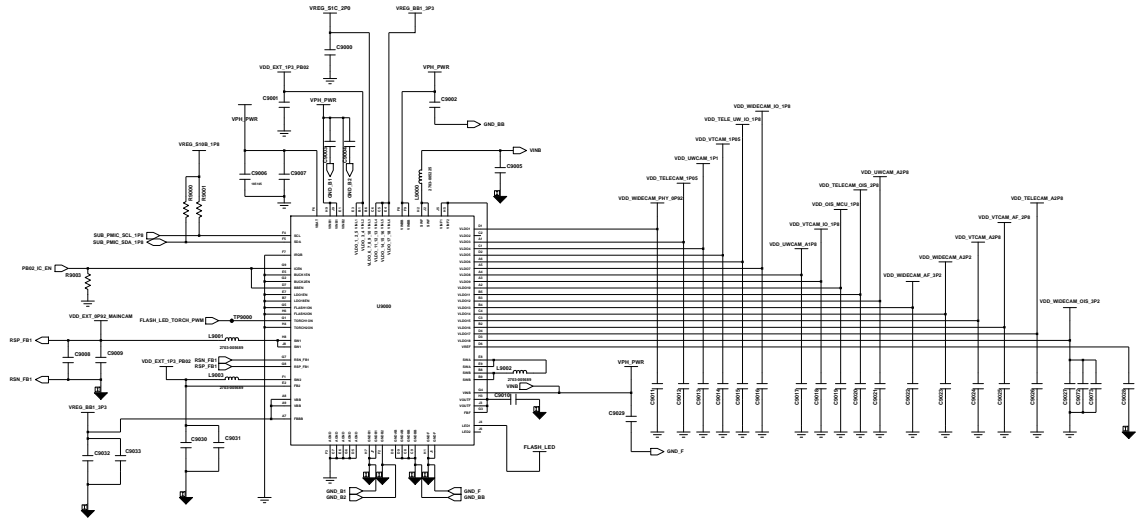
on MASTER PCB

SPK AMP



3rd MIC

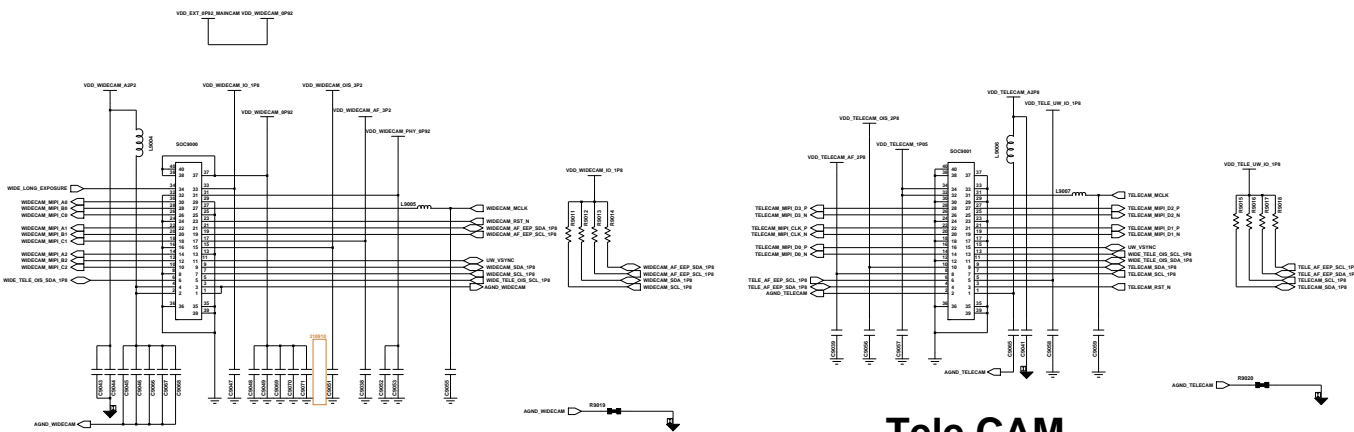
# CAMERA



## CAM PMIC (PB02)

## Flash & Flicker sensor

## MainCAM LDO



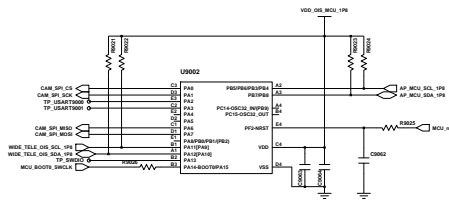
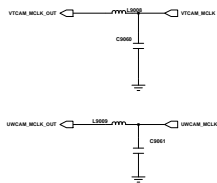
## Wide CAM

## Tele CAM

# on MASTER PCB

## ULTRA WIDE CAM

## FRONT CAM



## CAM MCU

# DISPLAY

# Visual

## DISPLAY PMIC

# on MASTER PCB

## DISPLAY CONNECTOR

## on MASTER PCB

# PMR735A

# 5G IFIC (SMR546)

# Radiation







|          | R0                  | G0             |
|----------|---------------------|----------------|
| GPIO_20  | UB_DDI_3P0_EN       | DISP_SDA_1P8   |
| GPIO_21  | UB_DDI_1P8_EN       | DISP_SCL_1P8   |
| GPIO_62  | UB_DDR_1P6_EN       | DISPLAY_PM_INT |
| GPIO_96  | PCIE0_WAKE_N        | UWB_INT        |
| GPIO_143 | HST_AS_EN           | UWB_EN         |
| GPIO_144 | WL_XFEM_CTRL_LAA_RX | LAA_RX_EN      |
| GPIO_148 | WLAN_COEX_UART_RX   | BT_HOST_WAKE   |
| GPIO_184 | BT_WLAN_SB_CLK      | UWB_SPL_SYNC   |
| GPIO_185 | BT_WLAN_SB_DATA     | WLAN_HOST_WAKE |

# BOSS HOLE

|                           |   |                             |         |      |                 |             |
|---------------------------|---|-----------------------------|---------|------|-----------------|-------------|
| Changed by:<br>Janet Wang | Date Changed:<br>Monday, April 19, 2021 | Time Changed:<br>2:58:12 pm | QA CHK: | REV: | Drawing Number: | Page:<br>12 |
|---------------------------|---|-----------------------------|---------|------|-----------------|-------------|



Side etching(open)

Side etching(open)

INP11000

BOTH HOLE11001

BOTH HOLE11002

CON11000

SOC4000

U7006

U4003

L7019

L7016

L9000

L9003

C9005

C9002

C9001

C9000

C9003

C9004

C9005

C9006

C9007

C9008

C9009

C9010

C9011

C9012

C9013

C9014

C9015

C9016

C9017

C9018

C9019

C9020

C9021

C9022

C9023

C9024

C9025

C9026

C9027

C9028

C9029

C9030

C9031

C9032

C9033

C9034

C9035

C9036

C9037

C9038

C9039

C9040

C9041

C9042

C9043

C9044

C9045

C9046

C9047

C9048

C9049

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