SM-S908U MASTER RF REV0.7B

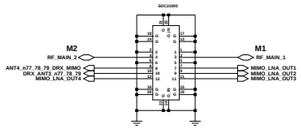
11 2021

Engineer:	
Drawn by:	
R&D CHK:	
DOC CTRL CHK:	
MFG ENGR CHK:	
QA CHK:	

TITLE: U_SM8350 — Size:

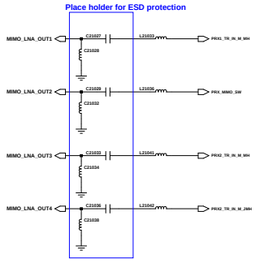
Changed by: 92nd | Date Changed: | Time Changed: | REV: | Drawing Number: | Page: 2

Radiation

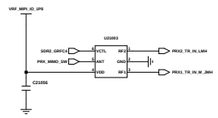


MAIN FRC

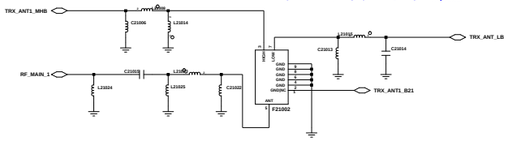
Place holder for ESD protection



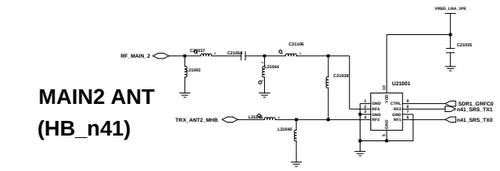
MHB MIMO_LNA OUT



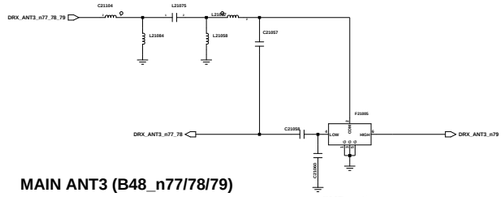
Check SMD Option
KOR/NA/CHN :DPX252690DT-5187B1K Diplexer
JPN : LFD2H829MMZAE751 Triplexer



MAIN1 ANT
(LB,MB,JPN B21)

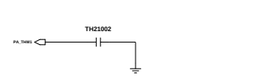


MAIN2 ANT
(HB_n41)

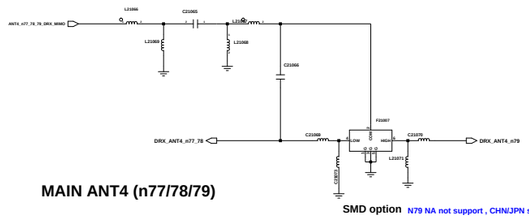


MAIN ANT3 (B48_n77/78/79)

SMD option N79 NA not support , CHN/JPN support



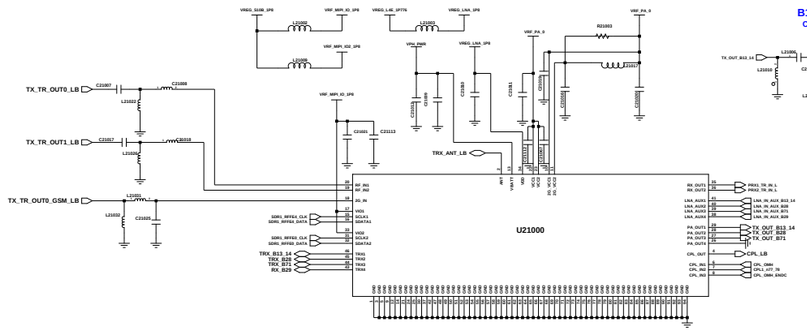
THERMISTERS



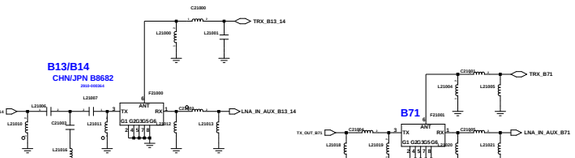
MAIN ANT4 (n77/78/79)

SMD option N79 NA not support , CHN/JPN support

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

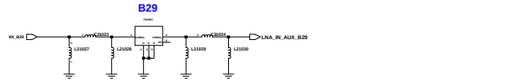


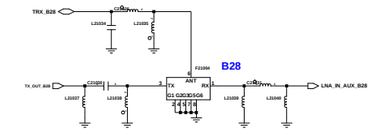
B13/B14
CHN/JPN B8682



B71

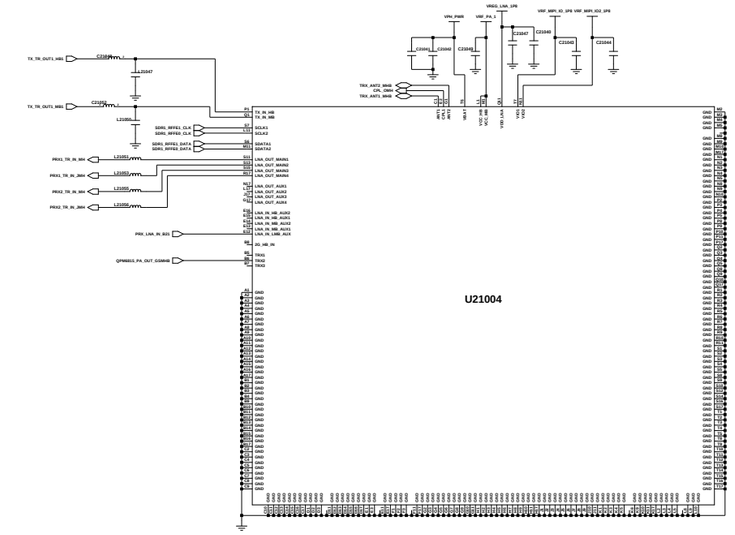
B29



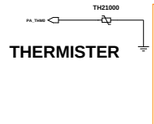


B28

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



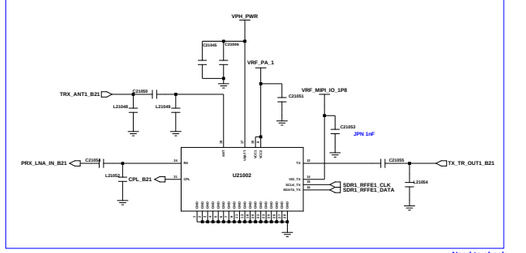
THERMISTER



0913

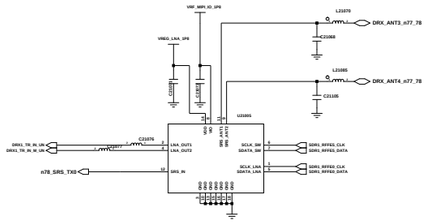
NA/KOR/CHN OPEN
JPN SMD

B21 SMD option
NA / CHN no support JPN support



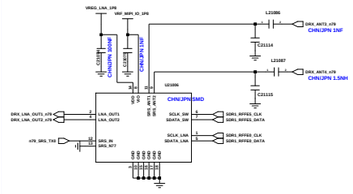
Need to check

n77/78

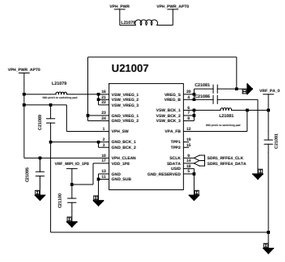


SMD option
N79 NA not support , CHN/JPN support

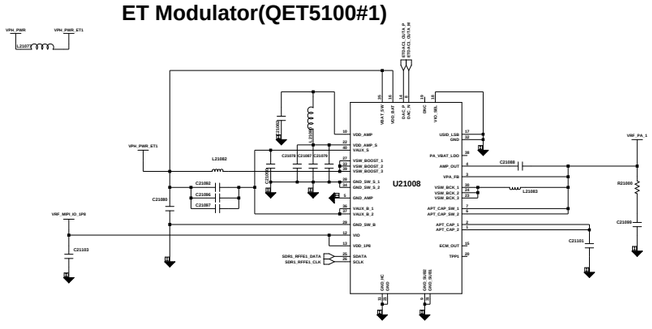
NA/KOR OPEN
CHN/JPN SMD



ET Modulator(QET6105#0)



ET Modulator(QET5100#1)



2G_PA DELETE

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Drawn by:	SEC		
R&D CHK:		TITLE:	RF (1/2)
DOC CTRL CHK:			
SPD SIGN CHK:			
QA CHK:		REV	
Changed by:	PATR	Drawing Number:	
Date Changed:			
Time Changed:			

TRANSCEIVER(Dual SDR735)

SUB ANT1_Frame
(lb_mhb)

SUB ANT6_Slit
(L1_LMB)

PEA ANT

SUB ANT2_Slit
(UHB_N77_N78)

SUB8_LDS
(n79)

SUB5 DELETE

SUB3_Slot
(UWB)

SUB4_Slit
(WIFI1 2.4G/5G, GPS L5)

CCP

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)

(KOR/CHN/JPN : SFML6S0V001)

DRX_ANT

QET6105 #2

ENDC module
(B1/2/3/4/7/25/30/39/41/66_BC1_DCS/PCS)

JPN

B30

GPS_L1(for SUB4 opt)

GPS_L5

UHB
(B48, n77/78)

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

NA/KOR/JPN OPEN
CHN SMD

Engineer:	SEC		
Drawn by:	SEC		
R&D CHK:		TITLE:	RF (2/2)
DOC CTRL CHK:		SIZE:	
MFG SIGN-OFF:			
Changed by:	Date Changed:	Time Changed:	REV:
QA CHK:		Drawing Number:	

WIFI (BCM4389 CoB)

Radiation

UWB

UWB Conn.

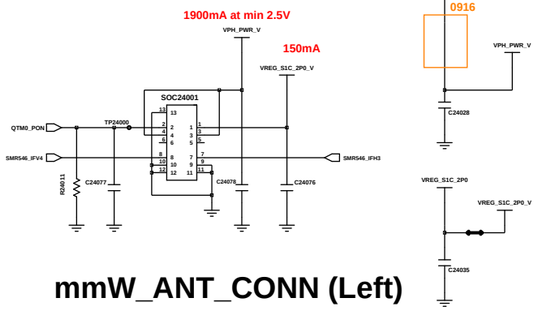
CHN-NC

Engineer: RF	SAMSUNG ELECTRONICS
Drawn by: RF	
RFD CHK:	TITLE: Connectivity (1/2)
DOC CTRL CHK:	Size: A4 1.32.4
MFG ENGR CHK:	
QA CHK:	

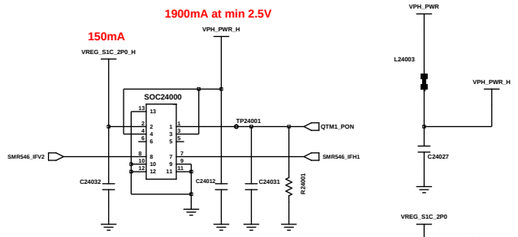
Radiation

KOR/CHN OPEN
NA/JPN SMD

CANADA NC

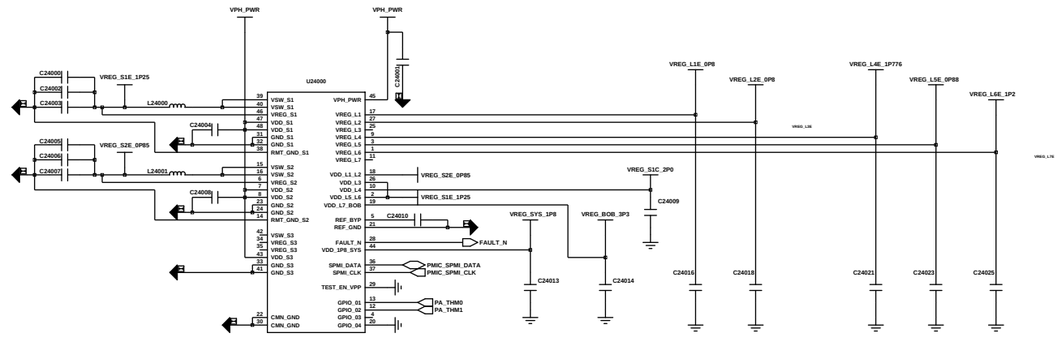


mmW_ANT_CONN (Left)

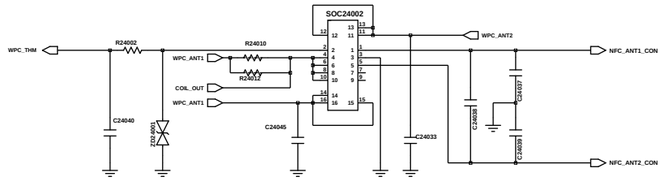


mmW_ANT_CONN (Right)

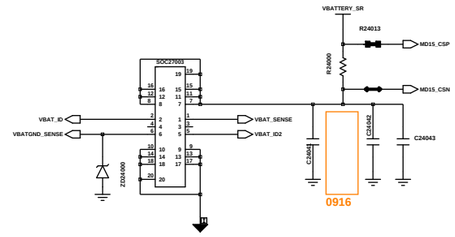
Power



PMR735A



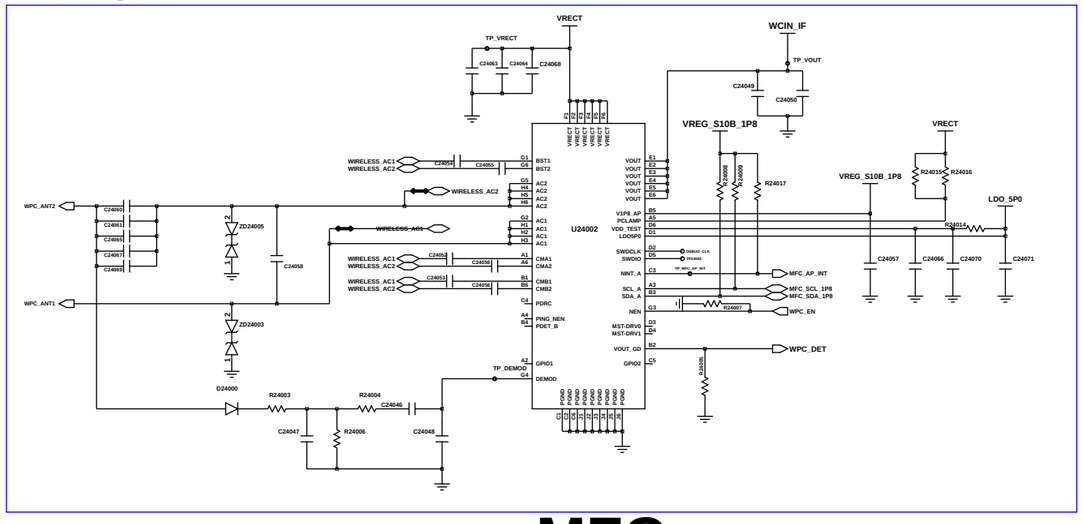
W/C CONNECTOR



Battery Connector

Power

IDT->LSI



MFC

Engineer: SSC		SAMSUNG ELECTRONICS	
Drawn by: SSC			
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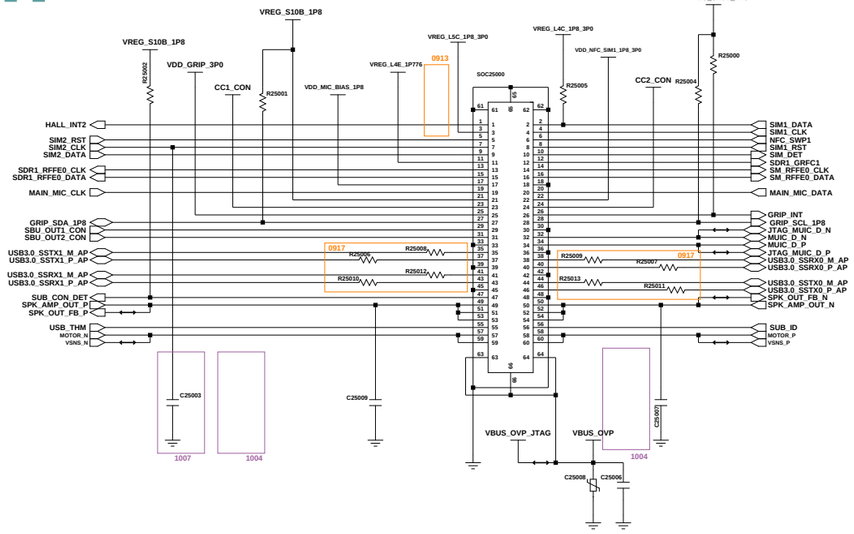
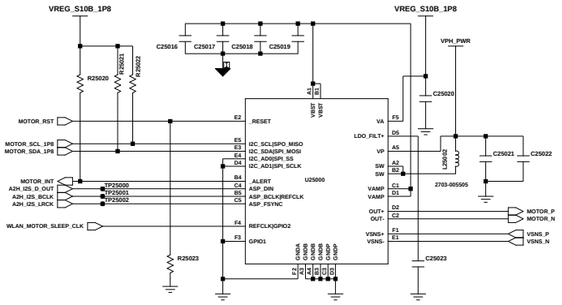
MFG ENGR CHK:			16 1 12 A
Changed by: tanvir.kaur	Date Changed: Wednesday, April 21, 2021	Time Changed: 10:24:31 pm	QA CHK:
REV	Drawing Number:		Page: 72

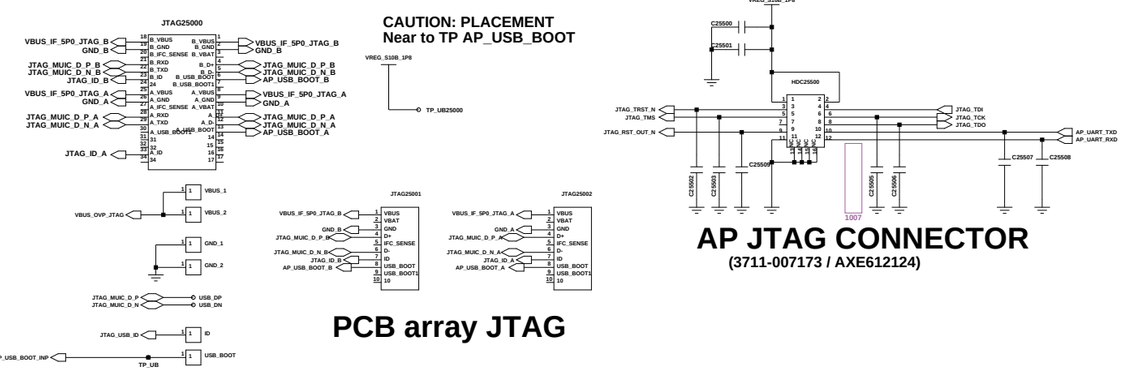
System



IF SUB PBA Conn



MOTOR DRV IC



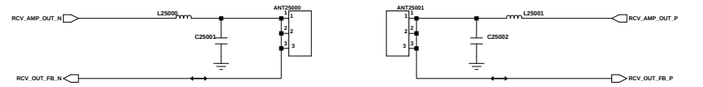
PCB array JTAG

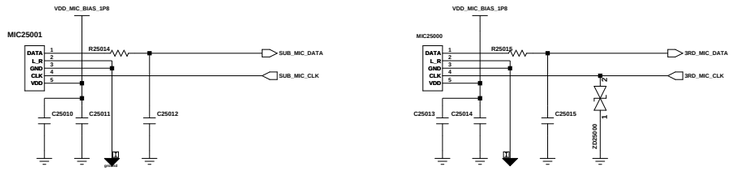
AP JTAG CONNECTOR

(3711-007173 / AXE612124)

AUDIO

RCV Conn.





2nd MIC

3rd MIC

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Drawn by: SEC					
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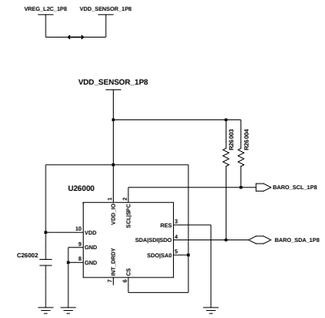
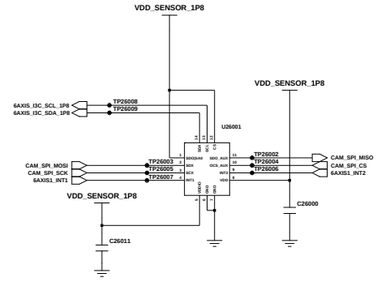
DOC CTRL CHK:	TITLE: ETC				Size: 16 1 12 A
MFG ENGR CHK:					
QA CHK:	Changed by: hanuri.kang	Date Changed: Wednesday, April 21, 2021	Time Changed: 10:24:53 pm	REV	Drawing Number: Page: 17

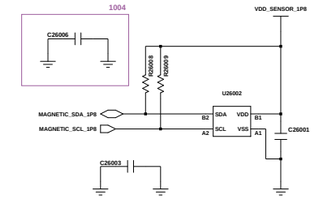
Visual



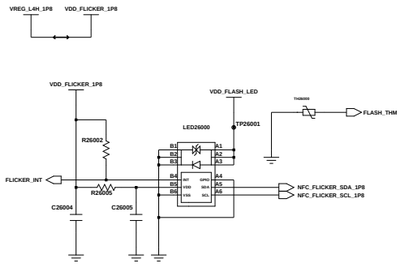
Barometer SENSOR

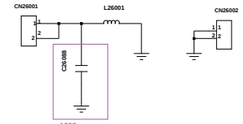


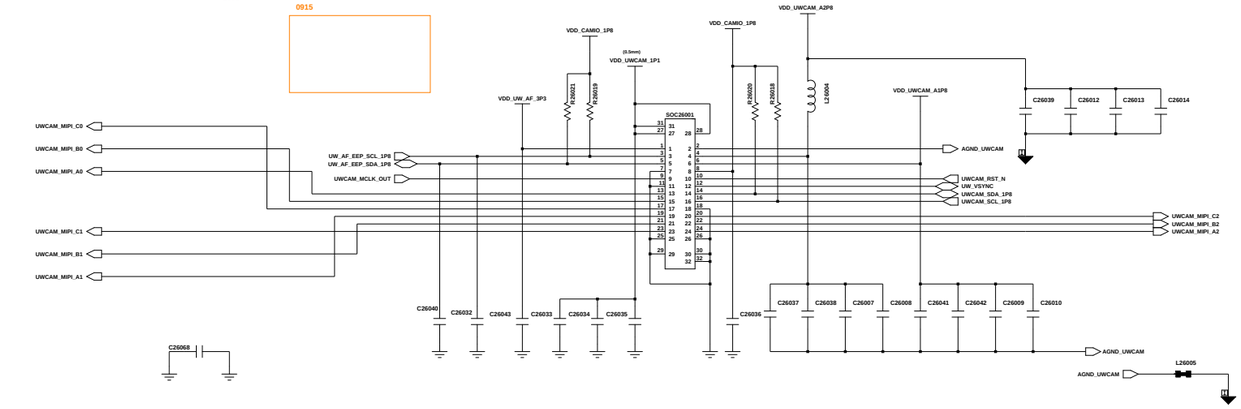
6 Axis SENSOR (GYRO,ACCEL)



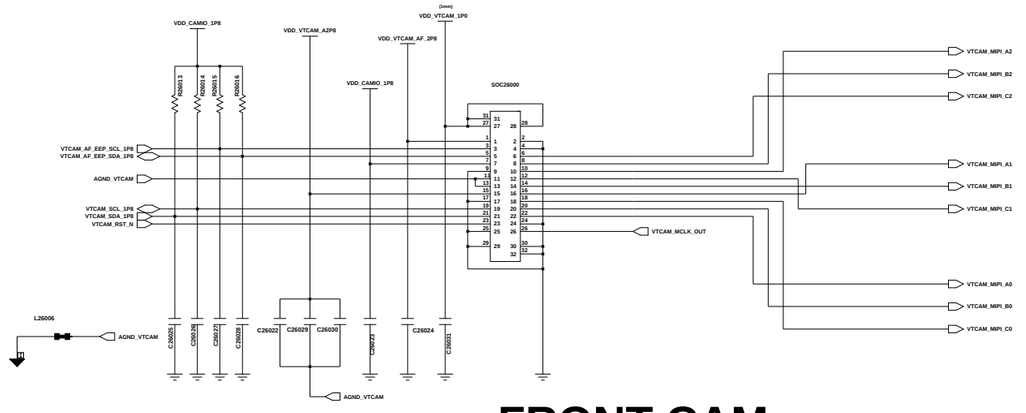
Magnetic SENSOR



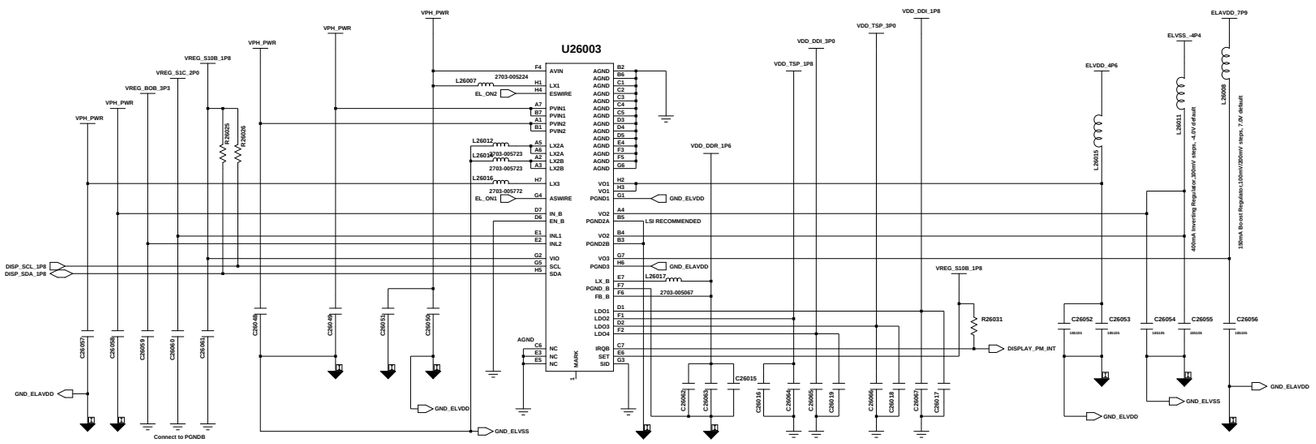




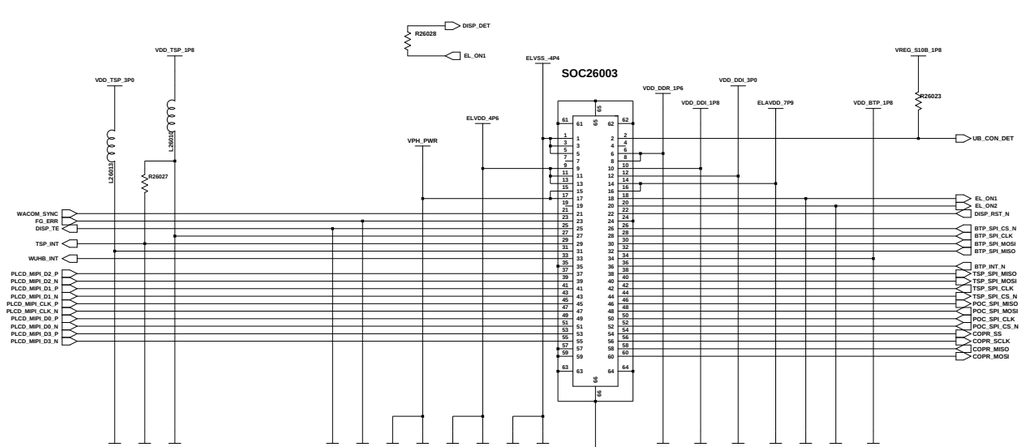
ULTRA WIDE CAM



FRONT CAM



DISPLAY PMIC

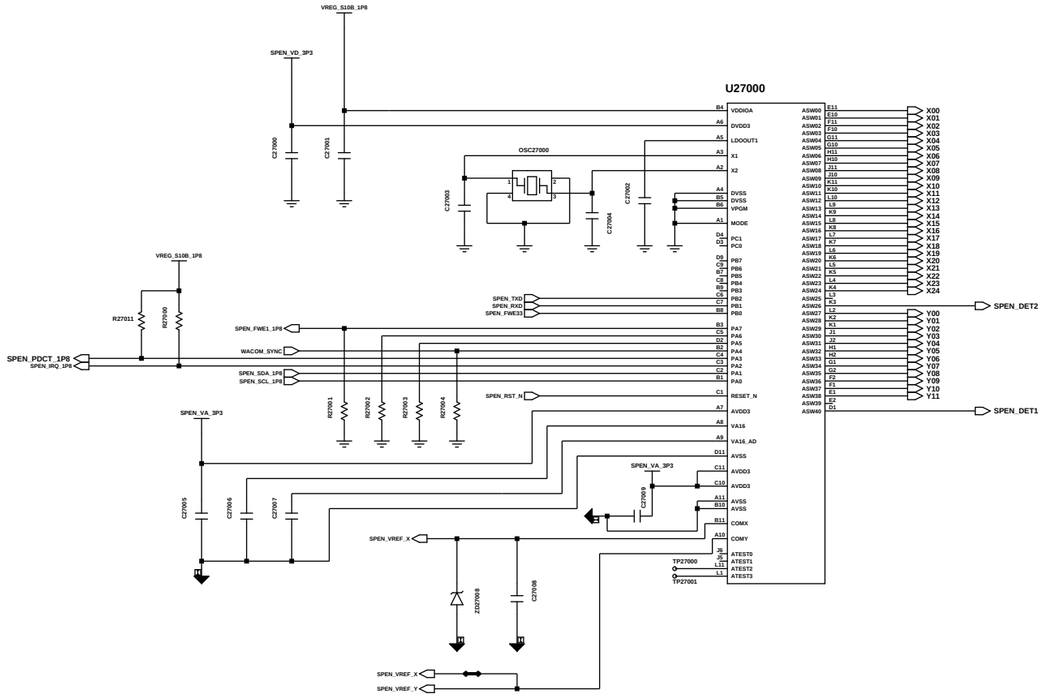


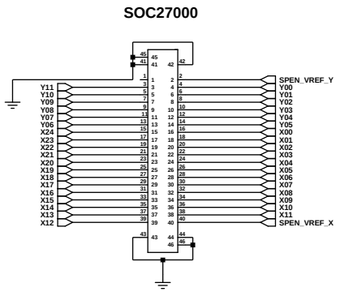
DISPLAY CONNECTOR

Engineer: SEC	SAMSUNG ELECTRONICS
Drawn by: C	TITLE: SENSOR, CAMERA, DISPLAY
R&D CHK:	Size: 16 | 12 A
DOC CTRL CHK:	
MFG ENGR CHK:	
QA CHK:	REV: Drawing Number: Page: 16

Changed by: hanuri.kang | Date Changed: Wednesday, April 21, 2021 | Time Changed: 10:25:40 pm

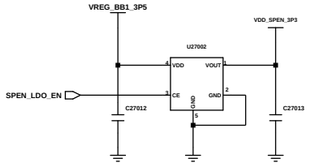
DIGITIZER(WEZ02)

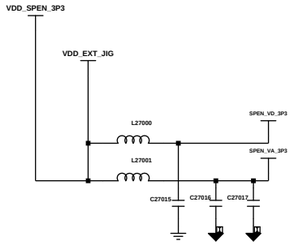


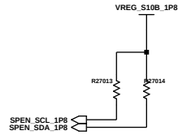


DIGITIZER CONN.

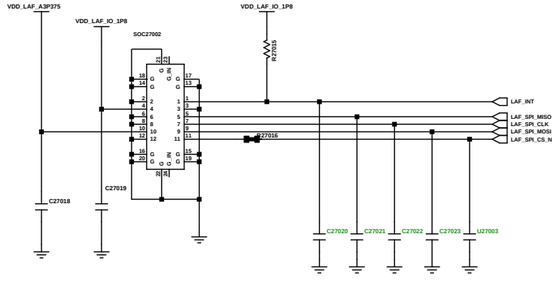
SPEN_DET







DIGITIZER TP



RANGING sensor

Engineer: SSC	SAMSUNG ELECTRONICS
Drawn by: SSC	
R&D CHK:	TITLE: U_SM8350
DOC CTRL CHK:	Size: A
MFG ENGR CHK:	
QA CHK:	REV:
Changed by: lv.r.che	Drawing Number:
Date Changed: Thursday, April 2, 2020	Page: 72
Time Changed: 2:31:42 pm	

INTERPOSER

Design

INP280-1

INP280-2

INP281

BOSS HOLE

SHIELDCAN

SLAVE_TYPE

	ADC
NA_mmW	68K
NA_CAN_Sub6	100K
CHN_SUB6	150K
GLOBAL	200K
JPN_mmW	270K
For JIG BINARY	OPEN

2D BARCODE

Designed:	SAMSUNG ELECTRONICS	
Checked by:		
Approved by:		
PM:	TITLE:	SIZE:
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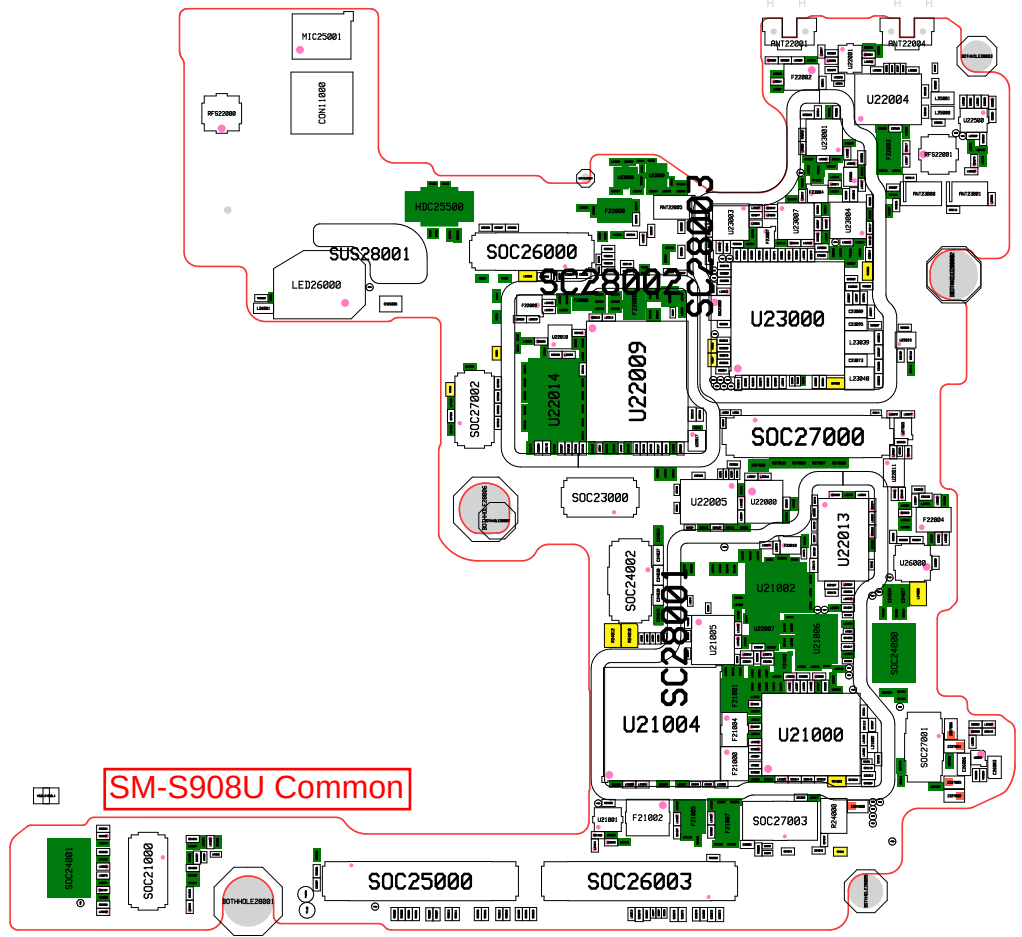
MFG ENGR CHK:		
QA CHK:	DWG:	REV:
	Drawing Number:	Page: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CON11000
RFS22000
HDC25500
SUS28001
LED26000
SOC26000
SOC28002
SOC28003
U23000
U22009
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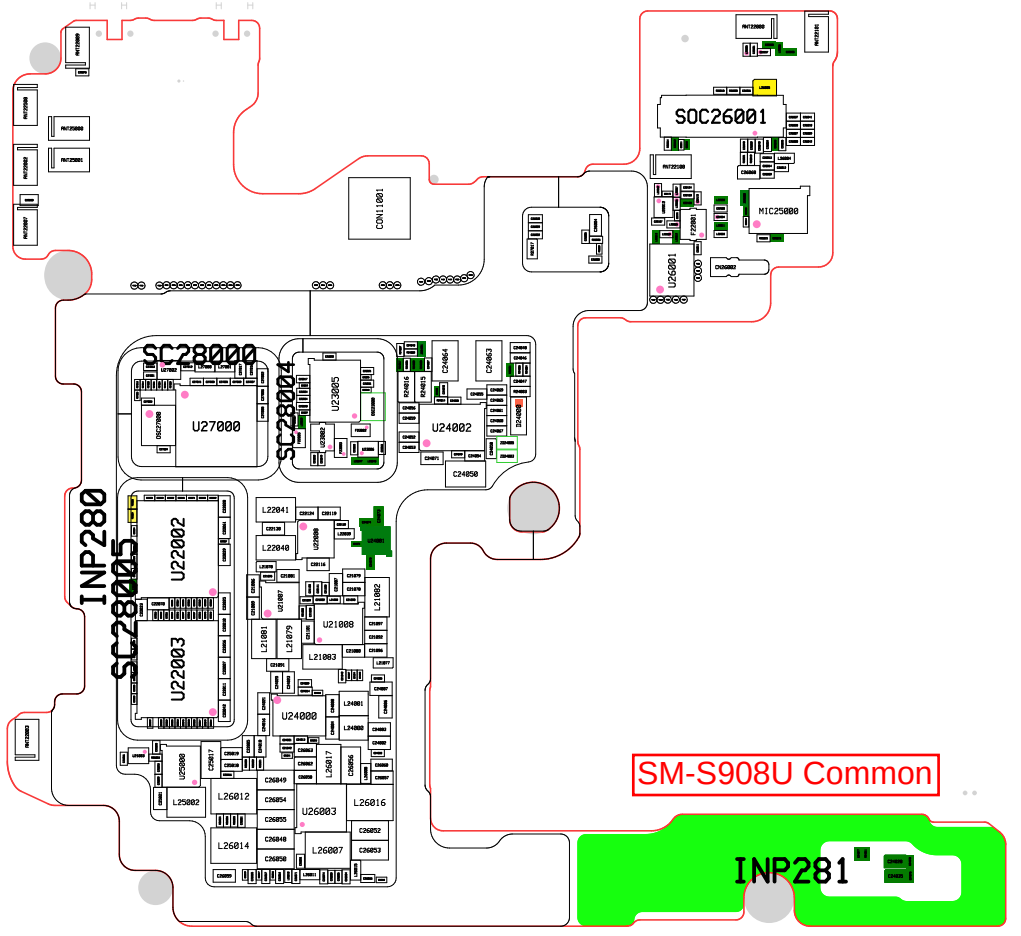
SOC27002
SOC27000
SOC23000
U22005
U22008
U22013
SOC24002
SOC28001
U21002
U21005
U21006
SOC24000
U21004
U21000
SOC27001
F21002
SOC27003
SOC25000
SOC26003
SOC24001
SOC21000
BOTHOLE28001
SM-S908U Common


SOC26001
CON1001
SC28000
U27000
SC28004
U23005
U24002
C24050
INP280
SC28005
U22002
U22003
U24000
U21008
L26012
L26016
L26003
L26014
L26007
U26001
M1C25000
SM-S908U Common
INP281

B0 QCOM Secondary_AP Rev0.7A

2021.10.

Engineer:
Drawn by:
R&D CHK:
DOC CTRL CHK:
DFC ENGR CHK:
QA CHK:
Changed by: 92nd
Date Changed:
Time Changed:
TITLE: U_SM8350
Size:
REV:
Drawing Number:
Page:

MAIN1 ANT
(LB,MB,JPN B21)

MAIN FRC

MAIN2 ANT
(HB_n41)

MHB MIMO_LNA OUT

MAIN ANT3 (B48_n77/78/79)

THERMISTERS

MAIN ANT4 (n77/78/79)

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

ET Modulator(QET6105#0)

ET Modulator(QET5100#1)

on MASTER PCB

2G_PA

on MASTER PCB

Engineer:	SEC
Drawn by:	SEC
R&D CHK:	
DOC CTRL CHK:	
MFG ENGR CHK:	
QA CHK:	

TITLE: RF (1/2)

SIZE: Drawing Number:

Changed by: PHSN | Date Changed: | Time Changed:

TRANSCEIVER(Dual SDR735)

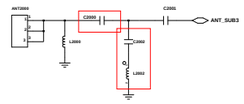
on MASTER PCB

DRX_ANT

on MASTER PCB

SUB ANT1
(lb,mb,hb)

SUB ANT2
(N77,N78)



SUB3
(UWB)

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

REV0.6

SUB ANT5
(L1,MB,HB,N79)

CCP

SUB6
(UHB(b48/n77/n78/n79) mimo)

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)

on MASTER PCB

QET6105 #2

ENDC module
(B1/2/3/4/7/25/30/39/41/66_BC1_DCS/PCS)

on MASTER PCB

GPS_L1(for SUB4 opt)

GPS_L5

on MASTER PCB

UHB
(B48, n77/78)

UHB
(n79)

on MASTER PCB

Engineer:	SAMSUNG ELECTRONICS
Approved by:	
Drawn by:	
R&D CHK:	TITLE: RF (2/2)
DOC CTRL CHK:	Size: A4
MFG ENGR CHK:	
QA CHK:	REV: Drawing Number: Page:

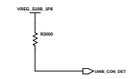
Changed by: kwon.kang
Date Changed: Monday, April 19, 2021
Time Changed: 1:04:48 pm

WIFI (BCM4389 CoB)

on MASTER PCB

UWB

on MASTER PCB



UWB Conn.

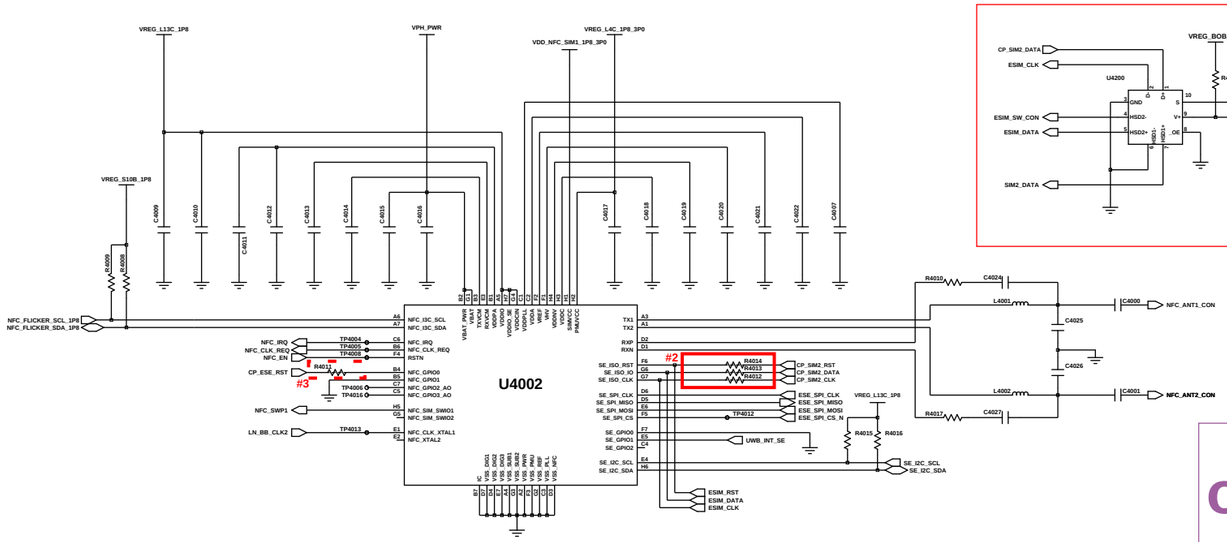
Engineer:	SAMSUNG ELECTRONICS
Designed by:	
ECAD CHK:	TITLE: Connectivity (1/2)
DOC CTRL CHK:	SIZE: A4 1 58 A
MFG ENGR CHK:	
QA CHK:	REV: Drawing Number: Page:

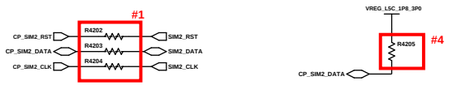
Changed by: Kim Dae
Date Changed: Wednesday, April 1, 2021
Time Changed: 10:58:38 am

Power

NFC

		NFC IC	#1	#2	#3	#4		Switch IC	ESIM_SIM2_SEL
NA	Nano + eSIM	SN220U	OPEN	SHORT	SHORT	20k		NC	
EUR/Global	2-Nano + eSIM	SN220U	OPEN	OPEN	SHORT	20k		SMD	HSD1(H)_SIM2 HSD2(L)_eSIM
CHN	2-Nano	SN220T	SHORT	OPEN	OPEN	20k		NC	
JPN	Nano	SN220F	OPEN	OPEN	OPEN	OPEN		NC	





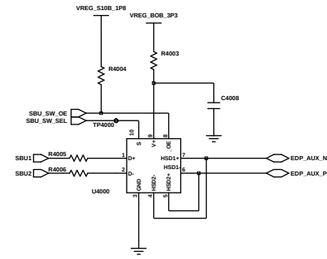
on MASTER PCB

W/C CONNECTOR

System

on MASTER PCB

MOTOR DRV IC



AUX sw

MFC

Power

MST Switch

on MASTER PCB

SENSORS

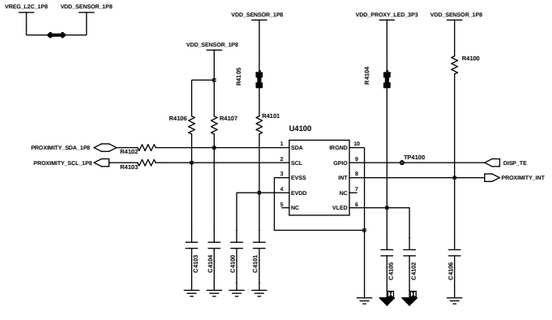
Visual

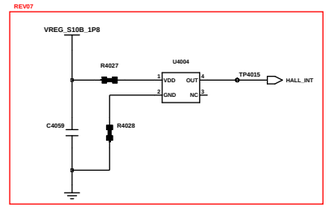
on MASTER PCB

Barometer SENSOR

6 Axis SENSOR (GYRO,ACCEL)

Magnetic SENSOR





COVER_DET HALL_IC

Battery Connector

on MASTER PCB

Grip Sensor (Upper side)

Proximeter/Ambient Light Sensor

Engineer:	SEC
Drawn by:	SEC
R&D CHK:	
DOC CTRL CHK:	
MFG ENGR CHK:	
QA CHK:	
TITLE:	Connectivity (2/2), Sensors
Size:	A3
Changed by:	PHZG
Date Changed:	
Time Changed:	
REV:	
Drawing Number:	
Page:	4

SM8450

(INTERFACE/GPIO)

System

UCP500-1

[1/4]

UME5000

UFS 3.1 128

SECURE NVM

on MASTER PCB

AP JTAG CONNECTOR

(3711-007173 / AXE612124)

CAUTION: PLACEMENT
Near to TP AP_USB_BOOT

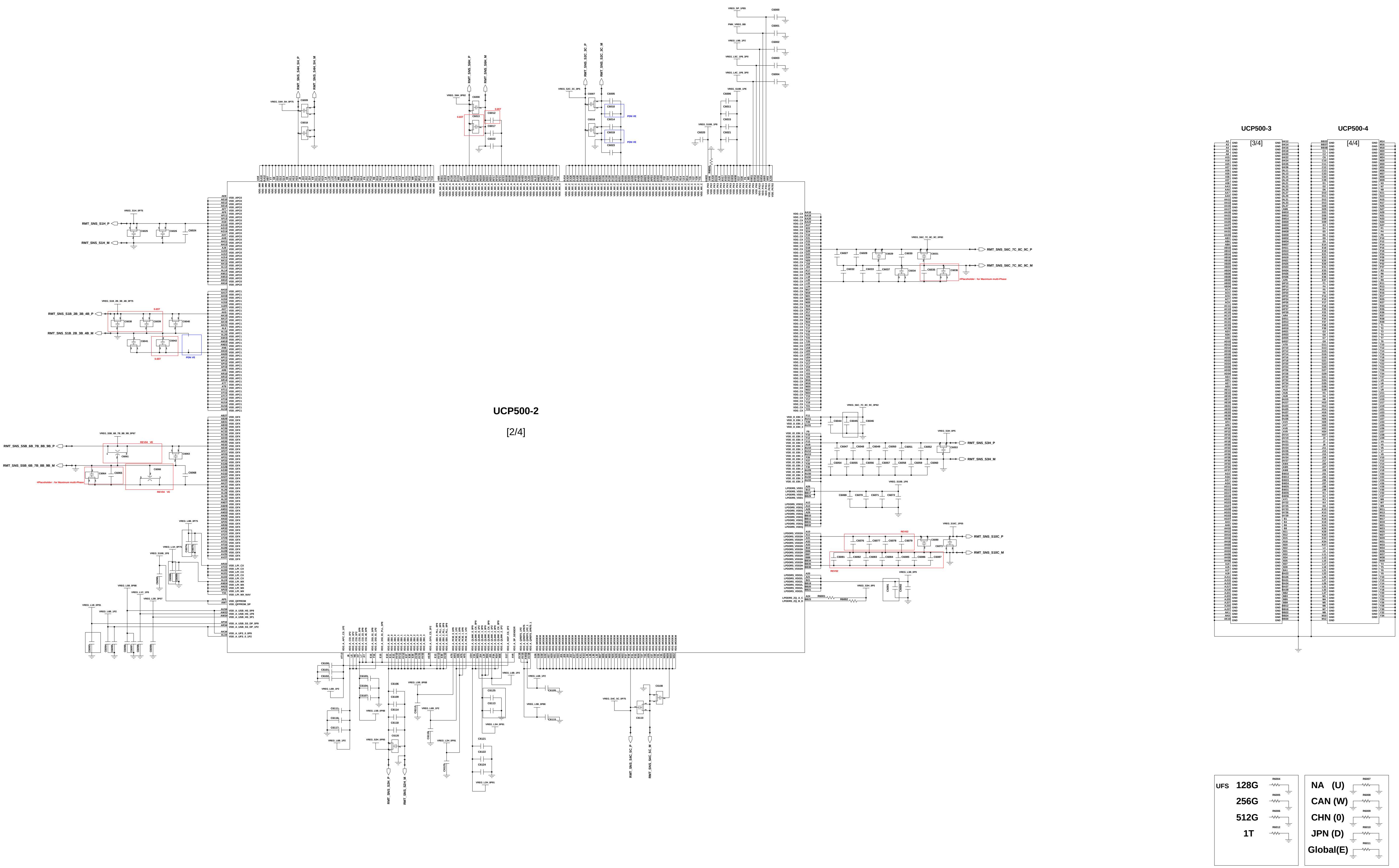
PCB array JTAG

FOR JIG

Engineer	SEC		
Drawn by:	SEC		
R&D CHK:		TITLE:	Size:
DOC CTRL CHK:		AP (1/2), UFS, JTAG	
MFG ENGR CHK:			
Changed by: puzs	Date Changed:	Time Changed:	QA CHK:	Drawing Number	

SM8450
(POWER, GND)

Power



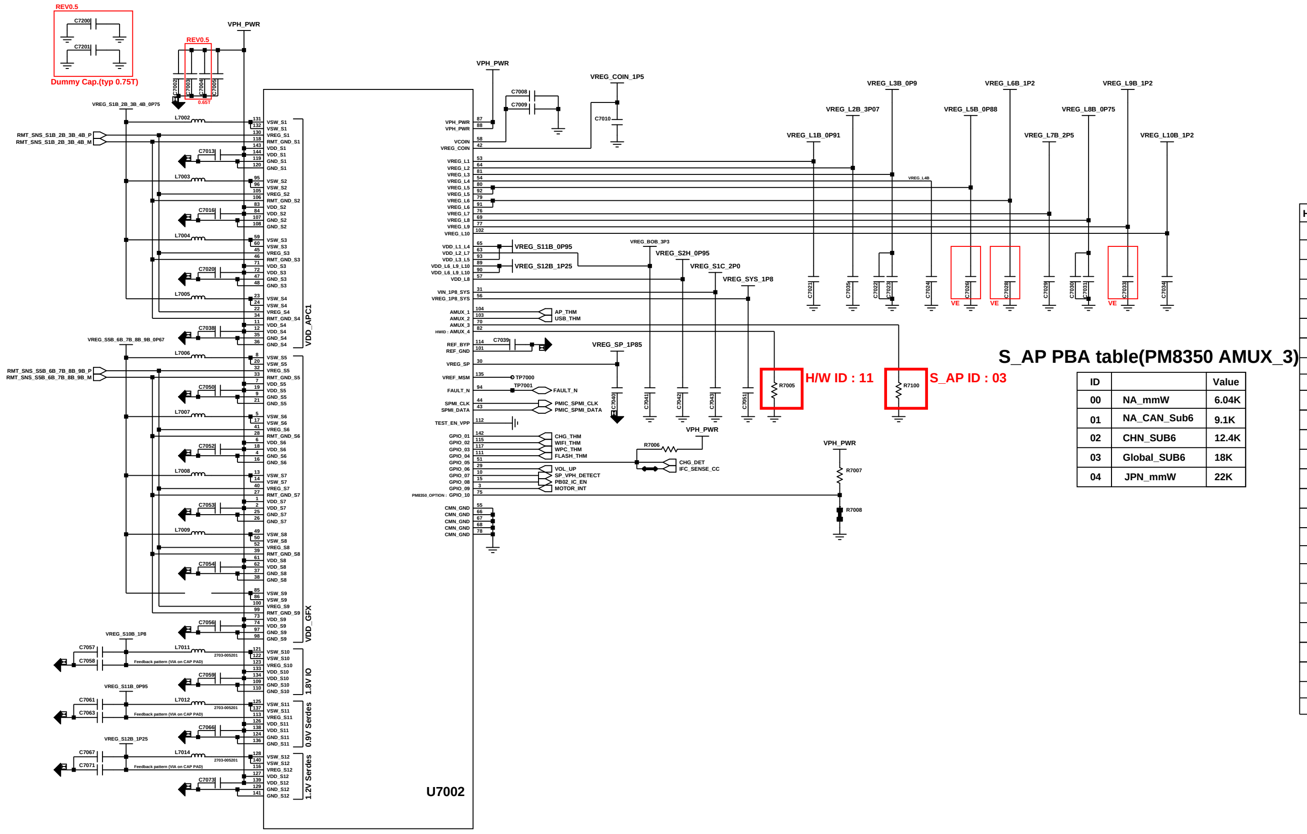
Engineer: SEC	SAMSUNG ELECTRONICS
Drawn by: SEC	
R&D CHK:	TITLE: AP (2/2)
DOC CTRL CHK:	Size: 24 1 16 A
MFG ENGR CHK:	

Changed by:	Date Changed:	Time Changed:	QA CHK:	REV:	Drawing Number:	Page:
jy.r.cho	Tuesday, December 15, 2020	4:19:43 pm				6

AP PMIC set & CLK Generator

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

Power System



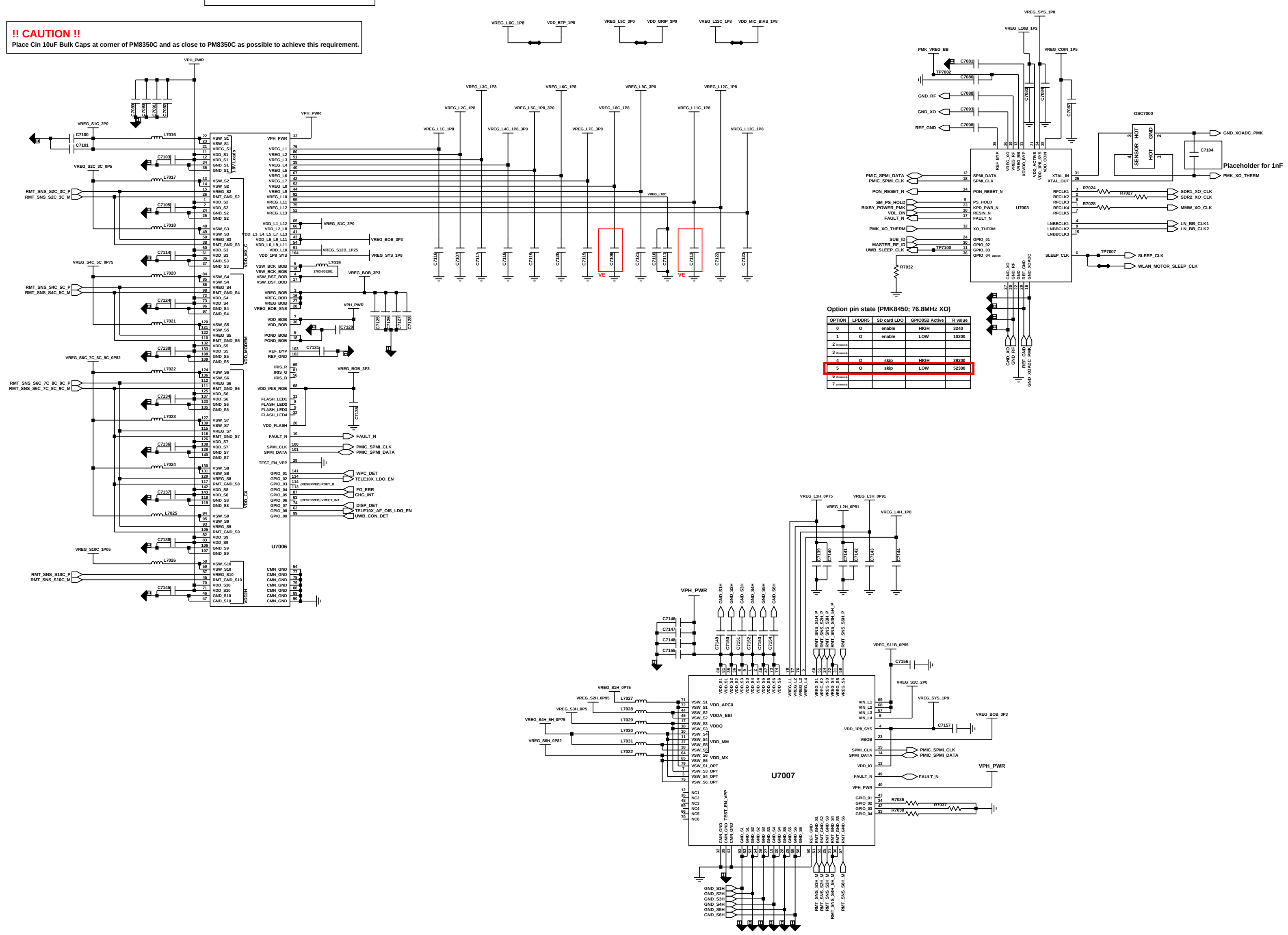
H/W ID table(PM8350 AMUX_4)

HW ID	BOARD REVISION	Value	Mech
00	Next P SW bring-up A-Type	6.04K	
01	B0 QCOM REV0.0	9.1K	
02	SM-S908U REV0.1	12.4K	
03		18K	
04	SM-S908U REV0.2	22K	
05	SM-S908U REV0.3	30K	
06		39K	
07	SM-S908U REV0.4	47K	
08	SM-S908U REV0.5	56K	
09	SM-S908U REV0.5G	68K	
10	SM-S908U REV0.6 / 0.6A	82K	
11	SM-S908U REV0.7	100K	
12	SM-S908E REV0.7	120K	
13		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	6.04K
01	NA_CAN_Sub6	9.1K
02	CHN_SUB6	12.4K
03	Global_SUB6	18K
04	JPN_mmW	22K

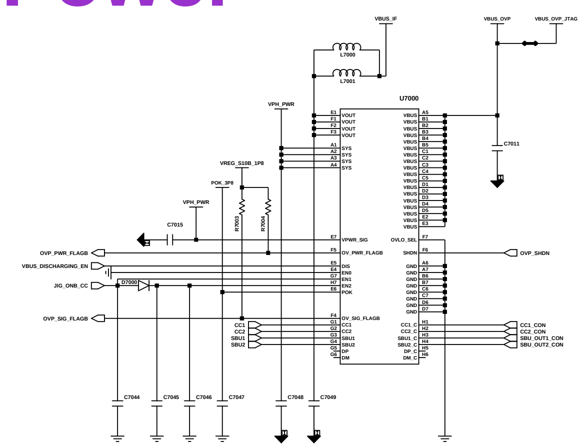
!! CAUTION !!
Place Cin 10uF Bulk Caps at corner of PM8350C and as close to PM8350C as possible to achieve this requirement.



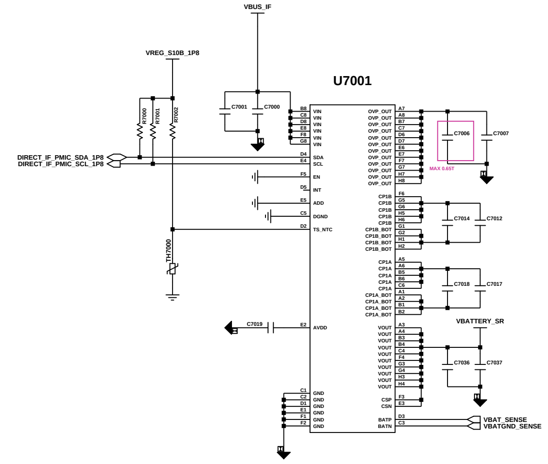
Option pin state (PMK8450; 76.8MHz XO)

OPTION	LPDDR5	SD card LDO	GPIO05B Active	R value
0	O	enable	HIGH	3240
1	O	enable	LOW	10200
2 (Reserved)				
3 (Reserved)				
4	O	skip	HIGH	39200
5	O	skip	LOW	52300
6 (Reserved)				
7 (Reserved)				

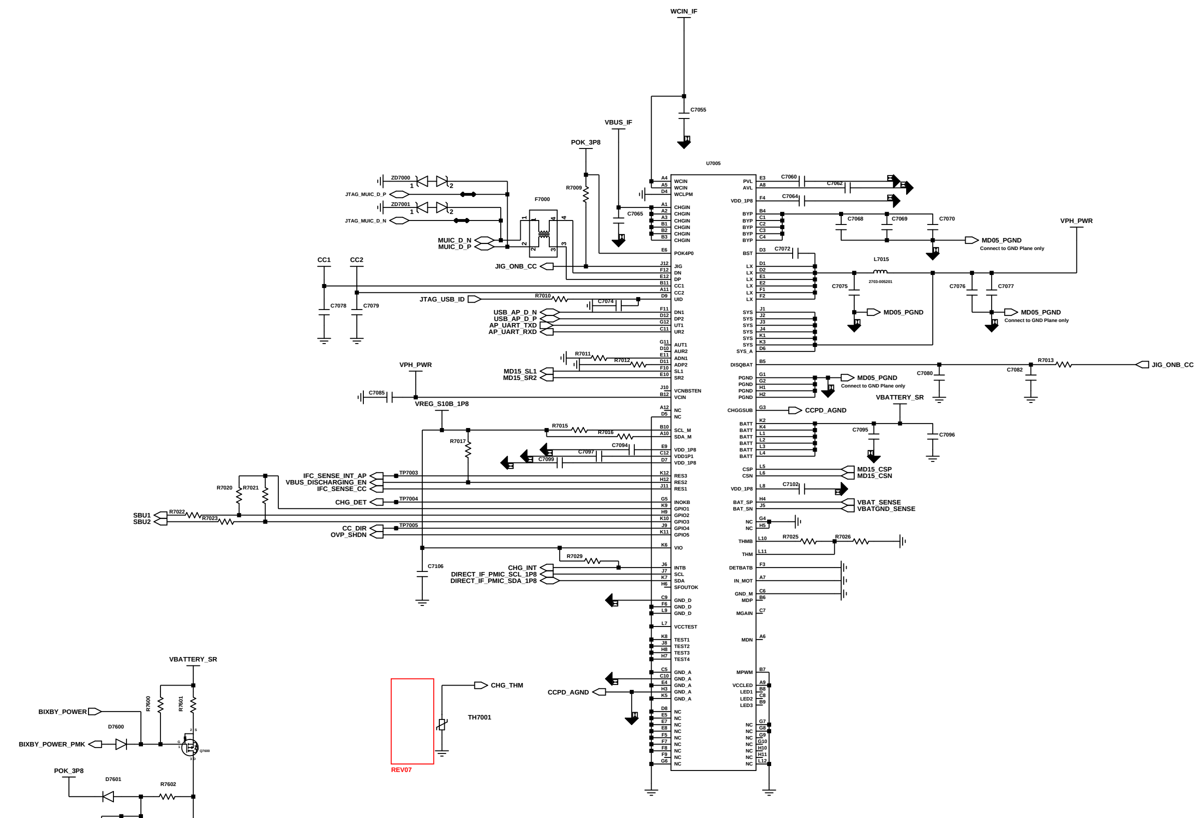
Power



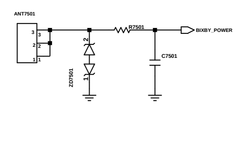
OVP LS



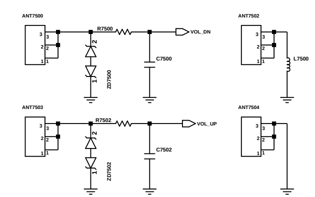
Direct Charging



IF PMIC



Power Key



Vol key

Engineer: SEC	TITLE: AP PMICs, Charger
Drawn by: SEC	
R&D CHK:	
DOC CTRL CHK:	
MFG ENGR CHK:	
QA CHK:	REV	Drawing Number:

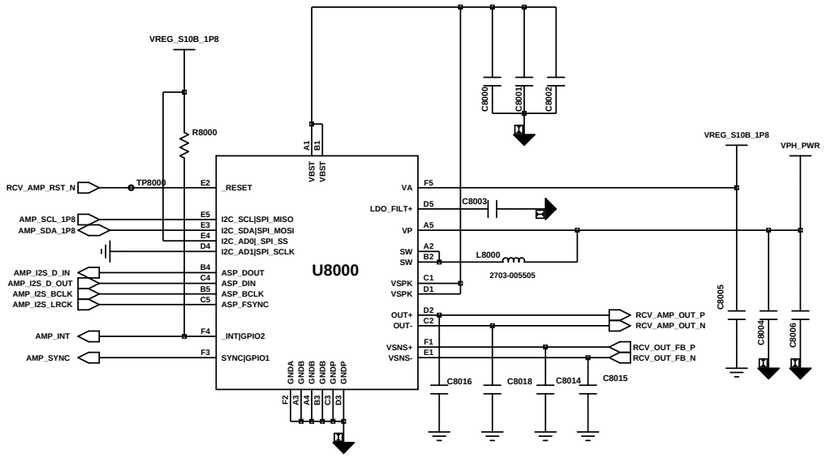
Changed by: puz6 | Date Changed: | Time Changed:

AUDIO PART

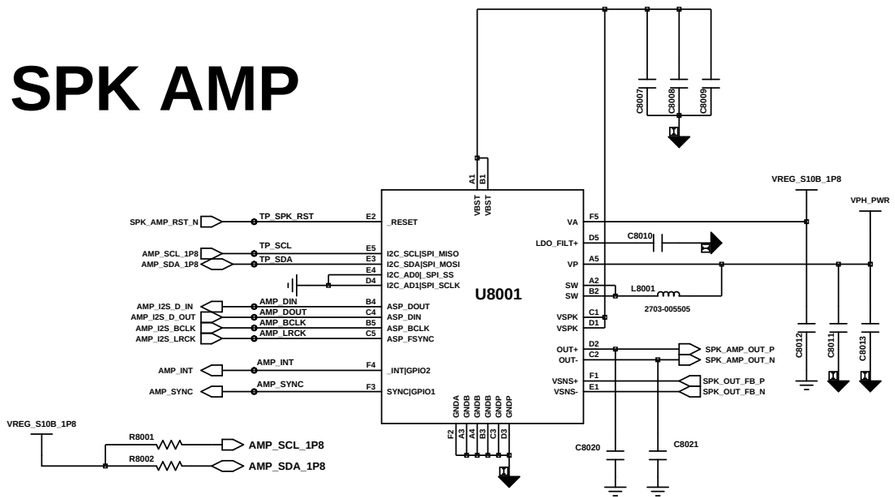
RCV Conn.

on MASTER PCB

RCV AMP



SPK AMP



AUDIO

on MASTER PCB

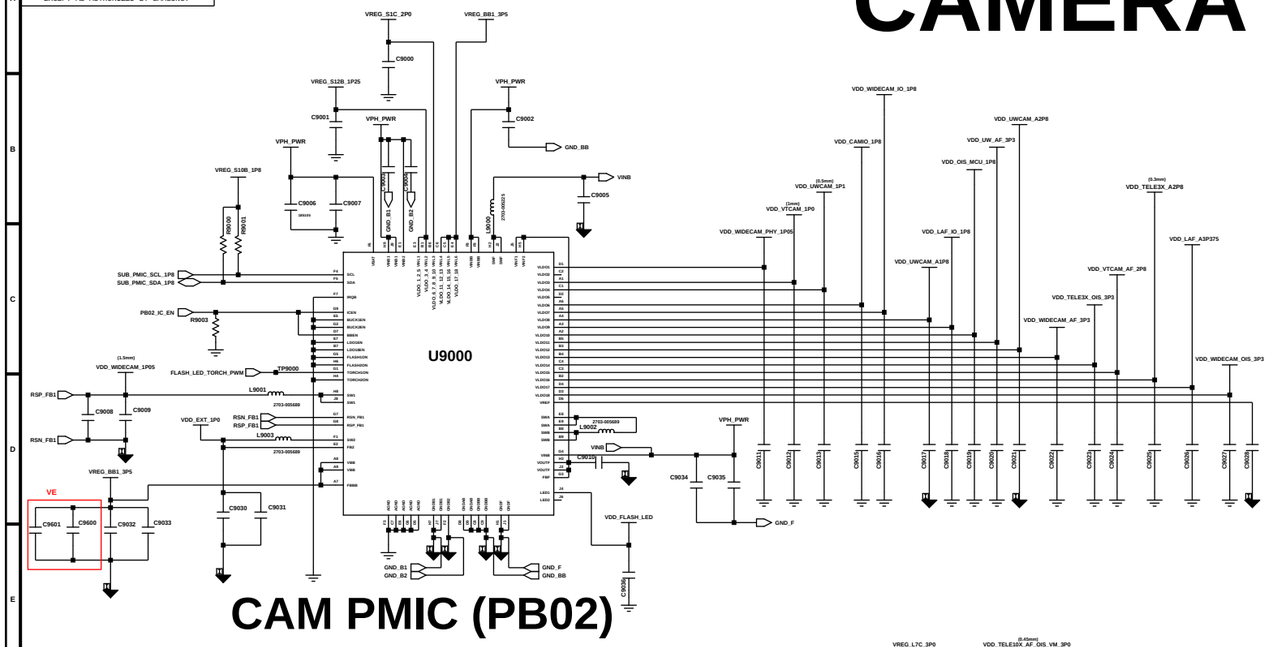
2nd MIC

3rd MIC

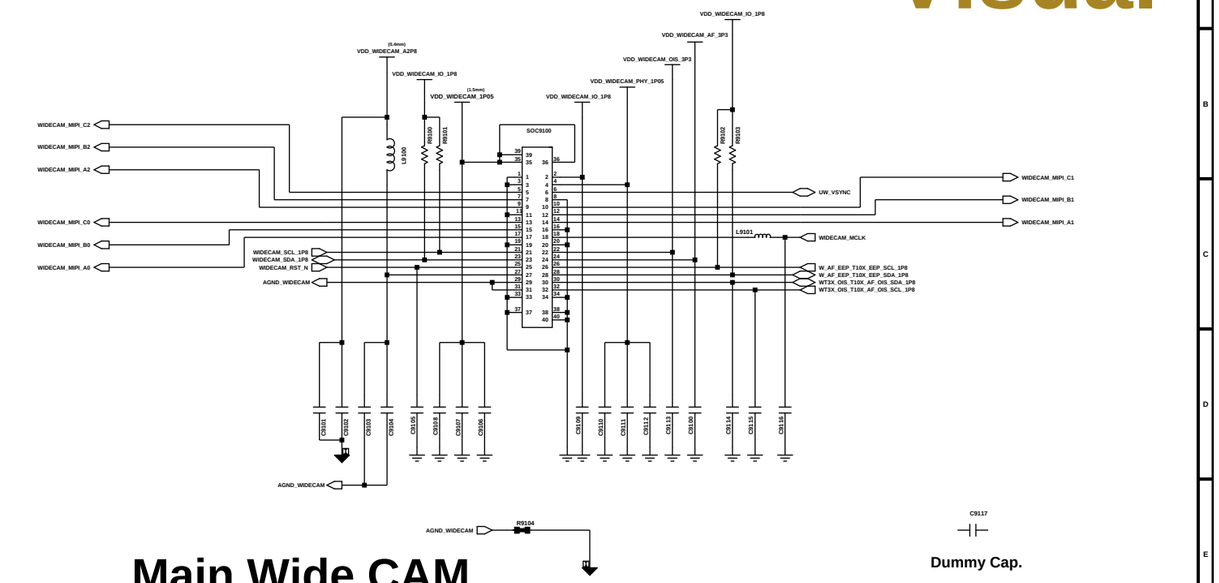
Engineer: SEC	SAMSUNG ELECTRONICS		
Drawn by: SEC			
R&D CHK:	TITLE: Audio	Size: 12 1 8 A	
DOC CTRL CHK:			
MFG ENGR CHK:			
Changed by: puZ6	Date Changed:	Time Changed:	QA CHK:
REV	Drawing Number:	Page: 8	

CAMERA

Visual

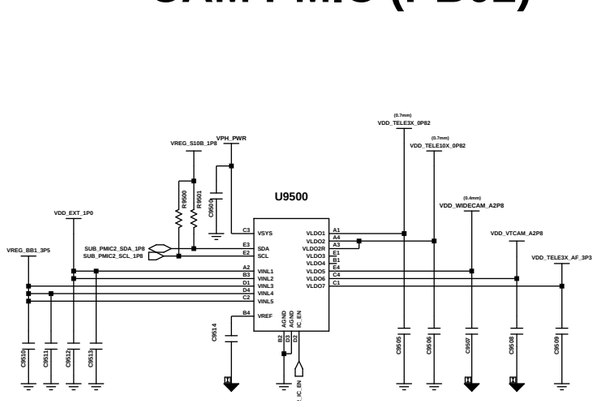


CAM PMIC (PB02)

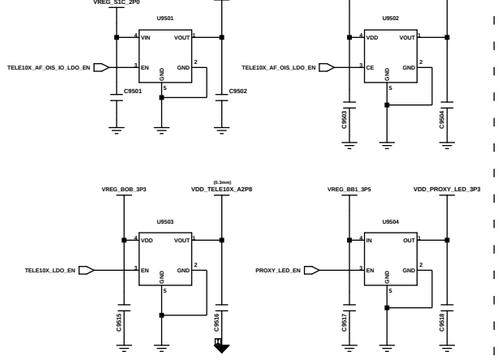


Main Wide CAM

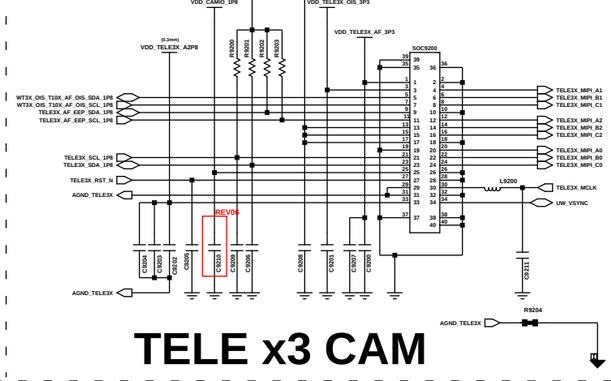
Dummy Cap.



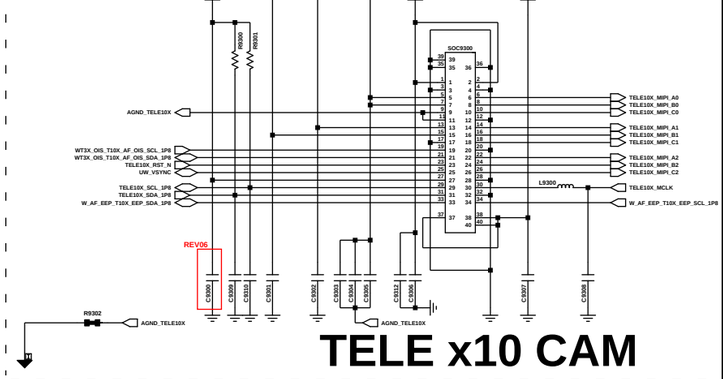
CAM PMIC2(PB03)



ULTRA WIDE CAM CONN



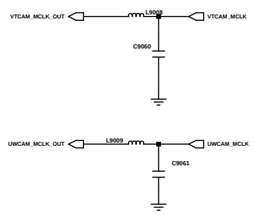
FRONT CAM(40M SINGLE)

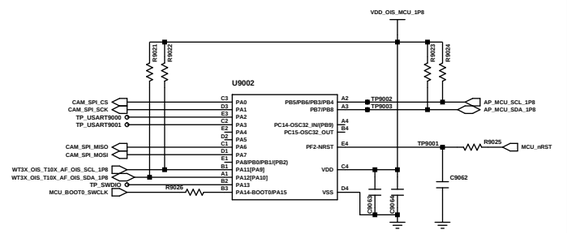


TELE x3 CAM

TELE x10 CAM

on MASTER PCB





CAM MCU

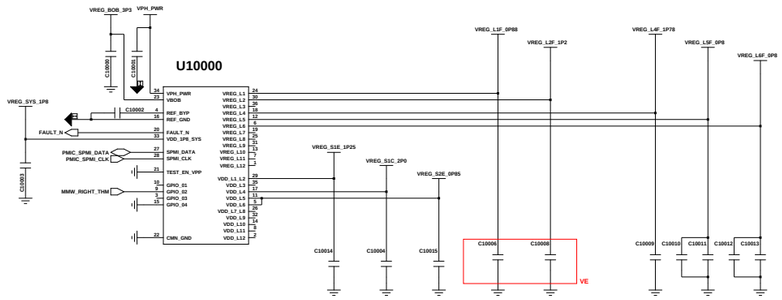
Engineer:	SEC
Drawn by:	SEC
R&D CHK:	
DOC CTRL CHK:	
MFG ENGR CHK:	
TITLE:	U_SM8350
Size:	
Changed by:	pvzs
Date Changed:	
Time Changed:	
QA CHK:	
REV	
Drawing Number:	
Page:	1

RF PMIC

Power

on MASTER PCB

NC

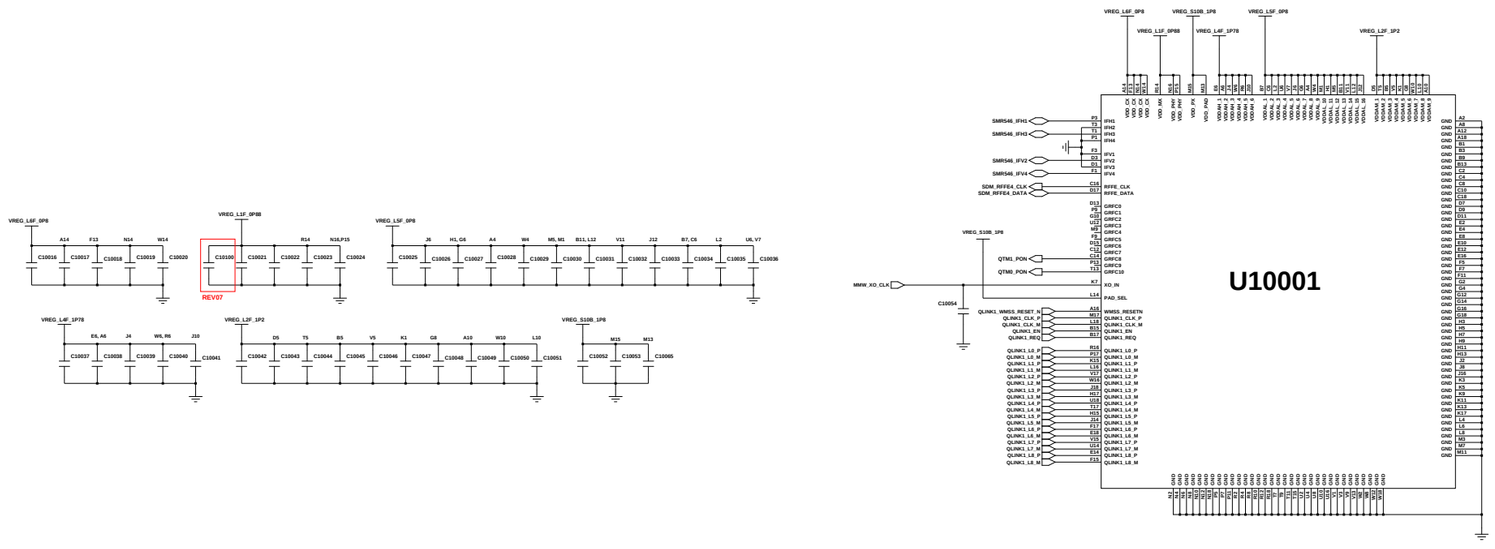


PMR735A

PMR735B

5G IFIC (SMR546)

Radiation



NC

on MASTER PCB

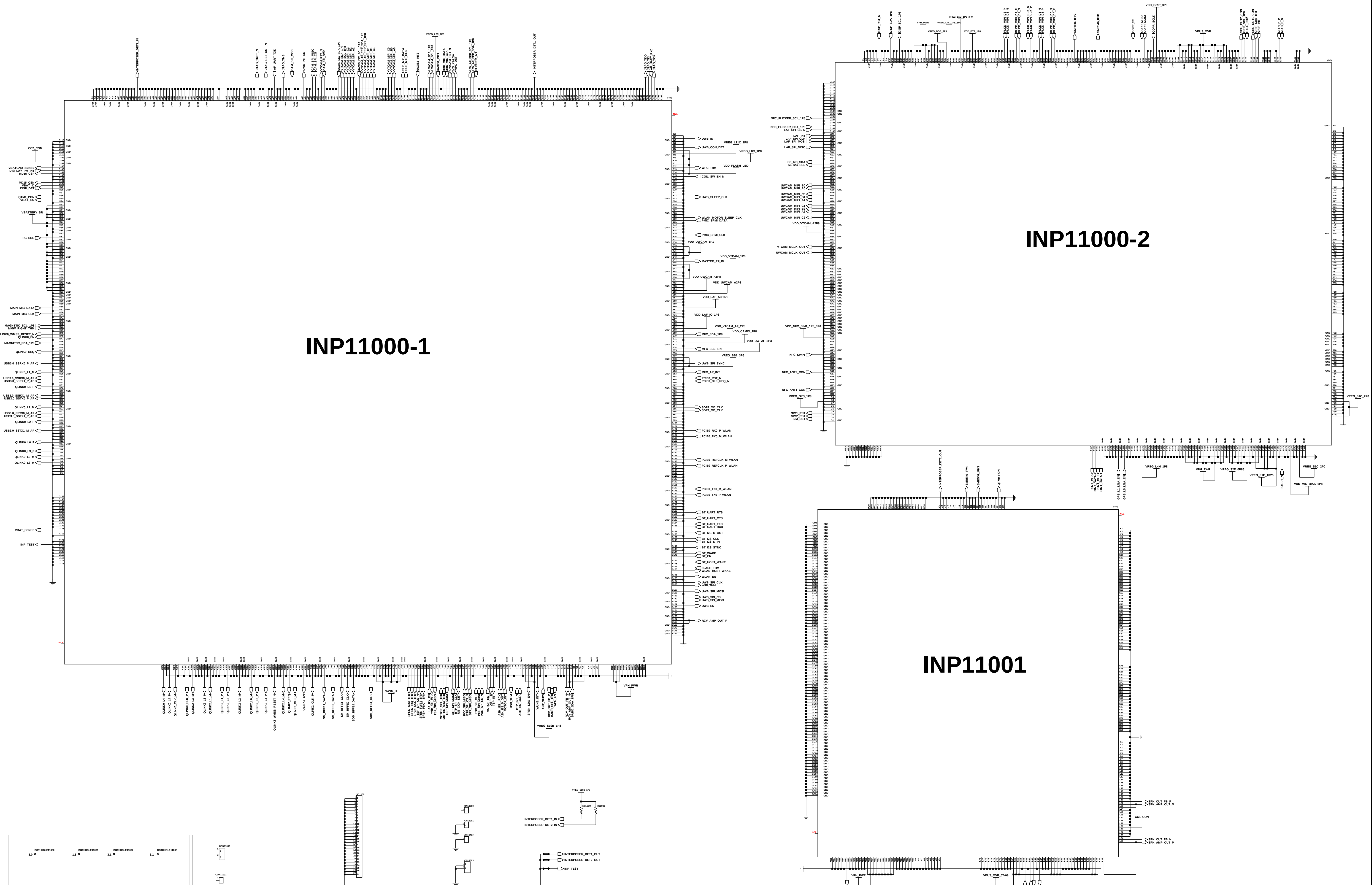
mmW_ANT_CONN (Left)

mmW_ANT_CONN (Right)

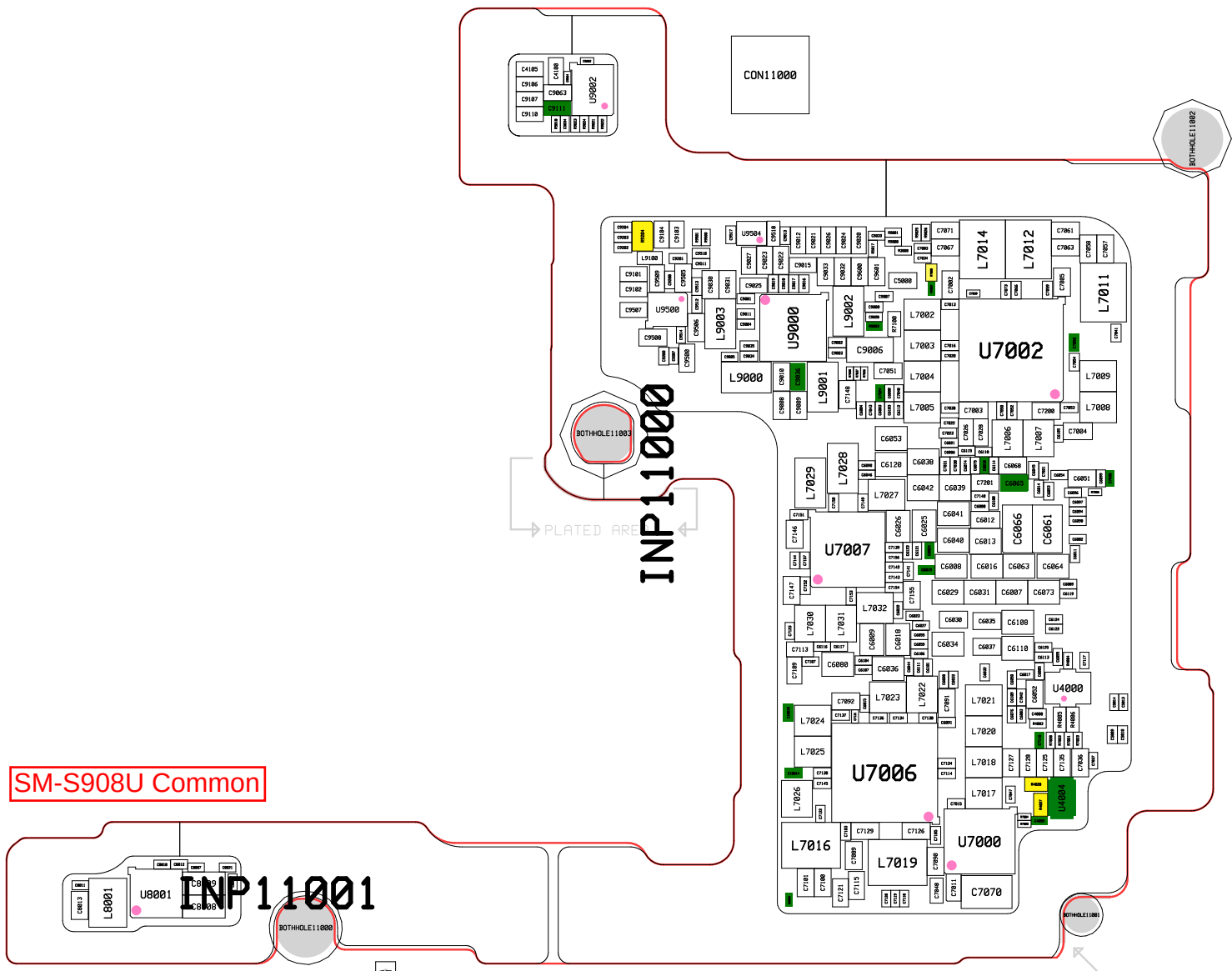
Engineer: SEC	SAMSUNG ELECTRONICS					
Drawn by: SEC						
R&D CHK:	TITLE: RF PMICs, 5G	Size:				
DOC CTRL CHK:						
MFG ENGR CHK:						
Changed by: 9ZnD	Date Changed:	Time Changed:	QA CHK:	REV:	Drawing Number:	Page: 13

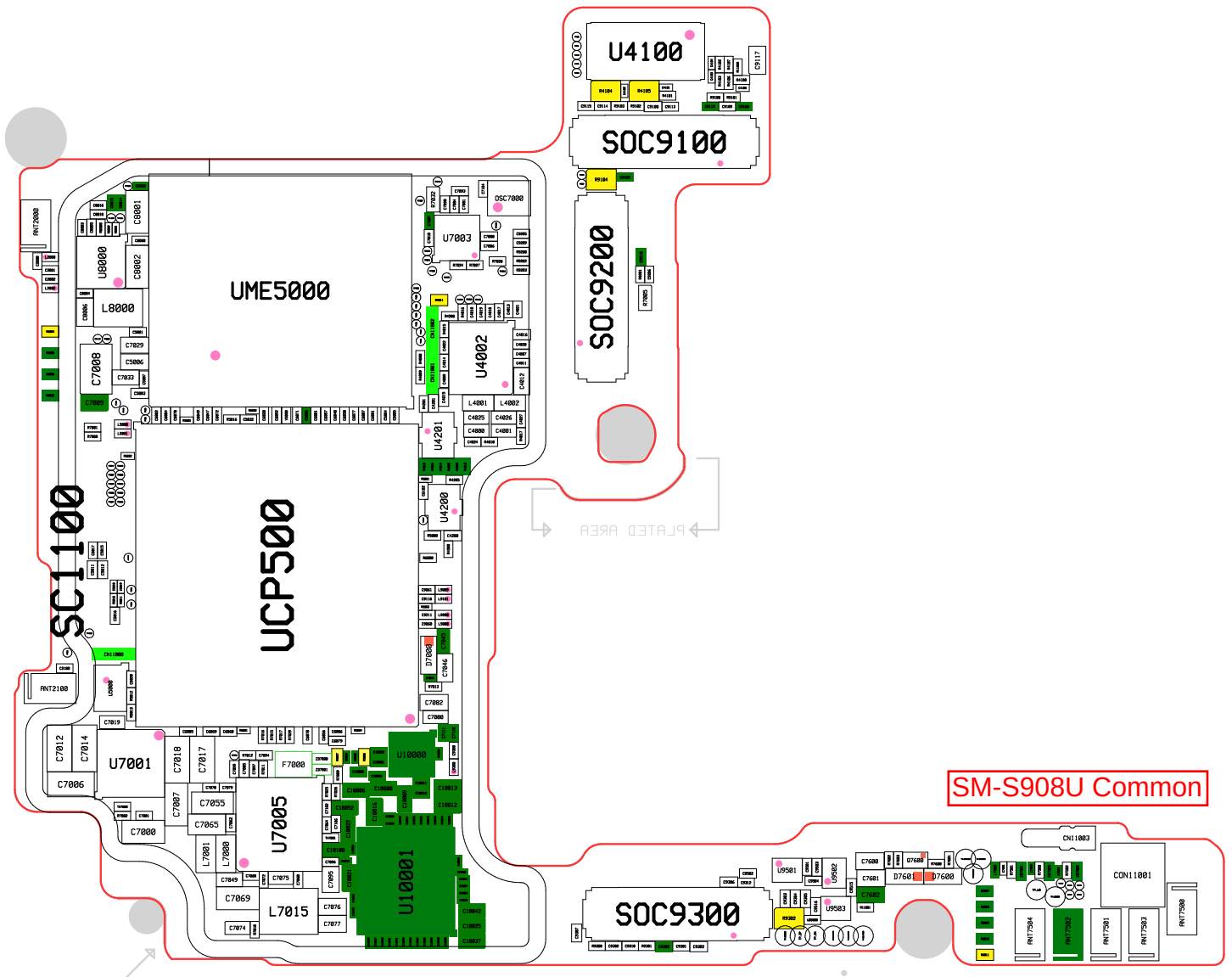
INTERPOSER

Design



Engineer: SEC	SAMSUNG ELECTRONICS
Drawn by: SEC	
R&D CHK:	TITLE: INTERPOSER, BOSS
DOC CTRL CHK:	Size: 24 1 16 A
MFG ENGR CHK:	
Time Changed: 2:50:12 pm	QA CHK:
REV:	Drawing Number:
Page: 12	


SM-S908U Common
INP11000
INP11001
CON11000
U7002
U7006
U7007
U7000
U9000
U9002
U9504
U9500
U8001
U4000
U4004
L7014
L7012
L7011
L7009
L7008
L7007
L7006
L7004
L7003
L7002
L7005
L7029
L7028
L7027
L7030
L7031
L7032
L7022
L7023
L7024
L7025
L7026
L7021
L7020
L7018
L7017
L7016
L7019
L9003
L9002
L9001
L9000
L8001
C7070
BOTHOLE11002
BOTHOLE11003
BOTHOLE11000
BOTHOLE11001
PLATED ARE


U4100
SOC9100
SOC9200
UME5000
SC1100
UCP500
U7003
U4002
U4201
U4200
U8000
L8000
C8001
C8002
C7008
C7029
C5006
C7033
C7009
OSC7000
L4001
L4002
C4025
C4026
C4000
C4001
C7019
C7012
C7014
U7001
C7006
C7018
C7017
C7007
C7055
C7065
C7000
F7000
U7005
U10000
U10001
C7001
L7000
C7049
C7075
C7069
L7015
C7074
C7076
C7077
C7005
C7002
C7000
D7000
C7046
U5300
RNT2000
RNT2100
SOC9300
U9501
U9502
U9503
C7600
C7601
C7602
C7680
D760
D7600
CN11003
CON11001
RNT7304
RNT7302
RNT7301
RNT7303
RNT7300
SM-S908U Common