Eureka1/2 S.LSI Rev0.7

SM-S921B

S_AP PCB part

2023.09.27

TG	System		Power Audio		RF			VIsual (CAM)	VIsual (Disp.) VIsual (Sensor)	HW Structure
Ref#.	11nnn	12nnn	13nnn	14nnn	15nnn	16nnn	17nnn	18nnn	19nnn	10nnn
Contents	AP IO AP Associated Motor Driver JTAG Key FPCB PCB ID	AP Power decap UFS memory	Core PMIC group	Audio AMP Charger MFC	RF Ant. UHB ET MOD#3	RF PMIC	UWB	CAM PMIC Wide CAM Tele 3x CAM		Interposer Shieldcan Bosshole
sheet	sheet01	sheet02	sheet03	sheet04	sheet05	sheet06	sheet07	sheet08	sheet09	sheet10

Engineer: SEC
Drawn By: SEC
R&D CHK:
DOC CTRL CHK:
MFG ENGR CHK:
QA CHK:
TITLE:
Size:
REV:
Drawing Number:
Page:
Changed by: 92nd
Date Changed:
Time Changed:
Friday

UCP100-1

(1/5)

Vol + Power key

SECURE NVM

SIM Level Shifter

EUR : SMD
KOR : NC

MOTOR DRV IC

eUSB REPEATER

SYSTEM CLOCK

Ref#. 10nnn

AP JTAG CONNECTOR
(3711-008997/BM23FR0.8-10DP)

FOR JIG

S_AP_ID

ID	ID_3	ID_2	ID_1	S_AP PBA Table
0	L	L	L	Not Used
1	L	L	H	Not Used
2	L	H	L	CHN JPN
3	L	H	H	Not Used
4	H	L	L	Not Used
5	H	L	H	KOR
6	H	H	L	EUR Global
7	H	H	H	NA CAN

S_AP PBA table

AP HW REV
17

CP HW REV
MOVE TO RF

REV	R1(ohm)	R2(ohm)
0	NC	0
1	430K	30K
2	390K	62K
3	360K	91K
4	330K	120K
5	300K	150K
6	270K	180K
7	240K	220K
8	200K	240K
9	180K	270K
10	150K	300K
11	120K	330K
12	91K	360K
13	62K	390K
14	30K	430K

iROM BOOT

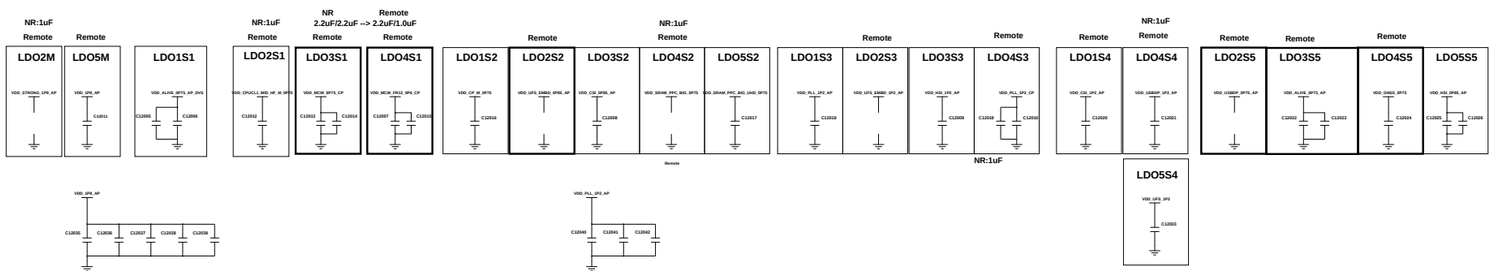
OM[2:0]	1st	2nd
000	UFS, CHD	USB
001	SPI	USB
010	USB	-
011	USB	-
100	MMC CARD	USB

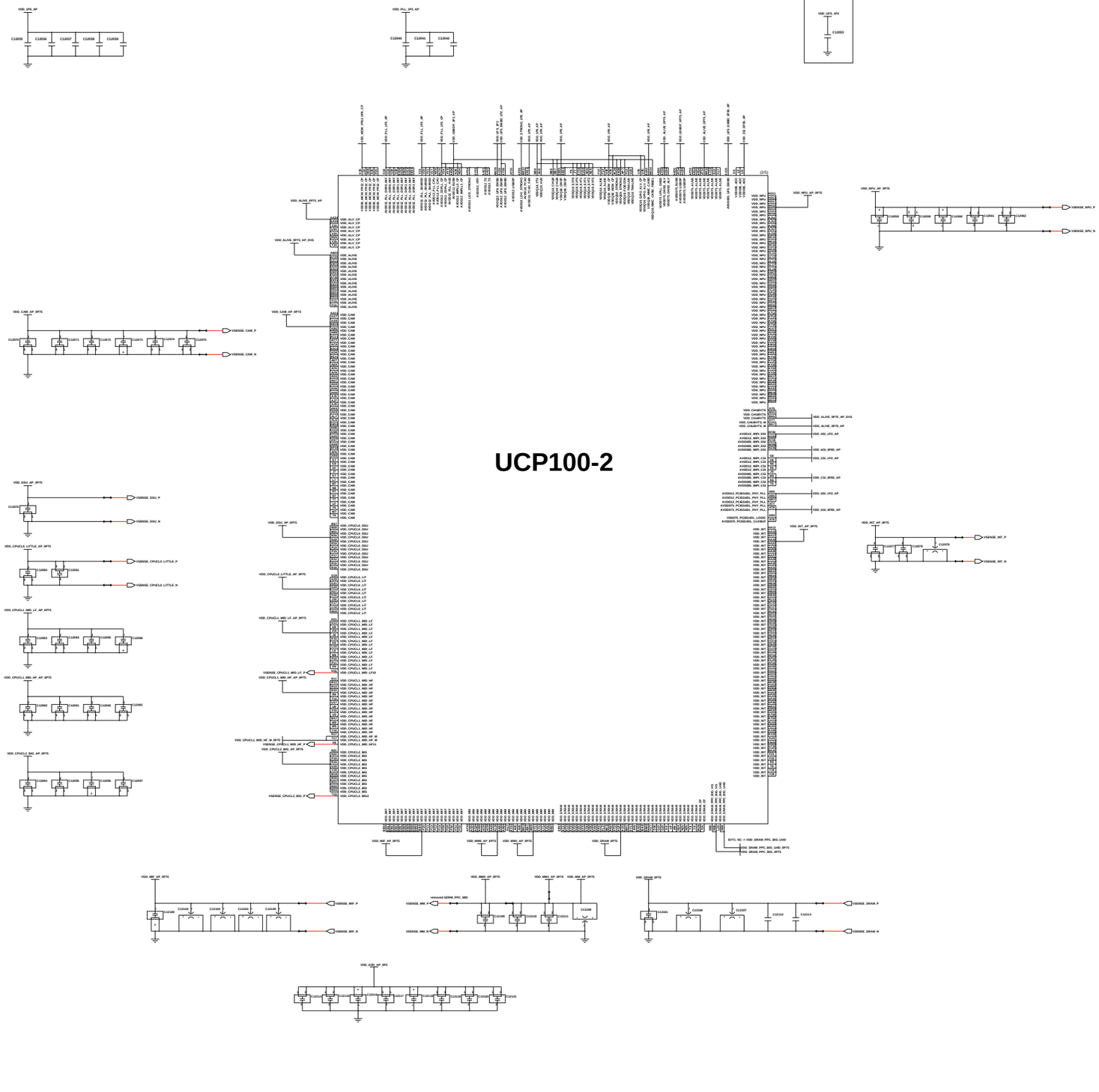
PCB array JTAG

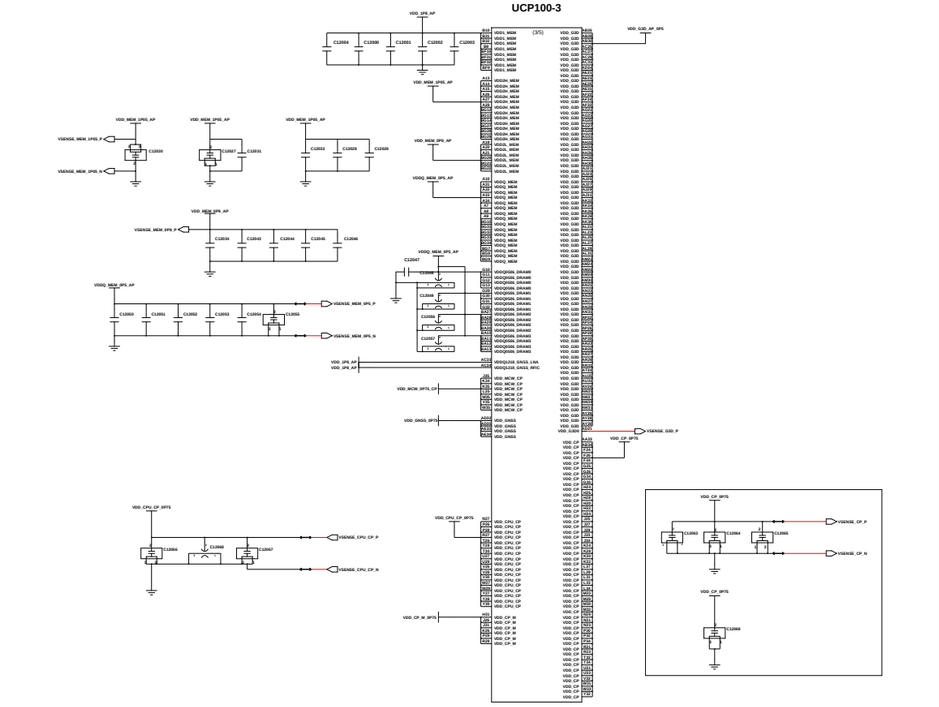
Engineer:	SAMSUNG ELECTRONICS
Drawn by:	
Check by:	
DOC CTRL CHK:	
MFG ENGR CHK:	
QA CHK:	
TITLE:	Systerm(1/2)
Size:	
REV: 0.3	Drawing Number:
Page:	

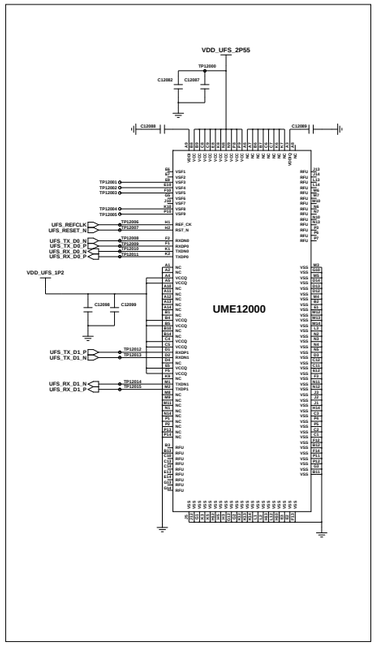
2. Power_decoupling capacitor

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





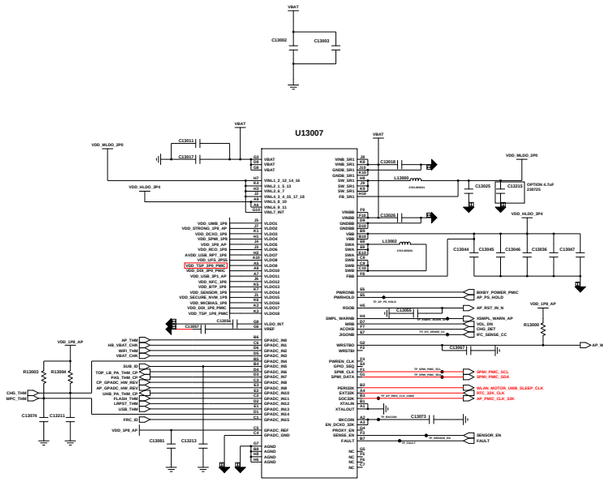




Engineer: Alfredo park	SAMSUNG ELECTRONICS
Drawn by: Alfredo park	
Approved by: Alfredo park	
DOC CTRL Date:	TITLE: SM-S901B_S908B_3_AP
MFG ENGR Date:	SIZE: A4
QA Date:	REV: 0.1
Changed by: Alfredo park	Date Changed: Tuesday, July 11, 2023
Time Changed: 3:43:07 pm	Drawing Number:
	Page: 1

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

U13007



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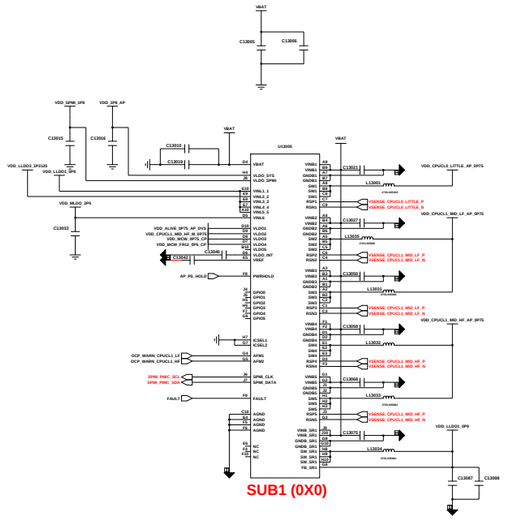

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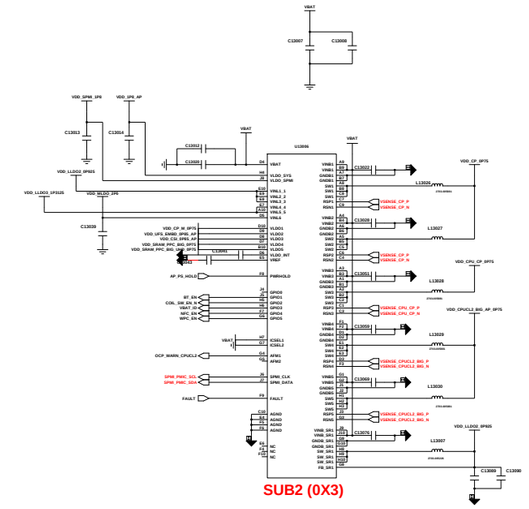
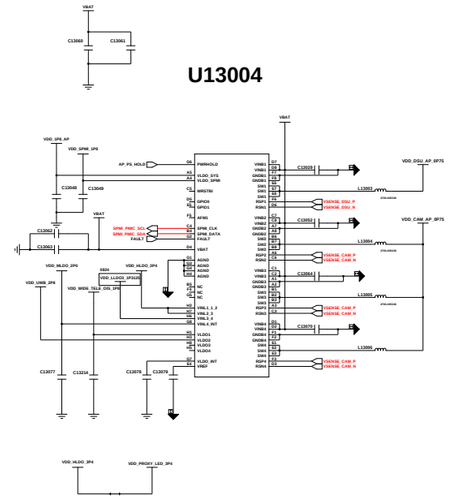
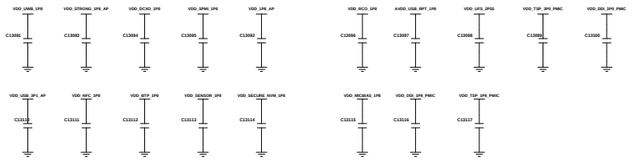
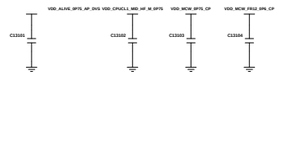
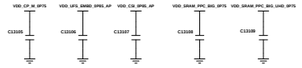


U13004









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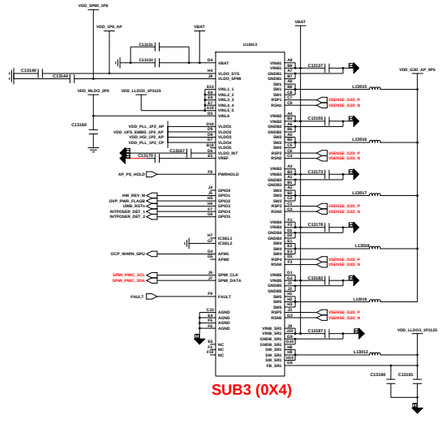

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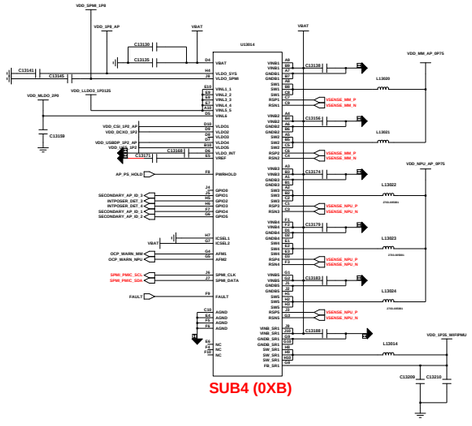
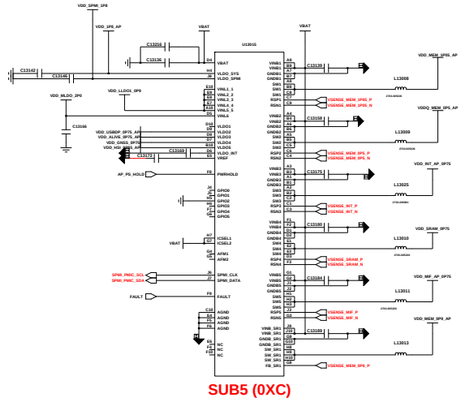
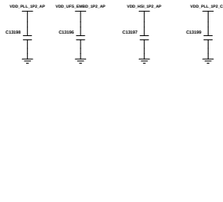
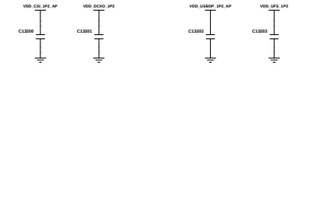
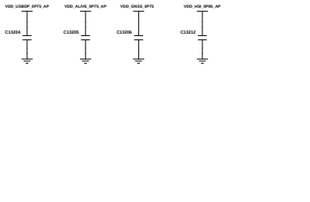


SUB5 (0XC)





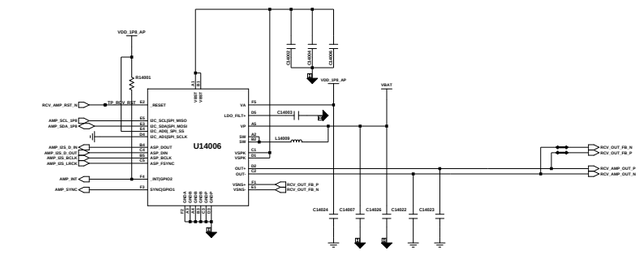




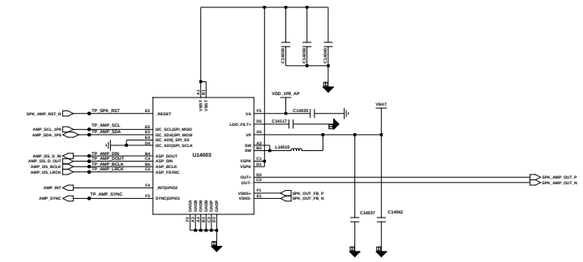
Ref#. 13nnn

Engineer:		SAMSUNG ELECTRONICS	
Changed by:			
Solved by:			
Checked by:		TITLE:	Size:
MFG ENGR CHK:		NOM_221202	A4 0.38 A
DOC CTRL CHK:			
QA CHK:		ECO:	Drawing Number:
Changed by:	Data Changed:	Time Changed:	Page:
jungtae.cho	Wednesday, December 28, 2022	1:00:53 pm	2

RCV AMP

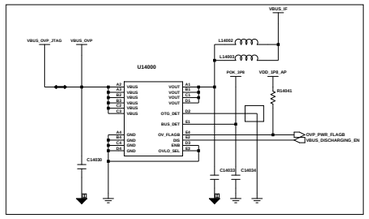


SPK AMP

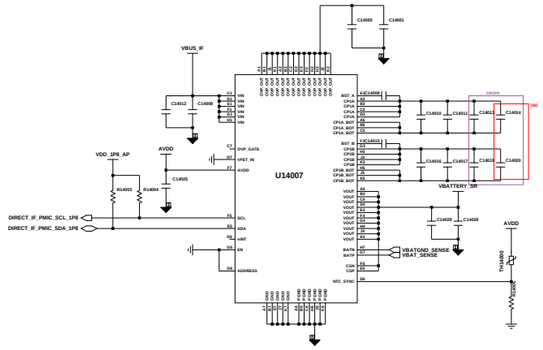


NFC

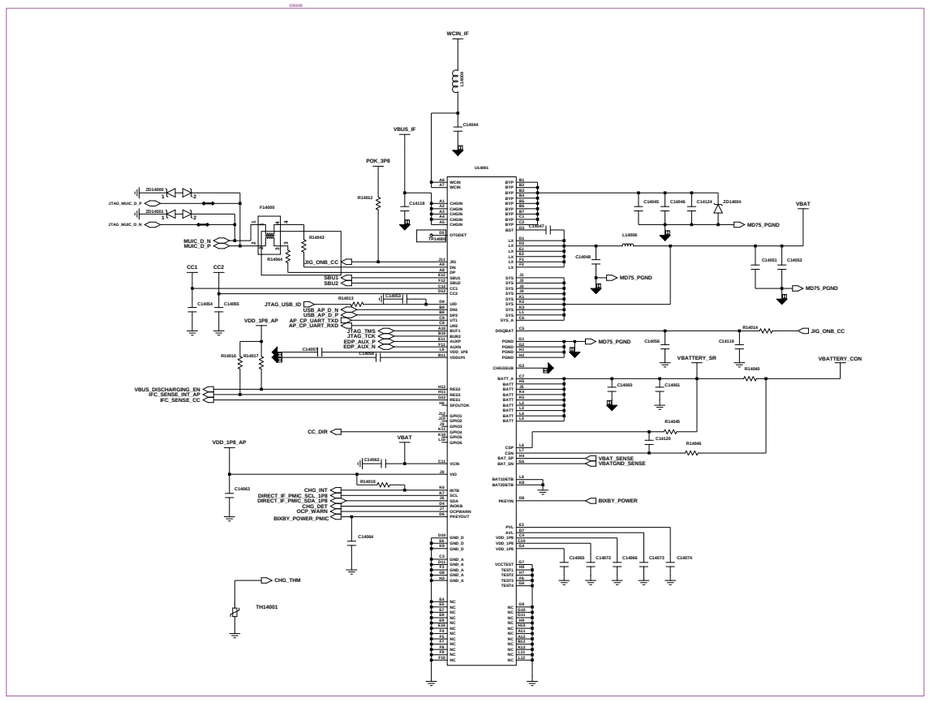
MOVE TO M_RF



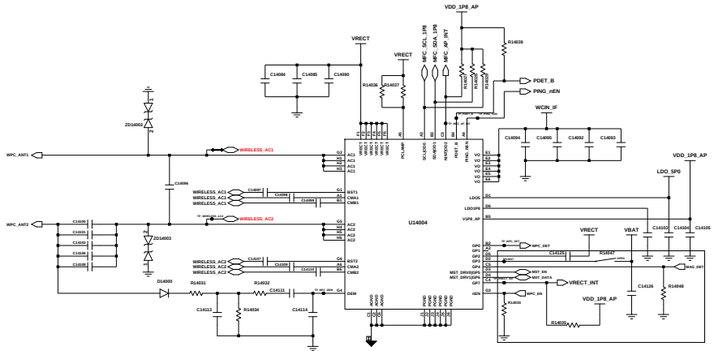
OVP LS



Direct Charging



IF PMIC



MFC

Ref#. 14nnn

Engineer:	SAMSUNG ELECTRONICS
Drawn by:	
Shield by:	
EDC CHK:	TITLE: Power, Audio (2/2)
DOC CTRL CHK:	SIZE: 24 X 36 A
MFG ENGR CHK:	
Changed by:	Date Changed:
QA CHK:	Time Changed:
	Drawing Number:
	Page:

SUB6
WIFI2_2.4G

CCP

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

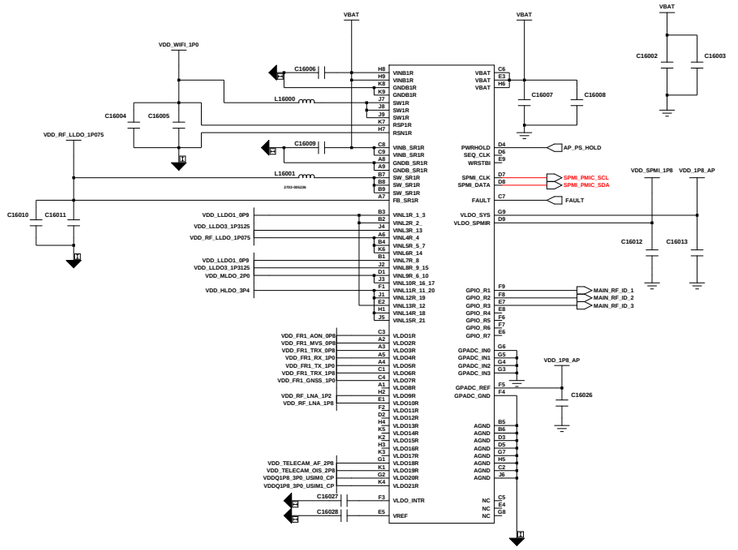
UHB LPAD THERM

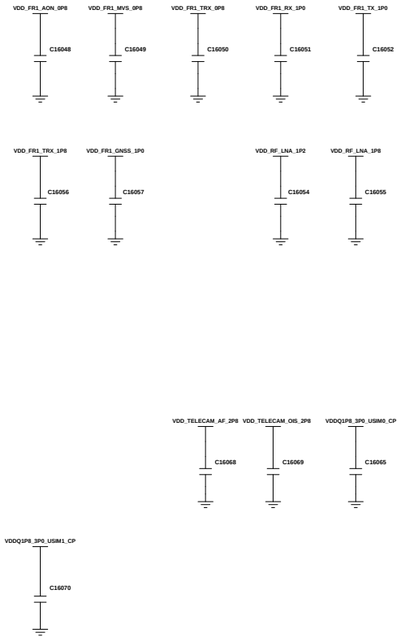
Ref#. 15nnn

Engineer: SEC	SAMSUNG ELECTRONICS		
Drawn by: SEC			
R&D CHK:	TITLE: RF (1/3)	Size: 8 1 6 A TL	
DOC CTRL CHK:			
MFG ENGR CHK:			
Changed by: jy.r.cho	Date Changed: Wednesday, November 30, 2022	Time Changed: 3:36:47 pm	QA CHK:
REV:	Drawing Number:	Page: 14	

RF PMIC

U16000



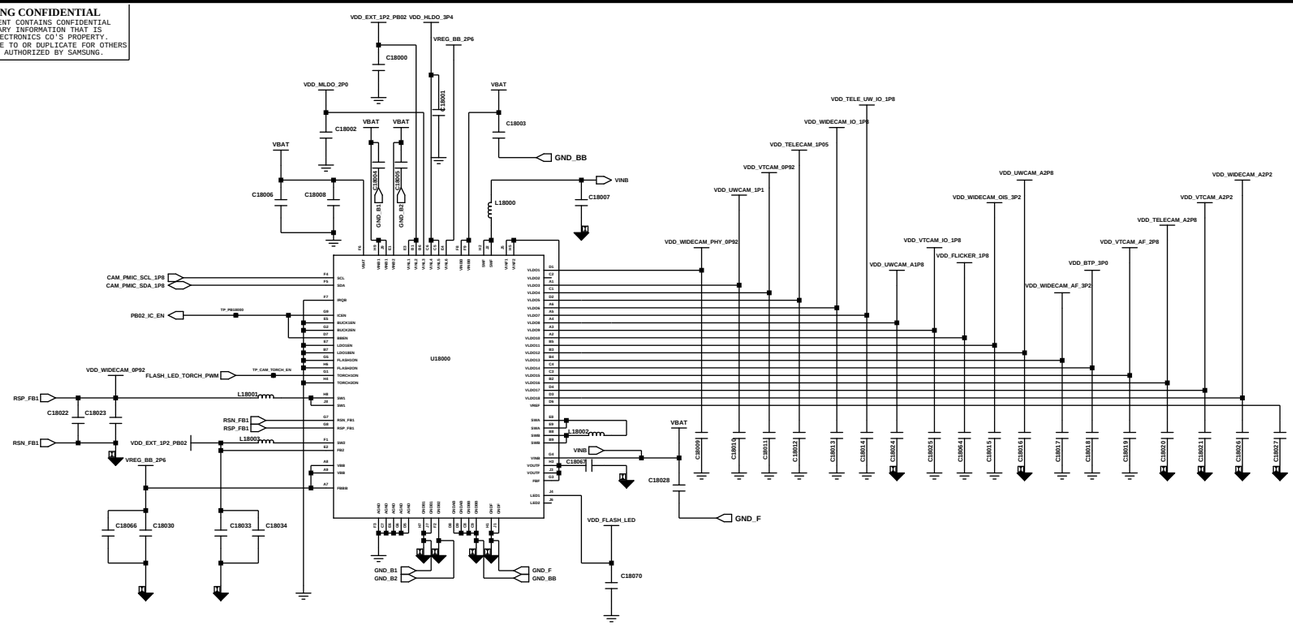


Ref#. 16nnn

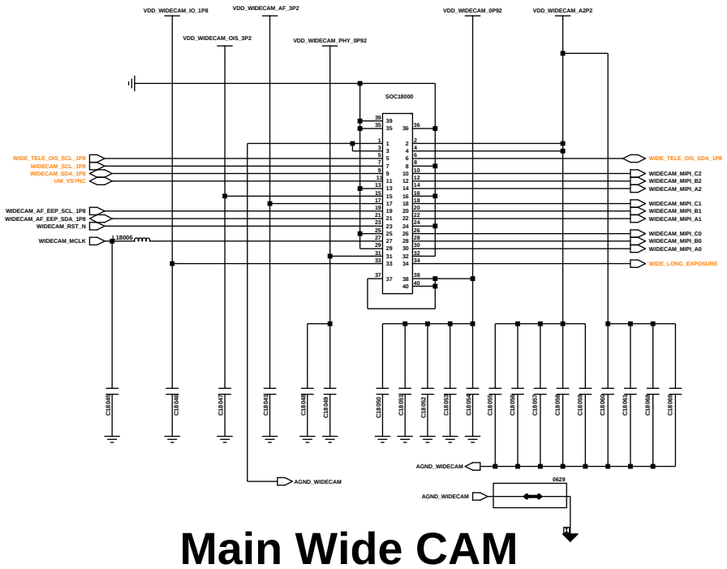
Engineer: SEC	SAMSUNG ELECTRONICS
Drawn by: SEC	
R&D CHK:	TITLE: RF (3/3)
DOC CTRL CHK:	Size: A
MFG ENGR CHK:	16 1 12
QA CHK:	REV: Drawing Number: Page: 16
Changed by: jy.r.cho	Date Changed: Tuesday, November 15, 2022
Time Changed: 11:36:46 am	

Ref#. 17nnn

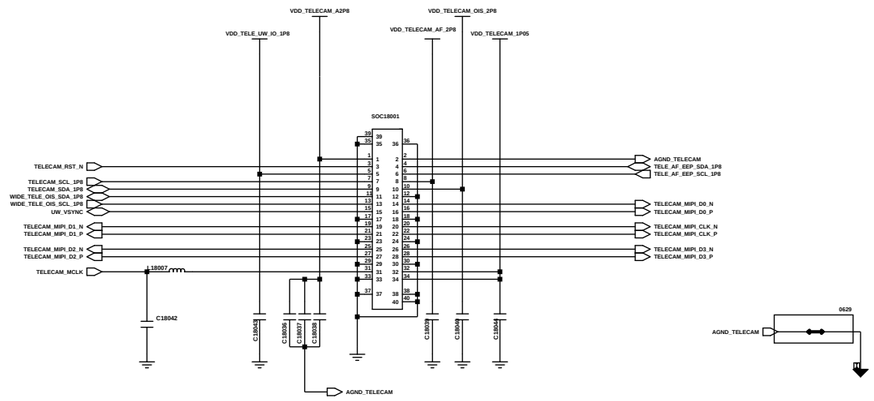
Engineer: cat	SAMSUNG ELECTRONICS
Drawn by: cat	
R&D CHK:	TITLE: RF(3/3)_UWB_WIFI PMIC 16 1 12 A
DOC CTRL CHK:	Size:
MFG ENGR CHK:	
QA CHK:	REV: Drawing Number: Page: 22
Changed by: cat	Date Changed: Thursday, May 12, 2016
Time Changed: 2:08:17 pm	



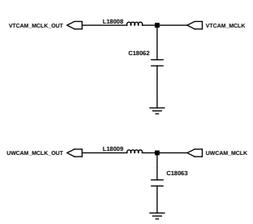
CAM PMIC (PB02)

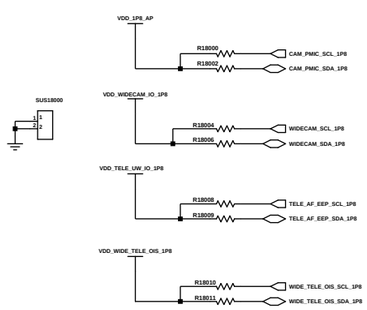


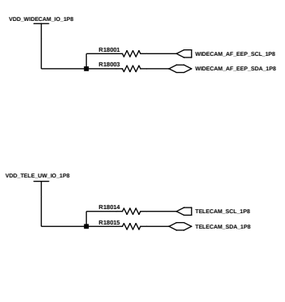
Main Wide CAM



TELE x3 CAM







Ref#. 18nnn

Engineer: SEC	SAMSUNG ELECTRONICS
Drawn by: SEC	
R&D CHK:	
DOC CTRL CHK:	TITLE: Visual (CAM)
MFG ENGR CHK:	Size: 16 1 12 A
QA CHK:	REV: Drawing Number: Page: 17

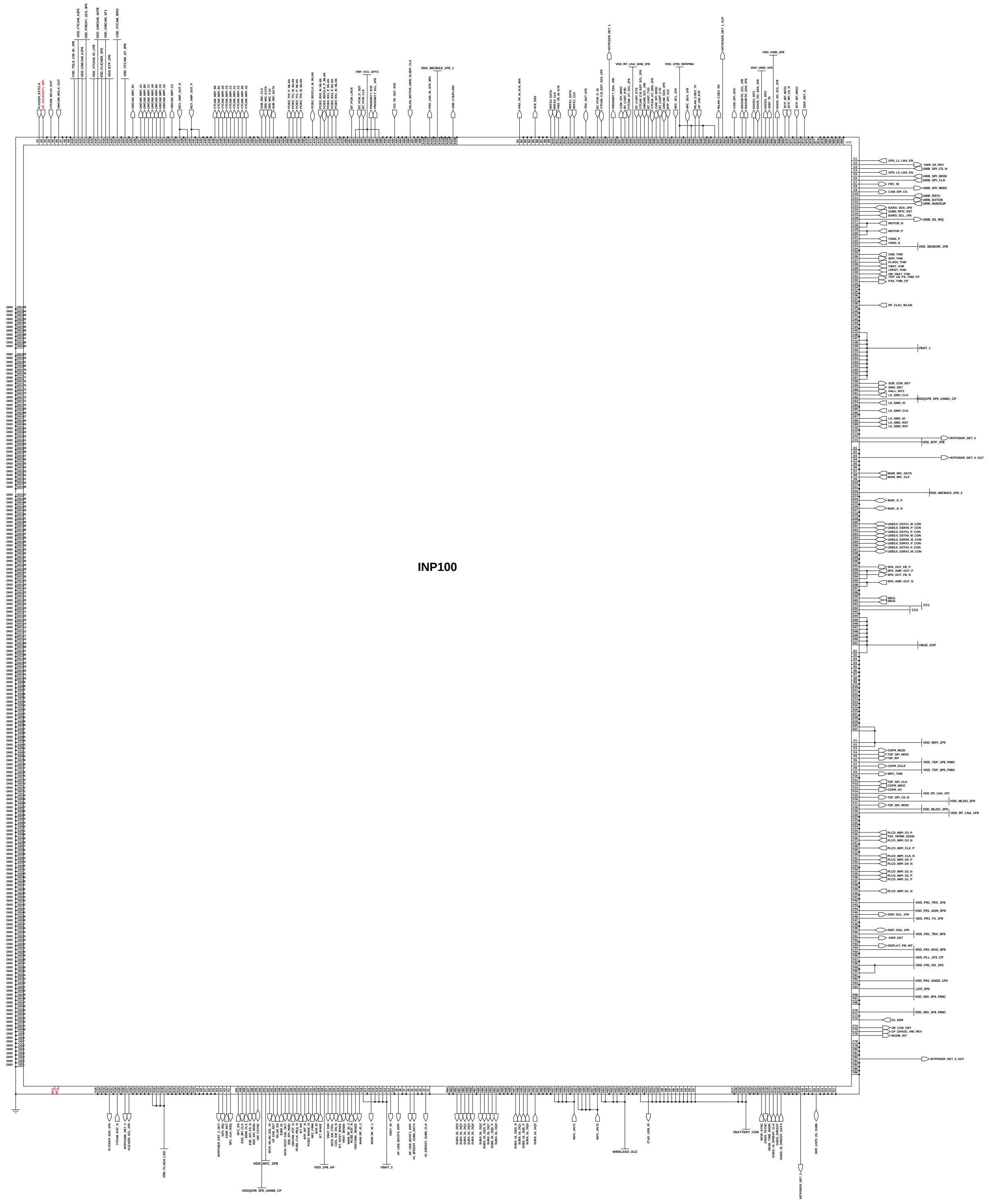
Changed by: Ky Cho | Date Changed: Tuesday, November 15, 2022 | Time Changed: 1:26:26 pm

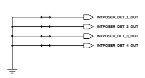
Ref#. 19nnn

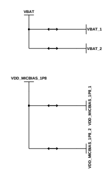
Engineer: junghun.pac	SAMSUNG ELECTRONICS
Drawn by: junghun.pac	
R&D CHK:	TITLE: Visual(Sensor)
DOC CTRL CHK:	Size:
MFG ENGR CHK:	
QA CHK:	REV:

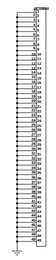
Changed by: junghun.pac | Date Changed: Wednesday, April 5, 2023 | Time Changed: 9:29:42 am | Drawing Number: | Page: 9

INTERPOSER Design

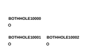




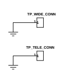




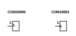
SHIELDCAN



BOSS HOLE



MARK



2D BARCODE

Ref#. 10nnn

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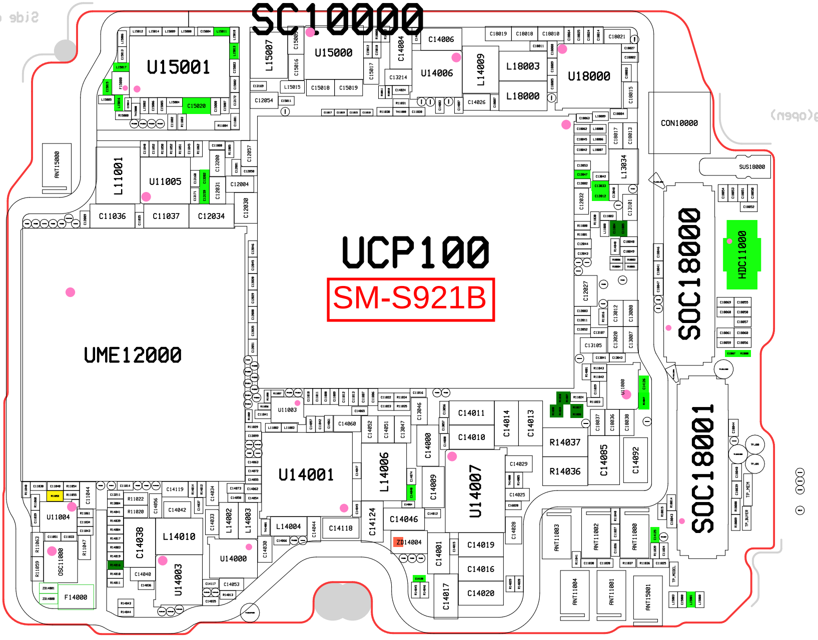
Drawn by:			
R&D CHK:	TITLE: HW Structure		Size:
DOC CTRL CHK:			
MFG ENGR CHK:			
QA CHK:	REV:	Drawing Number:	Page: 7

Changed by:	Date Changed:	Time Changed:
beomju.kim	Thursday, June 30, 2022	12:01:26 pm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UME12000
U15001
U15000
U14006
U18000
L18003
L18000
L14009
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C14006
CON10000
SUS18000
SOC18000
SOC18001
HDC11000
U11005
L11001
C11036
C11037
C12034
U14001
L14006
U14007
C14011
C14010
C14014
C14013
R14037
R14036
C14085
C14092
L14004
C14118
C14124
C14046
ZD14004
C14019
C14016
C14020
C14001
C14017
L14010
C14038
U14003
U14000
L14002
L14003
U11004
OSC11000
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ANT15001
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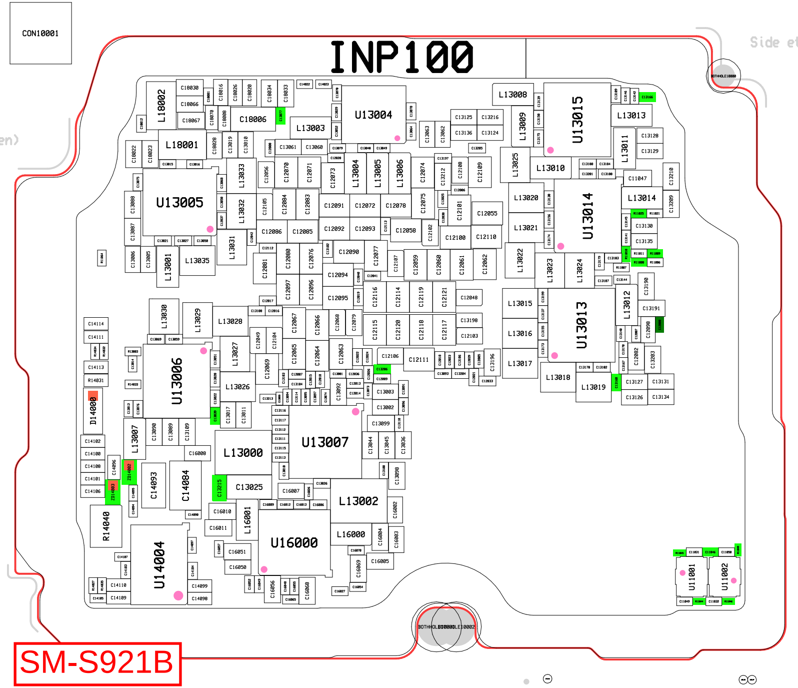
C14042
U11003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U13014
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U16000
U14004
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L18002
L18001
L13003
L13008
L13009
L13013
L13011
L13025
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L13002
L16000
L16001
C18006
C14084
C14093
C13025
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C12072
C12078
C12092
C12093
C12058
C12100
C12110
C12055
C12090
C12094
C12095
C12106
C12111
D14000
R14040
C13215
C13127
C13131
C13126
C13134
C16051
C16050
C16010
C16011
C16007
C16005
SM-S921B

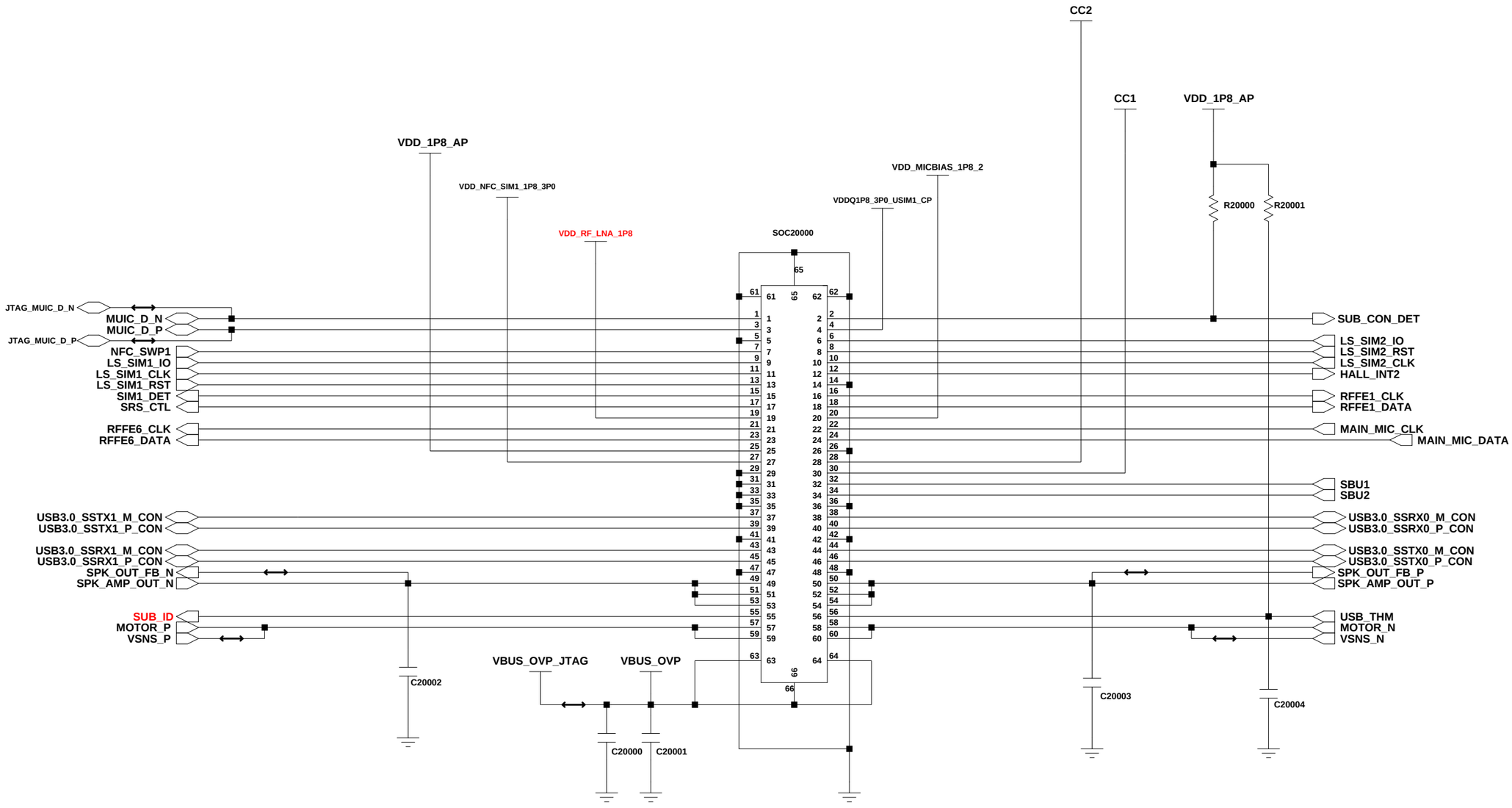
SM-S921B_M_RF_REV0.7

SM-S921B

2023. 10.04

TG	System		Power Audio		RF			VIsual (CAM)	VIsual (Disp.) VIsual (Sensor)	HW Structure
Ref#.	20nnn	21nnn	22nnn	23nnn	24nnn	25nnn	26nnn	27nnn	28nnn	29nnn
Contents	IF Sub PBA	PCB ID JTAG	BATT conn. DCM leakage WPC conn. WPC	Audio AMP 2nd/3rd MIC RCV cont.	ANT mmW ANT LFEM	LPAMID TRCV RF PMIC QET	BT/WiFi GPS UWB	Flash Ranging UWCAM VTCAM	Sensor Display PMIC Display conn. Digitizer PROXIMITY Sensor	Interposer Shieldcan
sheet	sheet01	sheet02	sheet03	sheet04	sheet05	sheet06	sheet07	sheet08	sheet09	sheet10

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



IF SUB PBA Conn

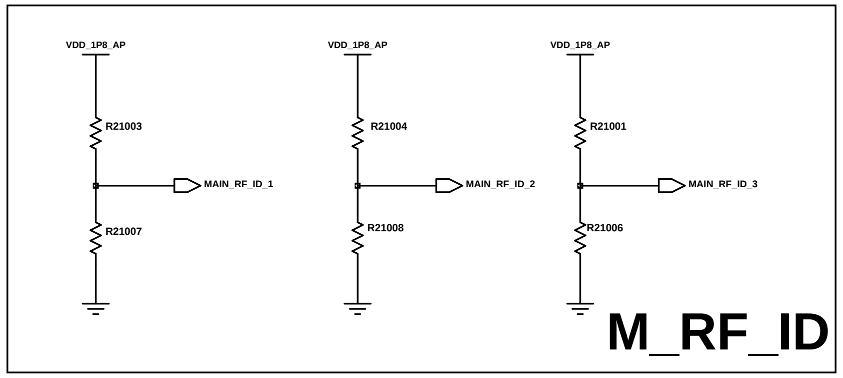
Ref#. 20nnn

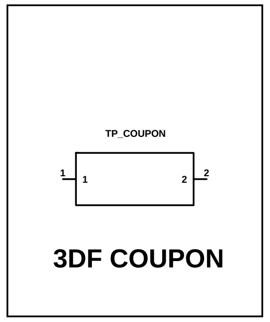
Engineer: SEC	SAMSUNG ELECTRONICS				
Drawn by: SEC					
R&D CHK:	TITLE: System	Size:			
DOC CTRL CHK:					
MFG ENGR CHK:					
Changed by: jy.r.cho	Date Changed: Tuesday, November 15, 2022	Time Changed: 2:20:13 pm	QA CHK:	REV:	Drawing Number: / Page: 20

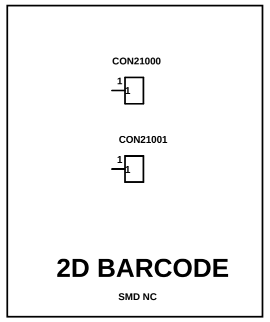
ETC PART

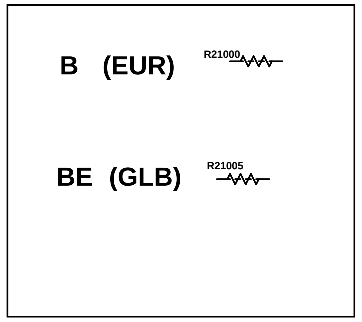
M_RF PBA table

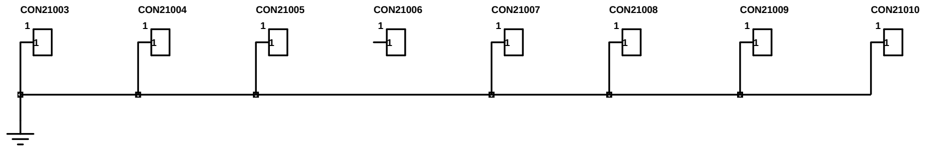
ID	ID3	ID2	ID1	M_RF PBA type
0	L	L	L	NA_mmW
1	L	L	H	NA_CAN_Sub6
2	L	H	L	CHN_SUB6
3	L	H	H	Global_SUB6
4	H	L	L	JPN_mmW
5	H	L	H	KOR_SUB6
6	H	H	L	EUR_SUB6
7	H	H	H	N/A



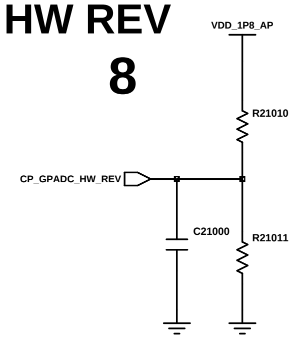






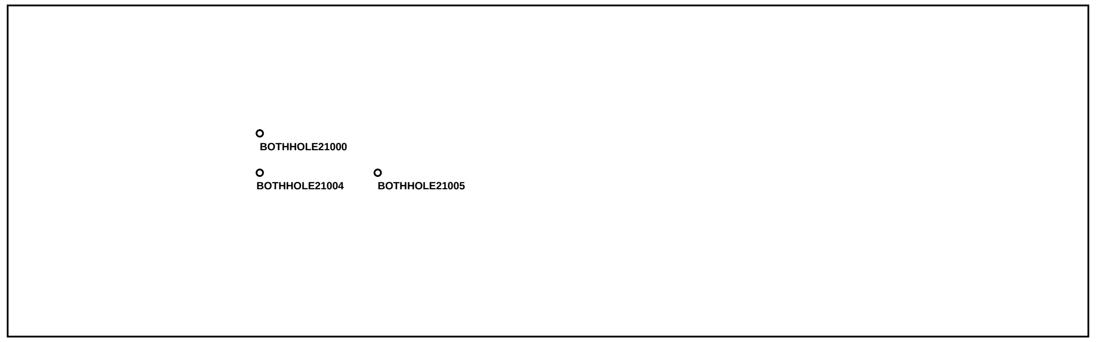


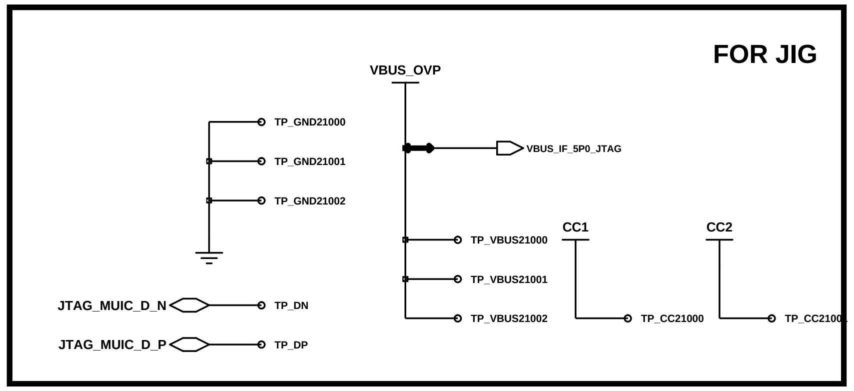
CP HW REV
8

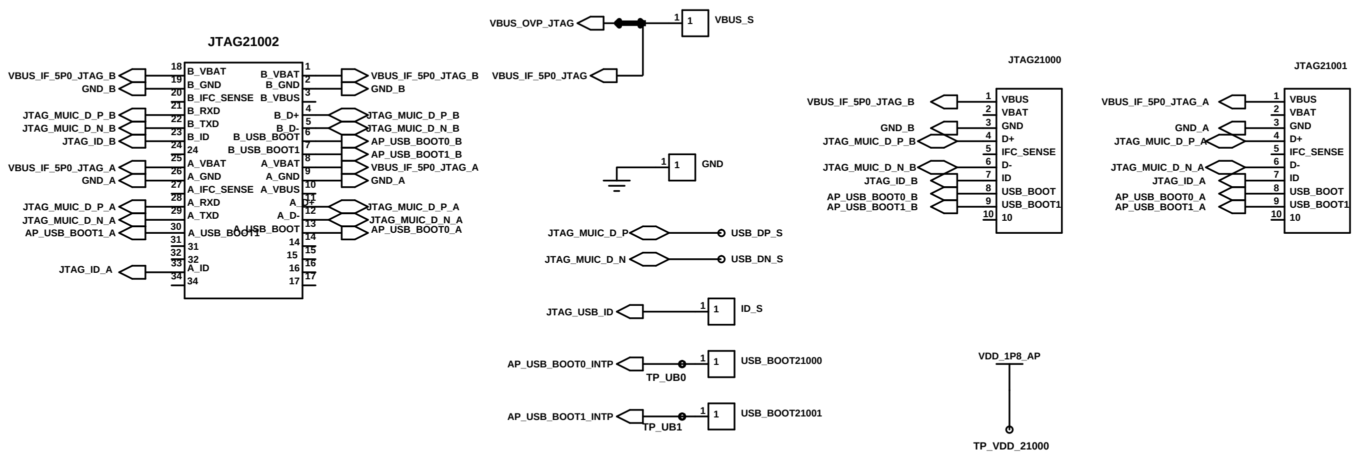


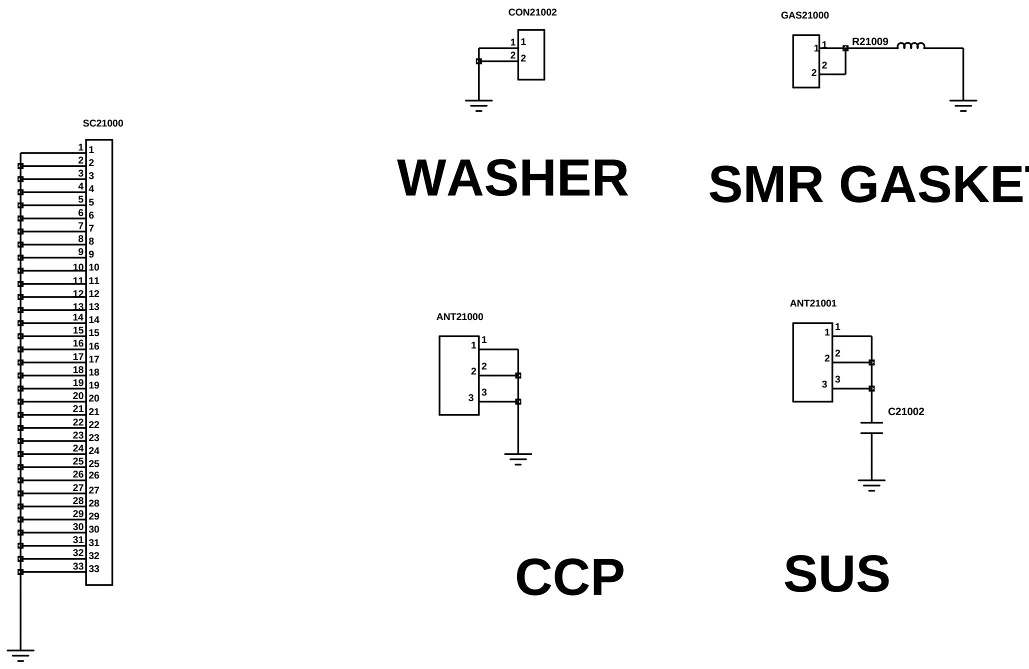
REV	R1(ohm)	R2(ohm)
0	NC	0
1	430K	30K
2	390K	62K
3	360K	91K
4	330K	120K
5	300K	150K
6	270K	180K
7	240K	220K
8	200K	240K
9	180K	270K
10	150K	300K
11	120K	330K
12	91K	360K
13	62K	390K
14	30K	430K

Boss Hole





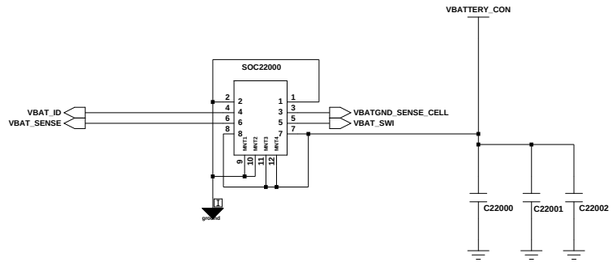




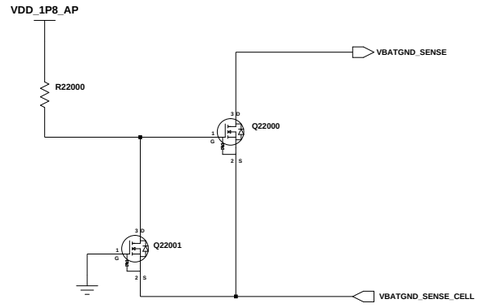
Ref#. 21nnn

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

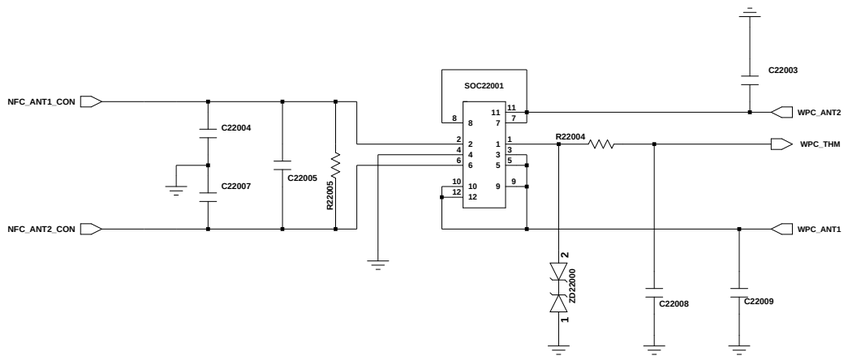
SAMSUNG ELECTRONICS
TITLE: System
Size:
Changed by: junghun.pac
Date Changed: Tuesday, April 4, 2023
Time Changed: 4:32:31 pm
REV
Drawing Number:
Page: 2



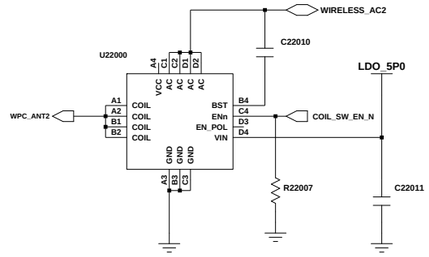
Battery Connector



for DCM leakage



W/C CONNECTOR



MST SW

MST SW Ref#. Guide

KOR only : 22900 ~ 22999

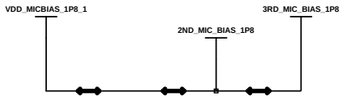
Ref#. 22nnn

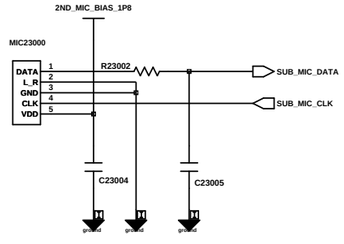
Changed by: junghun.pac	Date Changed: Monday, March 20, 2023	Time Changed: 3:22:55 pm	QA CHK:	REV:	Drawing Number:	Page: 22	Engineer: SEC	Drawn by: SEC	R&D CHK:	DOC CTRL CHK:	MFG ENGR CHK:

SAMSUNG ELECTRONICS

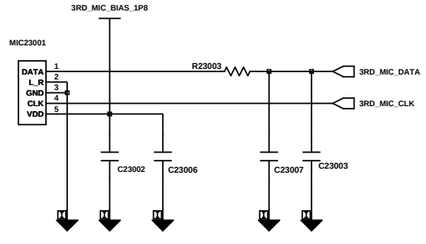
TITLE: Power, Audio (1/2)

Size: 12 1 8 A

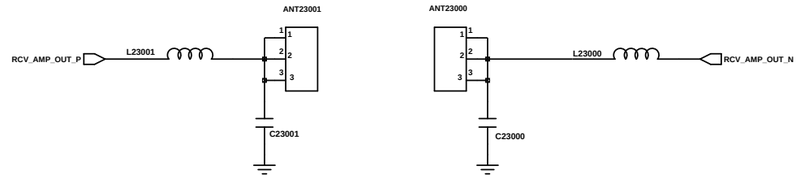




2nd MIC



3rd MIC

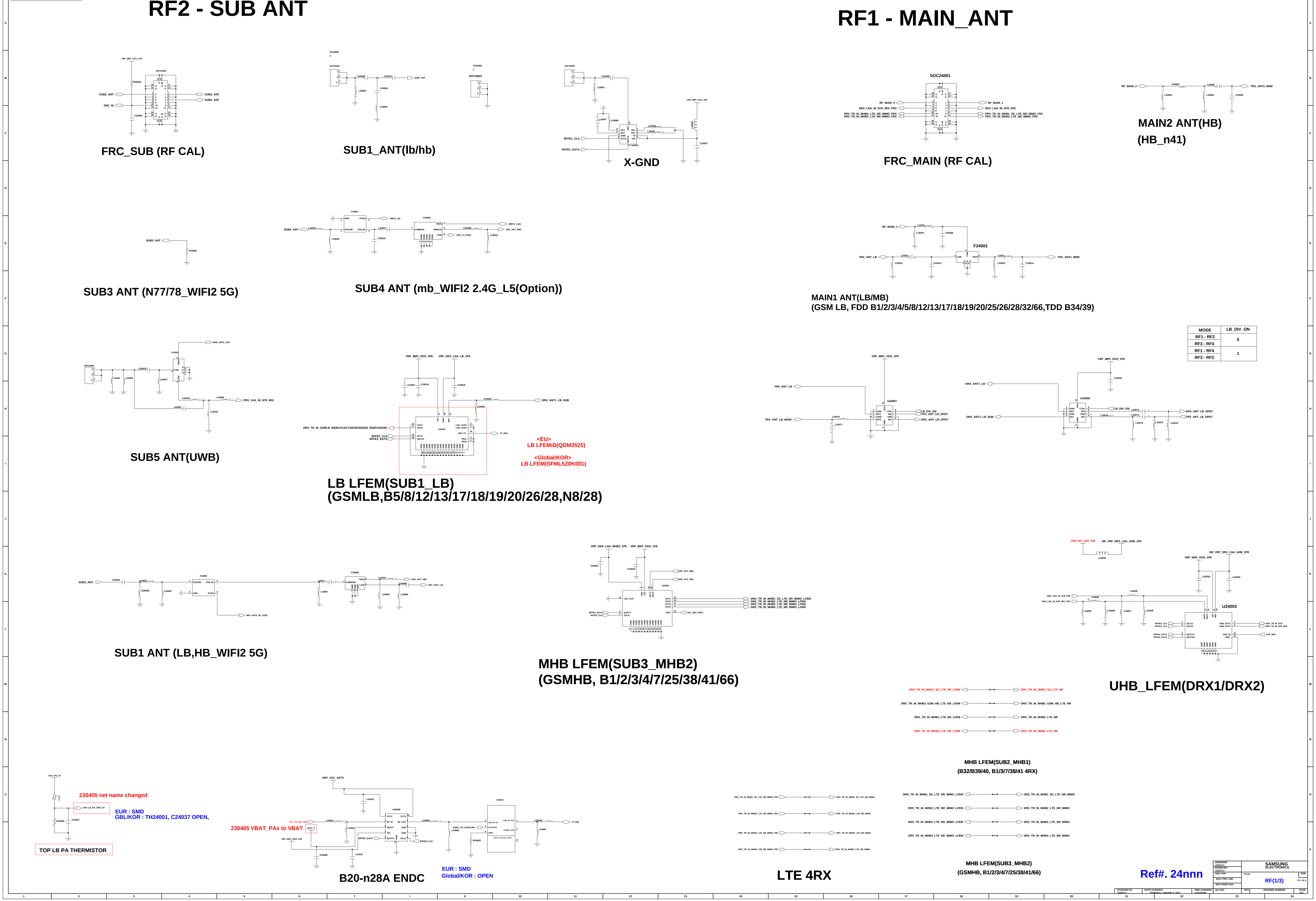


RCV Conn.

Ref#. 23nnn

Engineer: SEC	SAMSUNG ELECTRONICS		
Drawn by: SEC			
R&D CHK:	TITLE: Power, Audio (2/2)	Size: 12 1 8 A	
DOC CTRL CHK:			
MFG ENGR CHK:			
QA CHK:	REV	Drawing Number:	Page: 23

Changed by: ivr.cho | Date Changed: Wednesday, November 30, 2022 | Time Changed: 3:00:28 pm



230405 VBAT_PAx to VBAT

230405 VBAT_PAx to VRF_VCC_APT2

TX2_TR_OUT_B5/B12/13/17/18/19/20/26/28_N5/B12/20/28

TX2_TR_OUT_GSMLB

U25000

LB LPAMID

Need to change to QM77193

TX_OUT_B13

LNA_IN_AUX_B13

B13

N28_TRX_B20A

TX_OUT_B28

LNA_IN_AUX_N28_B20A

B28+B20Rx

Need to change to SAYRZ725MBA0L3K

TRANSCEIVER (S5540)

U25001-1

U25001-2

U25001-3

220222_CHANGE_OMH LPAMID

230405 VBAT_PAx to VBAT

EUR/GBL : SMD
KOR : OPEN

EUR : SMD
Global/KOR : OPEN

B32/n75_RX

U25002

MHB L-PAMiD

230405 VBAT_PAx to VBAT

EUR : SMD
GBL/KOR : OPEN

U25003

EN-DC TX MODULE
(B32/B39/40, B1/3/7/38/41 4RX)
(N1/N3/N7/N40/N41 Tx)

2G LB BAT Check

2G HB BAT Check

230405 net name changed

LB/OMH/ENDC LPAMiD THERM

U25004

U25005

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

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

SAMSUNG ELECTRONICS

WIFI (WCN7851 CoB)

U26004

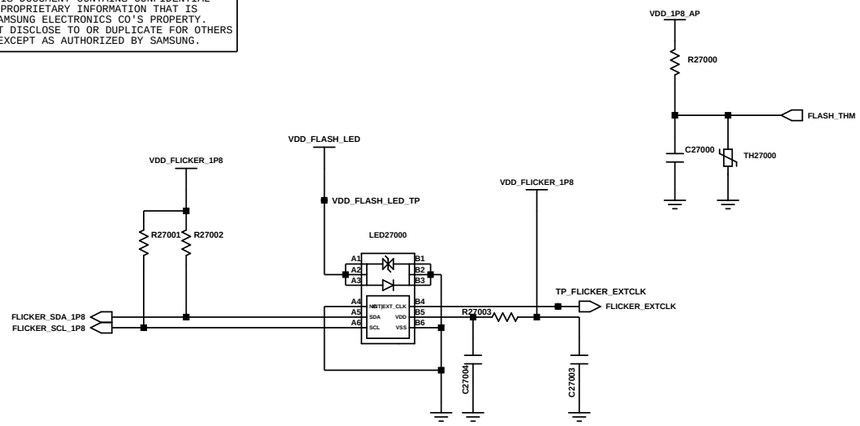
GPS L1

GPS L5

NFC

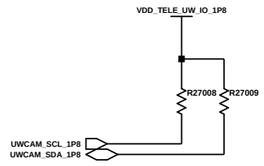
UWB

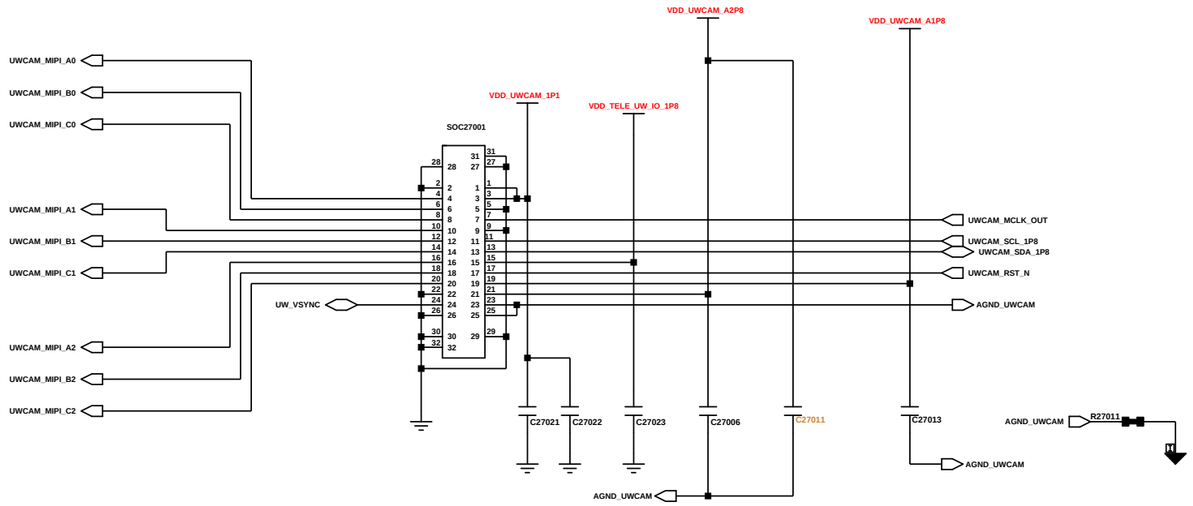
Antenna - COMMON PARTS



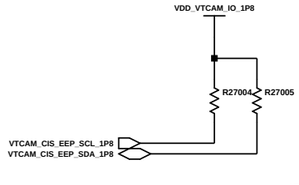
Flash & Flicker sensor

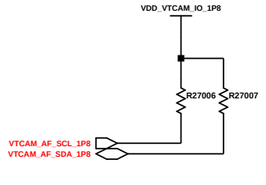
RANGING sensor

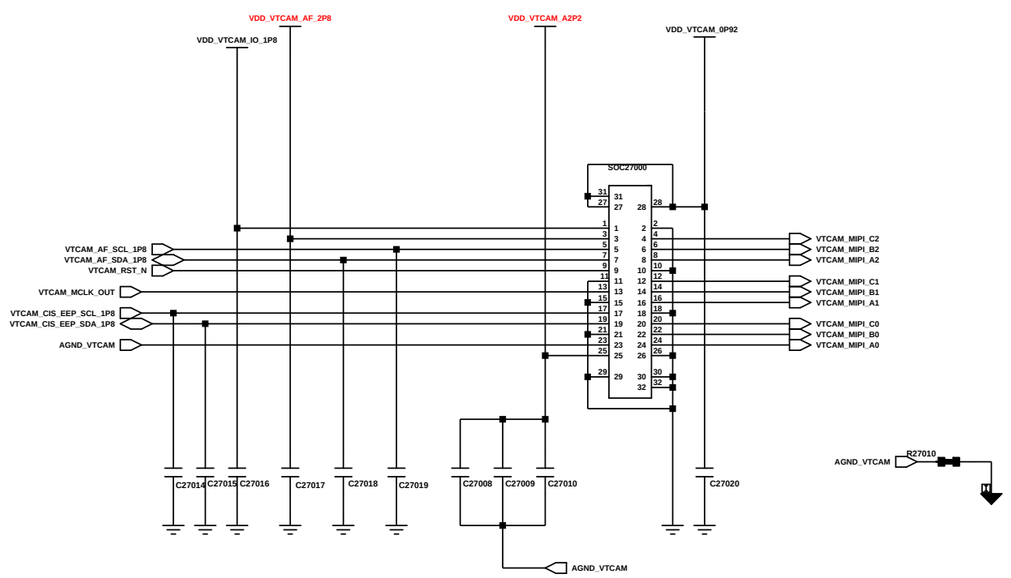




ULTRA WIDE CAM



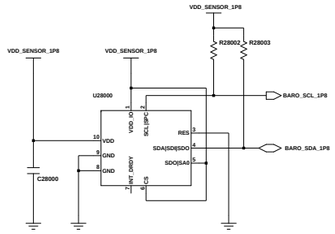




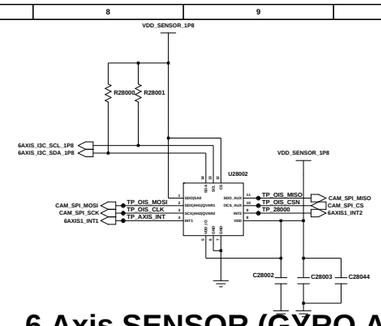
FRONT CAM

Ref#. 27nnn

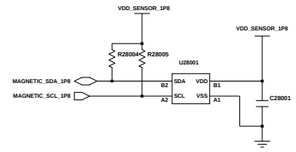
Engineer: SEC	SAMSUNG ELECTRONICS		
Drawn by: SEC			
R&D CHK:	TITLE: Visual (CAM)	Size: 12 1 8 A	
DOC CTRL CHK:			
MFG ENGR CHK:			
Changed by: jy.r.cho	Date Changed: Tuesday, November 15, 2022	Time Changed: 3:44:37 pm	QA CHK:
REV	Drawing Number:	Page: 27	



Barometer SENSOR

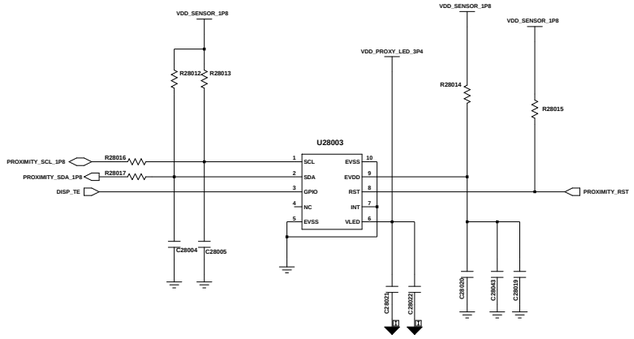


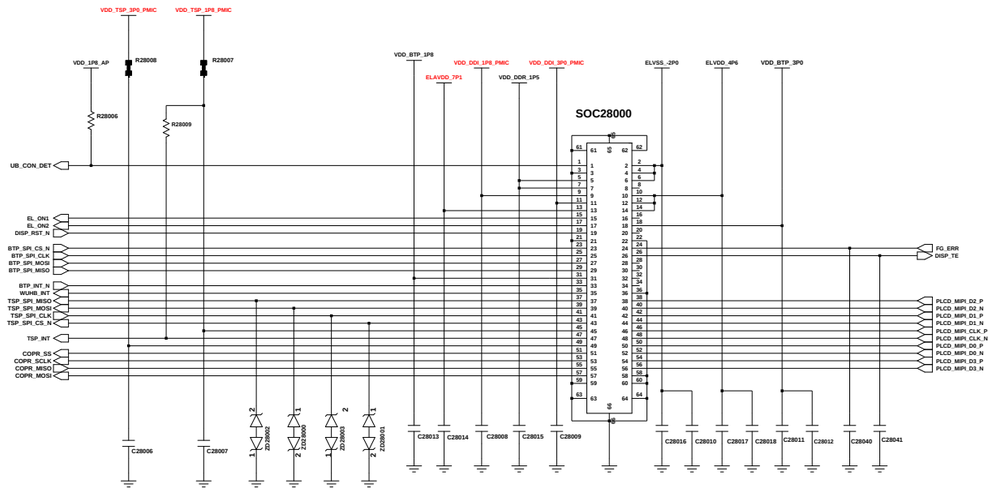
6 Axis SENSOR (GYRO,ACCEL)



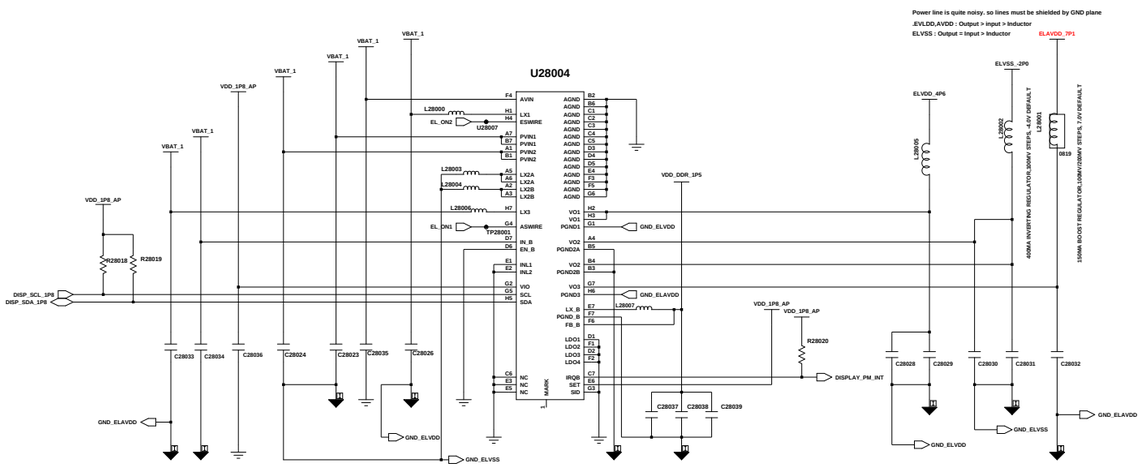
Magnetic SENSOR

Proximity sensor





DISPLAY CONNECTOR



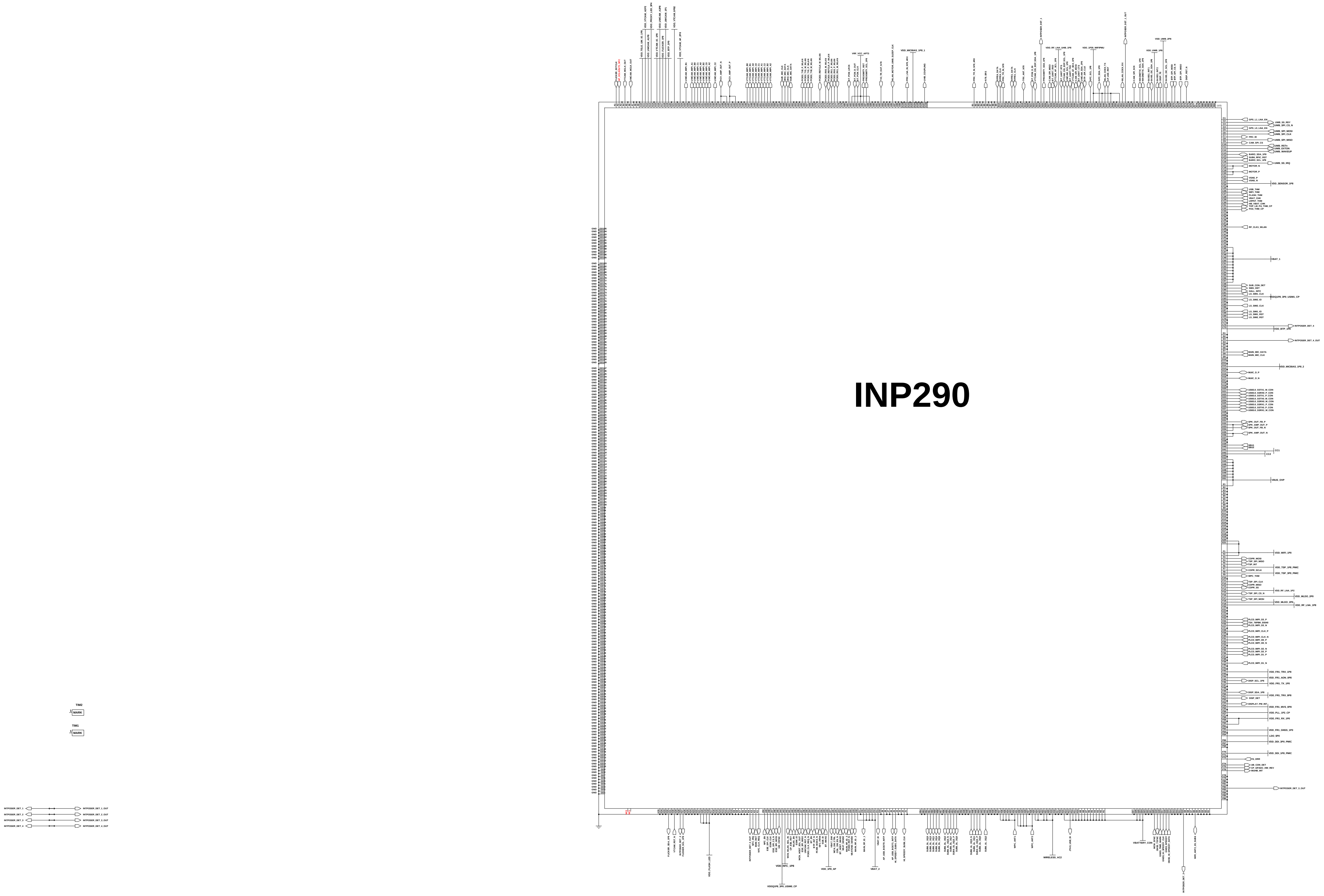
DISPLAY PMIC

Ref#. 28nnn

Engineer: SEC	SAMSUNG ELECTRONICS
Drawn by: SEC	
R&D CHK:	TITLE: Visual (Disp.) Visual (Sensor)
DOC CTRL CHK:	Size: 16 1 12 A
MFG ENGR CHK:	
QA CHK:	REV: Drawing Number: Page: 19

Changed by: ly.r.cho | Date Changed: Tuesday, November 15, 2022 | Time Changed: 3:54:49 pm

INTERPOSER Design

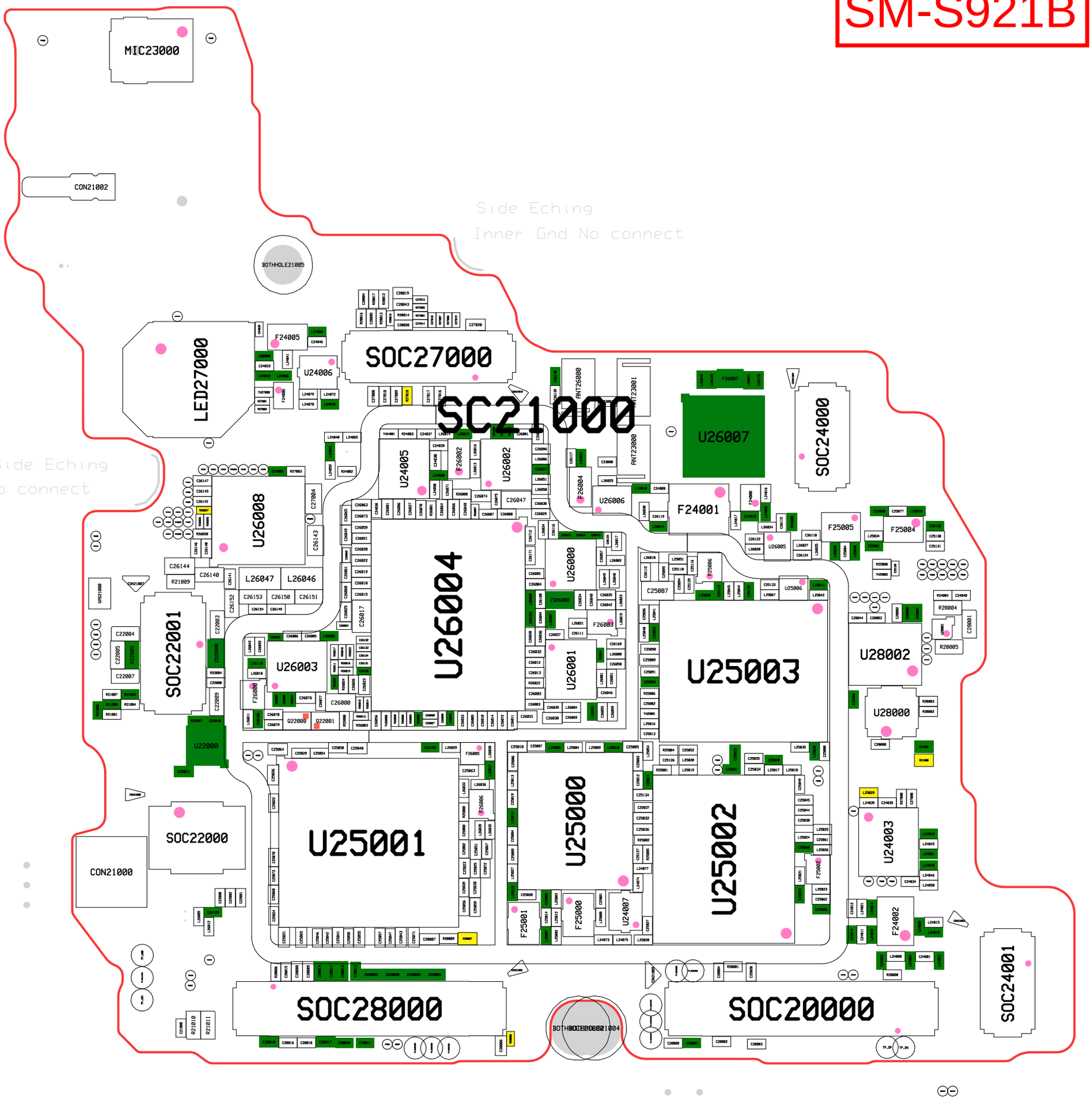


Ref#. 19nnn

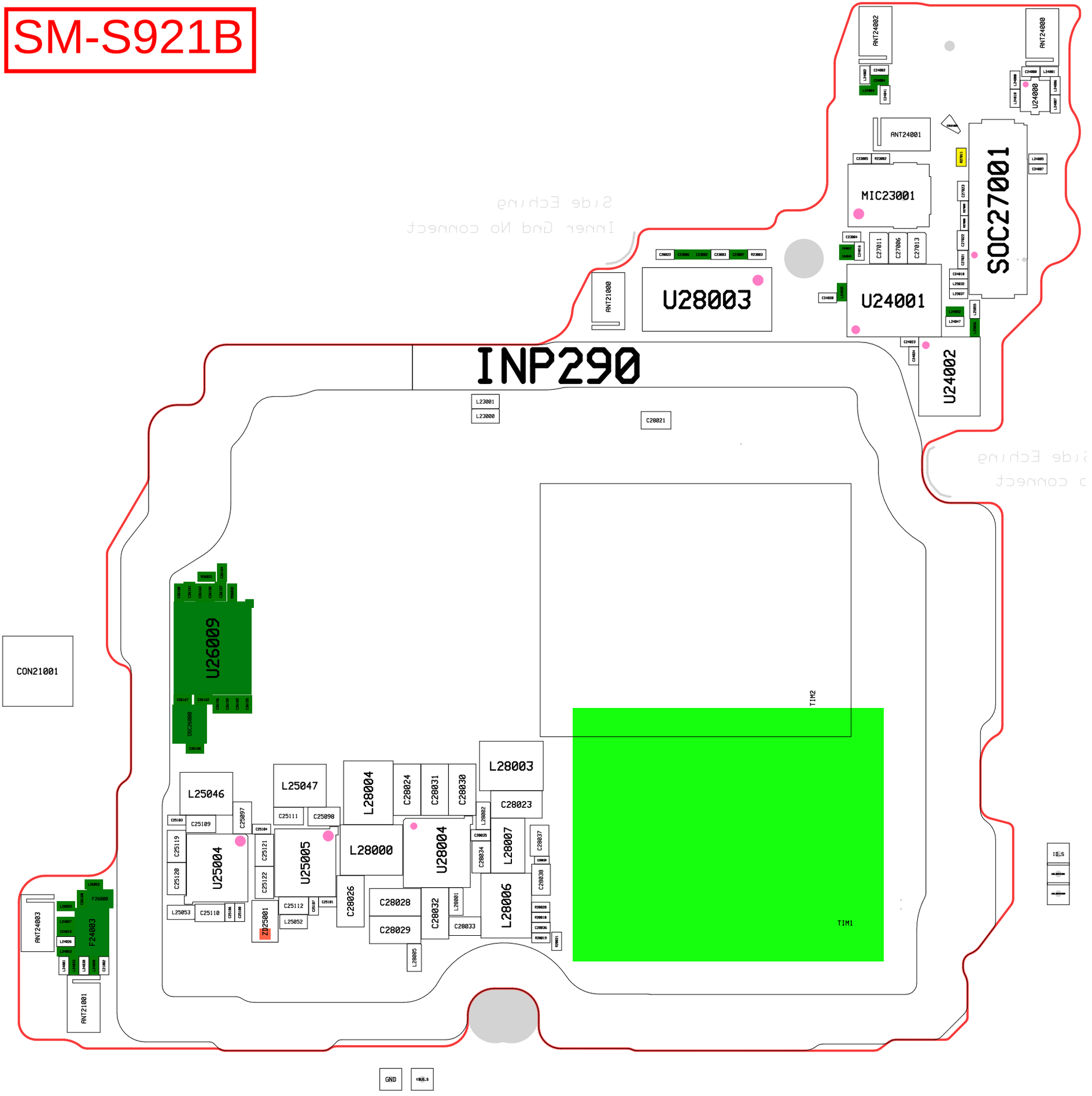
Engineer:	SAMSUNG ELECTRONICS		
Drawn by:			
R&D CHK:	TITLE: HW Structure		Size:
DOC CTRL CHK:			
MFG ENGR CHK:			

Changed by:	Date Changed:	Time Changed:	QA CHK:	REV:	Drawing Number:	Page:
beomju.kim	Thursday, June 30, 2022	12:01:26 pm				7

SM-S921B


MIC23000
CON21002
Side Eching
Inner Gnd No connect
BOTHOLE21005
LED27000
F24005
U24006
SOC27000
SC21000
ANT26000
ANT23001
ANT23000
U26007
SOC24000
U24005
F26002
U26002
F26004
U26006
F24001
F25005
F25004
U26005
U26008
C27004
C26143
C26144
C26140
R21089
L26047
L26046
C26153
C26150
C26151
C26152
C26147
C26145
C26142
U26004
U26000
C26047
C26017
F26003
U26001
C25087
U25003
U25006
U28002
U28000
SOC22001
C22004
C22005
C22007
C22003
C22008
C22009
U26003
F26000
C26876
C26000
Q22000
Q22001
U22000
C22011
U25001
F26006
U25000
F25001
F25000
U24007
U25002
F25002
U24003
F24002
SOC22000
CON21000
SOC28000
BOTHBOTEB0002004
SOC20000
SOC24001
TP_IN
TP_IP

SM-S921B


ANT24002
ANT24000
U24000
ANT24001
MIC23001
SOC27001
U28003
ANT21000
U24001
U24002
INP290
L23001
L23000
C28021
CON21001
U26009
TIM2
L25046
L25047
L28004
C28024
C28031
C28030
L28003
C28023
C25109
C25111
C25098
C25097
U25004
U25005
L28000
U28004
L28007
C28026
C28028
C28029
C28032
C28033
L28006
C28038
C28037
ZD25001
L25052
L25053
C25110
F26000
F24003
ANT24003
ANT21001
TIM1
GND
VBUS

SM-S921B IFSUB PBA REV0.7

SM-S921B

2023.09.19

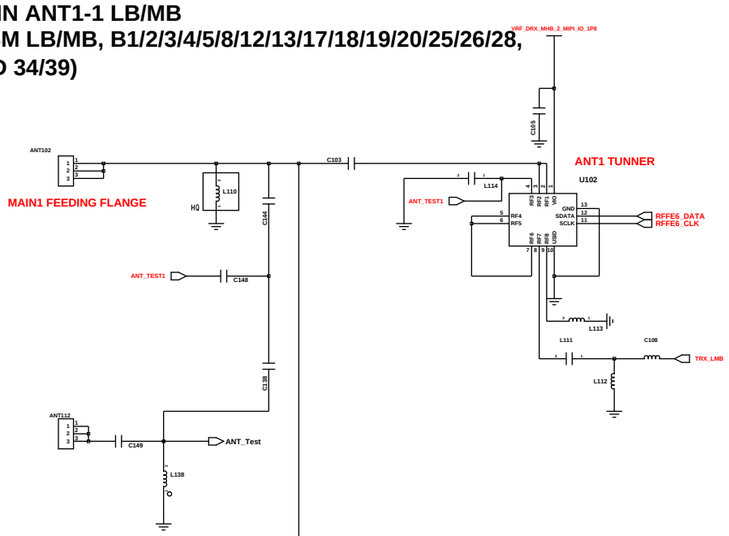
sheet01 : ANT

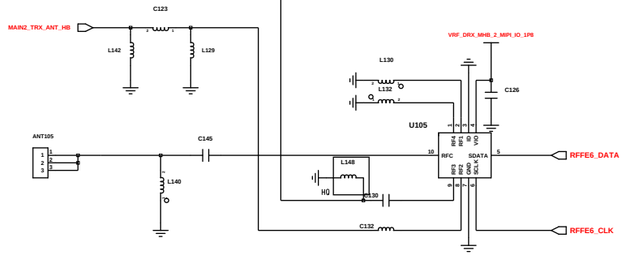
sheet02 : LOGIC

Engineer:					
Drawn by:					
R&D CHK:		TITLE:		Size:	
DOC CTRL CHK:					
MFG ENGR CHK:					
Changed by: user91	Date Changed:	Time Changed:	QA CHK:	REV:	Drawing Number:	Page: 0

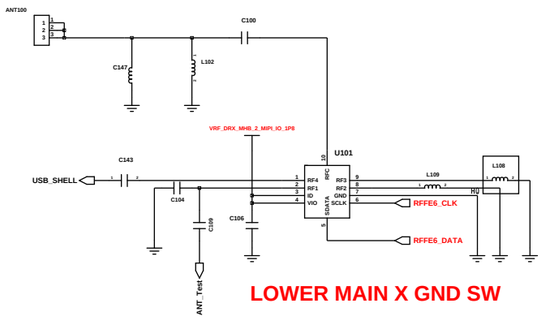
MAIN ANT

MAIN ANT1-1 LB/MB (GSM LB/MB, B1/2/3/4/5/8/12/13/17/18/19/20/25/26/28, TDD 34/39)

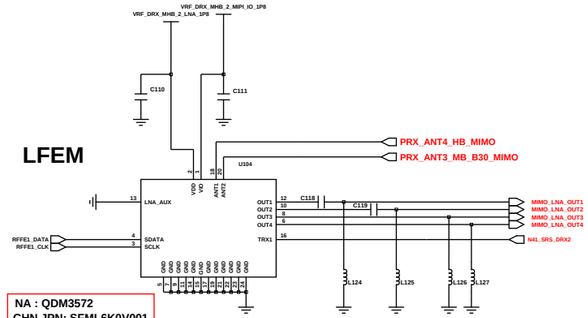




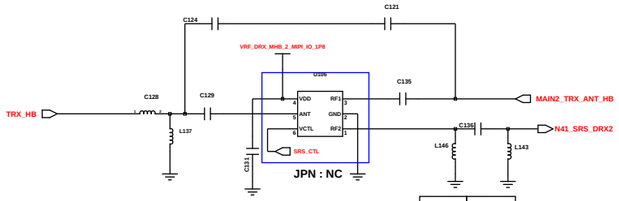
MAIN ANT2(HB/n77/n78)



LOWER MAIN X GND SW



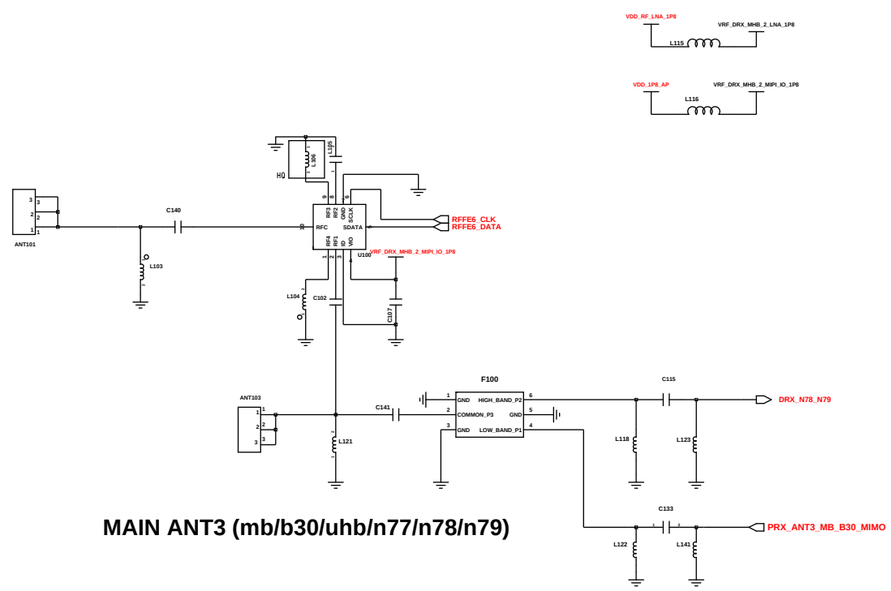
NA : QDM3572
CHN,JPN: SFML6K0V001
EUR,GLB: SFML6K0V001



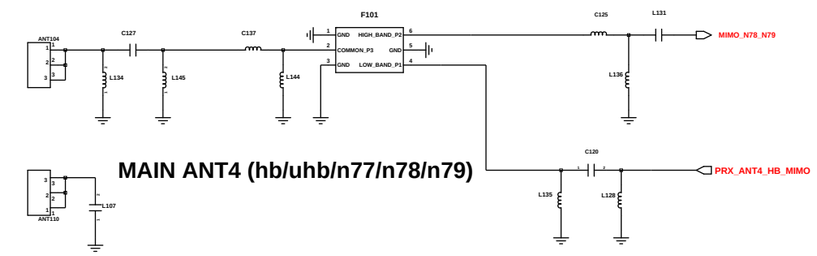
JPN : NC

N41 SRS

	JPN	NA/CHN
U106	NC	MXD8625ES
C129	NC	100pF
C135	NC	100pF
C131	NC	100nF
C124	100pF	NC
C121	100pF	NC

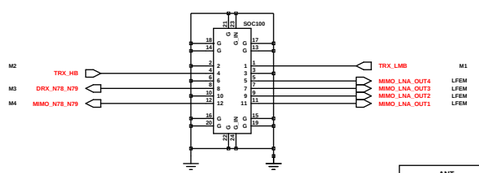


MAIN ANT3 (mb/b30/uhb/n77/n78/n79)



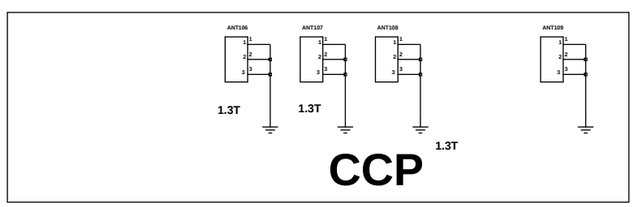
MAIN ANT4 (hb/uhb/n77/n78/n79)

FRC CON



ANT	Band
M1 (Metal)	LB/MB
M2 (Metal)	HB/ n77/n78/n79
M3 (Metal)	mb/uhb/n77/n78/n79
M4 (SPK sus)	hb/uhb/n77/n78/n79

RF Connector



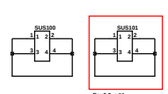
CCP

etc.

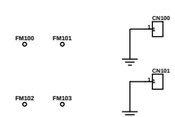
SHIELD CAN

TP100 SHORT EUR / GLB
TP101 NC KOR
TP102 NC GLB_RD

BOTHHOLE

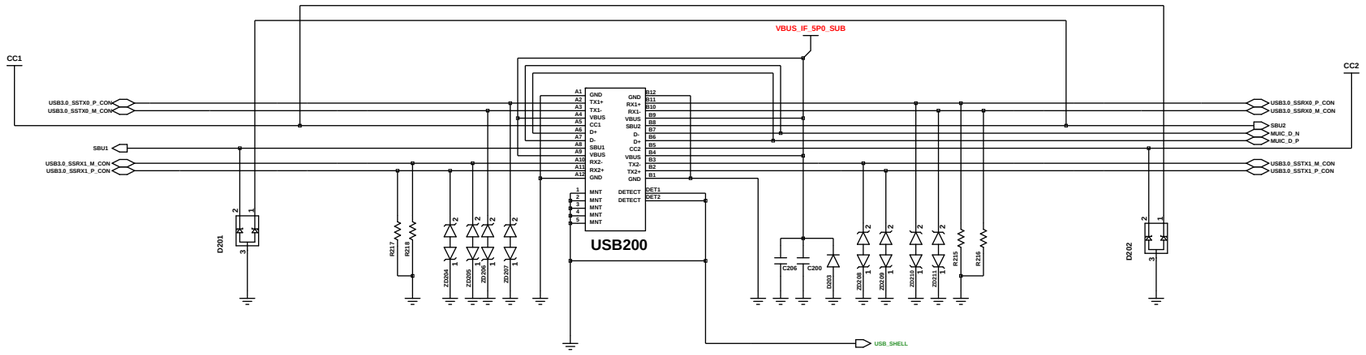


SCREW SUS



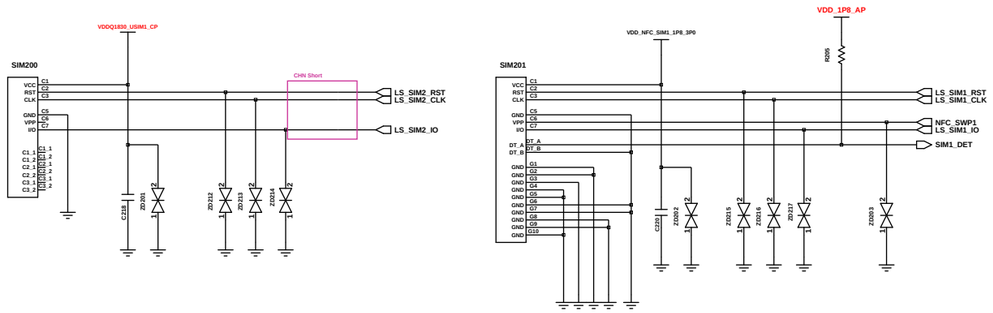
INSIK MARK

USB / SIM



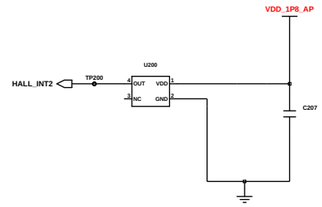
USB TYPE C CONNECTOR

Deep Drawing



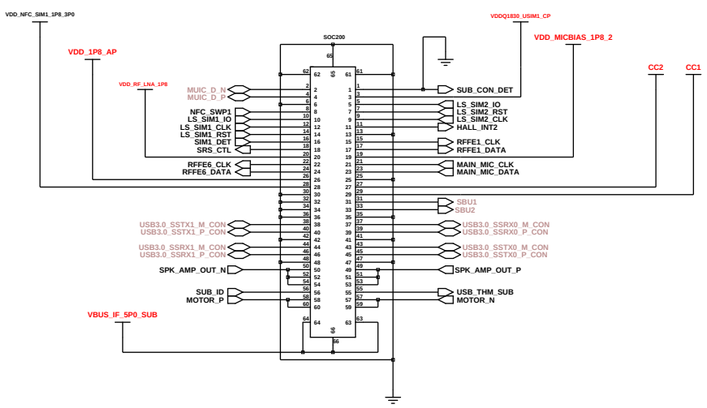
Stacked Dual SIM SOCKET

SENSOR



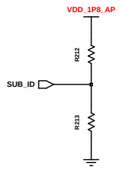
HALL SENSOR

BtoB CON



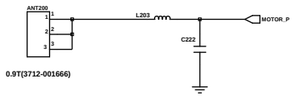
SUB PCB IF CONNECTOR

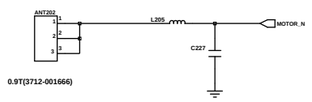
SUB VERSION



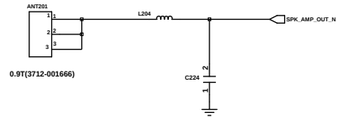
TYPICAL VALUE	ID_LSI	EXT_PU	EXT_PD	N.DM1
0	0	NC	332K, 1%	EUR_Sub6 Global_Sub6
480	1	332K, 1%	120K, 1%	NA_mmW NA_CAN_Sub6
720	2	270K, 1%	180K, 1%	CHN_Sub6
1080	3	180K, 1%	270K, 1%	KOR_Sub6_RD
1320	4	120K, 1%	332K, 1%	JPN_mmW
1480	5	100K, 1%	470K, 1%	Global_Sub6_RD

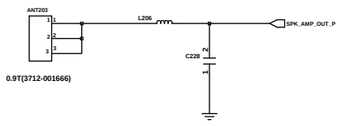
AUDIO



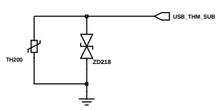


MOTOR conn.

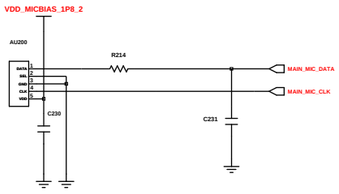




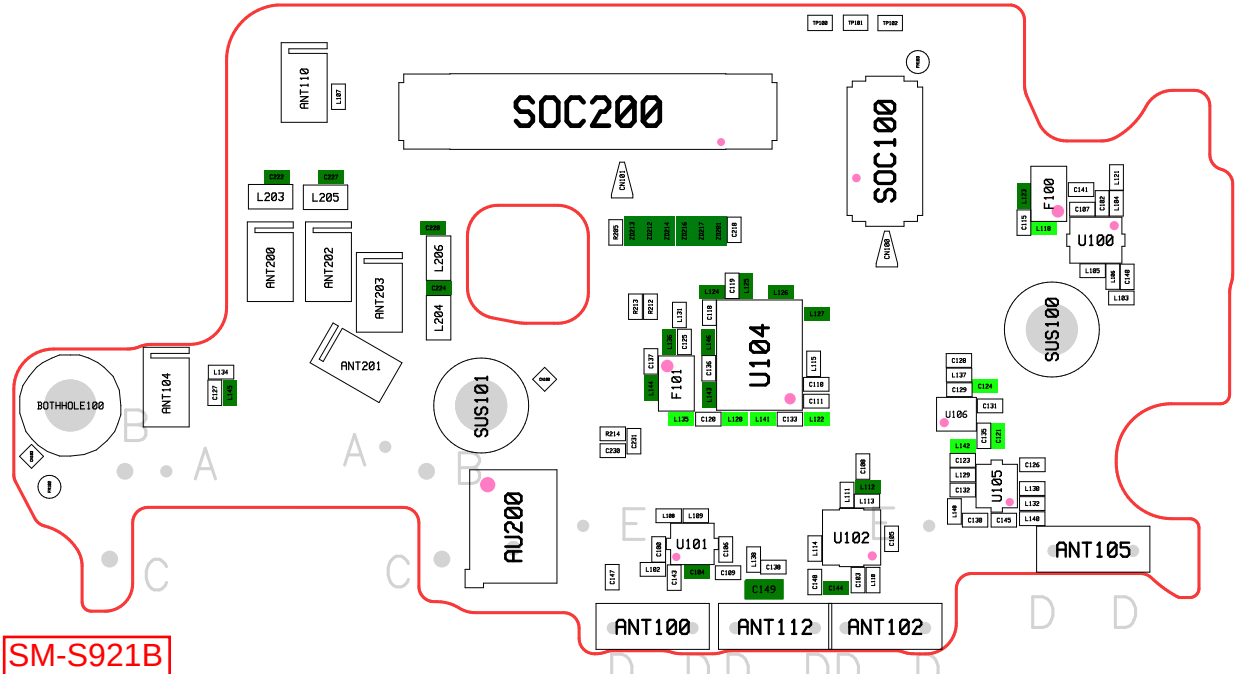
SPK CONTACT

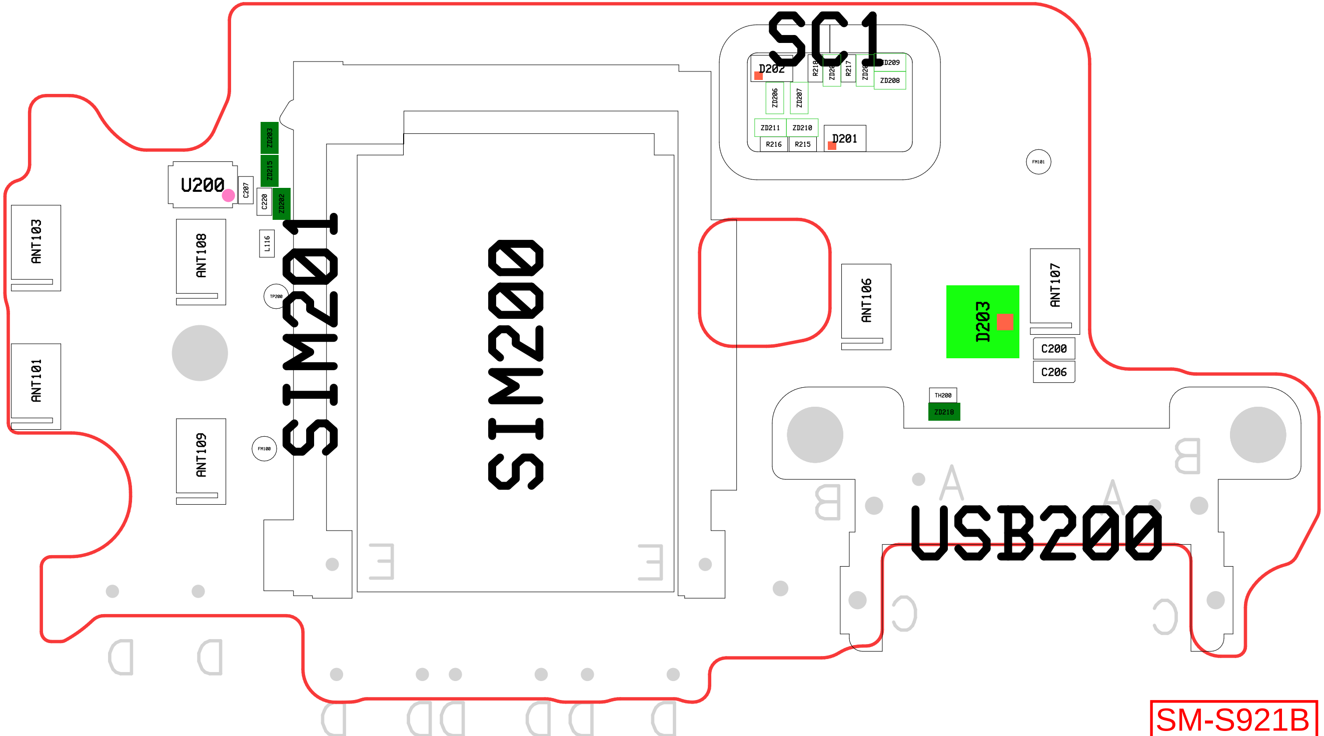


USB/BATTERY THERMISTOR



MAIN MIC


SOC200
SOC100
ANT110
L207
L203
L205
ANT200
ANT202
ANT203
ANT201
L206
L204
ANT104
BOTHOLE100
SUS101
AU200
U104
F101
SUS100
F100
U100
U106
U105
U101
U102
ANT105
ANT100
ANT112
ANT102
SM-S921B


SC1
D202
R218
R217
ZD209
ZD208
ZD206
ZD207
ZD211
ZD210
R216
R215
D201
FM101
U200
C207
C220
ZD203
ZD215
ZD202
L116
TP200
FM100
ANT103
ANT108
ANT101
ANT109
SIM201
SIM200
ANT106
D203
ANT107
C200
C206
TH200
ZD218
USB200

SM-S921B