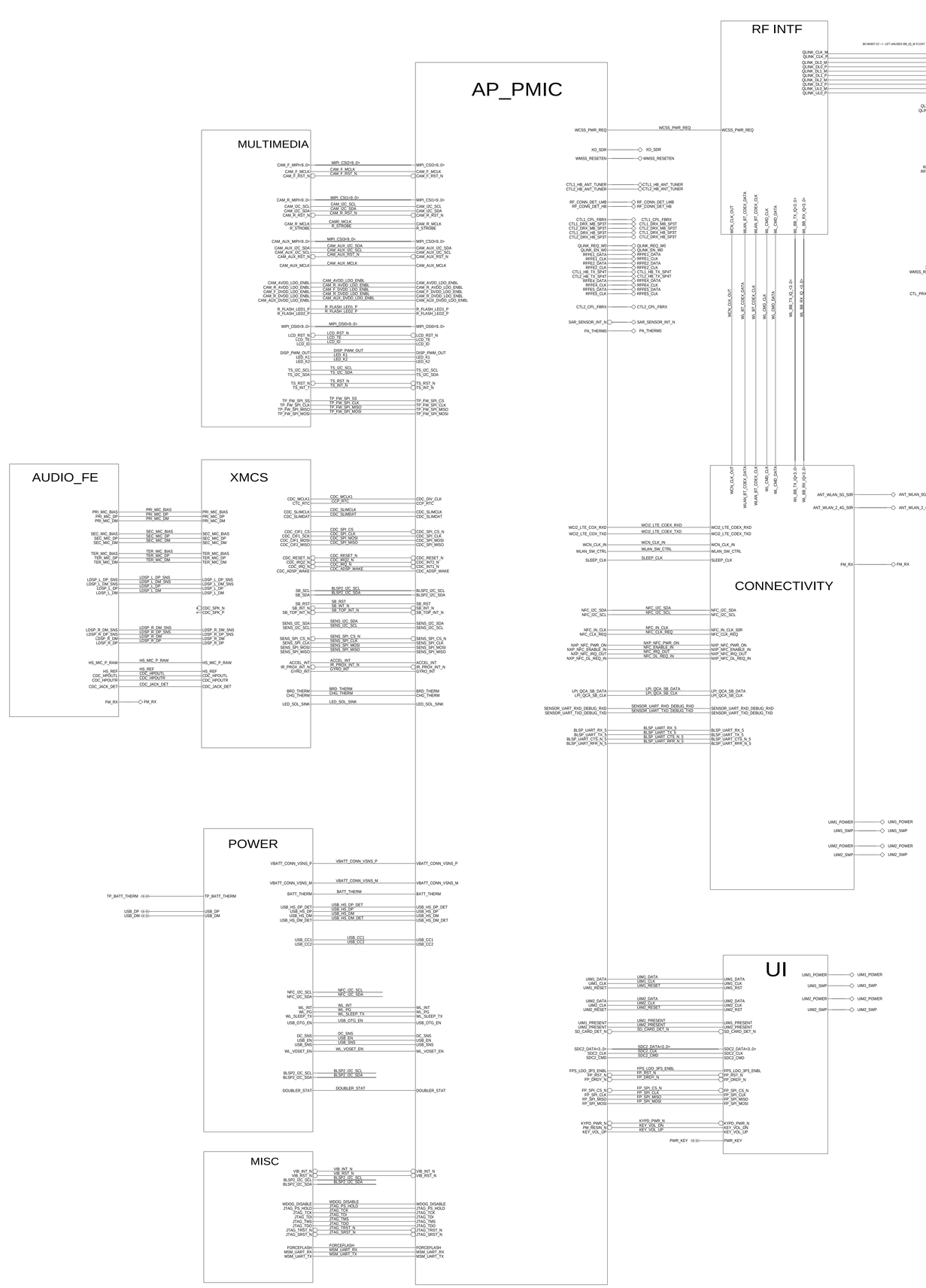
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



CPU

SC98C23230	SDM636 - 0	3CA+ NO CDMA, 1.8G
SC98C22620	SDM636 - 1	2CA+CDMA, 1.8G
SC98C23231	SDM636 - 2	2CA+ NO CDMA, 1.8G
SC98C23232	SDM636 - 3	3CA+CDMA, 1.8G

MEMORY

DENSITY	VENDOR PN	VENDOR	LENOVO PN
4+64	KMDH6001DA-B422	SAMSUNG	SM38C28210
	H9HP52ACPMADAR-KMM	HYNIX	SM38C33882
	MT29VZZZAD8DQKSL-046	MICRON	SM38C35427
4+128	MT29VZZZAD9DQKSM-046	MICRON	SM38C46633
6+128	KM3V6001CM-B705	SAMSUNG	SM38C20203

VARIANTS

VARIANT	MARKET	MARKET MODEL	MEMORY	SIM	NFC	CPU	PCBA
LA	LATAM,BRAZIL	XT1965-2	4+64G	DS	YES	SDM636-2	SP68C35674
WE	WE+JANZ	XT1965-3	4+64G	DS	YES	SDM636-2	SP68C35675
PRC	PRC	XT1965-6	4+128G 6+128G	DS	NO	SDM636-1	SP68C40451 SP68C40453

RioH ME/SHIELDS

PCB SHIELDING

SM88C34445
SH1000
SHIELDING_CPU_EMCP

SM88C34454
SH1100
SHIELDING_CDC_NFC

SM88C38188
SH2000
SHIELDING_B28_FULL

SM88C34447
SH3000
SHIELDING_SMARTPA

SM88C34448
SH4000
SHIELDING_RF_DCDC

SM88C34449
SH5000
SHIELDING_WIFI

SM88C34450
SH6000
SHIELDING_RF_WTR

SM88C34451
SH7000
SHIELDING_PMI

SM88C34452
SH8000
SHIELDING_PMU

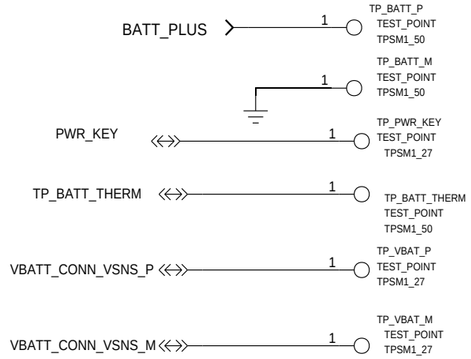
SM88C34453
SH9000
SHIELDING_RF_PA

SM88C35901
SH9100
SHIELDING_VIBRATOR

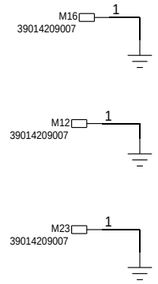
ME CARRIER FIX

SM88C40401
M2000

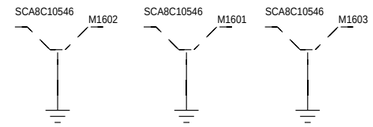
FACTORY TEST POINT FOR USB



GROUND CONTACTS



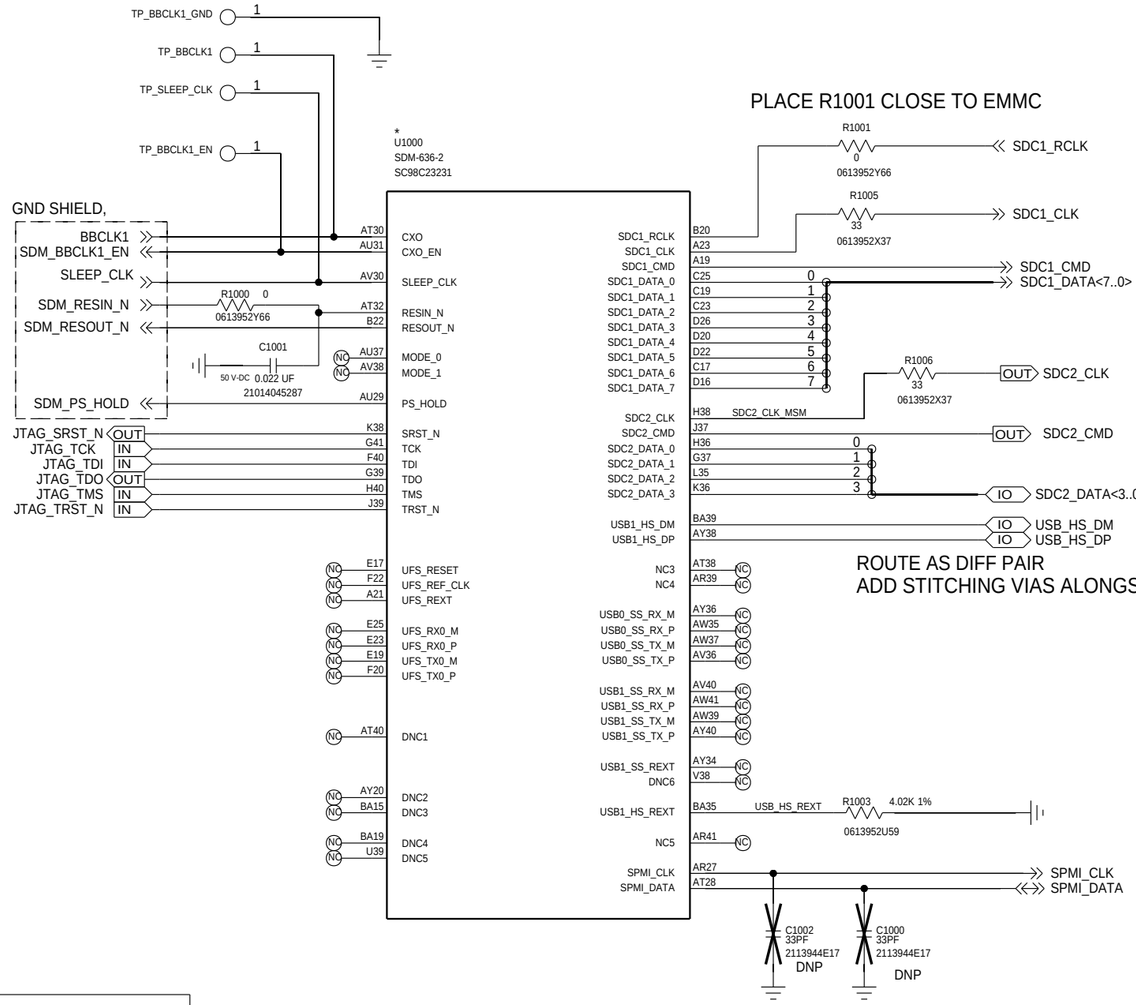
RF CABLE CLIP

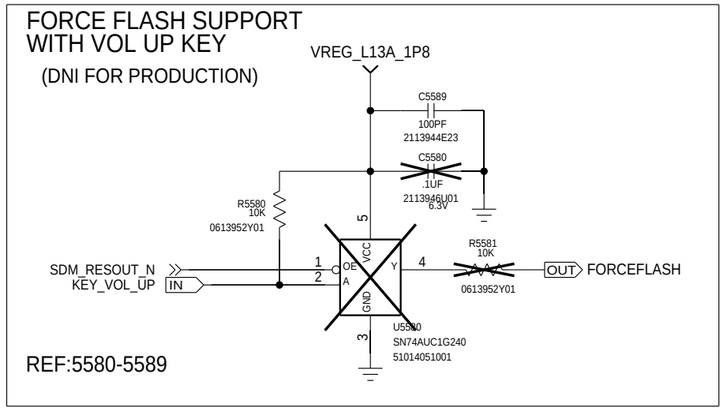


SCREW

SDM: CTRL

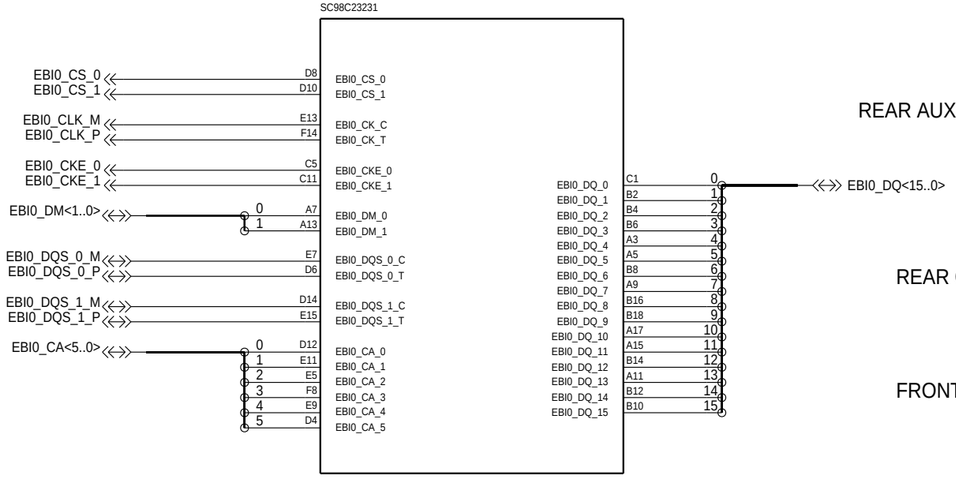
REF 1000-1099





SDM: MIPI/DSI/CSI/EBI0

REF 1200-1299



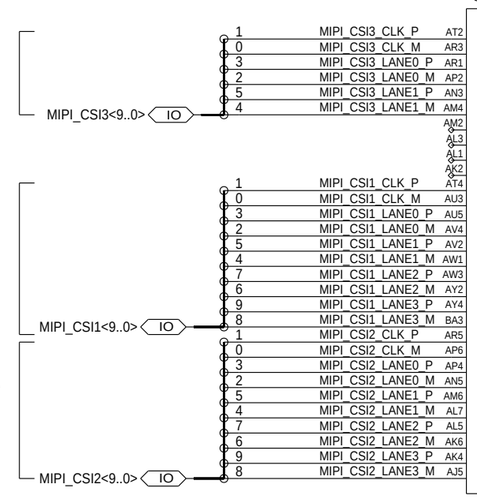
GND SHIELD FOR EBI0 AS A GROUP IF POSSIBLE

GND SHIELD FOR CSI3 AS A GROUP IF POSSIBLE

REAR AUX CAMERA

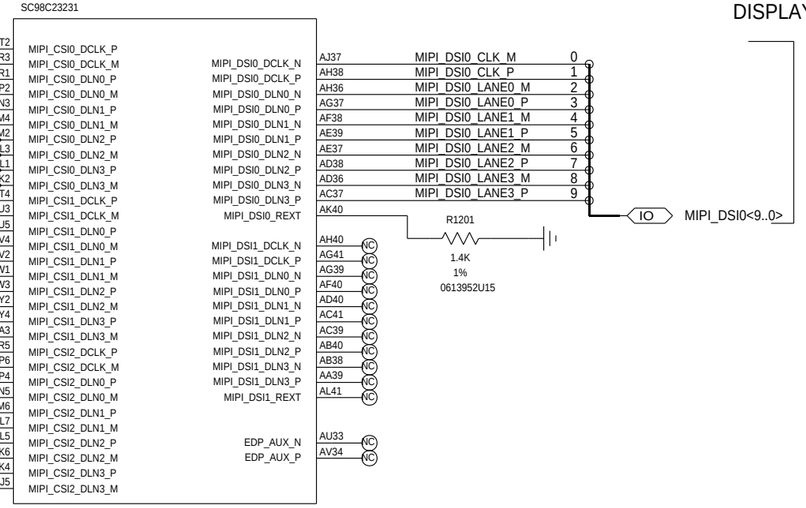
REAR CAMERA

FRONT CAMERA



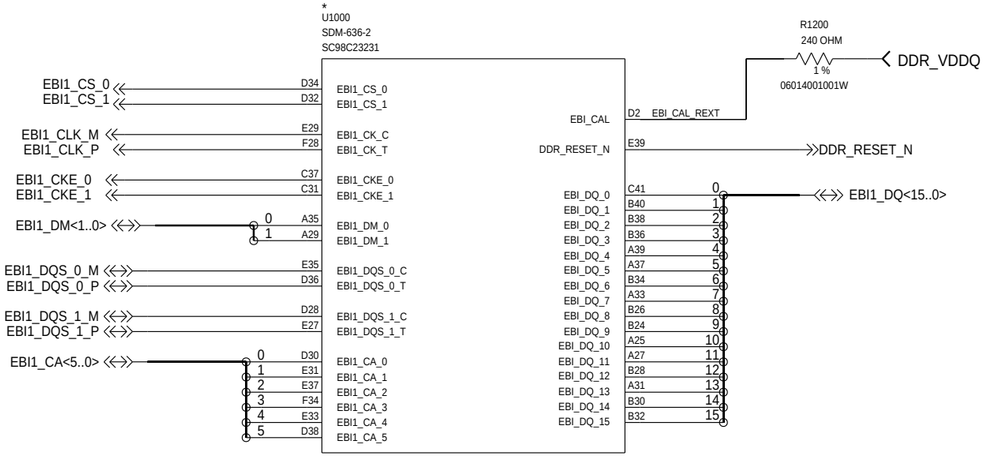
GND SHIELD FOR CSI2 AS A GROUP IF POSSIBLE
GND SHIELD FOR CSI1 AS A GROUP IF POSSIBLE

DISPLAY



GND SHIELD FOR DSI0 AS A GROUP IF POSSIBLE

ADD GND STITCHING VIAS FOR EACH SIGNAL GROUP (EBI,CSI,DSI) WHEN POSSIBLE

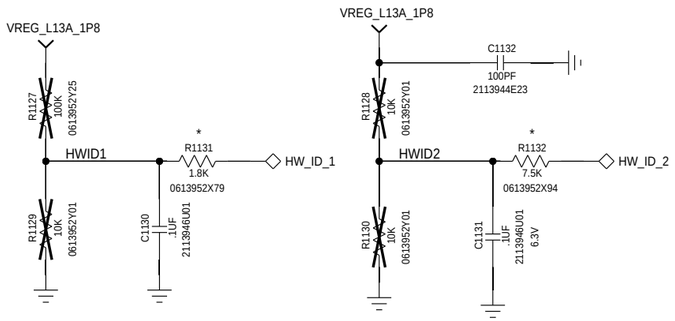


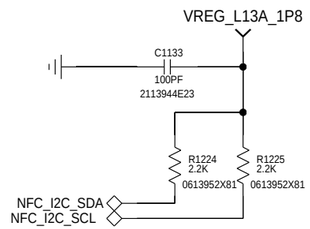
GND SHIELD FOR EBI1 AS A GROUP IF POSSIBLE

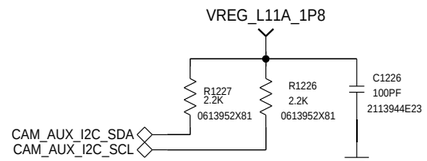
SDM: GPIO (0-141) REF 1200-1299

MOT BOARD ID

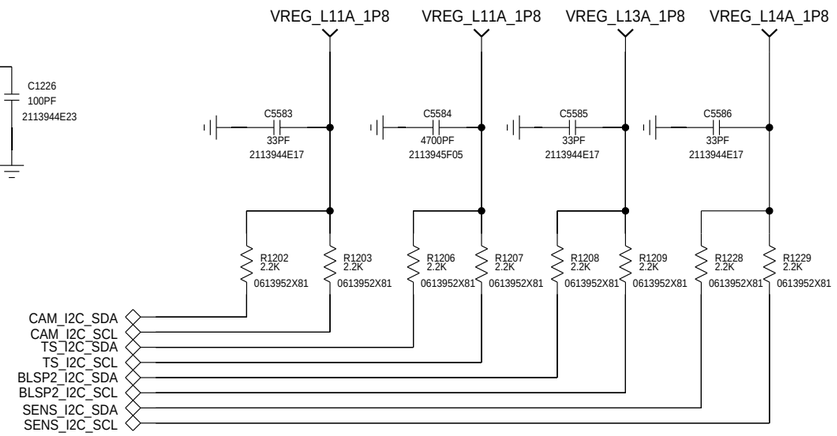
FOR RUNTIME REVISION INFORMATION, REFER TO:
HTTPS://DOCS.GOOGLE.COM/SPREADSHEETS/D/16MWPCNKOBTYO6TPGAIPA2FM2YLOA15_B5TRXA0NFFXS/EDIT#GID=0





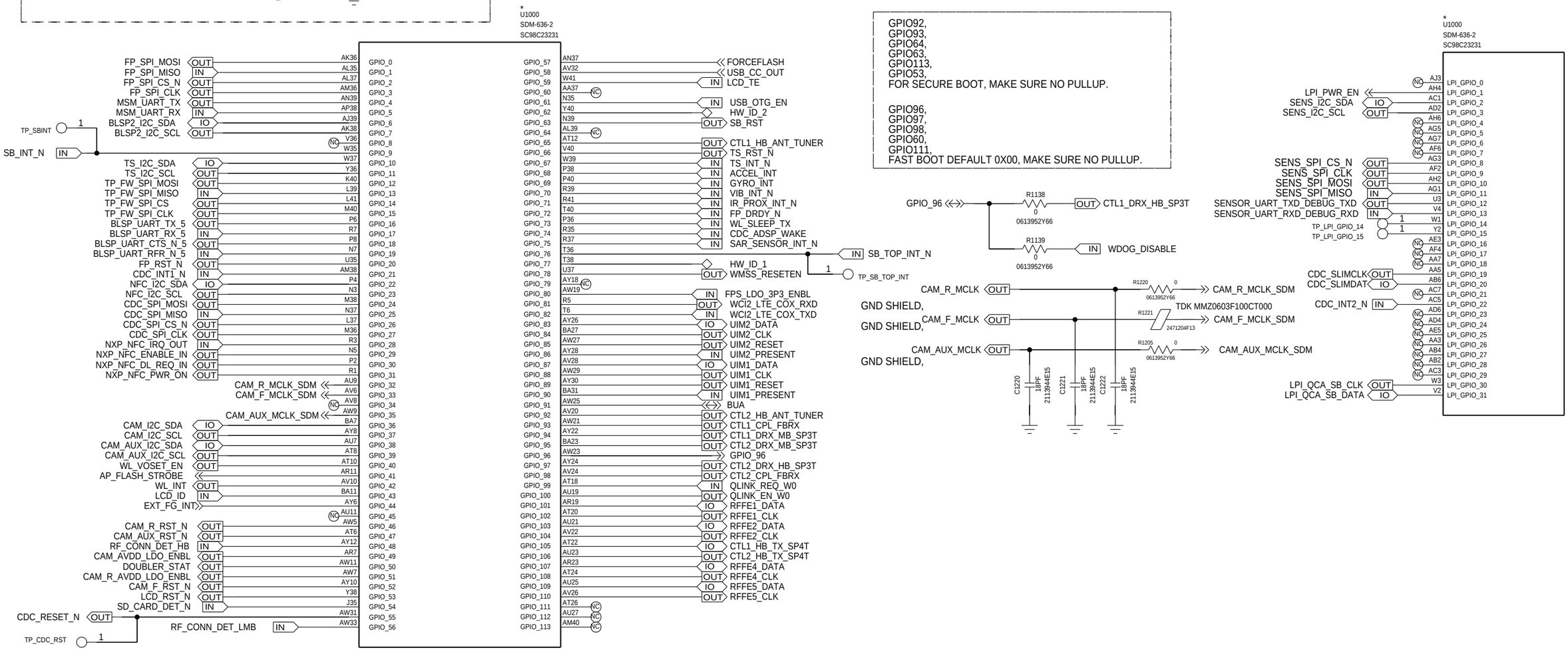


I2C2 ADDRESS
DRV2624 0XBA,0XB5
AW8690 0XB6,0XB7
SAR9331 0X50,0X51
SAR9325 0X50,0X51
SMART PA TOP 0X82,0X83
SMART PA 0X80,0X81
BQ25970 0X65,0X67
RT5738 0XAC,0XAD
TPS61280 0XEA,0XEB
PM3003A 0XC0,0XC1
BQ27426 0XAA,0XAB



GPIO92,
GPIO93,
GPIO64,
GPIO63,
GPIO113,
GPIO53,
FOR SECURE BOOT, MAKE SURE NO PULLUP.

GPIO96,
GPIO97,
GPIO98,
GPIO60,
GPIO111,
FAST BOOT DEFAULT 0X00, MAKE SURE NO PULLUP.

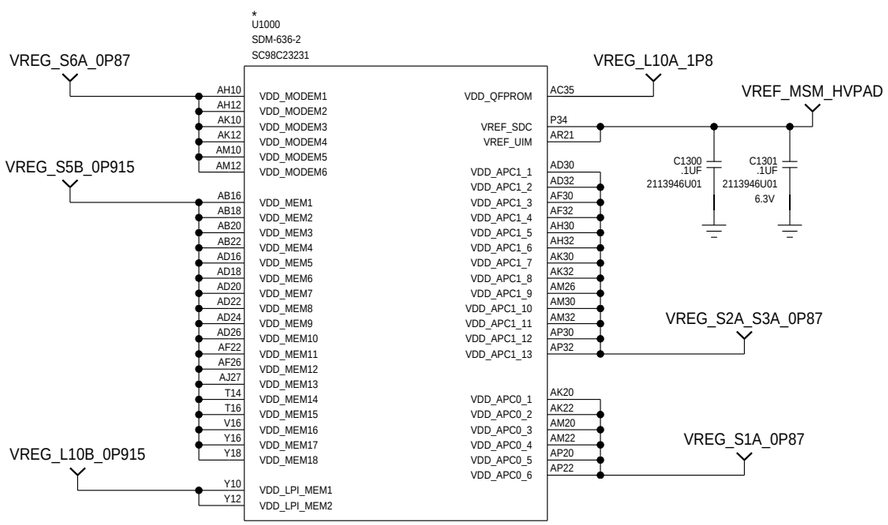


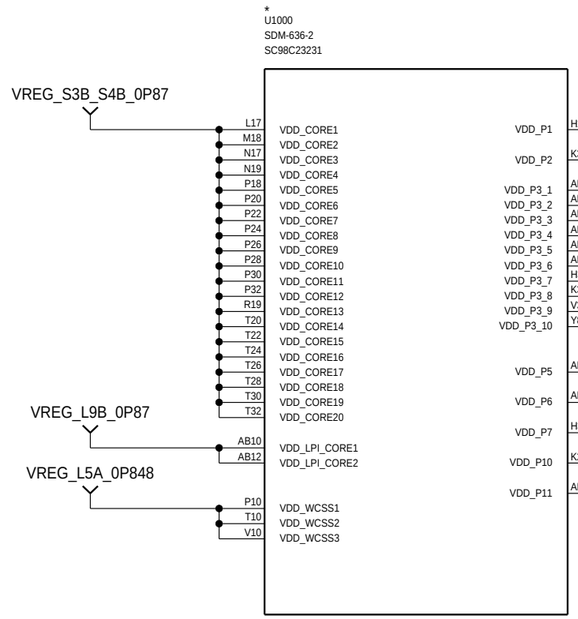
ENSURE THAT THERE ARE NO EXTERNAL PULLS ON THE GPIOS (92, 93, 64, 63,113, AND 53) IF SECURE BOOT IS NOT REQUIRED

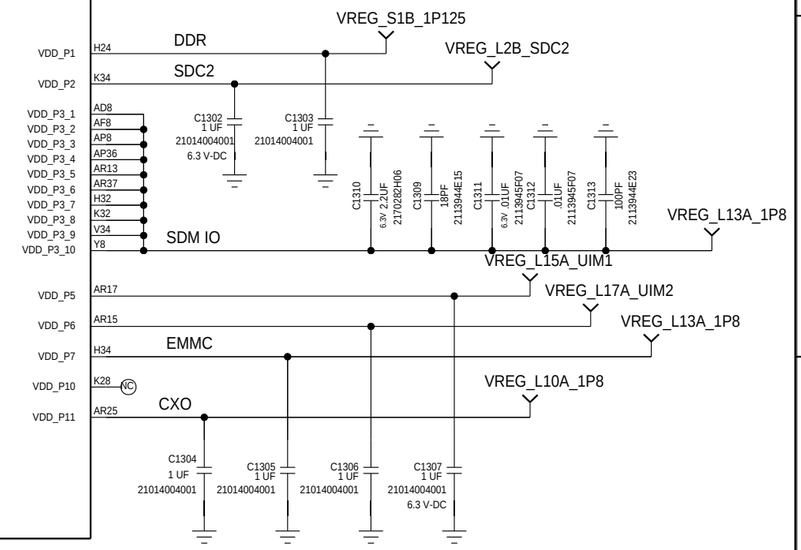
SDM: PWR1

REF 1300-1399

CAD NOTE: PLACE ONE DECAP NEAR PINS V5, V6 AND
THE OTHER DECAP NEAR PIN R5

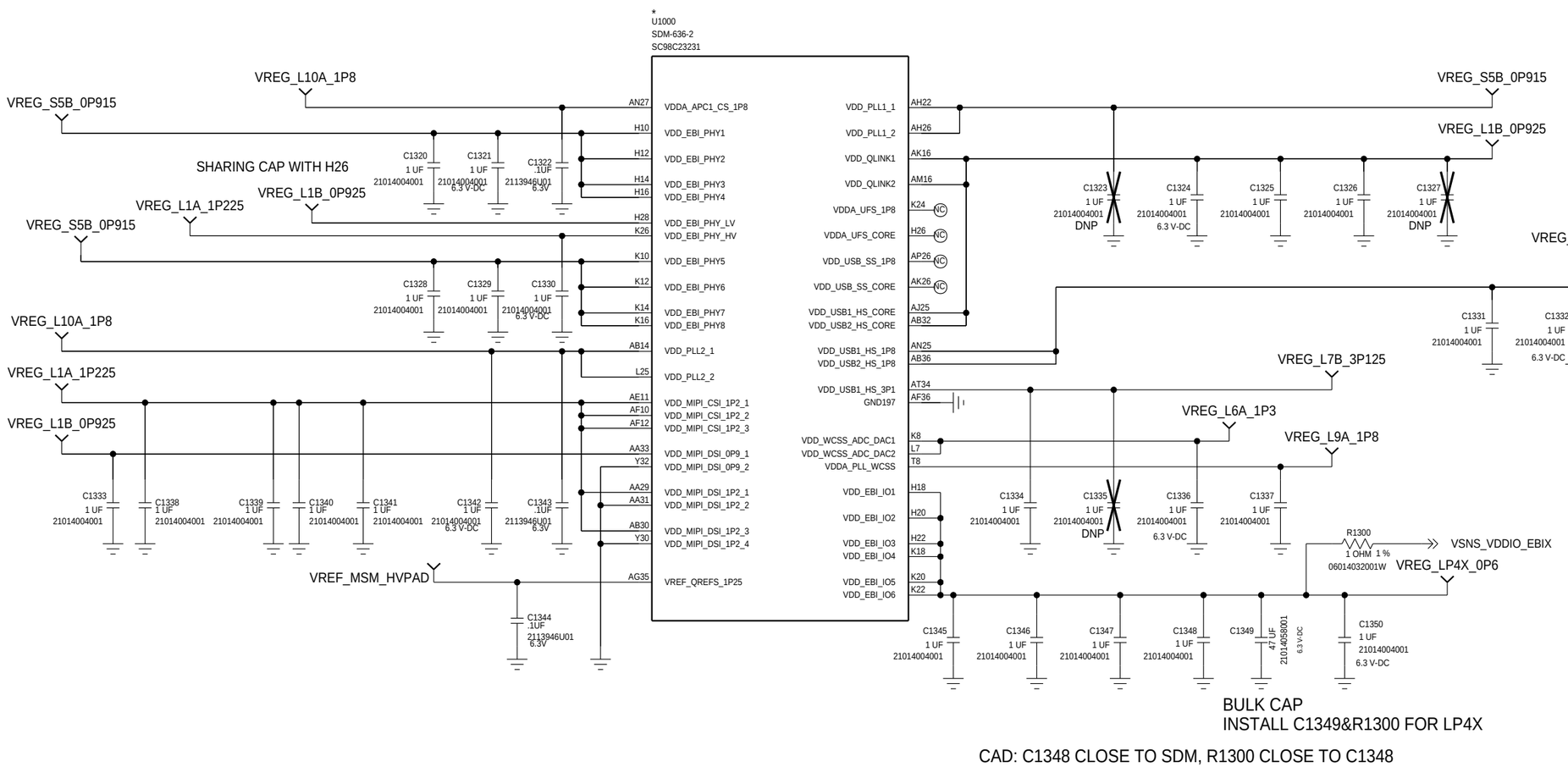






SDM: PWR2

REF 1300-1399



SDM: BYPASS CAPS

REF 1400-1499

VREG_S6A_0P87

CAD: C1412 CLOSE TO SDM,E1439 CLOSE TO C1412

VSNS_MSS_P

E1439

C1407 1 UF 21014004001
C1408 1 UF 21014004001
C1409 1 UF 21014004001
C1410 1 UF 21014004001
C1411 1 UF 21014004001 6.3 V-DC
C1412 22UF 2113956B58 6.3V
C1413 22UF 2113956B58

VREG_L13A_1P8

C1400 1 UF 21014004001
C1401 1 UF 21014004001
C1402 1 UF 21014004001
C1403 1 UF 21014004001
C1404 1 UF 21014004001
C1405 1 UF 21014004001
C1406 1 UF 21014004001 6.3 V-DC

VREG_S1A_0P87

CAD: C1422 CLOSE TO SDM,E1435 E1437 CLOSE TO C1422

VSNS_SILVER_APC_P

VSNS_SILVER_APC_M

E1436

E1437

C1416 22UF 2113946U03
C1417 1 UF 21014004001
C1418 22UF 2113946U03
C1419 22UF 2113946U03
C1420 22UF 2113946U03 6.3V
C1421 1 UF 21014004001 6.3 V-DC
C1422 22UF 2113956B58 6.3V
C1423 22UF 2113956B58
C1463 10 UF 21003097001 DNP

VREG_L9B_0P87

C1414 1 UF 21014004001
C1415 1 UF 21014004001 6.3 V-DC

VREG_S2A_S3A_0P87

CAD: C1435 CLOSE TO SDM, E1430 E1431 CLOSE TO C1435

VSNS_GOLD_APC_P

VSNS_GOLD_APC_M

E1430

E1431

C1426 .22UF 2113946U03
C1427 .22UF 2113946U03 6.3V
C1428 1 UF 21014004001 6.3 V-DC
C1429 1 UF 21014004001
C1430 1 UF 21014004001
C1431 1 UF 21014004001
C1432 .22UF 2113946U03
C1433 .22UF 2113946U03
C1434 .22UF 2113946U03
C1435 22UF 2113956B58 6.3V
C1436 22UF 2113956B58
C1437 22UF 2113956B58
C1438 22UF 2113956B58
C1464 10 UF 21003097001 DNP

VREG_L10B_0P915

C1424 1 UF 21014004001
C1425 1 UF 21014004001 6.3 V-DC

CAD: C1448 CLOSE TO SDM, E1432 E1433 CLOSE TO C1448

VREG_S3B_S4B_0P87

VSNS_CX_P

VSNS_CX_M

E1432

E1433

C1441 1 UF 21014004001
C1442 1 UF 21014004001
C1443 1 UF 21014004001
C1444 1 UF 21014004001
C1445 1 UF 21014004001
C1446 1 UF 21014004001
C1447 1 UF 21014004001
C1448 22UF 2113956B58
C1449 22UF 2113956B58
C1450 22UF 2113956B58
C1451 22UF 2113956B58

VREG_L5A_0P848

C1439 1 UF 21014004001
C1440 1 UF 21014004001 6.3 V-DC

CAD: C1461 CLOSE TO SDM, E1434 E1435 CLOSE TO C1481

VREG_S5B_0P915

VSNS_MX_P

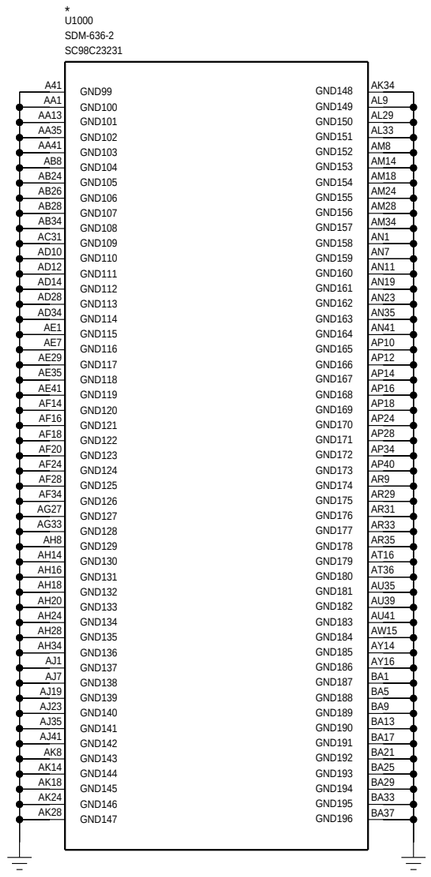
VSNS_MX_M

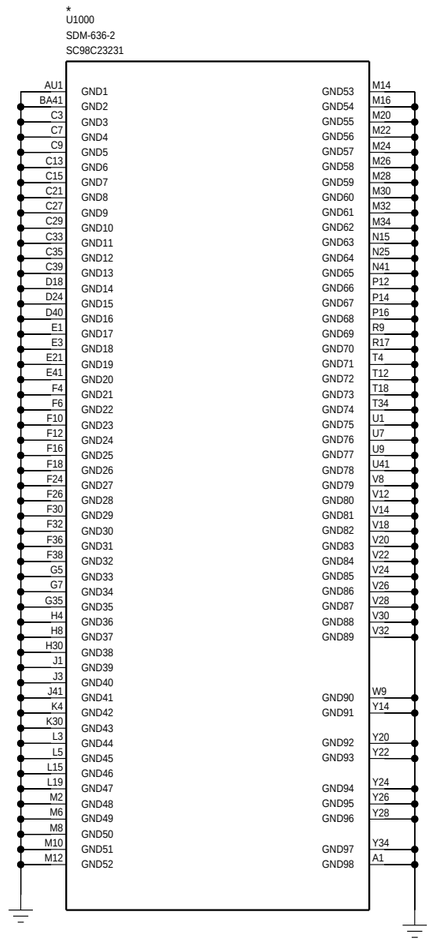
E1434

E1435

C1452 1 UF 21014004001
C1453 1 UF 21014004001
C1454 1 UF 21014004001
DNP
C1455 1 UF 21014004001
C1456 1 UF 21014004001
C1457 1 UF 21014004001
C1458 1 UF 21014004001
C1459 1 UF 21014004001
C1460 1 UF 21014004001
C1461 22UF 2113956B58
C1462 22UF 2113956B58

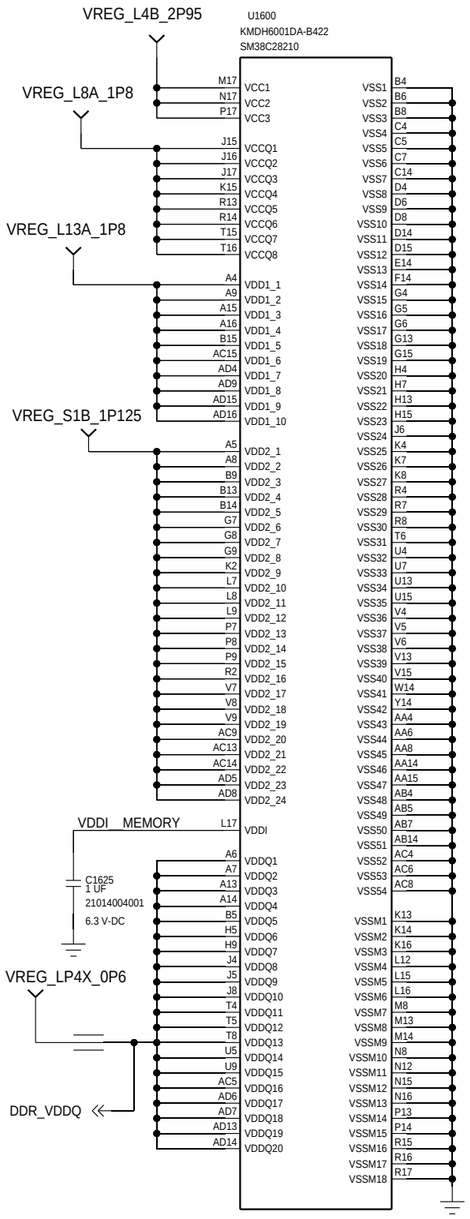
SDM: GROUND/DNC

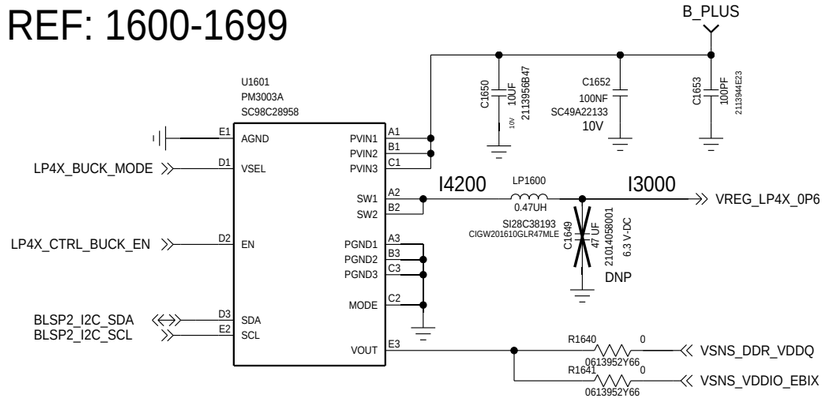




MEMORY: EMCP

REF: 1600-1699



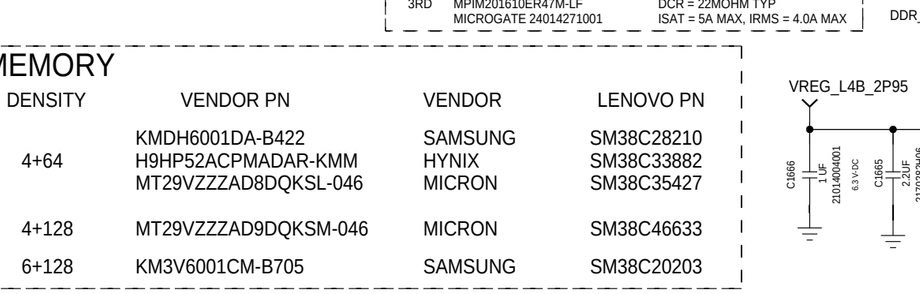


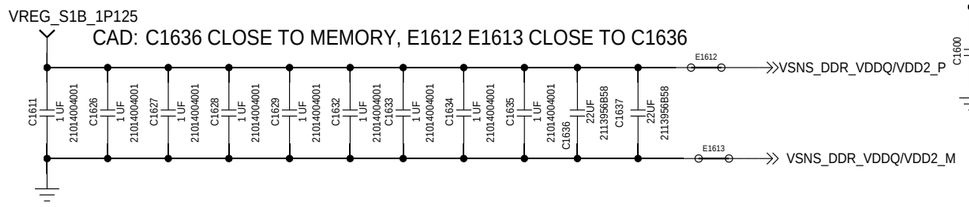
LP4X DCDC INDUCTOR

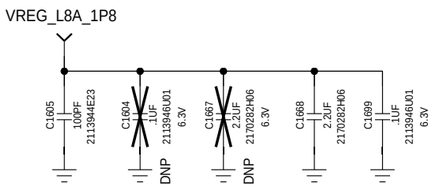
1ST	CIGW201610GLR47MLE		DCR = 21MOHM TYP
	SECOM	SI28C38193	ISAT = 5A MAX, IRMS = 4.7A MAX
2ND	MEKK2016TR47MT		DCR = 26MOHM TYP
	TAIYO	SI29A6N0SW	ISAT = 5A MAX, IRMS = 4.3A MAX
3RD	MPIM201610ER47M-LF		DCR = 22MOHM TYP
	MICROGATE	24014271001	ISAT = 5A MAX, IRMS = 4.0A MAX

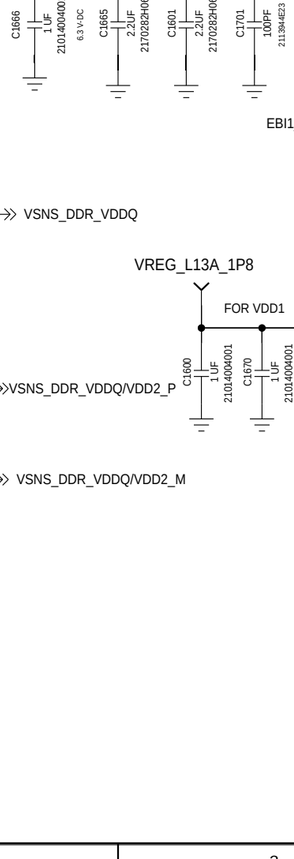
MEMORY

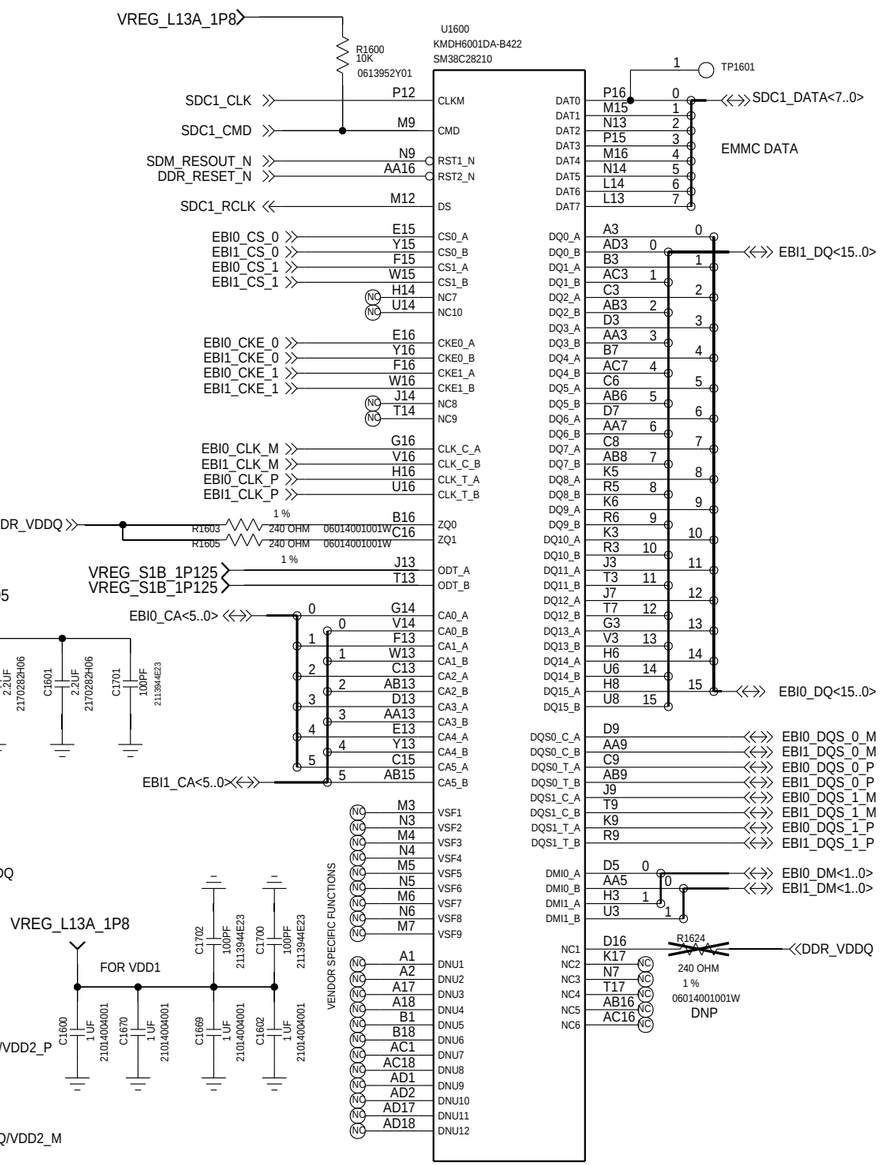
DENSITY	VENDOR PN	VENDOR	LENOVO PN
	KMDH6001DA-B422	SAMSUNG	SM38C28210
4+64	H9HP52ACPMADAR-KMM	HYNIX	SM38C33882
	MT29VZZZAD8DQKSL-046	MICRON	SM38C35427
4+128	MT29VZZZAD9DQKSM-046	MICRON	SM38C46633
6+128	KM3V6001CM-B705	SAMSUNG	SM38C20203









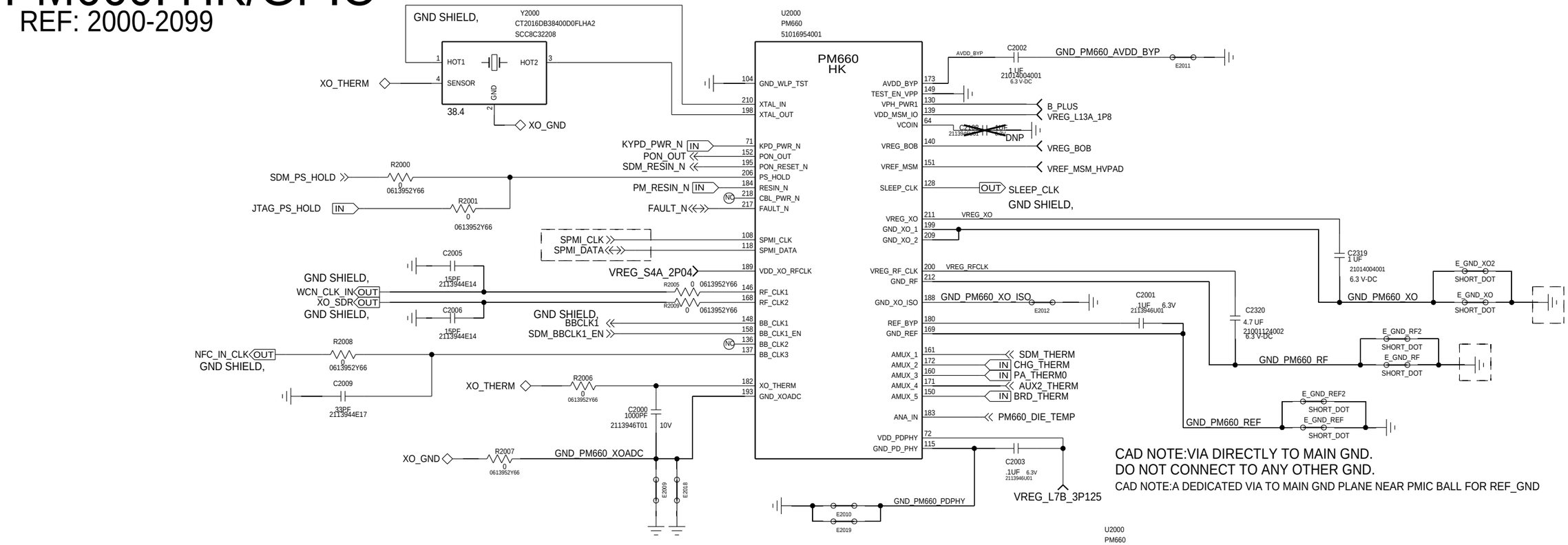


ADD STITCHING VIAS ALONG THE OUTLINE OF DDR AND SDC SIGNALS
THOSE PARALLEL INTERFACE CAN HAVE LARGE CURREN, SSN ARE HIGH
MAY CAUSE RF DESNE IF RETURN CURRENT ARE NOT WELL LIMITED
AVOID ROUTING SENSITIVE SIGNAL CORSS THIS SECTION
SENSITIVE SIGNALS CAN BE CLOCKS, (CK, MCLK), ANALOG SIGNALS AND SO ON

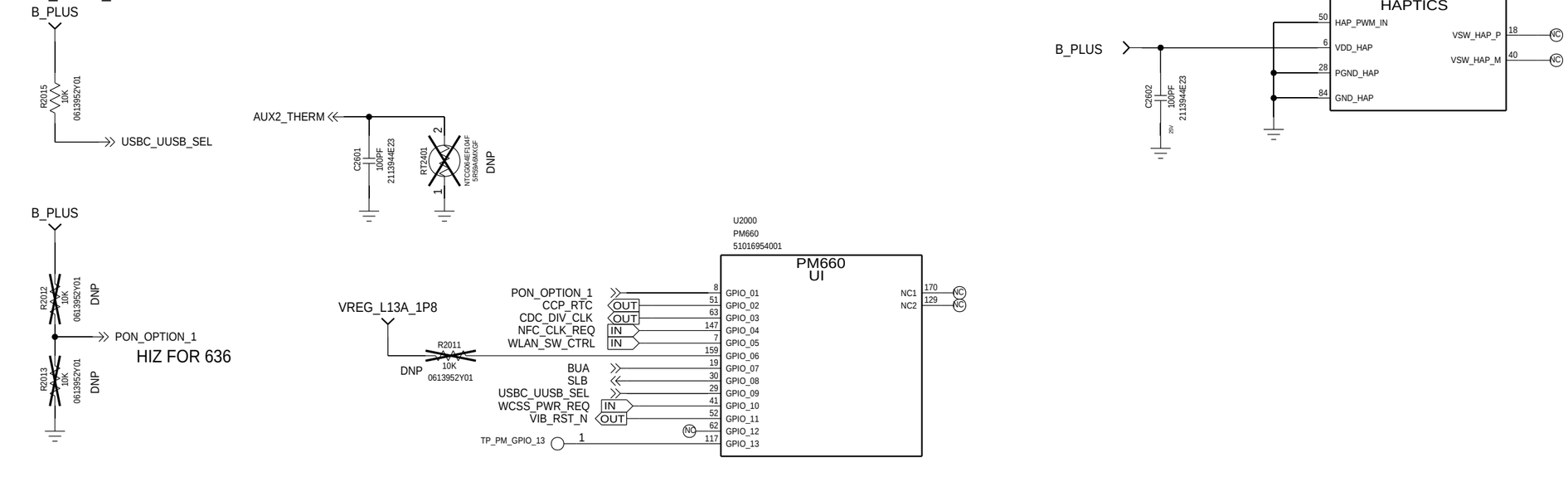
PM660: HK/GPIO

REF: 2000-2099

XTAL_IN, AND XTAL_OUT ROUTED ON 1ST LAYER, NOT AS DIFFERENT PAIR. REFER TO 80-P7747-3 REV. B FOR CRYSTAL LAYOUT GUIDE



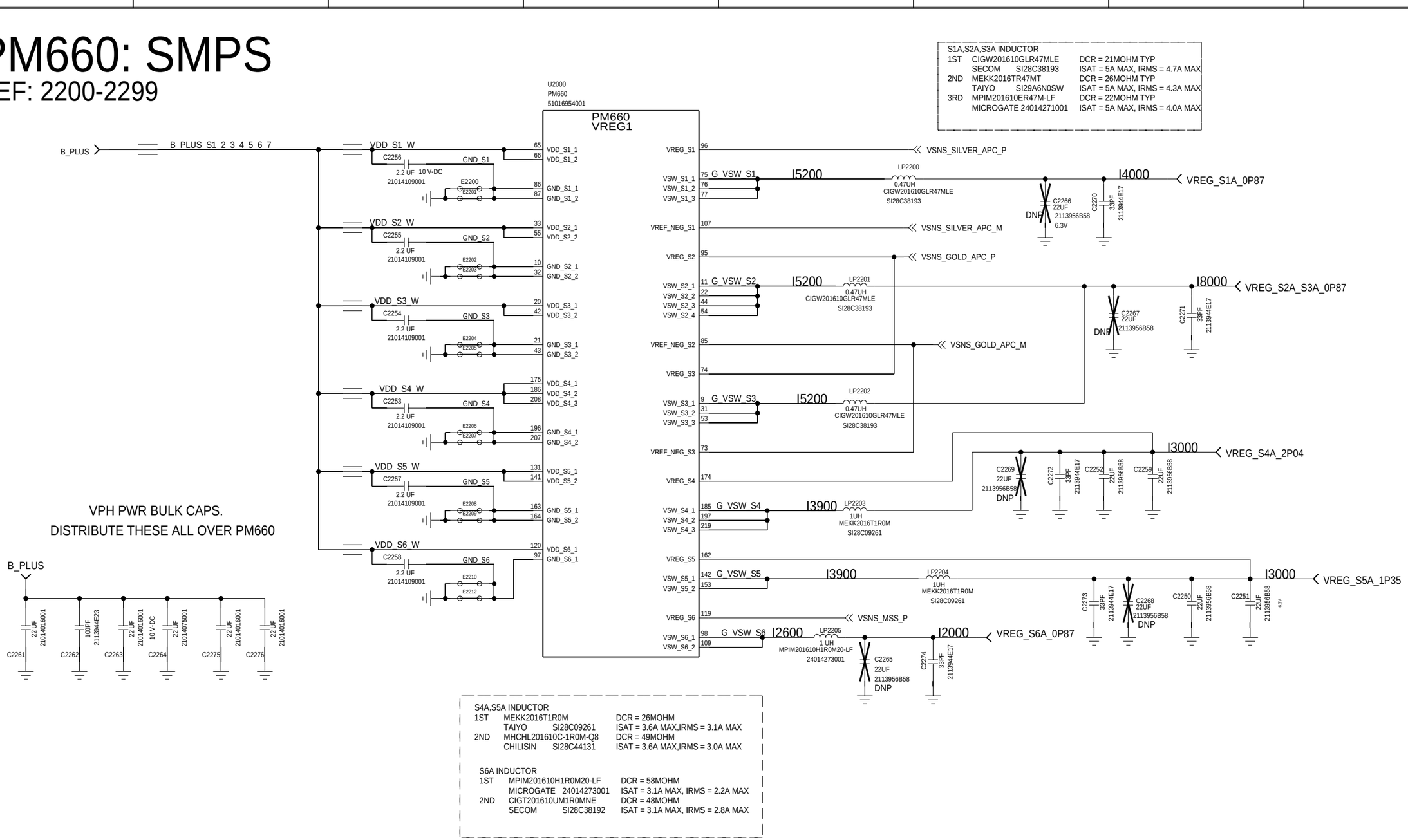
USBC_UUSB_SEL IS HIGH/HI-Z FOR TYPE-C



PM660: SMPS

REF: 2200-2299

VPH PWR BULK CAPS.
DISTRIBUTE THESE ALL OVER PM660



S1A,S2A,S3A INDUCTOR

1ST	CIGW201610GLR47MLE		DCR = 21MOHM TYP
	SECOM	SI28C38193	ISAT = 5A MAX, IRMS = 4.7A MAX
2ND	MEKK2016TR47MT		DCR = 26MOHM TYP
	TAIYO	SI29A6N0SW	ISAT = 5A MAX, IRMS = 4.3A MAX
3RD	MPIM201610ER47M-LF		DCR = 22MOHM TYP
	MICROGATE	24014271001	ISAT = 5A MAX, IRMS = 4.0A MAX

S4A,S5A INDUCTOR

1ST	MEKK2016T1R0M		DCR = 26MOHM
	TAIYO	SI28C09261	ISAT = 3.6A MAX,IRMS = 3.1A MAX
2ND	MHCHL201610C-1R0M-Q8		DCR = 49MOHM
	CHILISIN	SI28C44131	ISAT = 3.6A MAX,IRMS = 3.0A MAX

S6A INDUCTOR

1ST	MPIM201610H1R0M20-LF		DCR = 58MOHM
	MICROGATE	24014273001	ISAT = 3.1A MAX, IRMS = 2.2A MAX
2ND	CIGT201610UM1R0MNE		DCR = 48MOHM
	SECOM	SI28C38192	ISAT = 3.1A MAX, IRMS = 2.8A MAX

PM660: CHARGING

REF: 2400-2419

CHG_VBUS
E5010
SI28C31638
UPZ1608W260-6R0TFA01
0603
C2400
4.7 UF
21014055001
10 %25 V-DC

U2000
PM660
51016954001

PM660
CHARGE_FG

USB_IN_1 78
USB_IN_2 79
USB_IN_3 88
USB_IN_4 89

USB_IN_MID
C2401
4.7 UF
21014055001
10 %
25 V-DC
GND_PM660_USB_MID
E2409

USB_IN_MID_1 56
USB_IN_MID_2 57
USB_IN_MID_3 67
USB_IN_MID_4 68

CHARGER INDUCTOR
1ST CIGT252010EH1R0MNE DCR = 26MOHM
SECOM 24014169001 ISAT = 4.7A MAX,IRMS = 4.1A MAX
2ND TFM252010ALC-1R0MTAA DCR = 35MOHM
TDK SI28C44888 ISAT = 4.3A MAX,IRMS = 4.1A MAX

B_PLUS
E2406
C2406
4.7 UF
21014032002
10 V-DC

VCONN_IN 17
VCONN_EN NC 61

USB_CC1 IN
USB_CC2 IN
CC1_ID 5
CC2 27
USB_CC_OUT
CC_OUT 39

STAT_CHG NC 90

R2425
0
0613952Y66
WIPWR_RECHG NC 92
WIPWR_CHG_OK 91
WL_PG IN
QI_PMA_ON 103

LDO_CTRL_1 NC 1
LDO_CTRL_2 NC 2

DC_EN NC 99
DC_SNS 80
DC_SNS IN
USB_EN OUT 100
USB_SNS IN 101
USB_EN
USB_SNS

USB_DP 49
USB_DM 60
USB_HS_DP_DET IN
USB_HS_DM_DET IN

VBATT_SNS_M 81
VBATT_SNS_P 102
VBATT_CONN_VSNS_M IN
VBATT_CONN_VSNS_P IN

IBATT_SNS_M 133
IBATT_SNS_P 122
IBATT_SNS_M
IBATT_SNS_P

ISNS_SMB_M 155
ISNS_SMB_P 144

BATT_ID 113
BATT_THERM 166
R2406 243K
0613952W38

AUX_THERM 177
BA_N 157

GND_FG 134
REF_GND_FG 167
GND_PSUB_FG 124

BOOT_CAP 36

VSW_CHG_1 34
VSW_CHG_2 35
VSW_CHG_3 45
VSW_CHG_4 46
SC48C09566
2?NF
C2402
16 V
LP2400
1 UH
24014169001
B_PLUS

PGND_CHG_1 12
PGND_CHG_2 13
PGND_CHG_3 23
PGND_CHG_4 24
GND_PM660_CHG
E2410
C2404
22 UF
21014016001
10 V-DC
C2405
100PF
2113944E23

VPH_PWR_1 3
VPH_PWR_2 15
VPH_PWR_3 25
VPH_PWR_4 37
VPH_PWR_5 47
FST_CHG_OUT

VBATT_PWR_1 4
VBATT_PWR_2 16
VBATT_PWR_3 26
VBATT_PWR_4 38
VBATT_PWR_5 48
R2419
0.01OHM
PA1206FRE470R01L
ST SR58C35596 S2
1206 1W
BATT_PLUS

BATT_THERM_BIAS 156
BATT_THERM_BIAS
AUX_THERM_BIAS 145
AUX_THERM_BIAS

VARB 112
VREG_FG 123
BOOT_PWR 14
REF_GND_CHG 59
C2403
4.7 UF
21014032002
10 V-DC
C2407
1 UF
21014004001
6.3 V-DC
C2408
100NF
SC49A22133
10 V
REF_GND_FG
GND_FG

E2414
IBATT_SNS_P
E2413
IBATT_SNS_M

BATT_THERM_BIAS
R2400
10K 1%
0613952V01

BATT_THERM IN
R2414
0
0613952Y66

AUX_THERM_BIAS
R2403
20K 1%
0613952V30
R2413
20K 1%
0613952V30
C2419
47PF
2113944E19
RT2400
NTCG004EF104F
SHS94MKGF

E2415
GND_FG
E2411
REF_GND_FG
E2412

U2600
BQ27426
SC98C40143

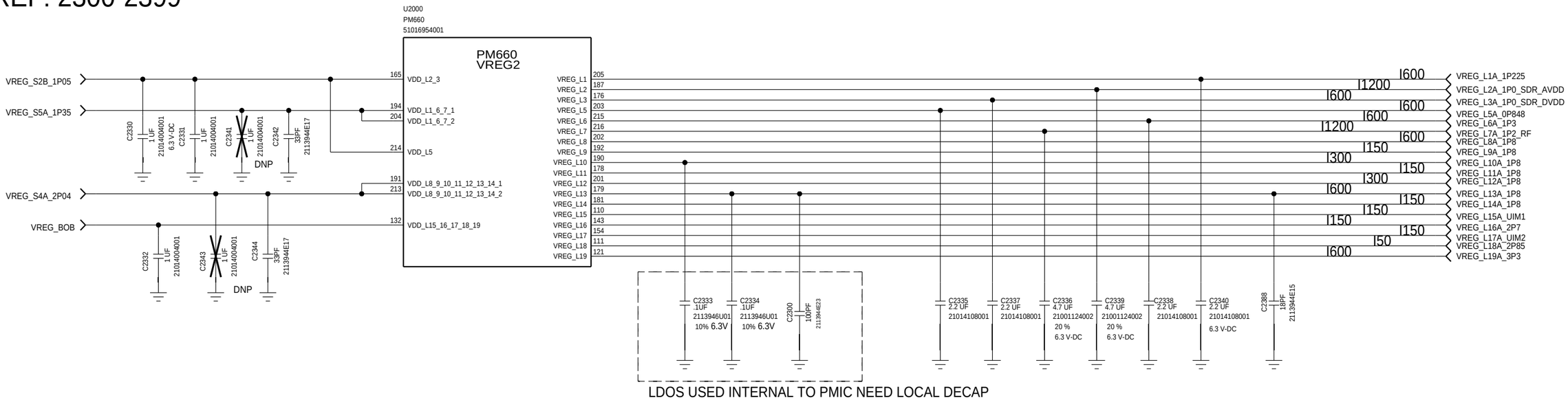
BLSP2_I2C_SCL
BLSP2_I2C_SDA
EXT_FG_INT
VREG_L13A_1P8
R2415
0
0613952Y66
R2600
10K
0613952Y01

SCL A3
SDA A2
GPOUT A1
SRN C2
SRP C1
BAT C3
BIN B1
VDD B3
VSS B2

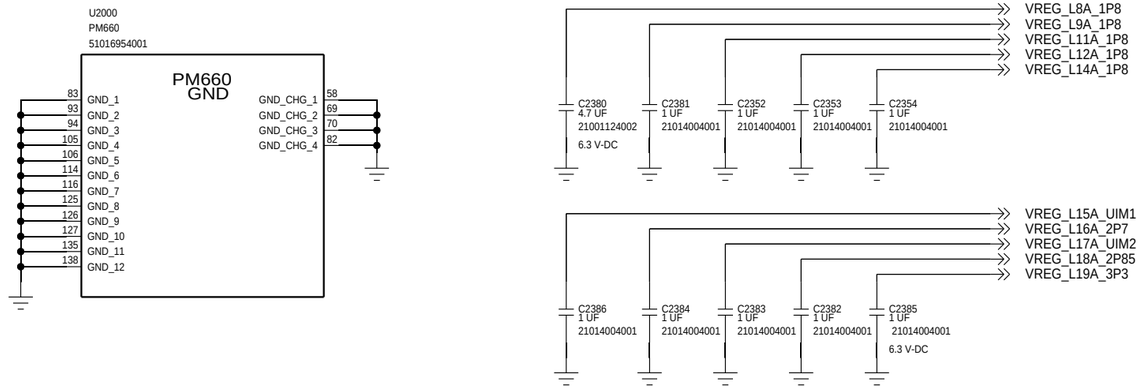
IBATT_SNS_M
IBATT_SNS_P
BATT_PLUS
C2603
2.2UF
2170282H06
6.3V
R2601
10K
0613952Y01
C2604
1 UF
2101407001
10 V-DC
E2416
E2417

PM660: VREGS

REF: 2300-2399



LDOS USED INTERNAL TO PMIC NEED LOCAL DECAP

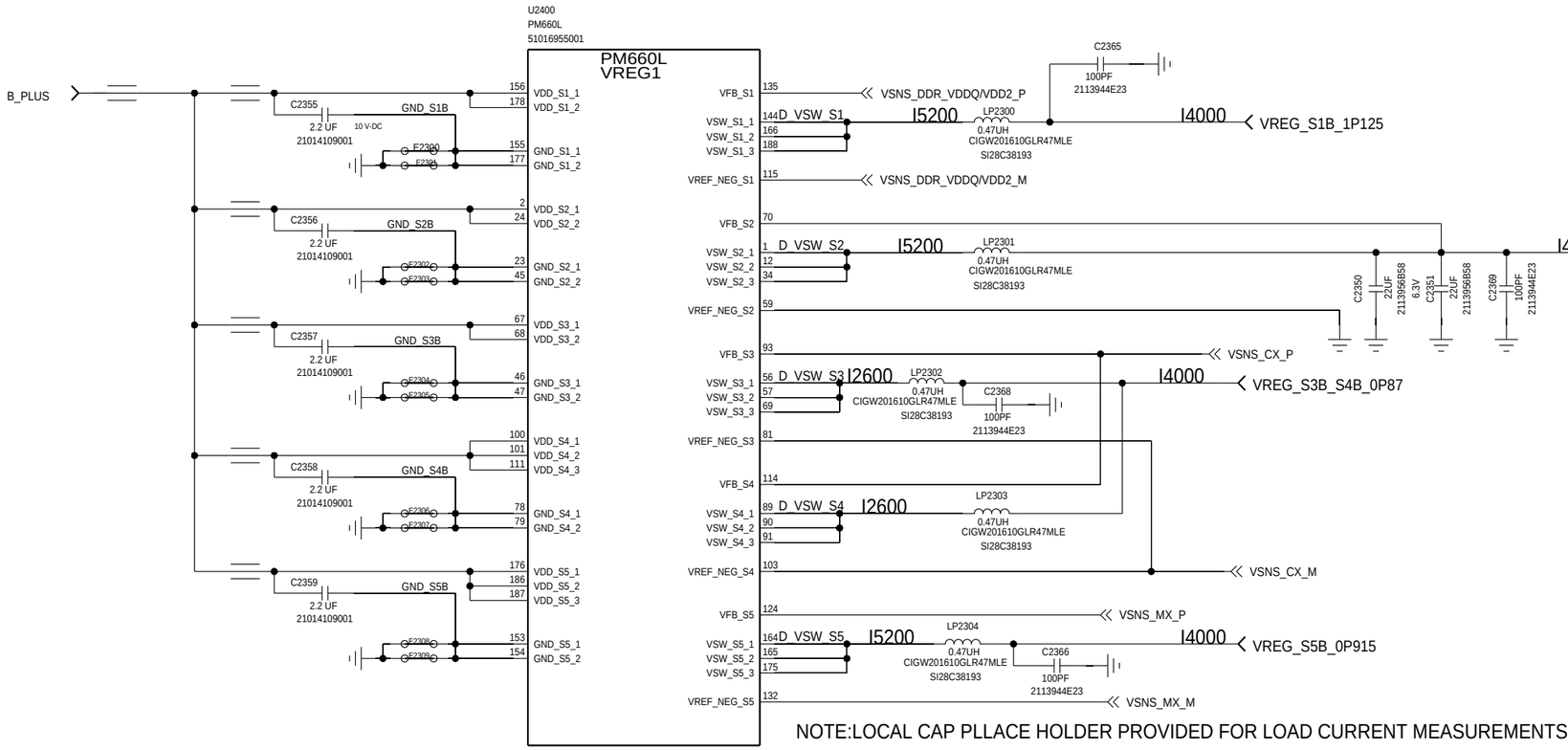


PSEUDO CAPLESS LODS
FOR CAPLESS LODS:IF DECAPS ON THE LOAD SIDE DO NOT ADD UP TO LDO SPEC, THEN INSTALL THE CAP CLOSE TO THE PMIC

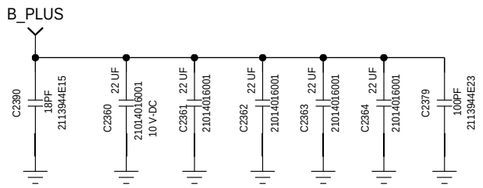
PM660L: SMPS

REF: 2300-2399

S1B-S5B INDUCTOR			
1ST	CIGW201610GLR47MLE		DCR = 21MOHM TYP
	SECOM	SI28C38193	ISAT = 5A MAX, IRMS = 4.7A MAX
2ND	MEKK2016TR47MT		DCR = 26MOHM TYP
	TAIYO	SI29A6N0SW	ISAT = 5A MAX, IRMS = 4.3A MAX
3RD	MPIM201610ER47M-LF		DCR = 22MOHM TYP
	MICROGATE 24014271001		ISAT = 5A MAX, IRMS = 4.0A MAX



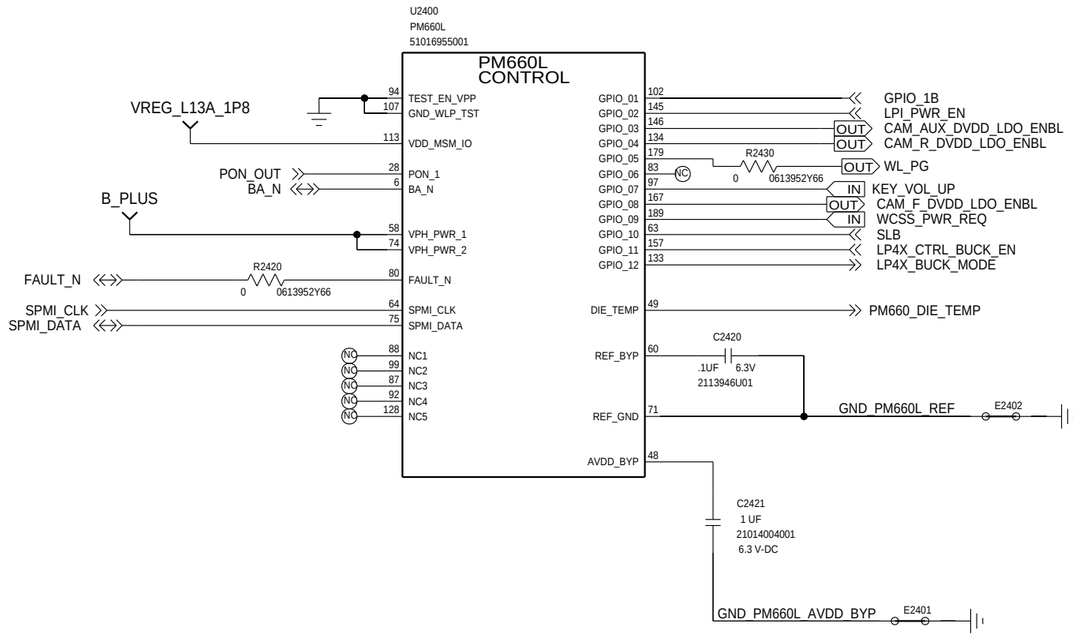
NOTE:LOCAL CAP PLLACE HOLDER PROVIDED FOR LOAD CURRENT MEASUREMENTS

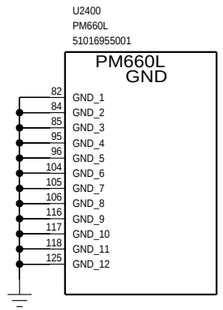


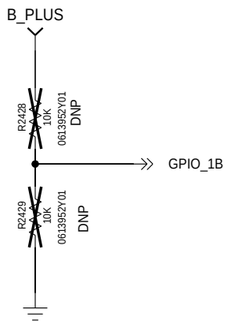
BULK CAPS.DISTRBUTE THESE ALL OVER U2400

PM660L: CONTROL

REF: 2420-2439





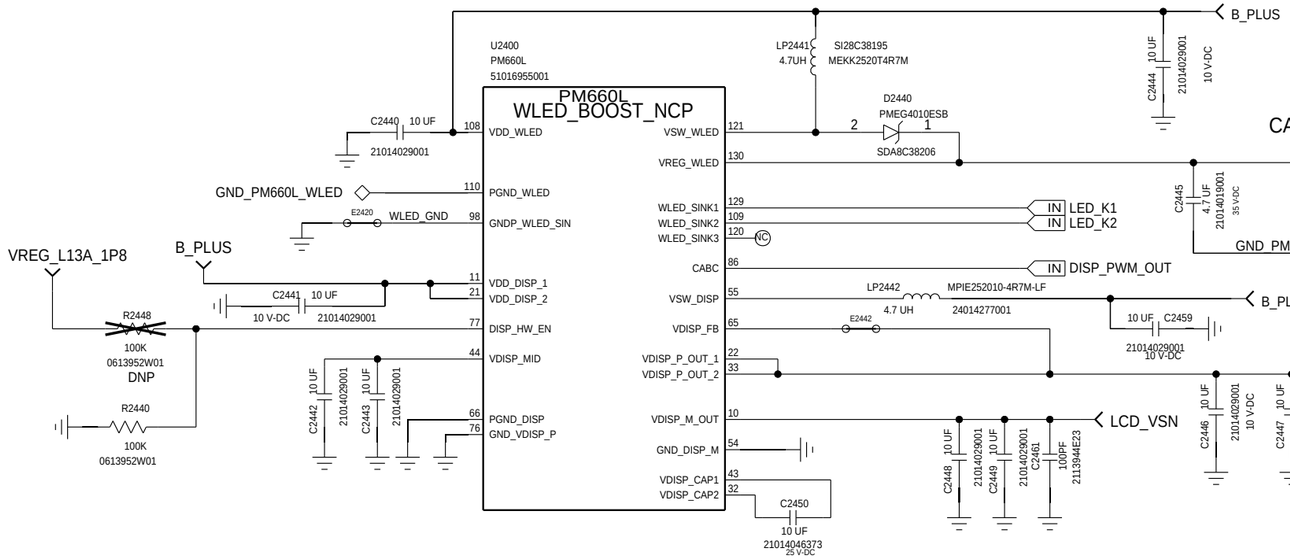


GND SHIELDED IF POSSIBLE, ROUTE DIFFERENTIALLY AND SPACING WITH 2X LW

PM660L: REG_WLED

REF: 2440-2459

WLED INDUCTOR			
1ST	MEKK2520T4R7M		DCR = 215MOHM TYP
	TAIYO	SI28C38195	ISAT = 1.6A MAX, IRMS = 1.5A MAX
2ND	CIGW252010GL4R7MNE		DCR = 180MOHM TYP
	SECOM	SI28C15532	ISAT = 1.4A MAX, IRMS = 1.4A MAX
3RD	MPIA252010-4R7M-LF		DCR = 260MOHM TYP
	MICROGATE	24014274001	ISAT = 1.5A MAX, IRMS = 1.15A MAX

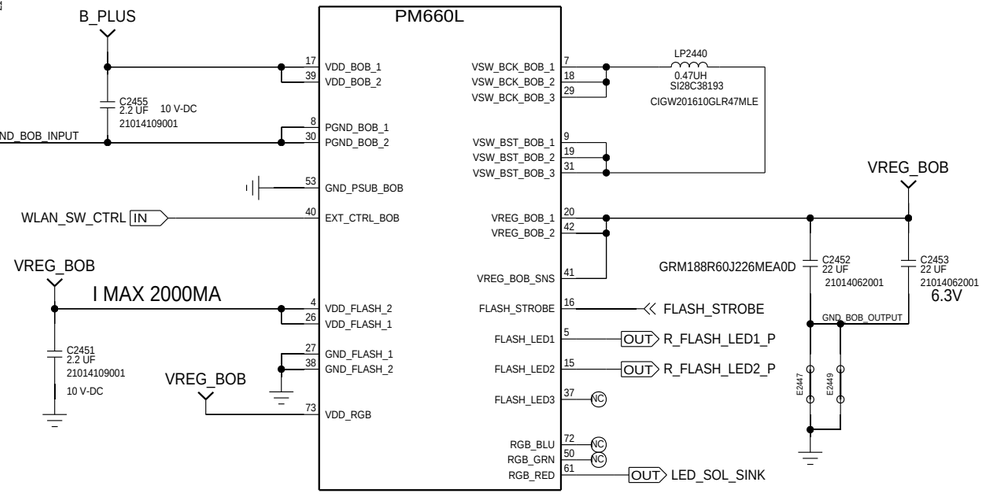


CAD NOTE:DEDICATED CONNECTION TO MAIN GND PLAIN

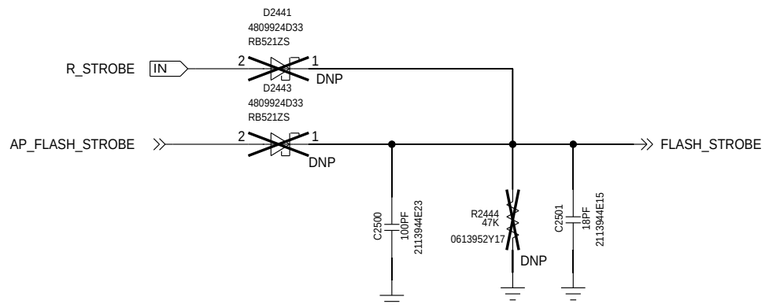
C2450 SHOULD BE CLOSE TO PINS AS POSSIBLE

LCD BAIS INDUCTOR			
1ST	MPIE252010-4R7M-LF		DCR = 265MOHM TYP
	MICROGATE	24014277001	ISAT = 1.3A MAX, IRMS = 1.2A MAX

BOB INDUCTOR			
1ST	CIGW201610GLR47MLE		DCR = 21MOHM TYP
	SECOM	SI28C38193	ISAT = 5A MAX, IRMS = 4.7A MAX
2ND	MEKK2016TR47MT		DCR = 26MOHM TYP
	TAIYO	SI29A6N0SW	ISAT = 5A MAX, IRMS = 4.3A MAX
3RD	MPIM201610ER47M-LF		DCR = 22MOHM TYP
	MICROGATE	24014271001	ISAT = 5A MAX, IRMS = 4.0A MAX

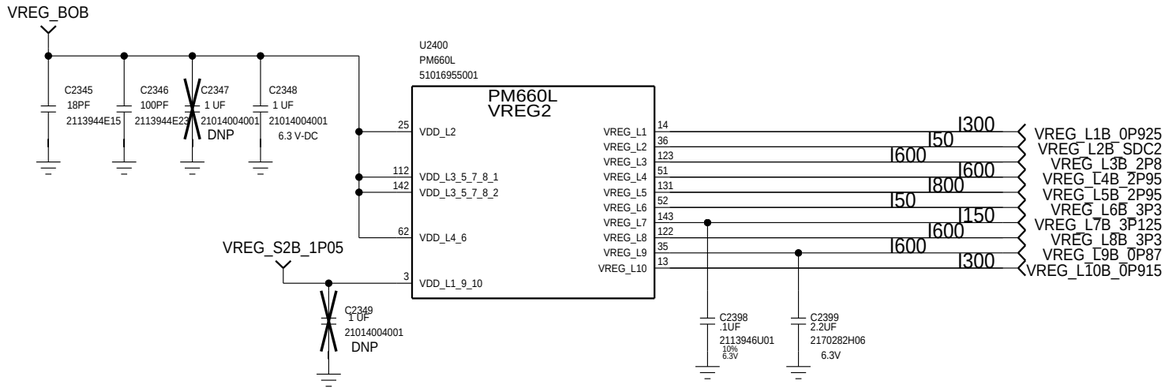


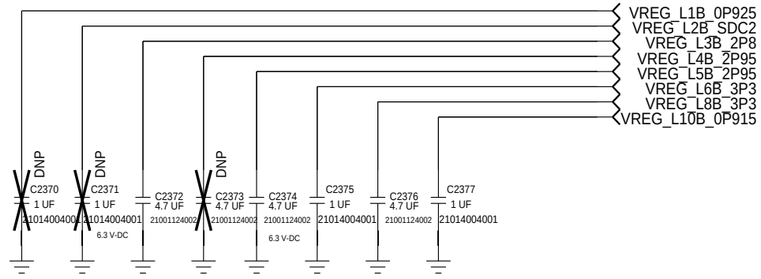
DNP FLASH STROBE LOGIC



PM660L: VREGS

REF: 2300-2399



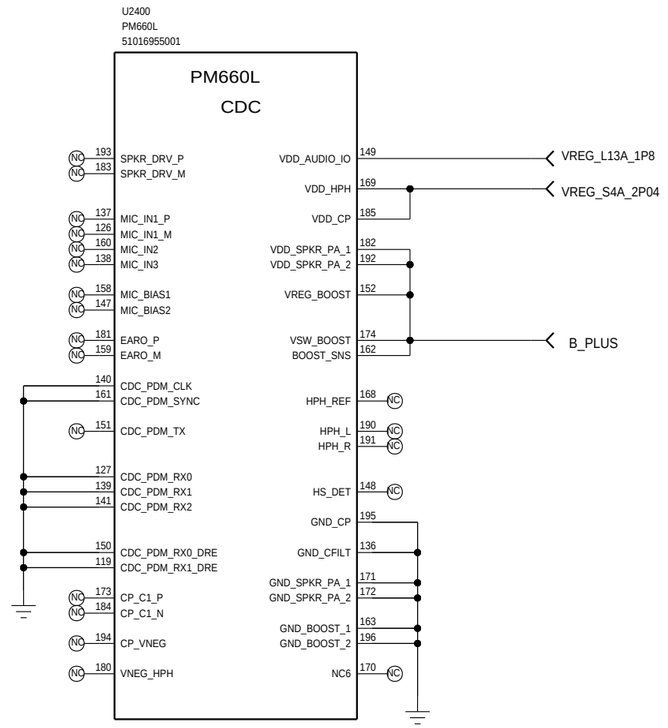


PSEUDO CAPLESS LODS

FOR CAPLESS LODS:IF DECAPS ON THE LOAD SIDE DO NOT ADD UP TO LDO SPEC, THEN INSTALL THE CAP CLOSE TO THE PMIC

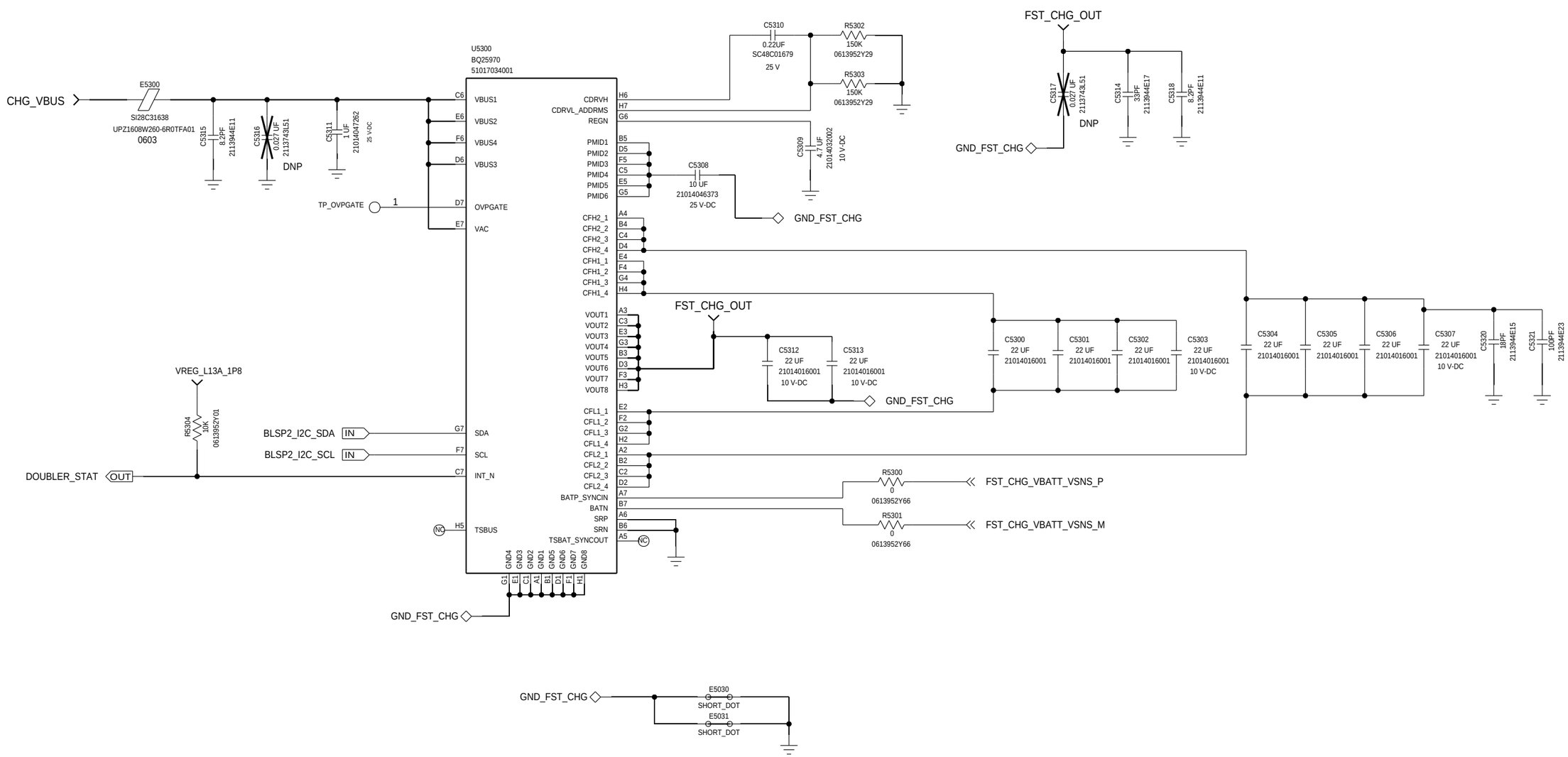
PM660L: CODEC

REF 2500-2579



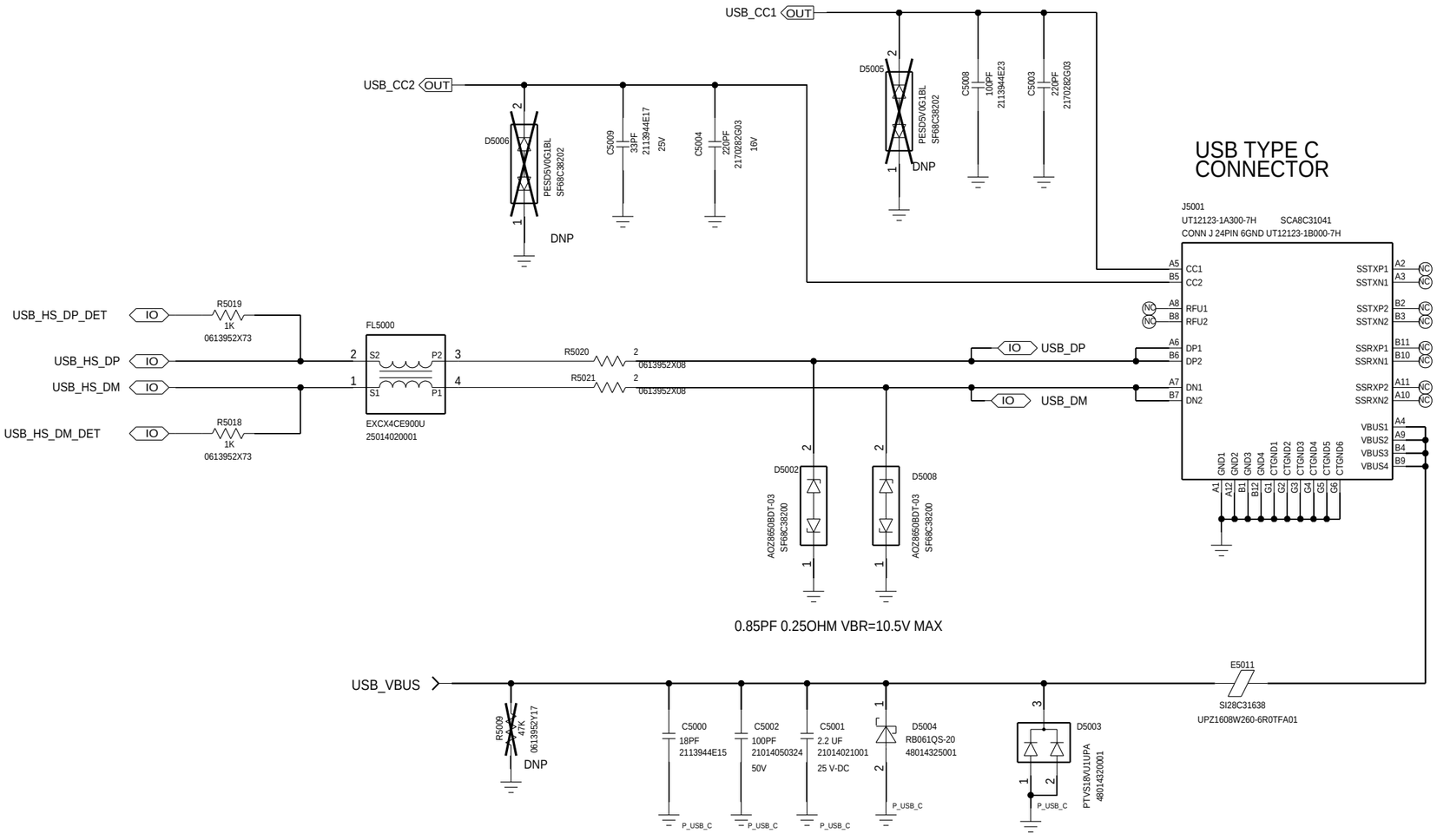
PWR: FAST CHARGER

REF:5300 - 5399



PWR: USB-C

REF:5300 - 5399

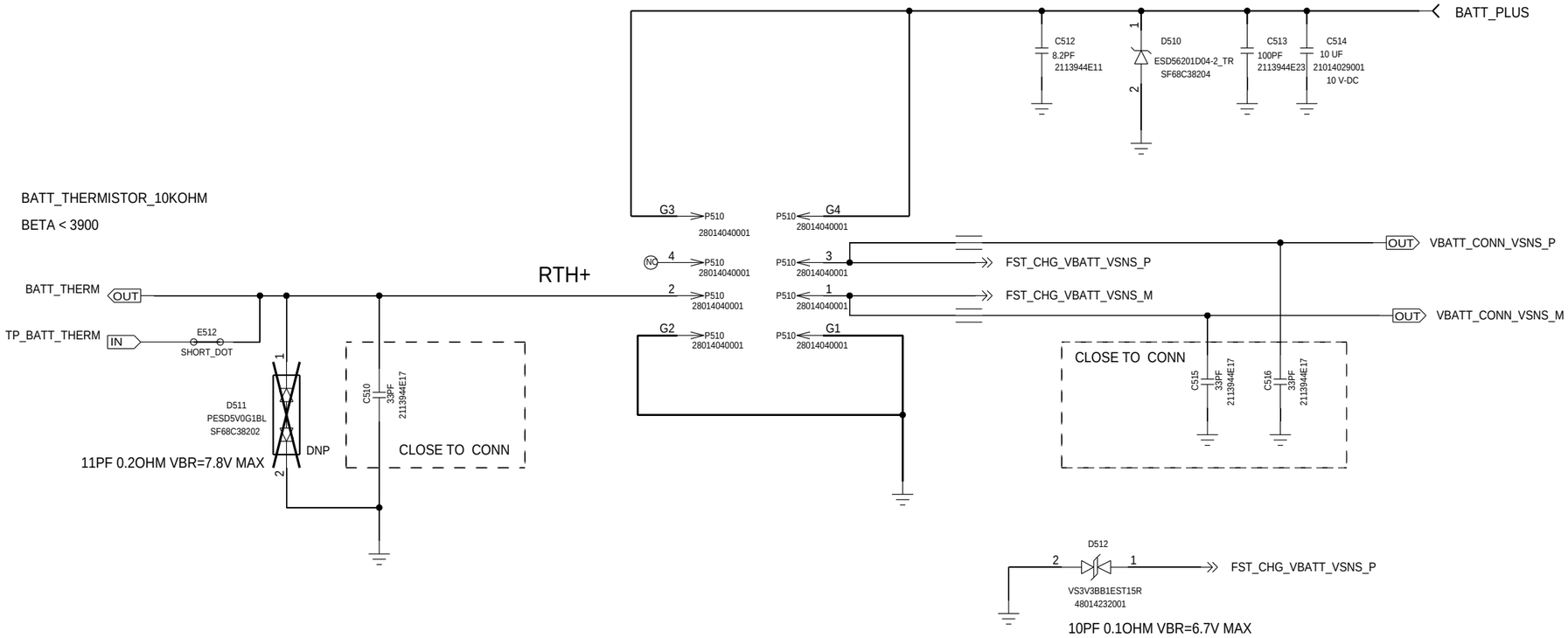


PWR: BATT

REF:510 - 550

BATTERY BLOCK

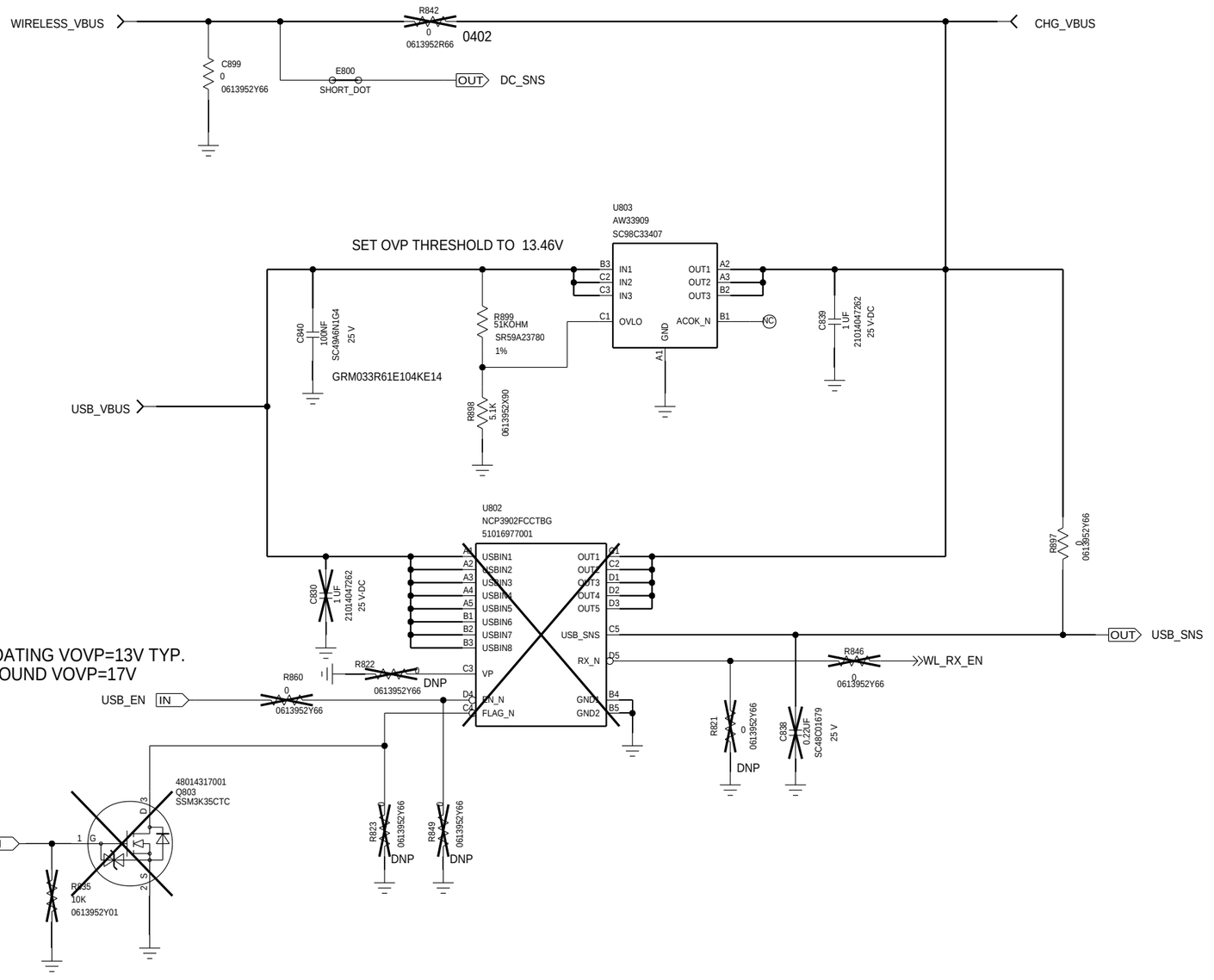
USE PMI INTERNAL SENSE



PWR: OVP

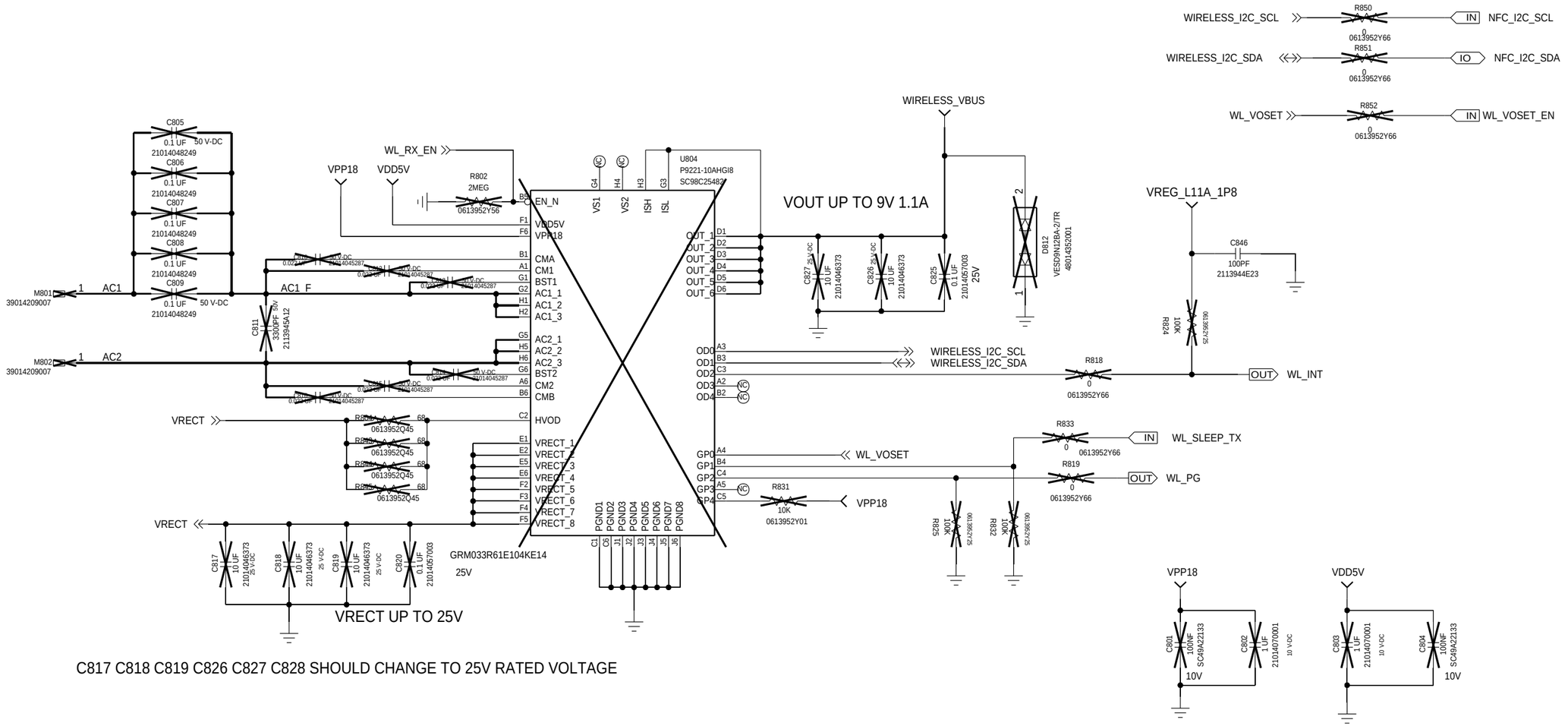
REF:800 - 899

0402 RES 0OHM RATED CURRENT 1A.



WIRELESS CHARGER

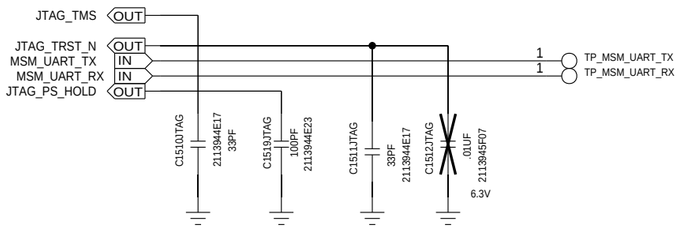
REF:800 - 899

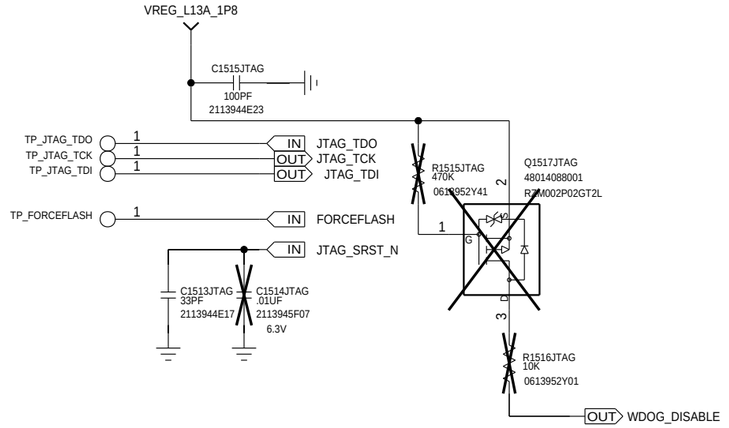


C817 C818 C819 C826 C827 C828 SHOULD CHANGE TO 25V RATED VOLTAGE

DEBUG PORT

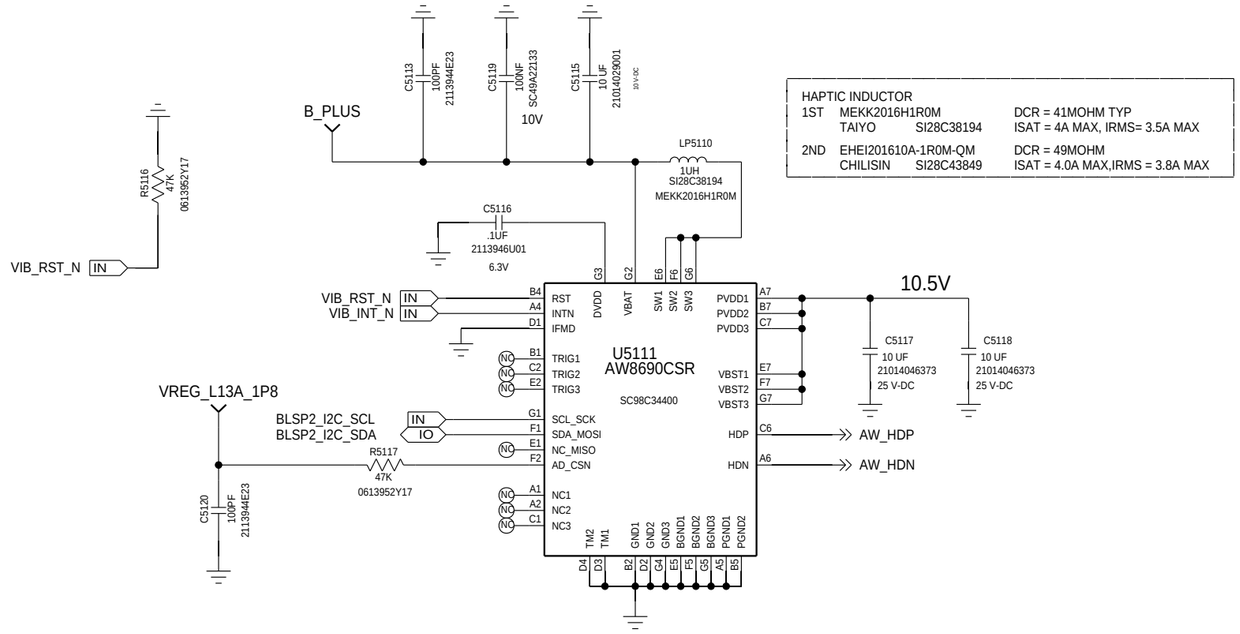
REF 1000-1099



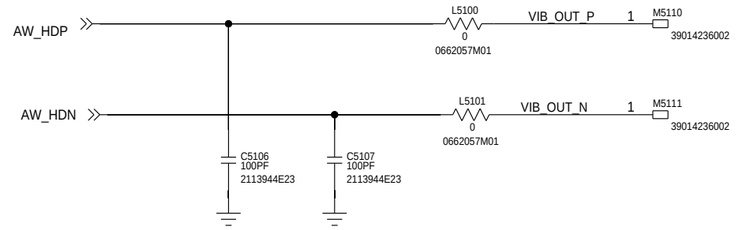


VIB DRIVER

REF: 2000-2099



HAPTIC INDUCTOR			
1ST	MEKK2016H1R0M		DCR = 41MOHM TYP
	TAIYO	SI28C38194	ISAT = 4A MAX, IRMS= 3.5A MAX
2ND	EHEI201610A-1R0M-QM		DCR = 49MOHM
	CHILISIN	SI28C43849	ISAT = 4.0A MAX,IRMS = 3.8A MAX

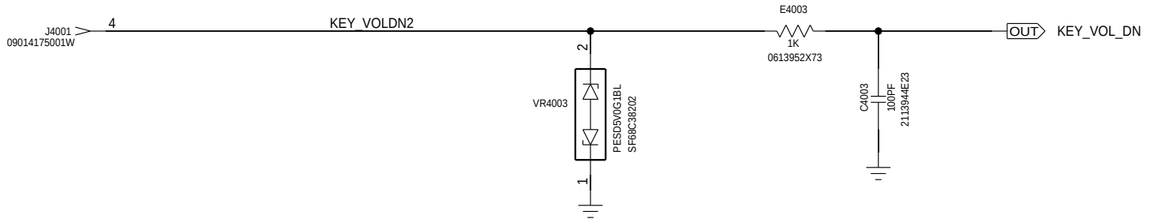


UI: SIDE KEY

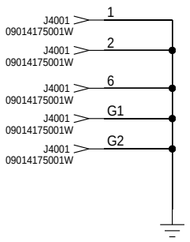
VOL_UP/DOWN/GND TPS NEED P0 BRINGUP ONLY

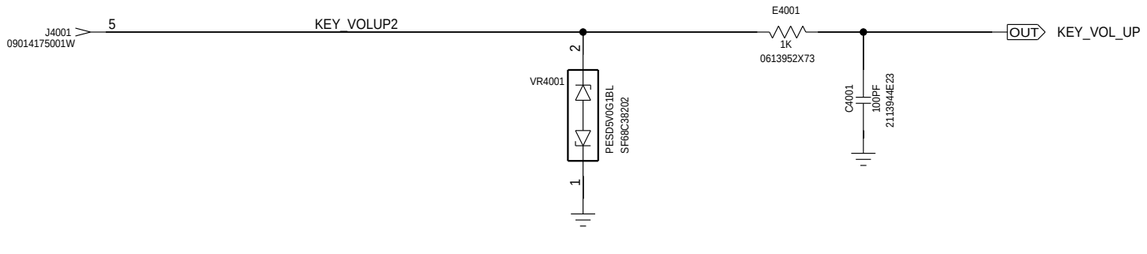
REF:4000-4199

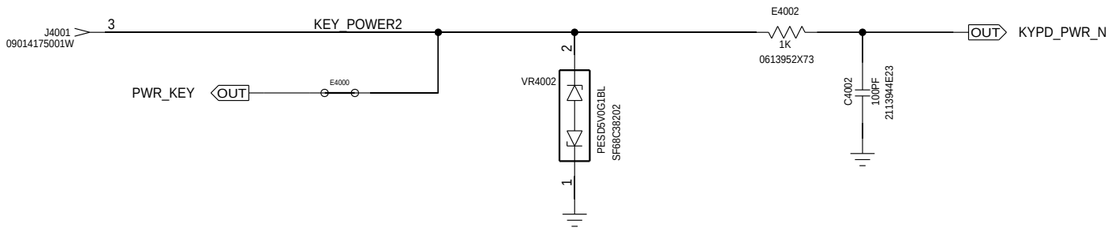
MECHANICAL KEYS



11PF 0.2OHM VBR=7.8V MAX

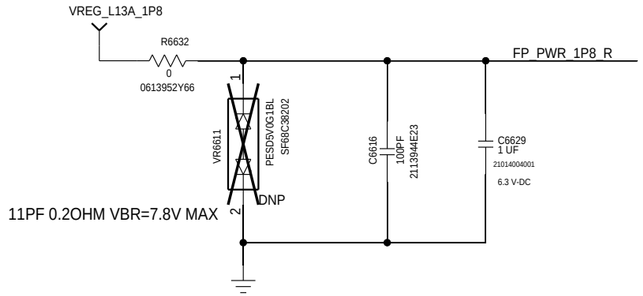


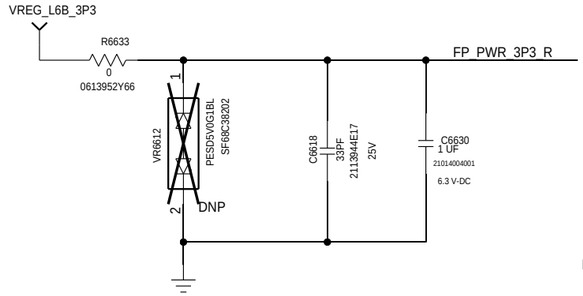


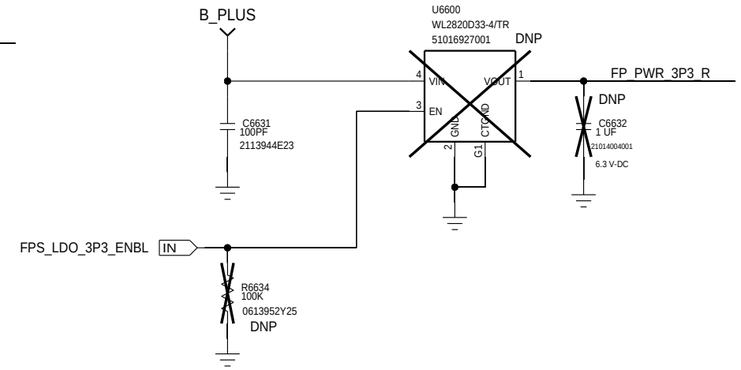


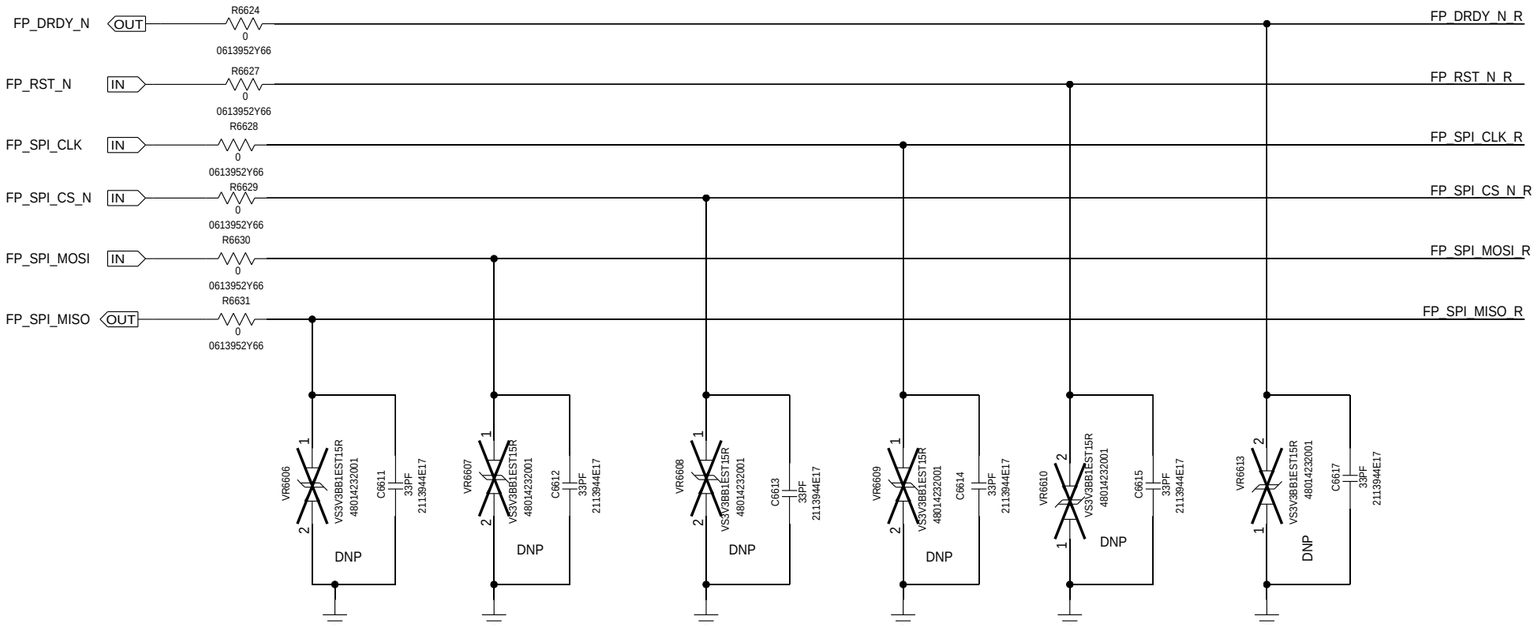
UI: FPS

REF: 6600 - 6699



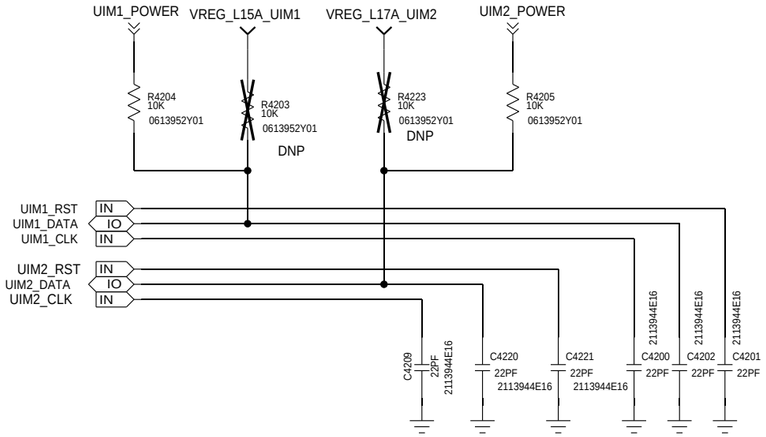


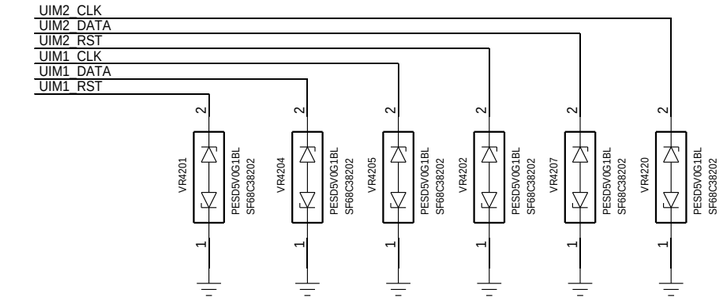




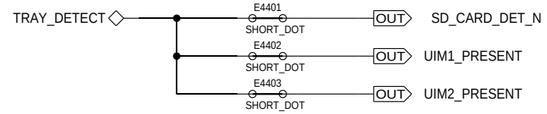
UI: UIM

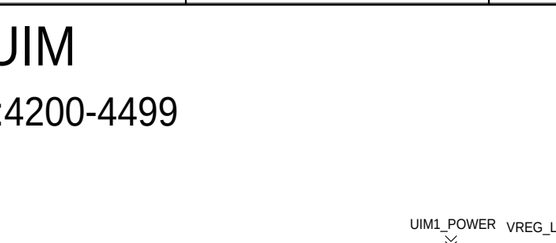
REF:4200-4499

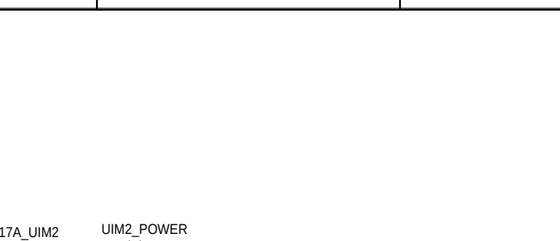


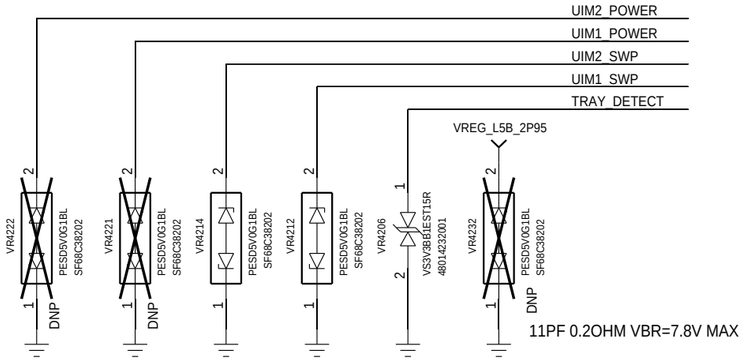


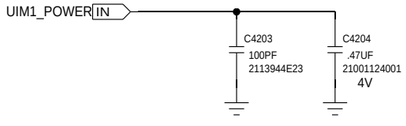
11PF 0.2OHM VBR=7.8V MAX

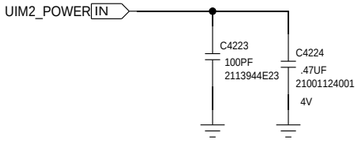










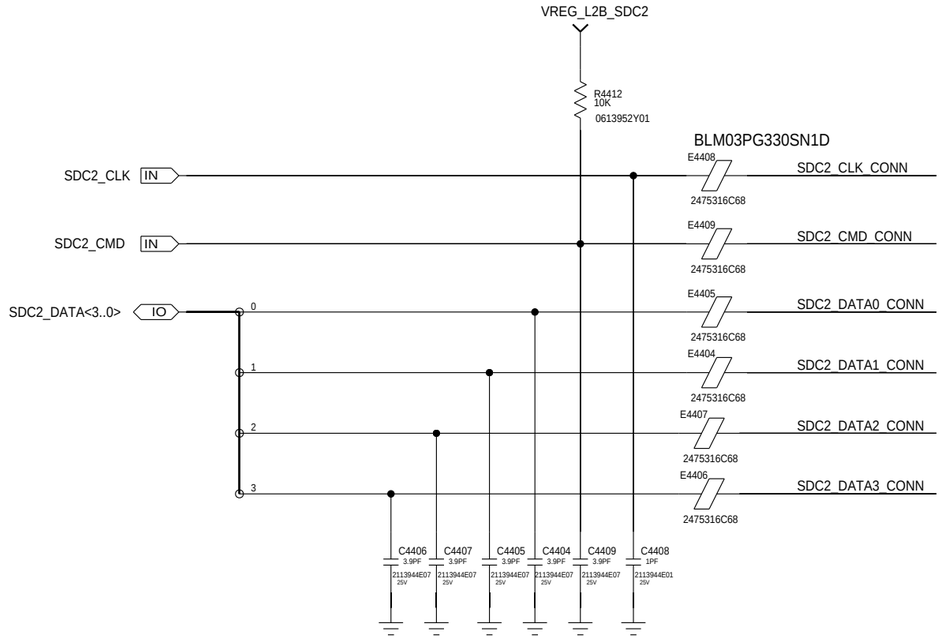


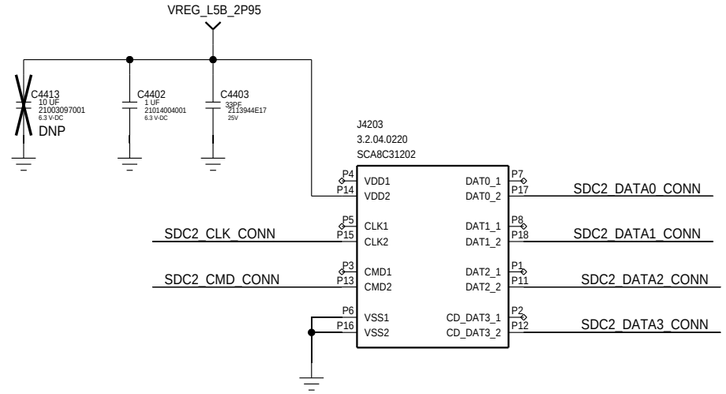
10PF 0.1OHM VBR=6.7V MAX

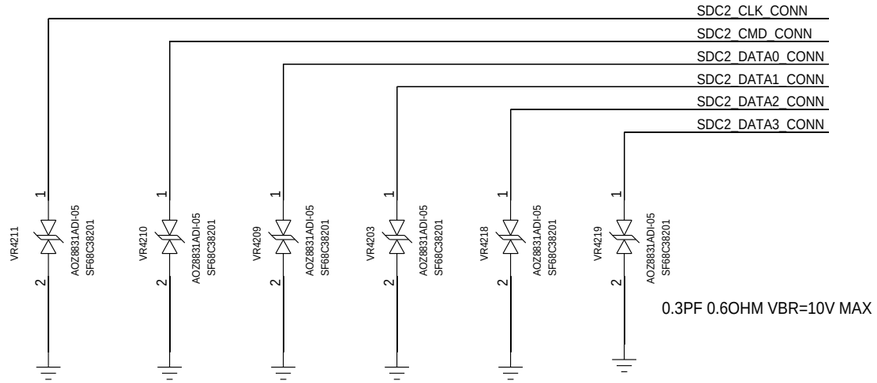
NOTE 1: USE 24.9K PULL-UP TO SUPPORT HOT SWAP WITH FREEZE-IO FEATURE.
NOTE 2: UIM_PWR BYPASS OF 0.33UF RECOMMENDED BY NFC IC SUPPLIER, PLACE NEAR CONNECTOR.

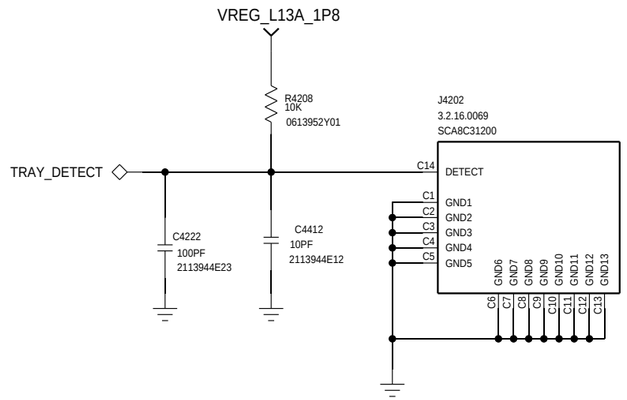
UI: SDCARD

REF:4200-4499

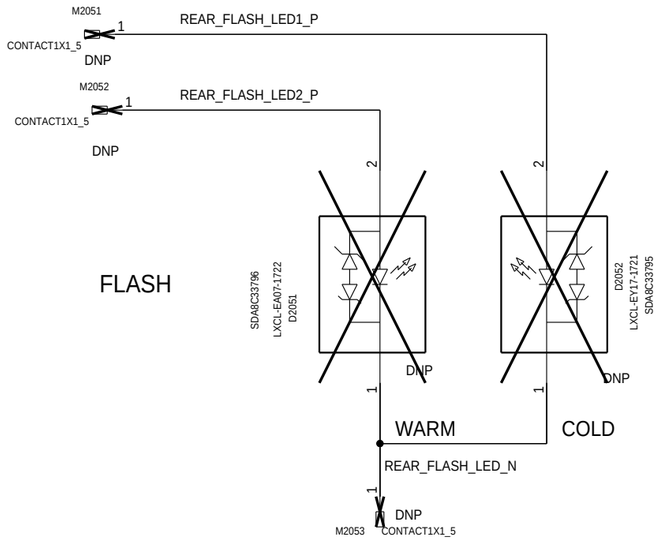


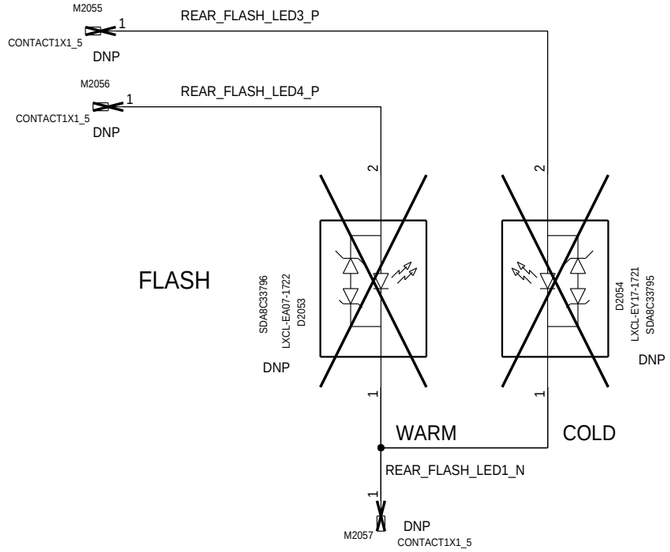


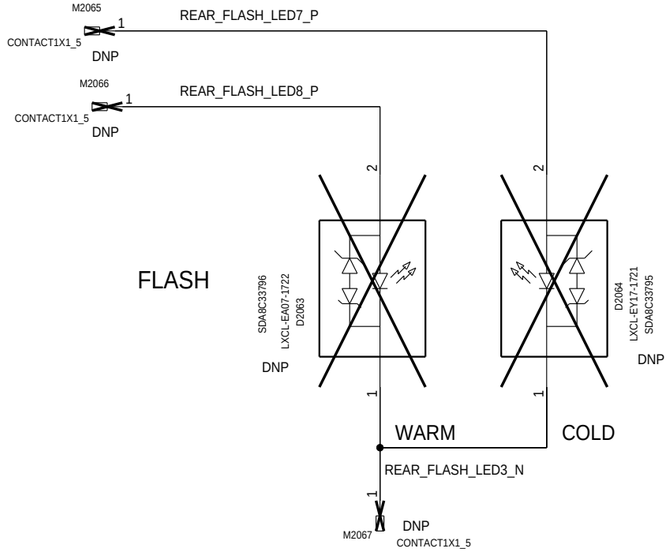


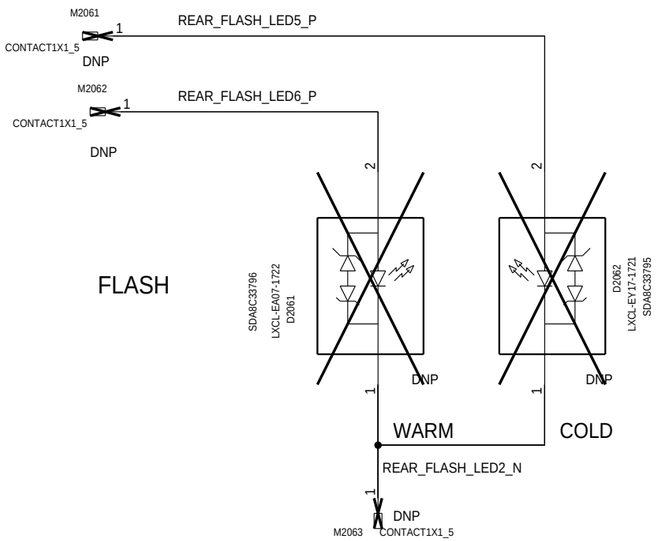


CAM: REAR FLASH



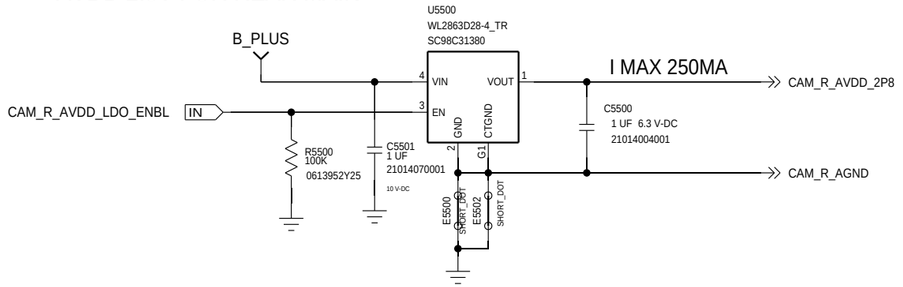




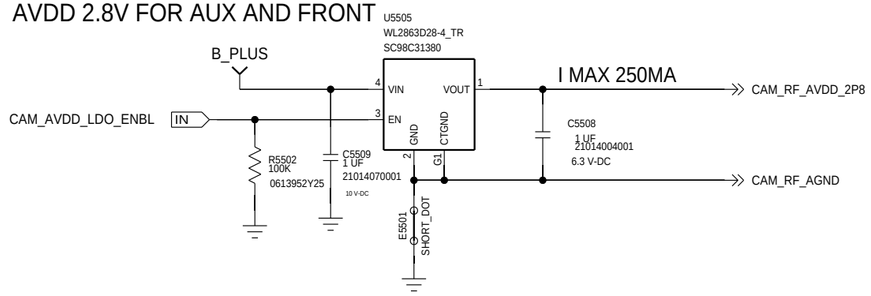


CAM: POWER REF:5500-5529

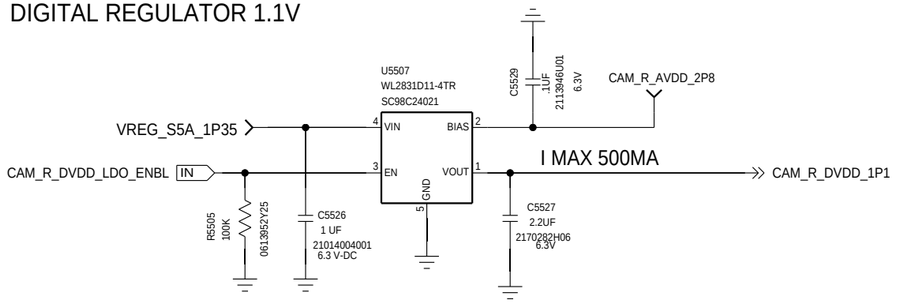
AVDD 2.8V FOR REAR MAIN



AVDD 2.8V FOR AUX AND FRONT

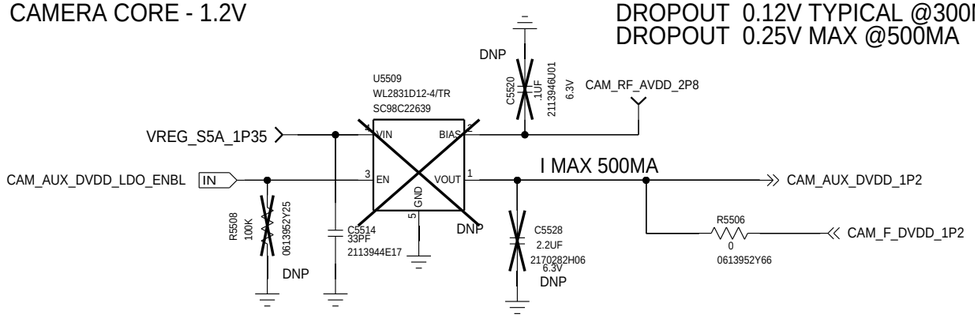


DIGITAL REGULATOR 1.1V



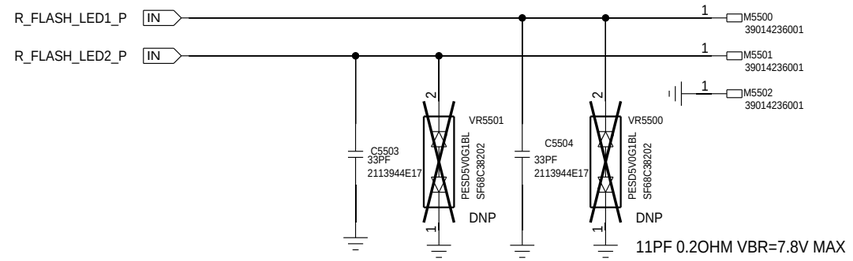
CAMERA CORE - 1.2V

DROPOUT 0.12V TYPICAL @300MA
DROPOUT 0.25V MAX @500MA

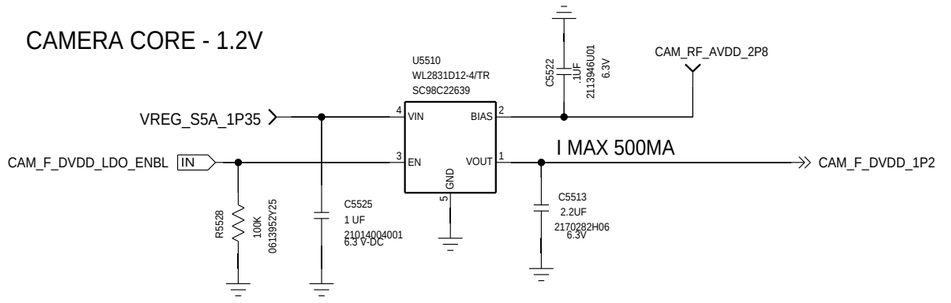


REAR FACING FLASH

REAR FLASH I MAX 1500MA FOR EACH



CAMERA CORE - 1.2V



DROPOUT 0.12V TYPICAL @300MA
DROPOUT 0.25V MAX @500MA

CAM: FRONT CONNECTOR

REF 5550-5569

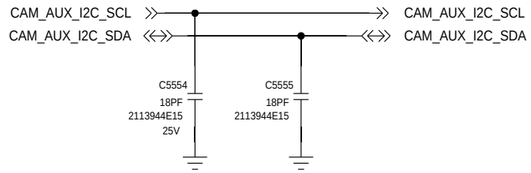
FF CAMERA CONNECTOR

SENSOR: OV12A10

12M, 1.25UM, 1/2.8", 4096X3072

I2C

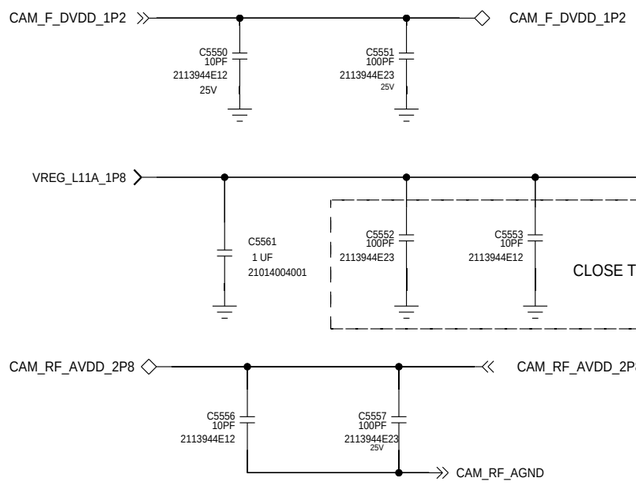
12M CAM I2C ADDR: 0X20(W), 0X21(R)

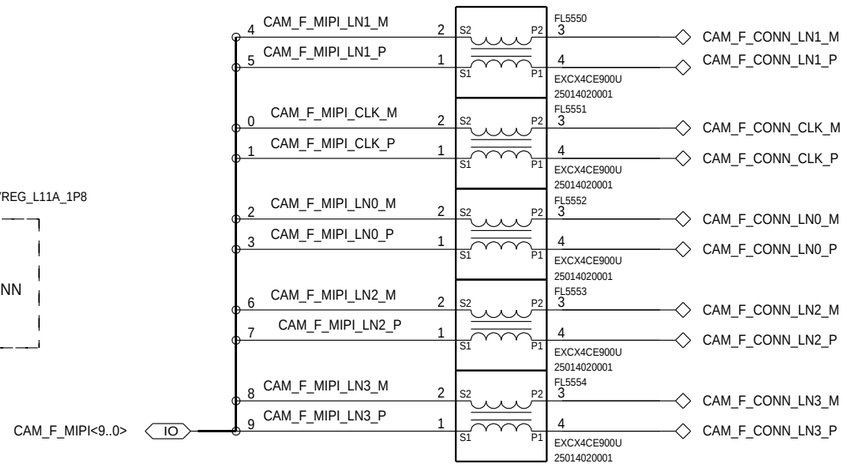


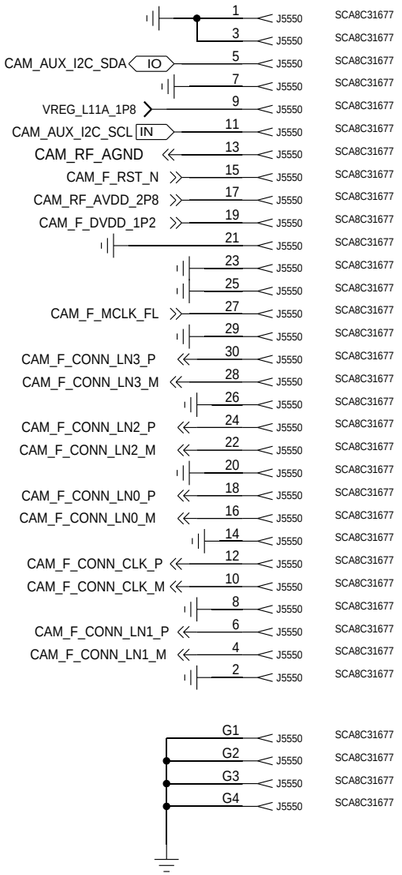
CAM I2C ADDRESS

FRONT OV12A10 CAM_AUX_I2C
SENSOR: 0X20,0X21
EEPROM: 0XA0,0XA1
AUX S5K5E9YX04 CAM_AUX_I2C
SENSOR: 0X20,0X21
REAR MAIN IMX519 CAM_I2C
SENSOR: 0X34,0X35
OIS: 0X48,0X49
EEPROM: 0XA0,0XA1

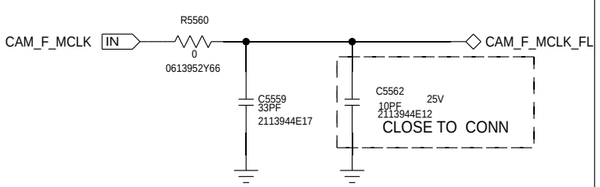
CAPACIORS BEADS ON THIS PAGE NEED BE PLACED CLOSE TO FRONT CAMERA CONNECTOR PIN.



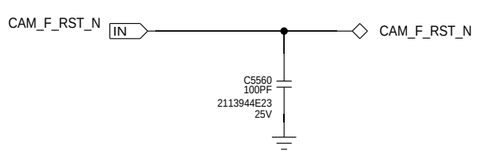




EMI/ESD FILTER



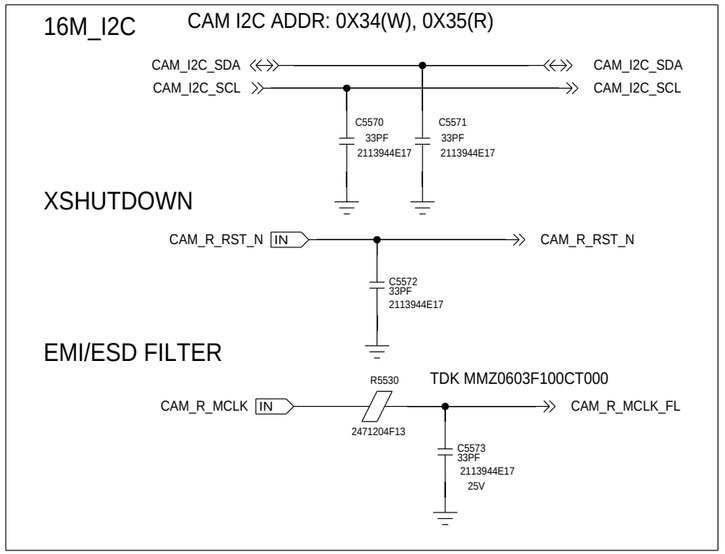
XSHUTDOWN

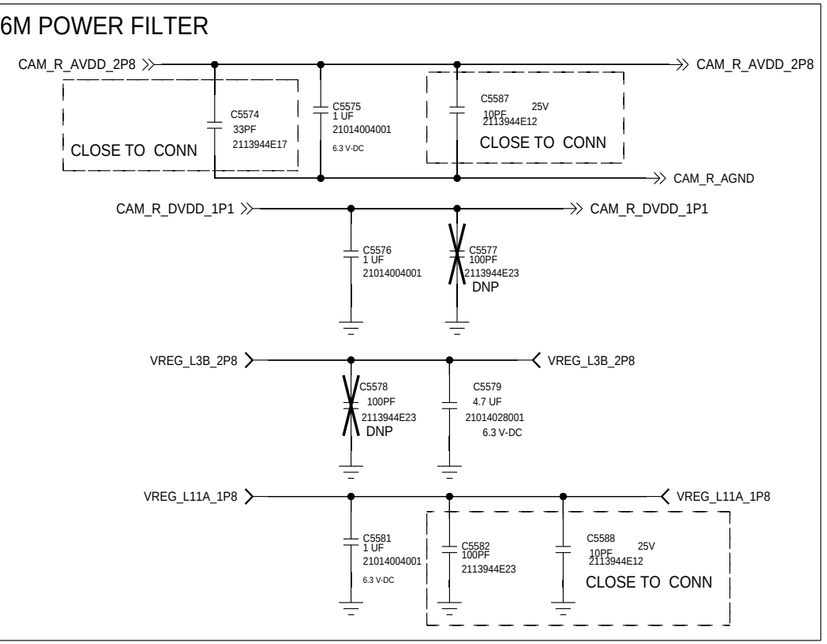


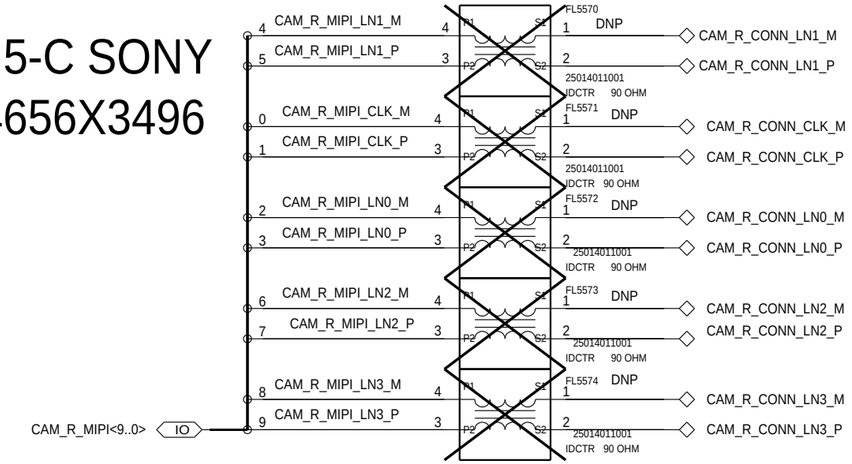
cam: rear main connector

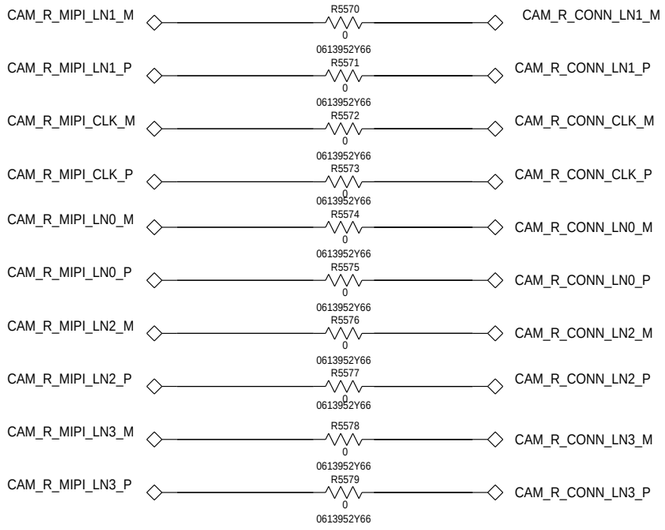
REF:5570-5589

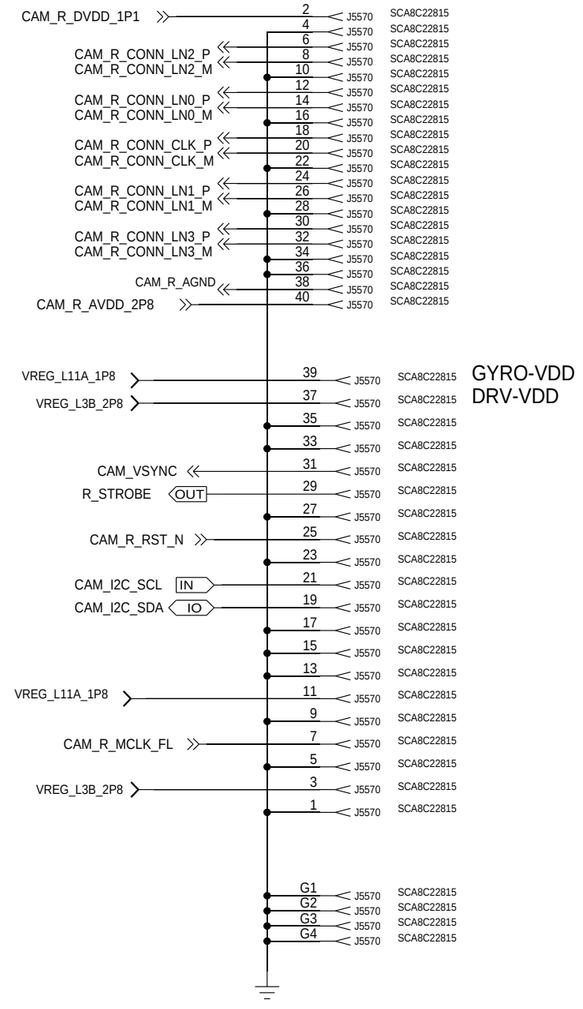
SENSOR: IMX519-AAQH5-C SONY
16M, 1.22UM, 1/2.534", 4656X3496









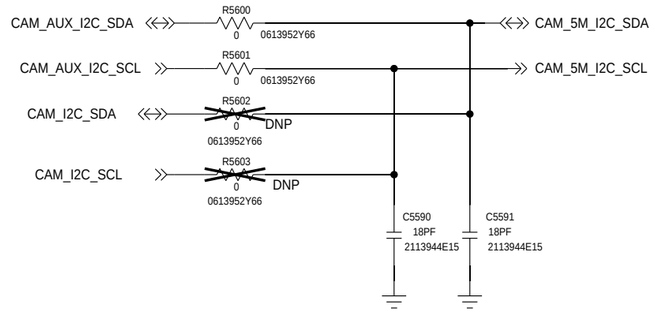


CAPACIORS BEADS ON THIS PAGE NEED BE PLACED CLOSE TO MAIN REAR CAMERA CONNECTOR PIN.

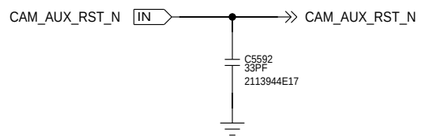
CAM: REAR AUX CONNECTOR

REF:5590-5610 5M CAM I2C ADDR: 0X20(W), 0X21(R)

AUX_I2C

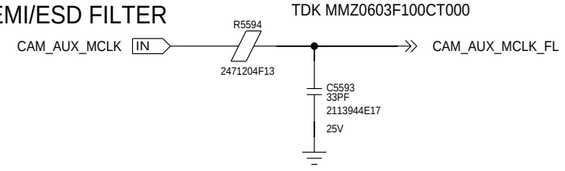


XSHUTDOWN



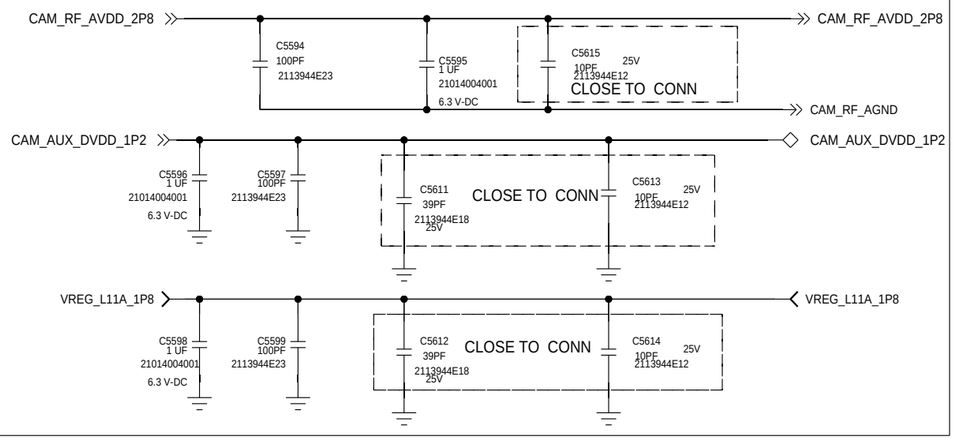
EMI/ESD FILTER

TDK MMZ0603F100CT000



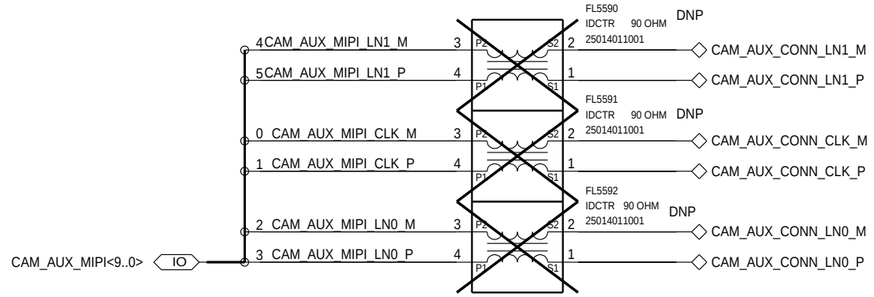
NEED TO CHECK MCLK

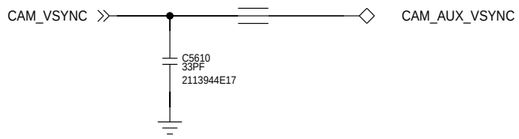
AUX POWER FILTER

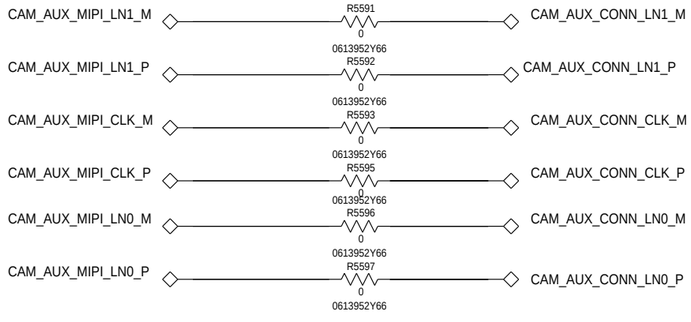


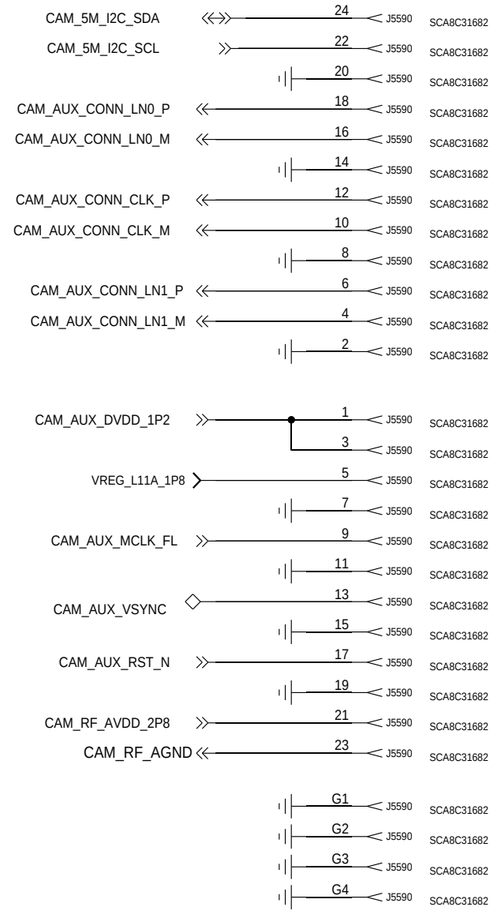
SENSOR: S5K5E9YX04 SUMSANG

5M, 1.12UM, 1/5", 2592X1944







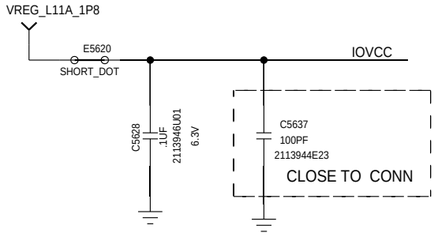


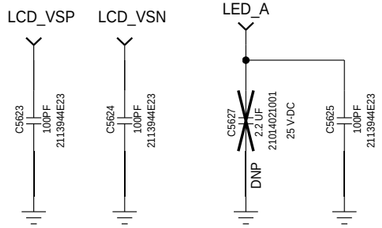
CAPACIORS BEADS ON THIS PAGE NEED BE PLACED CLOSE TO AUX REAR CAMERA CONNECTOR PIN.

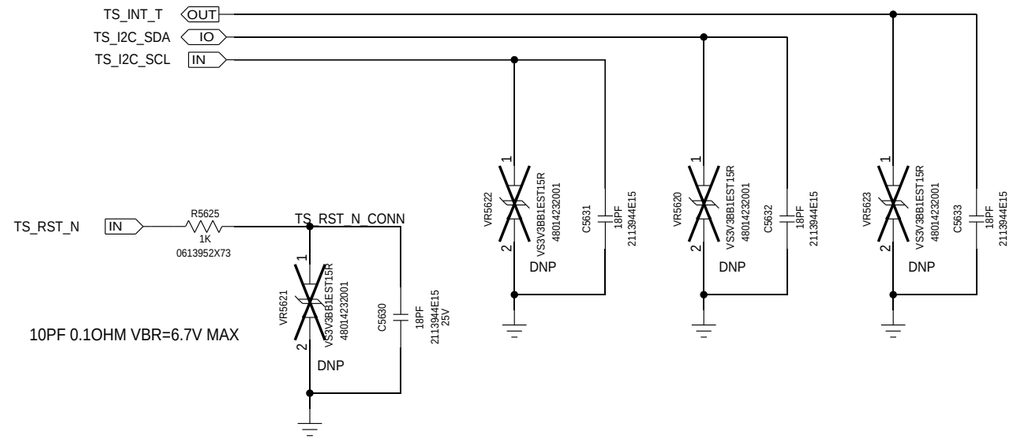
DISP: CONNECTOR

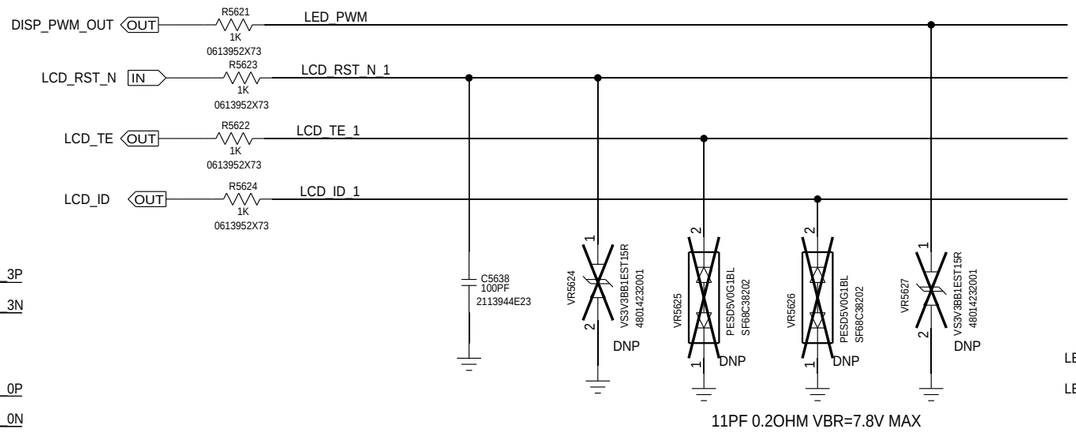
REF:5620--5650

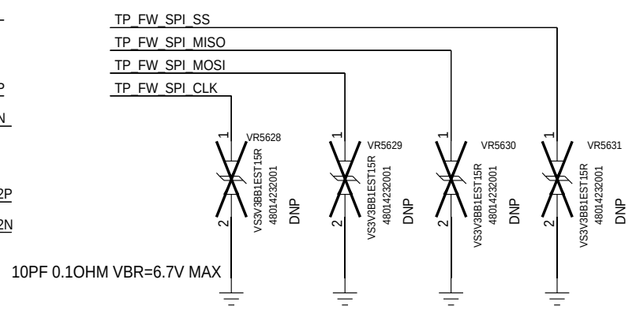
ATTENTION TO POWER SUPPLY

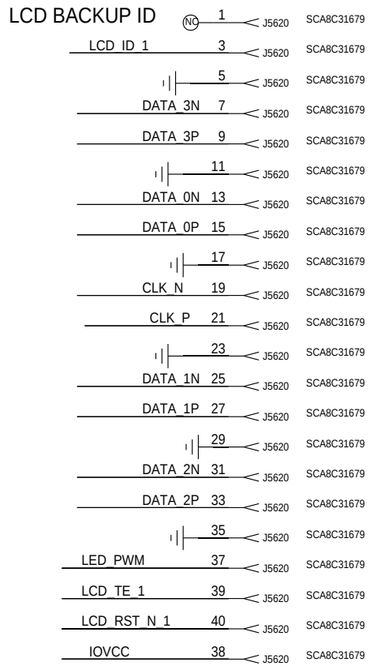


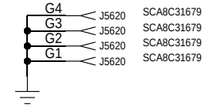


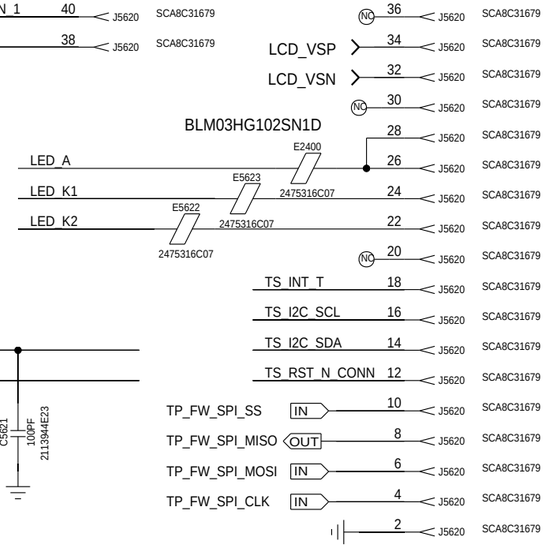












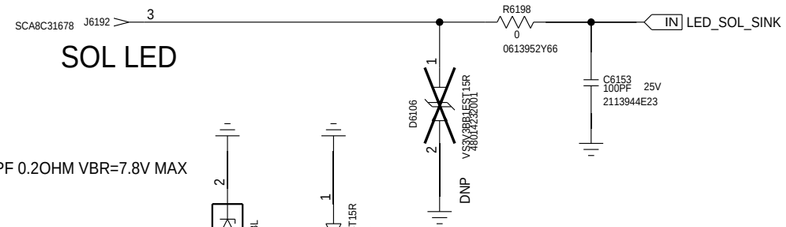
GND SHIELDED FOR MIPI DSI SIGNALS AS A GROUP

ADD GND STITCHING VIAS FOR EACH SIGNAL GROUP (EBI,CSI,DSI) WHEN POSSIBLE TO MINIMIZE RETURN CURRENT LOOP

XMCS: SENSORS

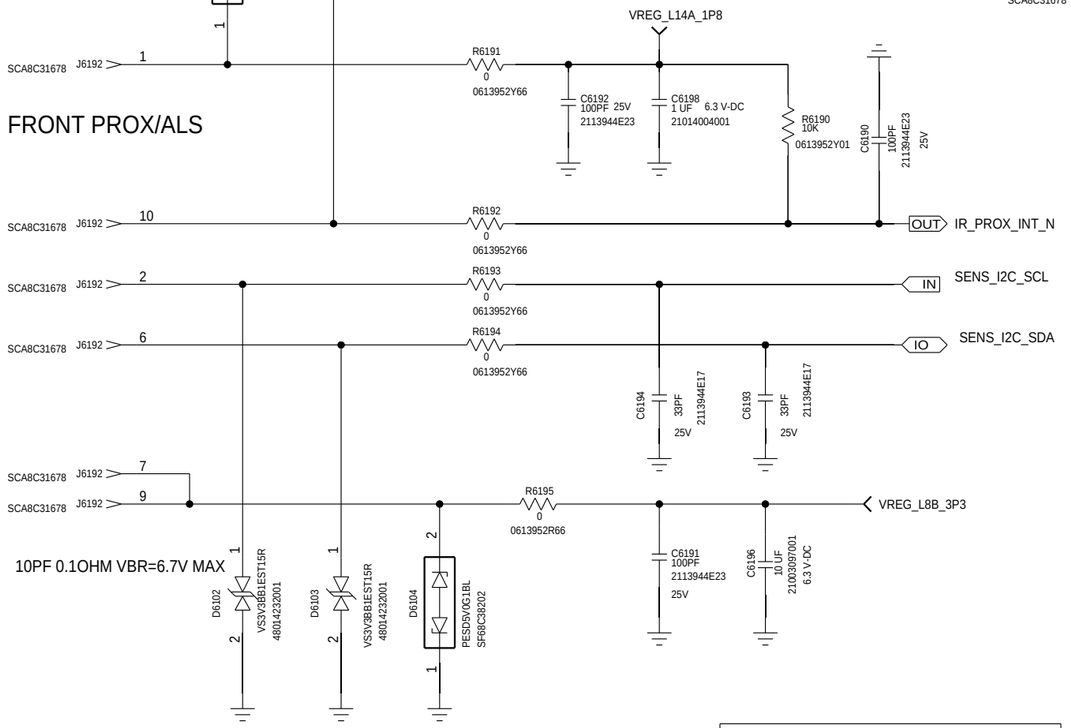
REF: 6100-6199

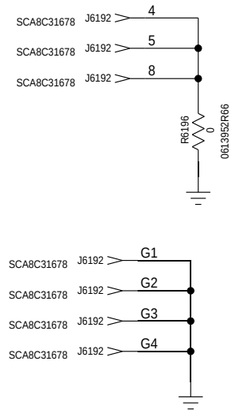
SOL LED



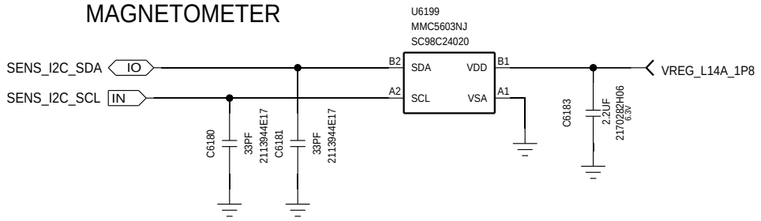
11PF 0.2OHM VBR=7.8V MAX

FRONT PROX/ALS





MAGNETOMETER

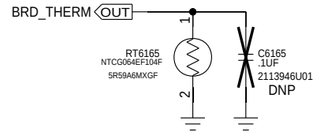


I2C ADDRESS

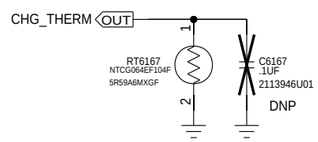
MMC5603NJ 0X60,0X61
CS47L35 0X34,0X35
TMD3702V 0X49,0X4A

AWAY FORM NOISY SIGNALS AND HIGH POWER SOURCES

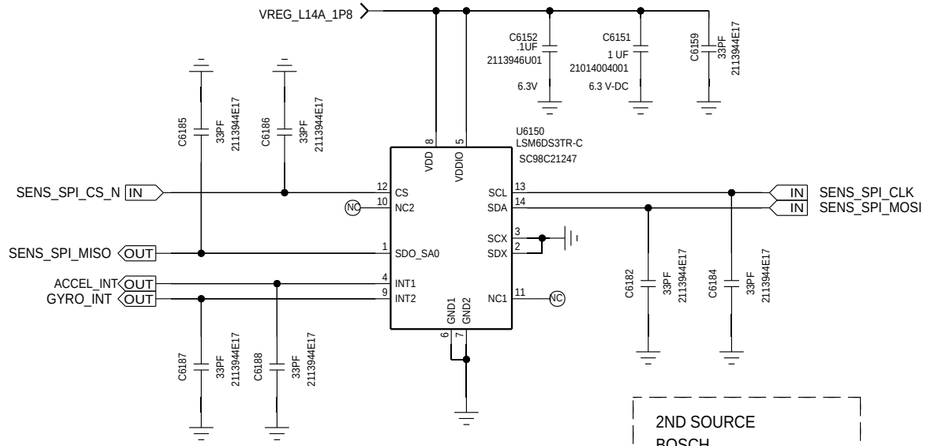
BOARD TEMP SENSOR



CHRG TEMP SENSOR



ACCELEROMETER+GYRO

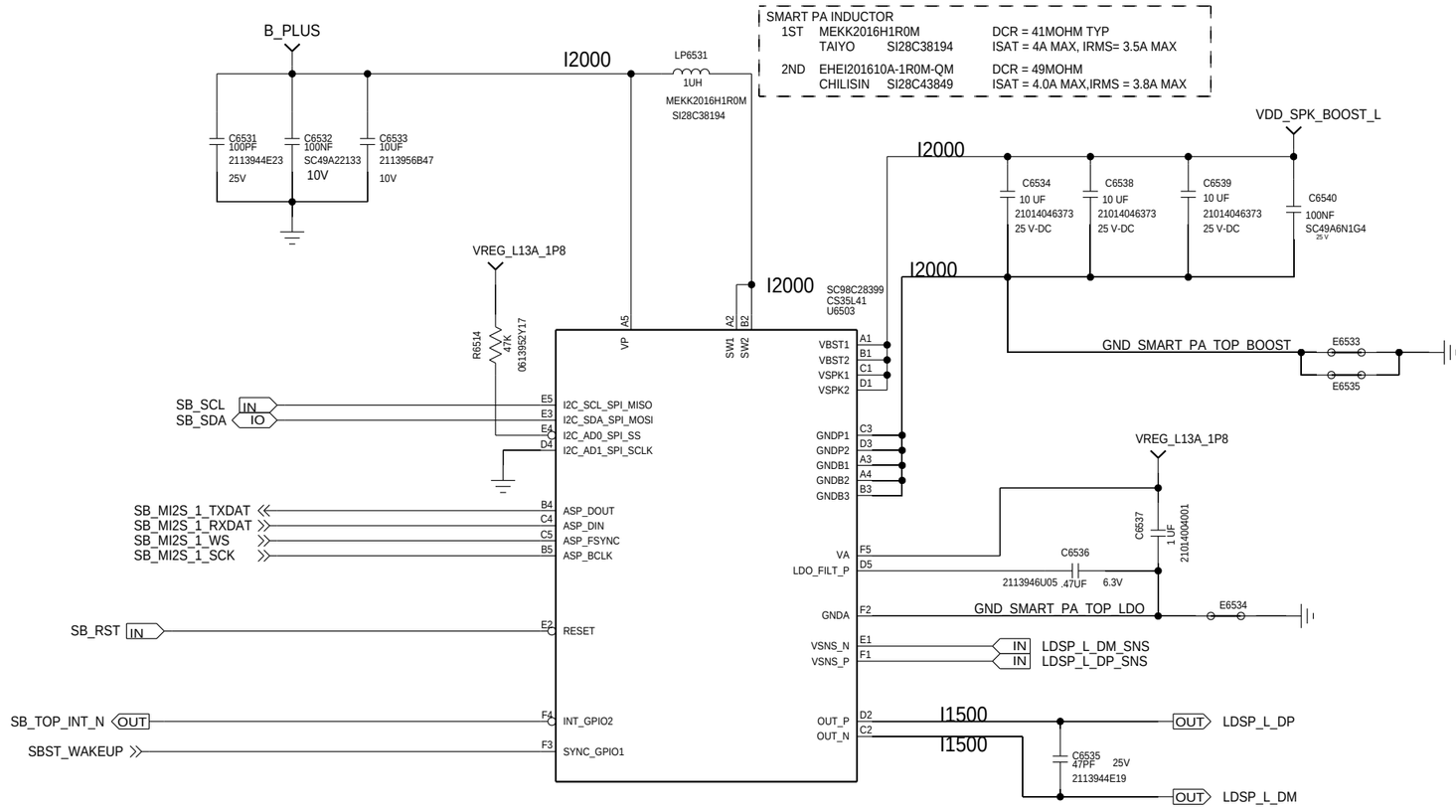


2ND SOURCE
BOSCH
BMI160
51016138002

XMCS: SMART BOOST TOP

REF 6500-6599

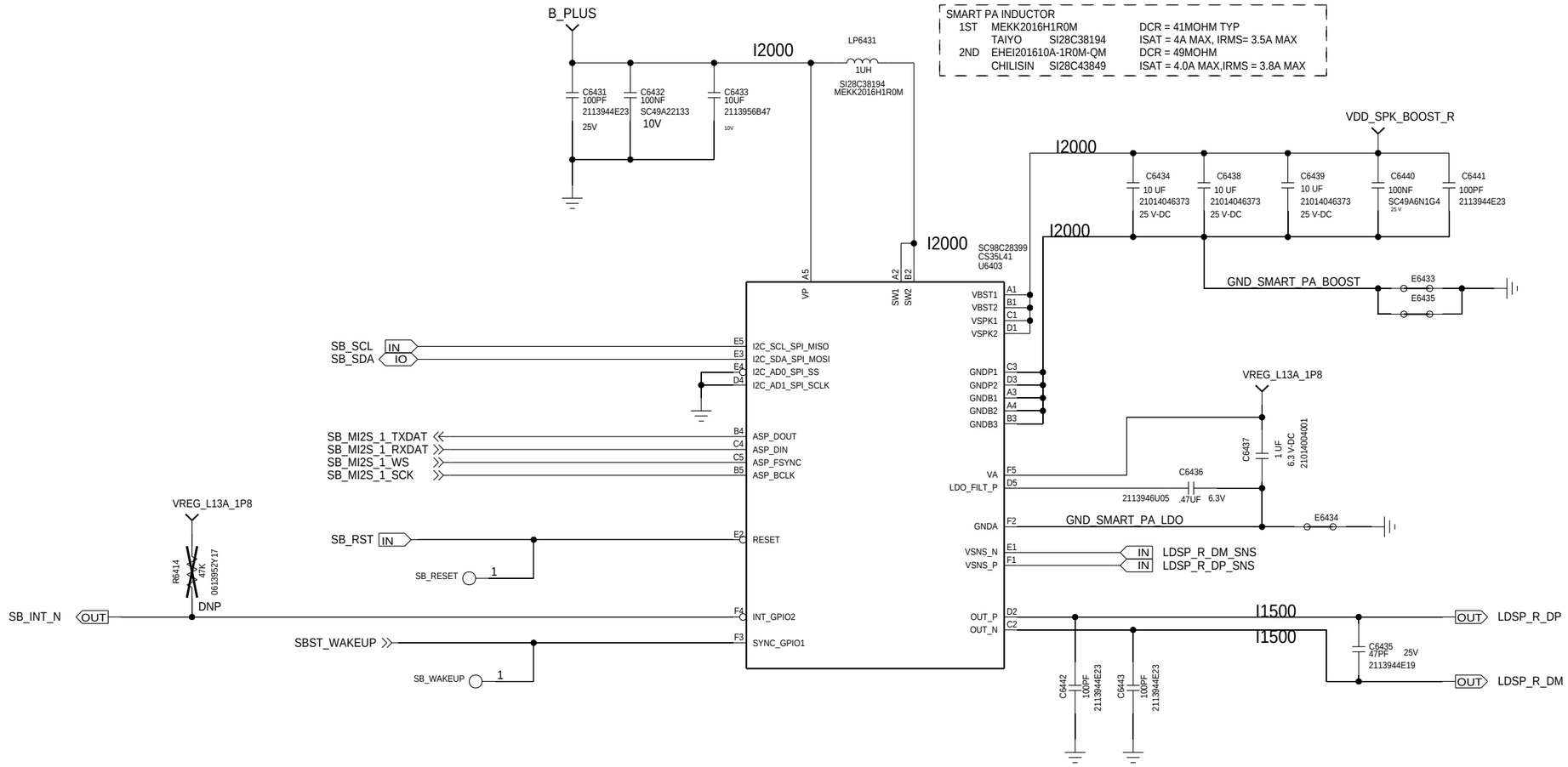
*** BOOST IC I2C ADD. 0X??



XMCS: SMART BOOST

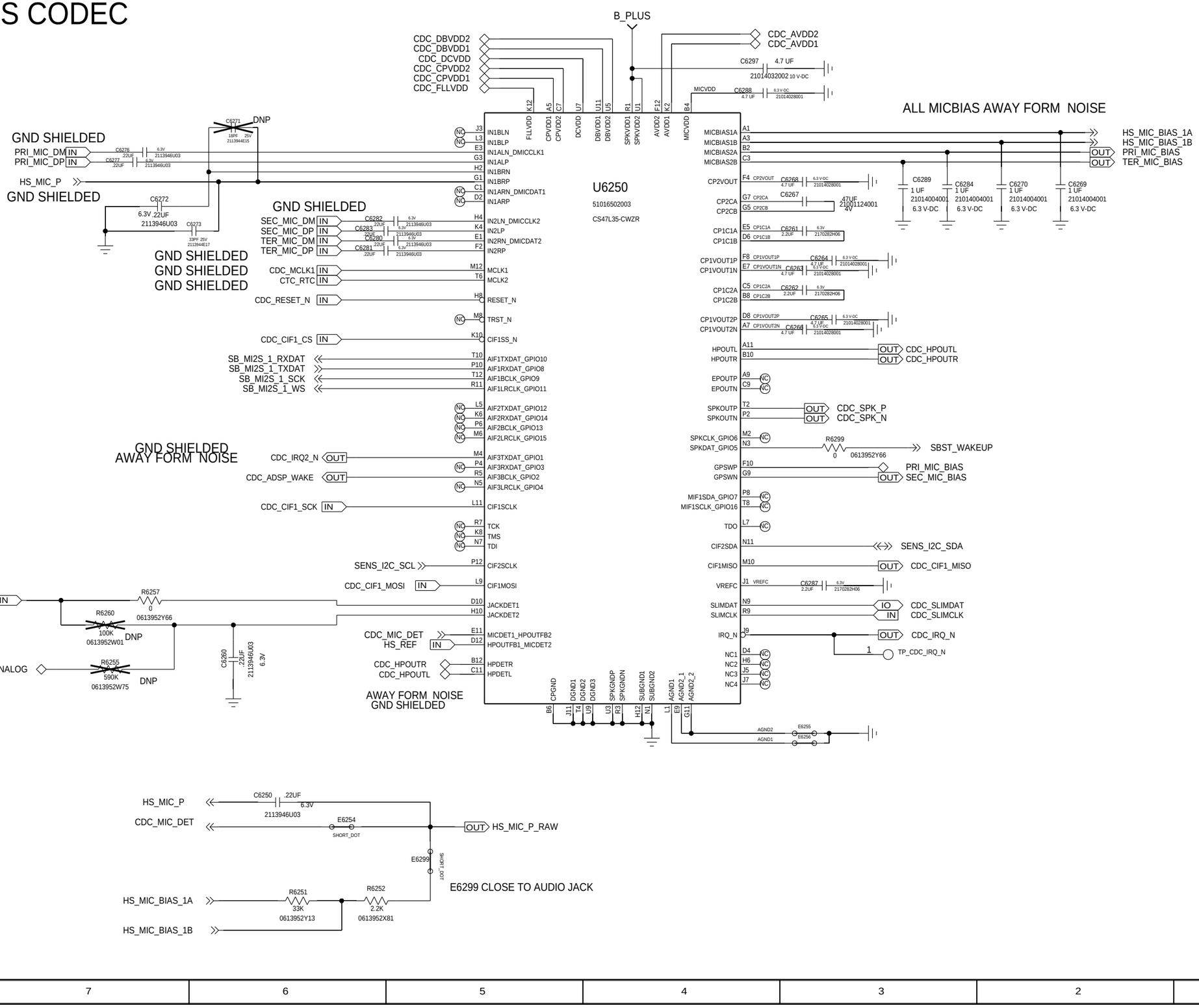
REF 6400-6499

*** BOOST IC I2C ADD. 0X??



XMCS: CIRRUS CODEC

REF 6250-6299

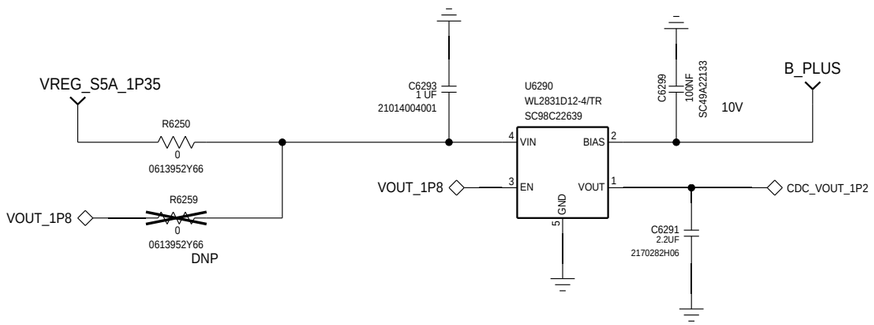


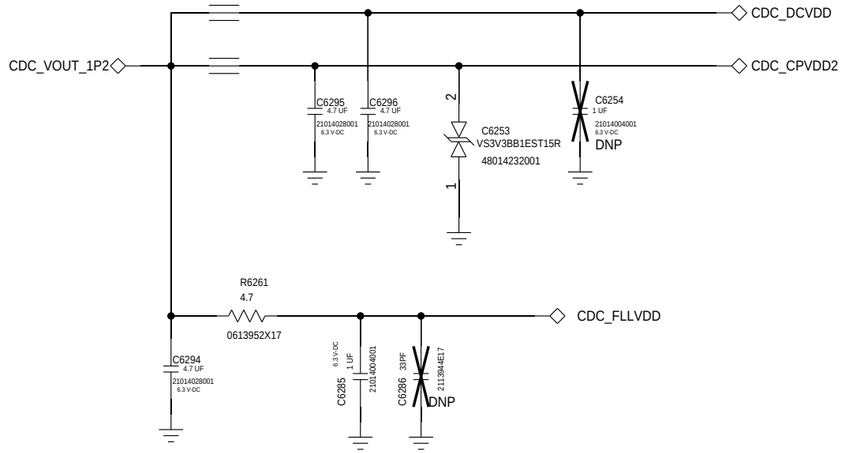
XMCS: CODEC POWER

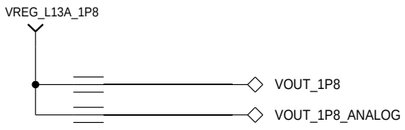
REF 6250-6299

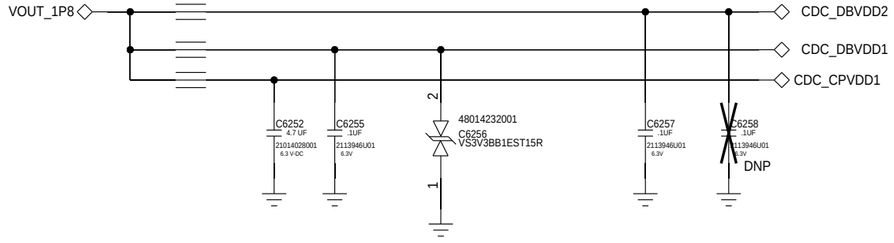
1.2V POWER SUPPLY

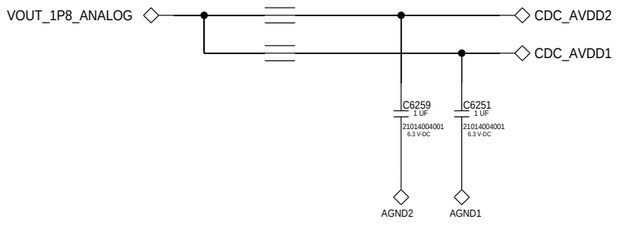
DROPOUT 0.12V TYPICAL @300MA
DROPOUT 0.25V MAX @500MA









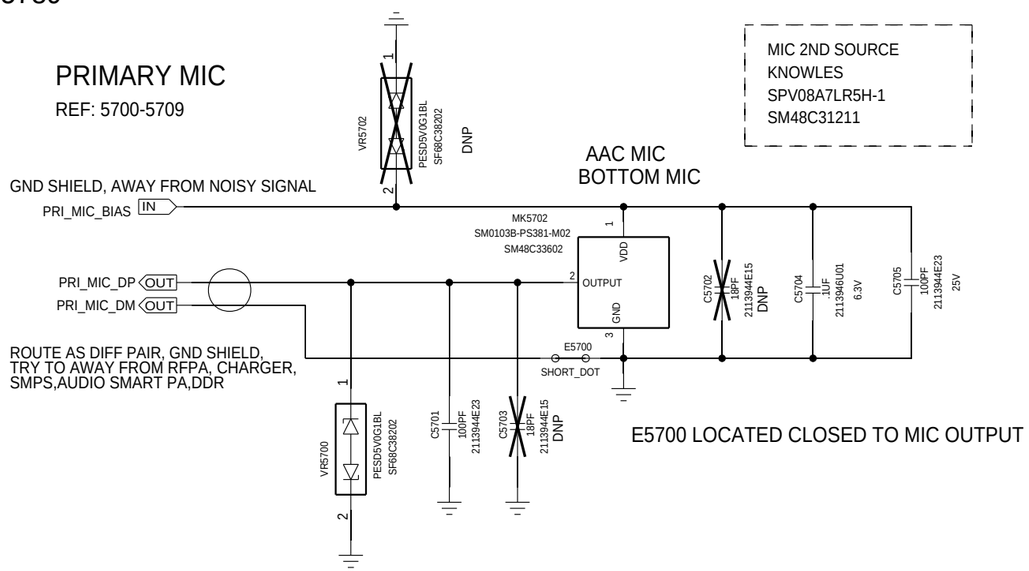


AFE: MICS

REF: 5700-5789

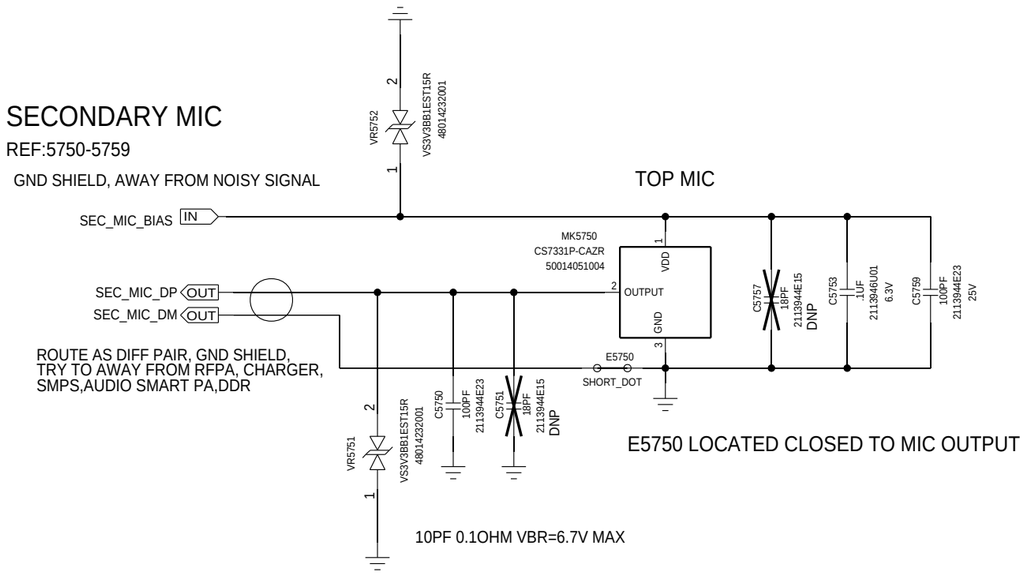
PRIMARY MIC

REF: 5700-5709



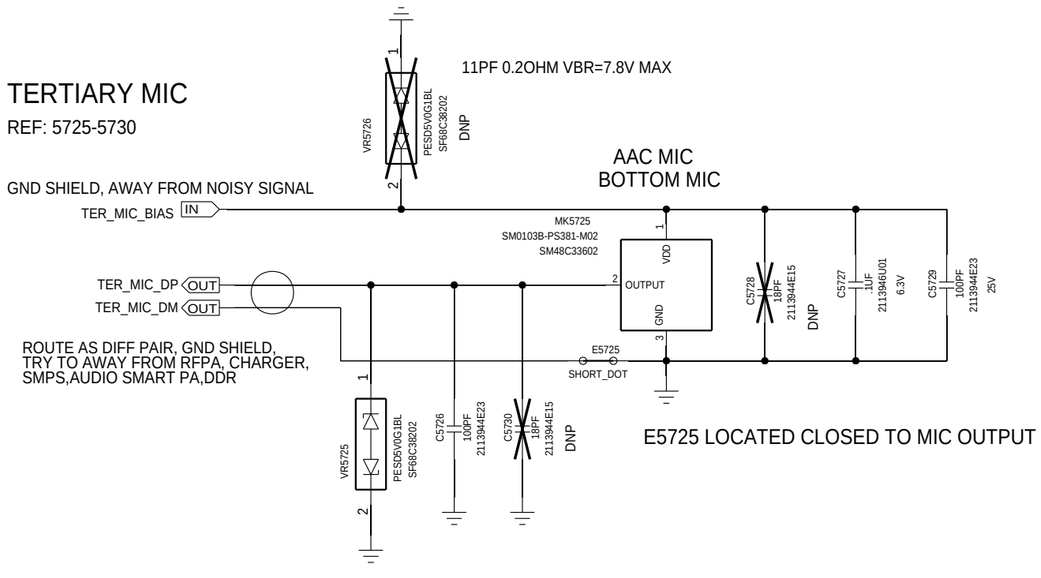
SECONDARY MIC

REF:5750-5759



TERTIARY MIC

REF: 5725-5730



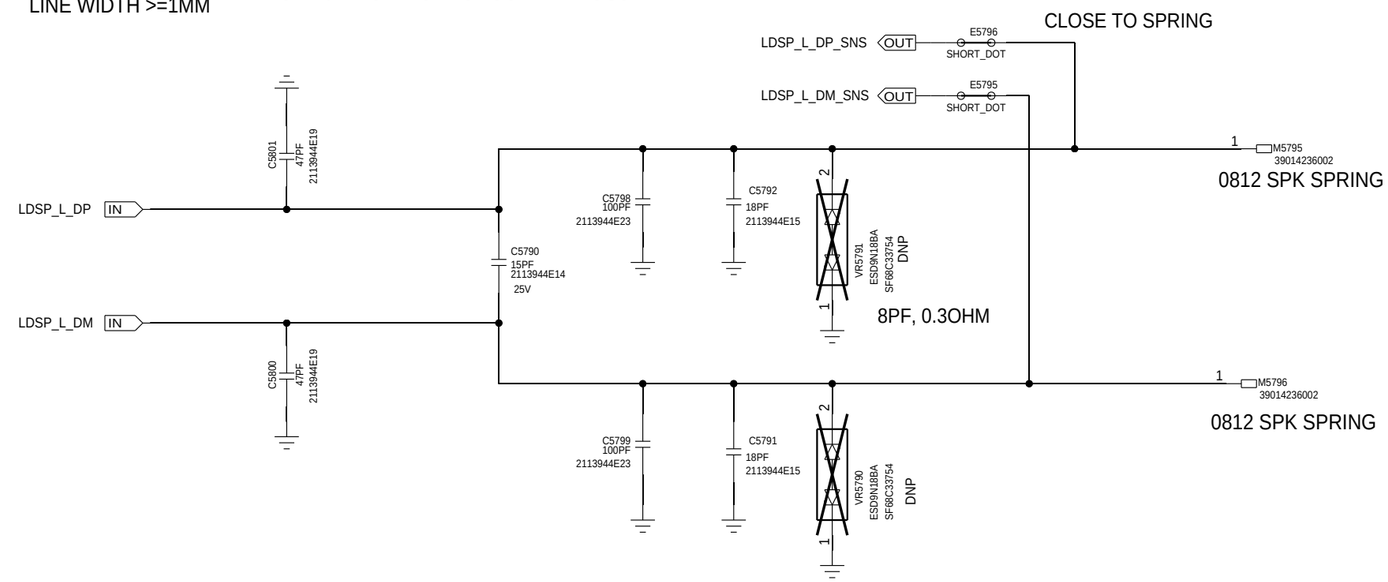
AFE: SPEAKERS

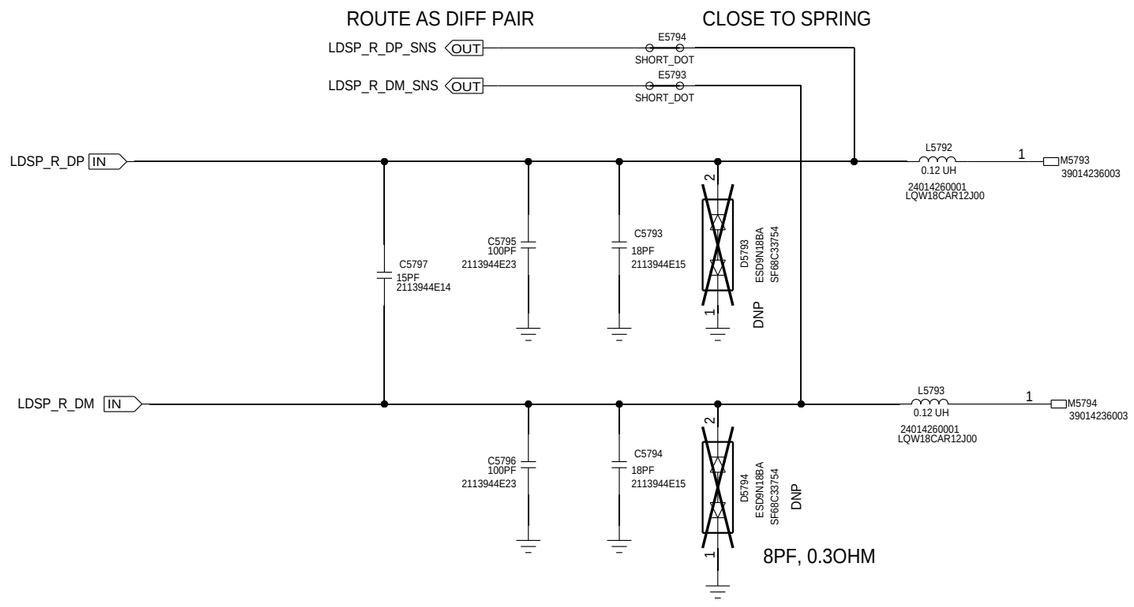
LOUDSPEARKER/EAR PIECE

REF:5790-5799

ROUTE AS DIFF PAIR
LINE WIDTH >=1MM

ADD STITCHING VIAS ALONGSIDE IF POSSIBLE

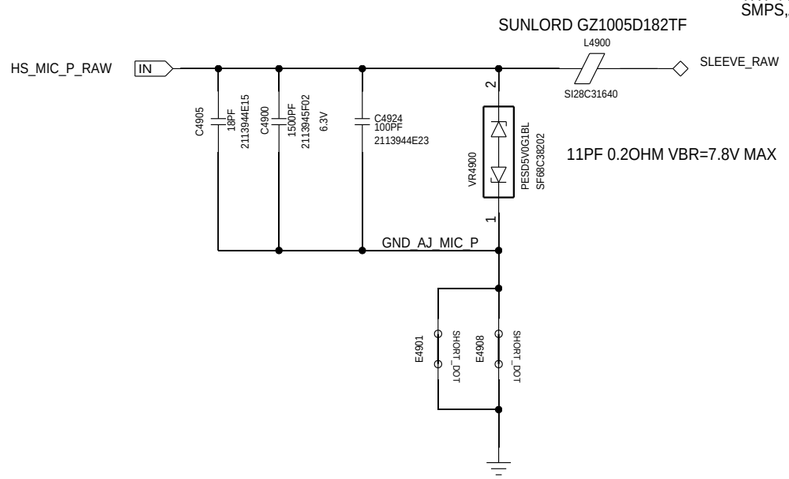


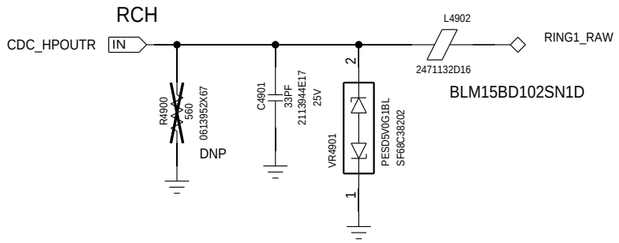


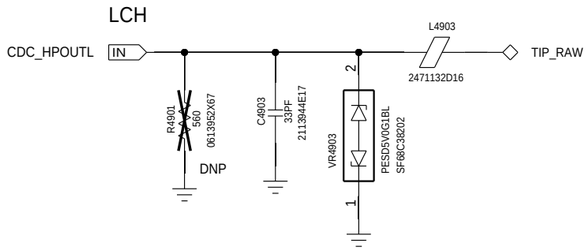
AFE: 3.5MM HEADSET

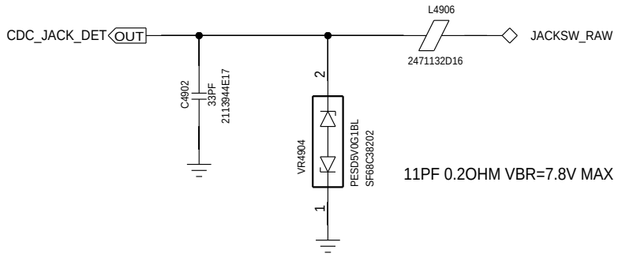
REF:4900-4949

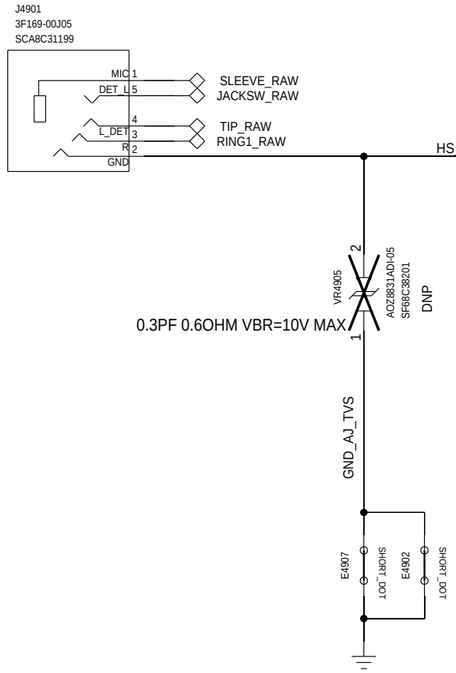
GND SHIELD,
TRY TO AWAY FROM RFPA, CHARGER,
SMPS,AUDIO SMART PA,DDR

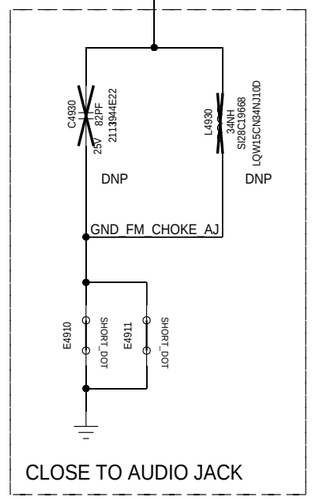


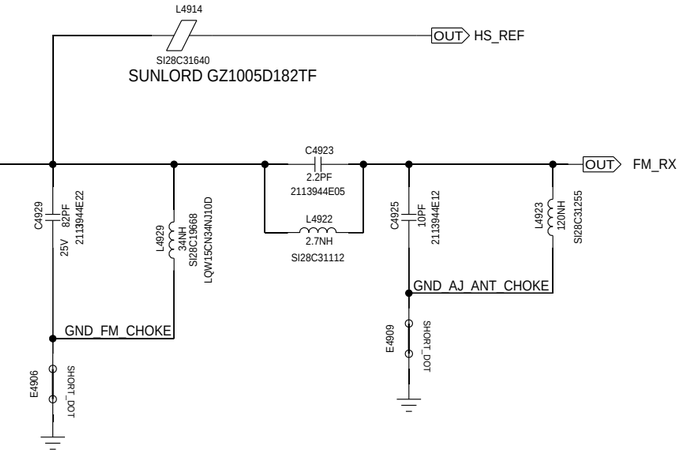












WCN3980 RF/CTRL

REF 4600-4699

WCN3980
51016960001
U4650

WCN3980
CONTROL

WL_CMD_CLK
WL_CMD_DATA
WLAN_TX_QM
WLAN_TX_QP
WLAN_TX_IM
WLAN_TX_IP
WLAN_RX_QM
WLAN_RX_QP
WLAN_RX_IM
WLAN_RX_IP
WL_BB_TX_IQ<3..0>
WL_BB_RX_IQ<3..0>
FM_RX_IN
WCN_CLK_OUT
WCN_CLK_IN
WCN_XO_IN
WLAN_PDET_IN_50R
2_4G_TRX_1_50R
SLEEP_CLK
WCN_CLK_OUT_1

2_4G_ANT_MAT_5_50R
B_PLUS
2_4G_ANT_2_50R
ANT_WLAN_2_4G_50R
2_4G_ANT_1_50R
2_4G_VDET
2_4G_TRX_2_50R
2_4G_TRX_3P_6_50R
2_4G_TRX_50R
SC98C22531
U4630
SKY85321-11
WLAN_VDET
WLAN_PDET_IN_50R
2G_FEM_LNA_EN
2G_FEM_PA_EN

5G_RX_1_50R
5G_TX_0_50R
5G_RX_2_50R
5G_RX_50R
5G_TX_50R
5G_TX_1_50R
5G_RX_MAT_5_50R
5G_VDET
51016840001
U4601
SKY85732-11
WCN_5G_MAT_5_50R
WCN_5G_1_50R
WCN_5G_2_50R
WCN_5G_3_50R
WCN_5G_4_50R
SF68C32337
FL4601
RFBPF1608060KFT
CLOSE TO FILTER
ANT_WLAN_5G_50R
5G_FEM_PA_EN
5G_FEM_LNA_EN

FM_RX
FM_RX_IN

WLAN_5G_MAT_50R
U4611
SC98C34253
MXD8721E

FL4601
NA - 91014361001(LFB185G54CGLD602)
NON NA - SF68C32337(RFBPF1608060KFT)

BASED ON 80-WL022-41 REV. A

WCN3980 POWER AND GND,CONTROL

REF 4700-4799

BT_FM_WLAN_1P3

VREG_L6A_1P3

R4736 0 0613952Y66

R4701 0 0613952Y66

C4708 4.7 UF 21001124002

C4729 100PF 2113944E23

- VDD13_WL_SYNTH — PIN 46
- VDD13_BT_SYNTH — PIN 5 — C4712 .01UF 2113945F07
- VDD13_PM — PIN 29 — C4748 .01UF 2113945F07
- VDD13_FM — PIN 12 — C4710 .01UF 2113945F07
- VDD13_BT_FM_BBPLL — PIN 4
- VDD13_BT — PIN 26

DNP C4744 100PF 2113944E23; C4715 .01UF 2113945F07

WLBT_3.3V

VREG_L19A_3P3

C4720 10 UF 21003097001

C4702 4.7 UF 21001124002 6.3 V-DC

C4723 1 UF 21014004001

- VDD33_WL_CH0 — PIN 55
- VDD33_WL_BT_DRV — PIN 34 — C4725 .01UF 2113945F07
- VDD33_WL_5GPA_DRV — PIN 61 — C4719 1 UF 21014004001
- VDD33_PM_DLDO — PIN 71 — C4727 .01UF 2113945F07
- VDD33_FEM — PIN 2 — C4728 .01UF 2113945F07

1.8V_IO

VREG_L13A_1P8

C4734 4.7 UF 21001124002

- VDD18_IO — PIN 56 — C4731 39PF 2113944E17

1.8V_XO

VREG_L9A_1P8

R4728 0 0613952Y66

C4718 2.2UF 2170282H06 6.3V

- VDD18_XTAL — PIN 32 — C4737 .47UF 2113946U05

51016960001 WCN3980 U4650

WCN3980 IO

		40	GP_EN		
		14	GP_IN		
		13	GP_OUT		
BLSP_UART_RFR_N_5	OUT	64	CTS		
BLSP_UART_CTS_N_5	IN	50	RTS		
BLSP_UART_TX_5	IN	16	RXD		
BLSP_UART_RX_5	OUT	8	TXD		
WLAN_SW_CTRL	OUT	15	SW_CTRL		
LPI_QCA_SB_CLK	IN	22	SB_CLK		
LPI_QCA_SB_DATA	IO	63	SB_DATA		
		76	COEX_CLK	IN	WLAN_BT_COEX_CLK
		77	COEX_DATA	IO	WLAN_BT_COEX_DATA
		57	COEX_RXD	IO	WCI2_LTE_COEX_RXD
		70	COEX_TXD	IO	WCI2_LTE_COEX_TXD
		23	SENS_RXD	IN	SENSOR_UART_TXD_DEBUG_TXD
		3	SENS_TXD	OUT	SENSOR_UART_RXD_DEBUG_RXD
		31	WL_BT_FEM_0		2G_FEM_PA_EN
		39	WL_BT_FEM_1		5G_FEM_LNA_EN
		11	WL_BT_FEM_2		2G_FEM_LNA_EN
		25	WL_BT_FEM_3		
		45	WL_BT_FEM_4		
		58	WL_BT_FEM_5		5G_FEM_PA_EN

51016960001 WCN3980 U4650

C4711 1 UF 21014004001; C4721 1 UF 21014004001

WCN3980 PWR_GND

	43	VDD11D_PM	
VDD13_PM	29	VDD13_PM	
VDD13_WL_SYNTH	46	VDD13_WL_SYNTH_CH0	
VDD13_BT_SYNTH	5	VDD13_BT_SYNTH	
VDD13_BT_FM_BBPLL	4	VDD13_BT_FM_BBPLL	
VDD13_BT	26	VDD13_BT_BB_WL	
VDD13_FM	12	VDD13_FM	
VDD18_IO	56	VDD18_IO	
VDD18_XTAL	32	VDD18_XTAL	
VDD33_WL_5GPA_DRV	61	VDD33_WL_5G_DRV_CH0	
VDD33_PM_DLDO	71	VDD33_PM_DLDO	
VDD33_WL_CH0	55	VDD33_WL_CH0	
VDD33_WL_BT_DRV	34	VDD33_WL_BT_DRV_CH0	
VDD33_FEM	2	VDD33_FEM	
	82	GND_SEALRING1	
	1	GND_SEALRING2	
	78	GND_SEALRING3	
	47	GND_ESD_0	
	66	GND_WL_BB_CH0	
	81	GND_WL_5G_RXFE_CH0	
	74	GND_WL_5G_DRV_CH0	
	51	GND_WL_SYNTH_CH0	
	67	GND_WL_5G_PA_CH0	
	62	GND_WL_BALUN_CH0	
	54	GND_WL_2G_PA_CH0	
	48	GND_WL_BT_DRV_CH0	
	35	GND_WL_BT_RXFE_CH0	
	30	GND_DIG	
	24	GND_ISO	
	49	GND_IO	
	65	GND_PM	
	38	GND_XTAL	
	28	GND_PDET	
	41	GND_DPD_CH0	
	19	GND_BT_SYNTH	
	33	GND_BT_BB	
	21	GND_GP	
	18	GND_BT_FM_BBPLL_A	
	6	GND_FM_RXFE	
	20	GND_FM_VCO	

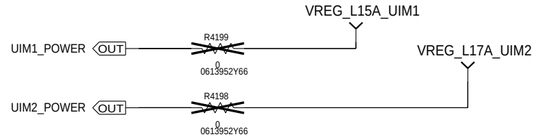
BASED ON 80-WL022-41 REV. A

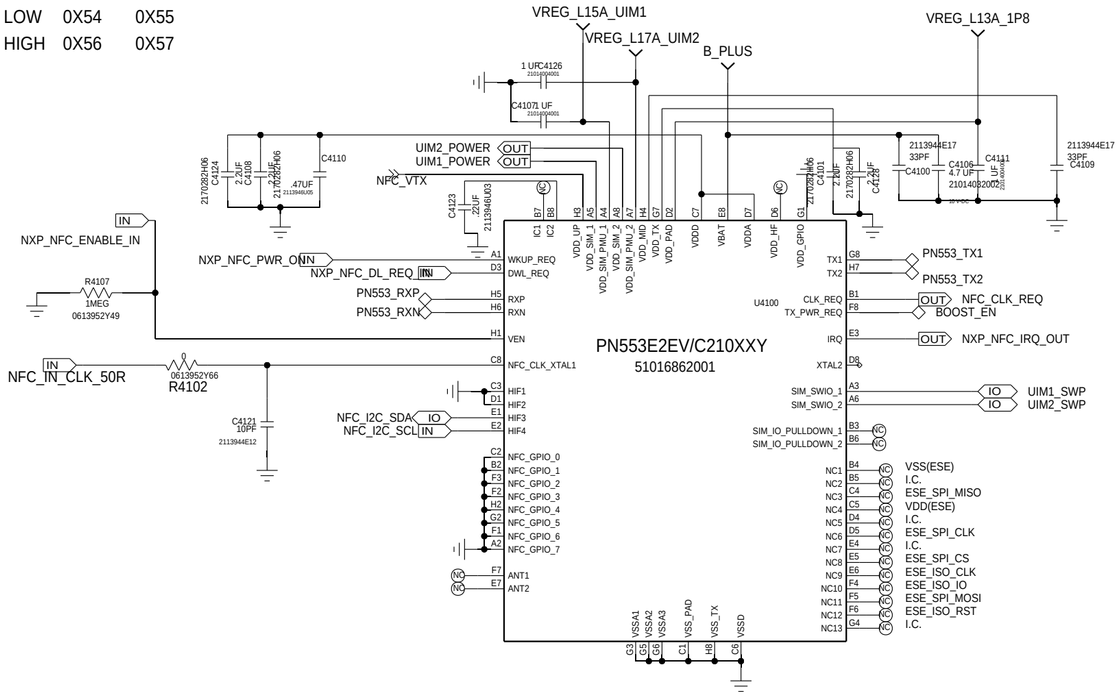
CONN: PN553 NFC

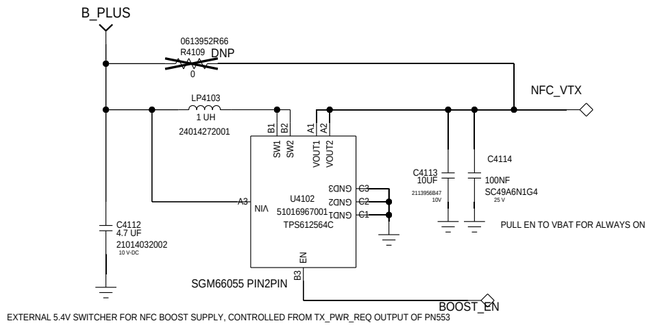
REF: 4100-4199

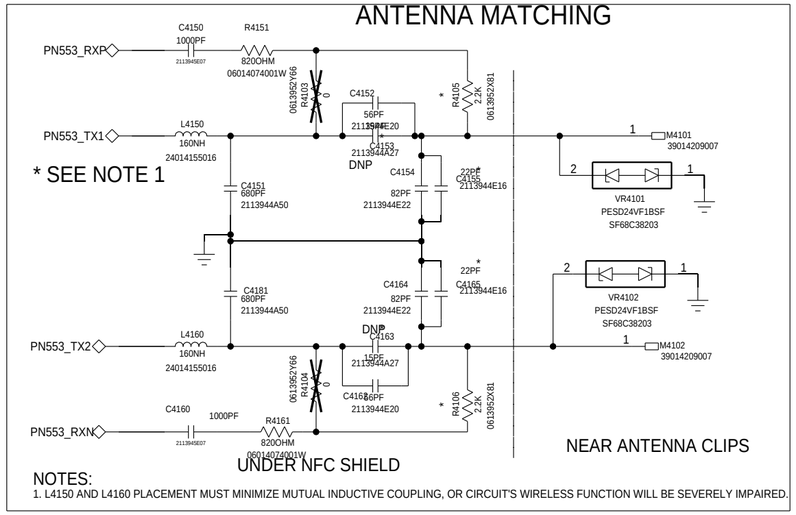
PN553 I2C ADDRESS MAP

HIF2	HIF1	WRITE	READ
LOW	LOW	0X50	0X51
LOW	HIGH	0X52	0X53
HIGH	LOW	0X54	0X55
HIGH	HIGH	0X56	0X57









RFFE:TRX ASM
REF 7000-7099

VDD_SWITCH_2P7 FOR RF SWITCH PWR SUPPLY

VREG_L16A_2P7 — R7003 0 0613952Y66 — C7024 1UF 2113946U01 — C7026 33PF 2113944E17 — VDD_RF_SWITCH_2P7_BOT

VREG_L16A_2P7 — R7001 0 0613952Y66 — C7025 1UF 2113946U01 — C7027 33PF 2113944E17 — VDD_RF_SWITCH_2P7_TOP

VREG_L13A_1P8_RF — C7001 .1UF 2113946U01 — C7000 33PF 2113944E17 — VDD_RF_SWITCH_2P7_BOT — C7019 1UF 2113946U01 — C7018 33PF 2113944E17

U7003
NA USE SC98C21210 LDJ18829M28DG014
NON NA SC98C32338 RFCPD1608050PS5T92

SC98C32338
U7003
RFCPD1608050PS5T92

BOT_ANT_LMB_50R — IO — C7028 100PF 2113944E23 — L7012 15NH SI28C31238 DNP — L7018 15NH SI28C31238 DNP

RF_OUT — CPL_FWD — CPL_REV — TERMINATION1 — TERMINATION2 — RF_IN — LMB_MAIN_ANT_CP_50R — C8011 100PF 2113944E23 — L7001 15NH SI28C31238 DNP

R7006 49.9 0613952S68 — R7007 49.9 0613952S68

CPL_MB_FWD_50R

CPL_MB_REV_50R

SC98C30040
FL8010
DPX252170DT-5051D1

LB_PORT — HB_PORT — COMM — GND5 GND4 GND3 GND2 GND1

BOT_LB_ANT_50R — C7089 100PF 2113944E23 — L7009 15NH SI28C31238 DNP — L7008 15NH SI28C31238 DNP — LB_MAIN_ANT_SW_50R

MB_MAIN_ANT_CP_50R — C7004 3PF 2170282J19 — L7015 15NH SI28C31238 DNP — L7002 8.2NH SI28C31232 — MB_MAIN_ANT_SW_50R

SC98C30039
LMSP3FQQ-J06
U7000

VDD — VIO — ANTLB — ANTHB — SCLK — SDATA — GND — CTGND

TXLB — TRXLB1 — TRXLB2 — TRXLB3 — TRXLB4 — TRXLB5 — TRXLB6 — TRXLB7 — TRXLB8 — TXHB — TRXHB1 — TRXHB2 — TRXHB3 — TRXHB4 — TRXHB5 — TRXHB6 — TRXHB7 — TRXHB8 — TRXHB9 — TRXHB10 — TRXHB11

PA_TX_2G_LB_50R
TRX_B8_50R
TRX_B12_B17_28B_50R
TRX_B13_71_50R
TRX_B20_B12_B17_50R
TRX_B13_B28A_50R
TRX_B5_B26_50R
PA_TX_2G_HB_50R
TRX_B1_50R
TRX_B1+B3_CA_50R
TX_B34_39_50R
TRX_B2_CA_B2_B25_B4_B66_50R
TRX_B2_50R
PRX_B34_39_50R

RFFE4_CLK — IN
RFFE4_DATA — IO

U7005
NA USE 58014033001 LDJ18829M25AG006
NON NA SC98C32345 MGMC18H0823G24-C59

SC98C32345
U7005
MGMC18H0823G24-C59

BOT_ANT_HB_50R — IO — C7043 3.9PF 2113944E07 — C7071 3.9NH SI28C31083 — MAIN_HB_1_50R

OUTPUT_P3 — INPUT_P4 — TERM_PORT_P2 — COUPLING_P1 — GND2 — GND1

R7008 49.9 0613952S68

CPL_HB_FWD_50R

TRX_B7_JUMPER_50R — C7015 100PF 2113944E01 — 2113944E12 — C7057 10PF — L7005 12NH SI28C31236

TX_B38_B41_50R
PRX_B40_50R
PRX_B38_B41_50R

SC98C37674
U7001
RFASWH656DTF03

RF1 — ANT — GND2 — CTGND — RF2 — RF3 — ID — VDD — RF4 — RF5 — RF6 — GND1 — VIO — SDATA — SCLK

VDD_RF_SWITCH_2P7_BOT — C7048 10PF 2113944E12 — C7049 1UF 2113946U01

VREG_L13A_1P8_RF — C7002 10PF 2113944E12

IO — RFFE4_DATA
IN — RFFE4_CLK

TRX_B7_50R — C7011 100PF 2113944E23 — C7013 100PF 2113944E23 — TRX_B7_JUMPER_50R

PRX_B1_B4_B66_50R

TX_B40_50R

U7001 BRAZIL+LA\VERZION DNP
TMO USE 5C99A6MWY7 RF1656TR13
NON TMO SC98C37674 RFASWH656DTF03

LMH_FBRX_OUT_50R — L7043 3.9NH SI28C31083 — FBRX_OUT_1_50R — C7042 5PF 2113944E25 — C7044 1PF 2113944E01 — R7046 18 0613952X39 — R7045 270 0613952X59 — R7047 270 0613952X59 — OUT — WTR_FBRX_P_50R

VDD_RF_SWITCH_2P7_BOT — C7141 18PF 2113944E15

SC98C32421
U7020
MXD8631

VDD — GND1 — GND2

GRFC1_GPIO93
CTL1_CPL_FBRX — IN
CTL2_CPL_FBRX — IN
GRFC6_GPIO98

V1 — V2 — RFIN — RF1 — RF2 — RF3

LMH_FBRX_OUT_50R
CPL_MB_FWD_50R
CPL_MB_REV_50R
CPL_HB_FWD_50R

C7190 100PF 2113944E23 — C7191 100PF 2113944E23

RFFE: QPA4360
REF 7150-7199

NOTE : REPLACE R7101 0 OHM WITH 10OHM IF VBATT OVERSHOOT IS MORE THAN 6V

DC BLOCK REQ'D

PLACE INSIDE WTR

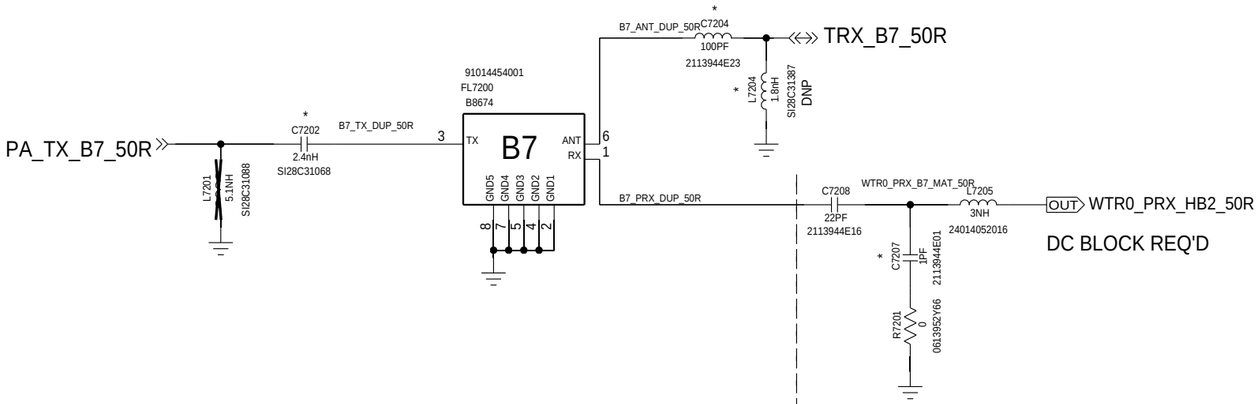
U7150

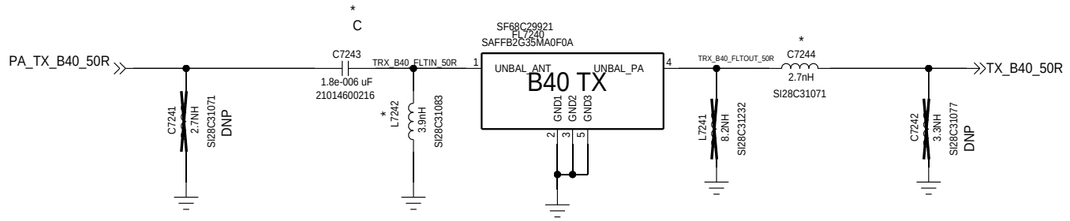
SC98C34252
QPA-4360-1-54-LGA-TR-0B-1

U7100
TMO USE SC98C04331 XMSS2O3G0PA-064
NON NA SC98C37673 MXD8641H

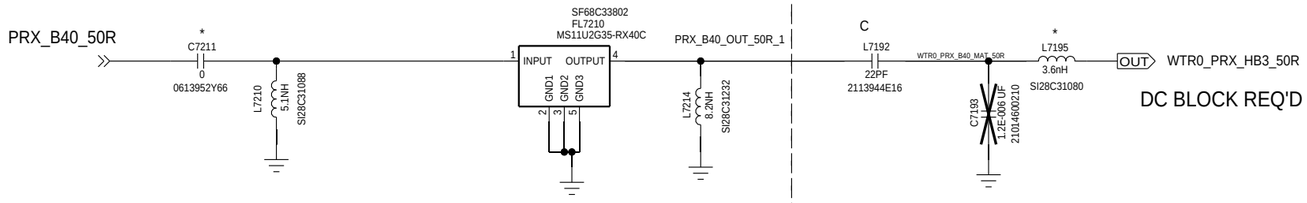
SC98C37673
MXD8641H

RFFE: HB_TRX_B7,38,40,41
REF 7200-7299

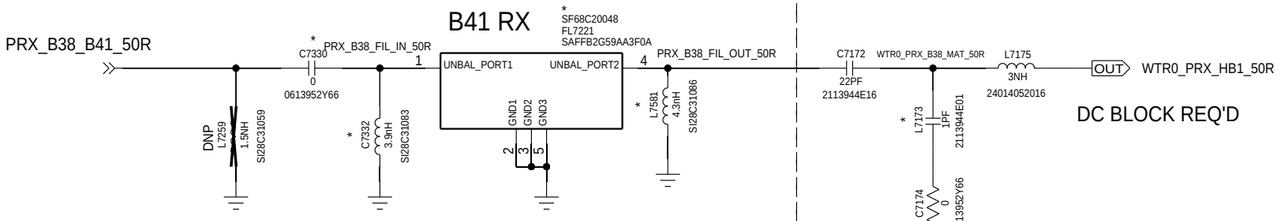




B40 RX

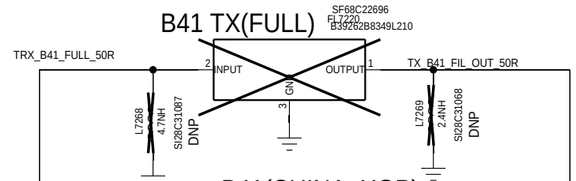


B41 RX

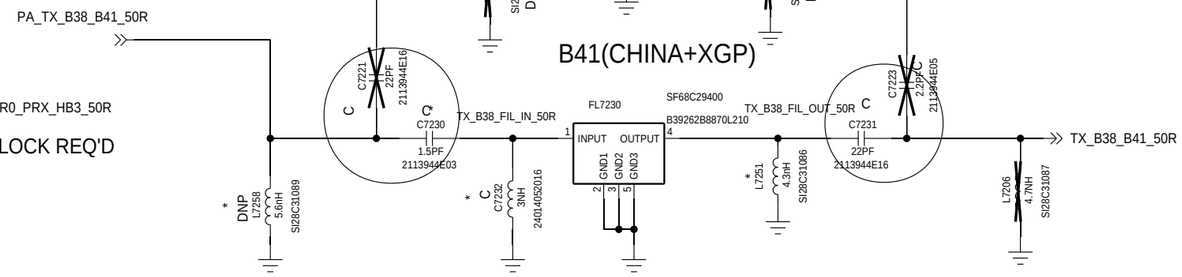


OTHER: B41(120MHZ) / B38 ¨C SF68C20048 (SAFFB2G59AA3F0A)
TMO B41(FULL) ¨C SF68C20051 (SAFFB2G59AA1F0A)
VERIZON BRAZIL DNP SIZE: 1109

B41 TX(FULL)

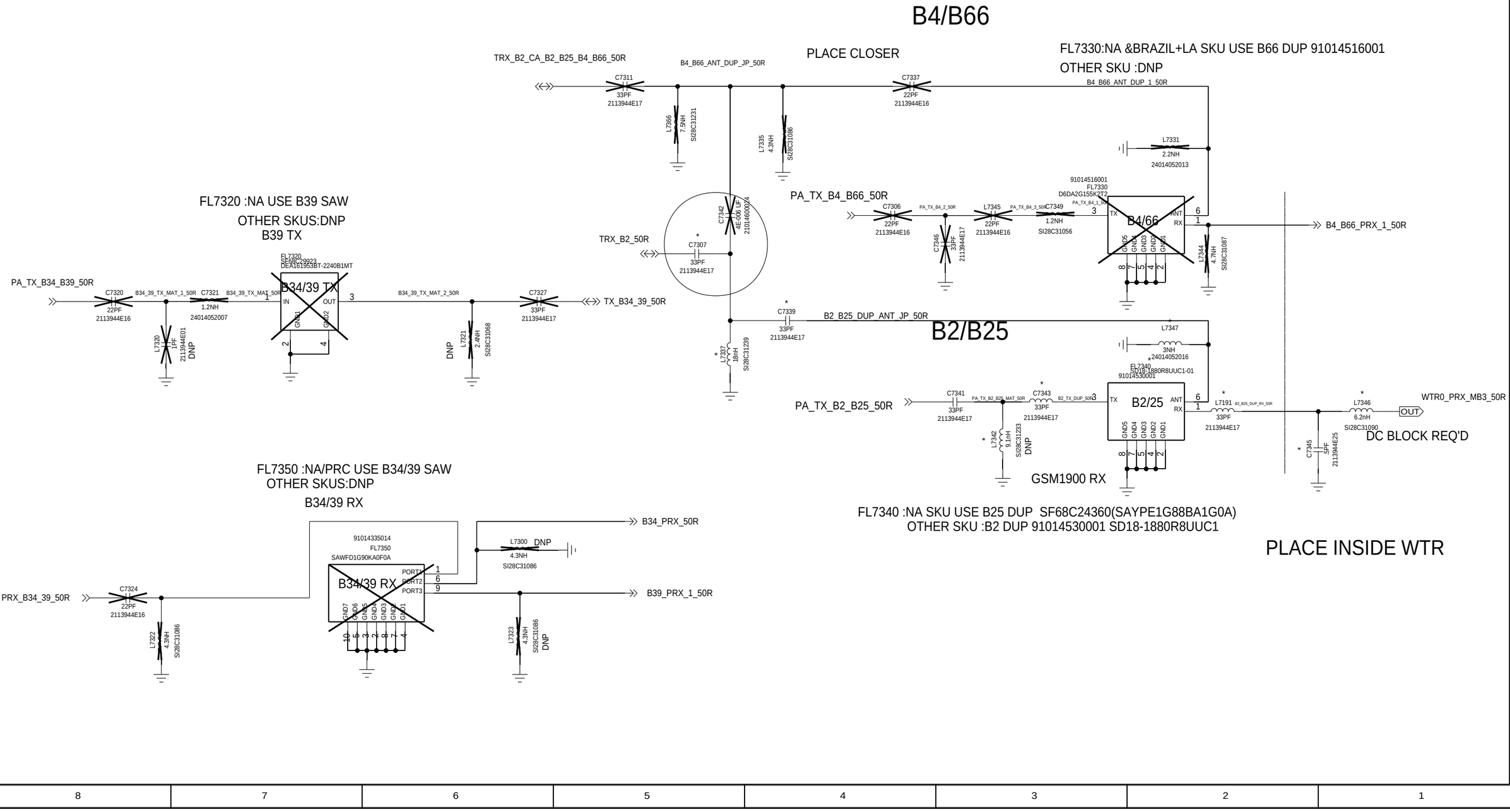


B41(CHINA+XGP)

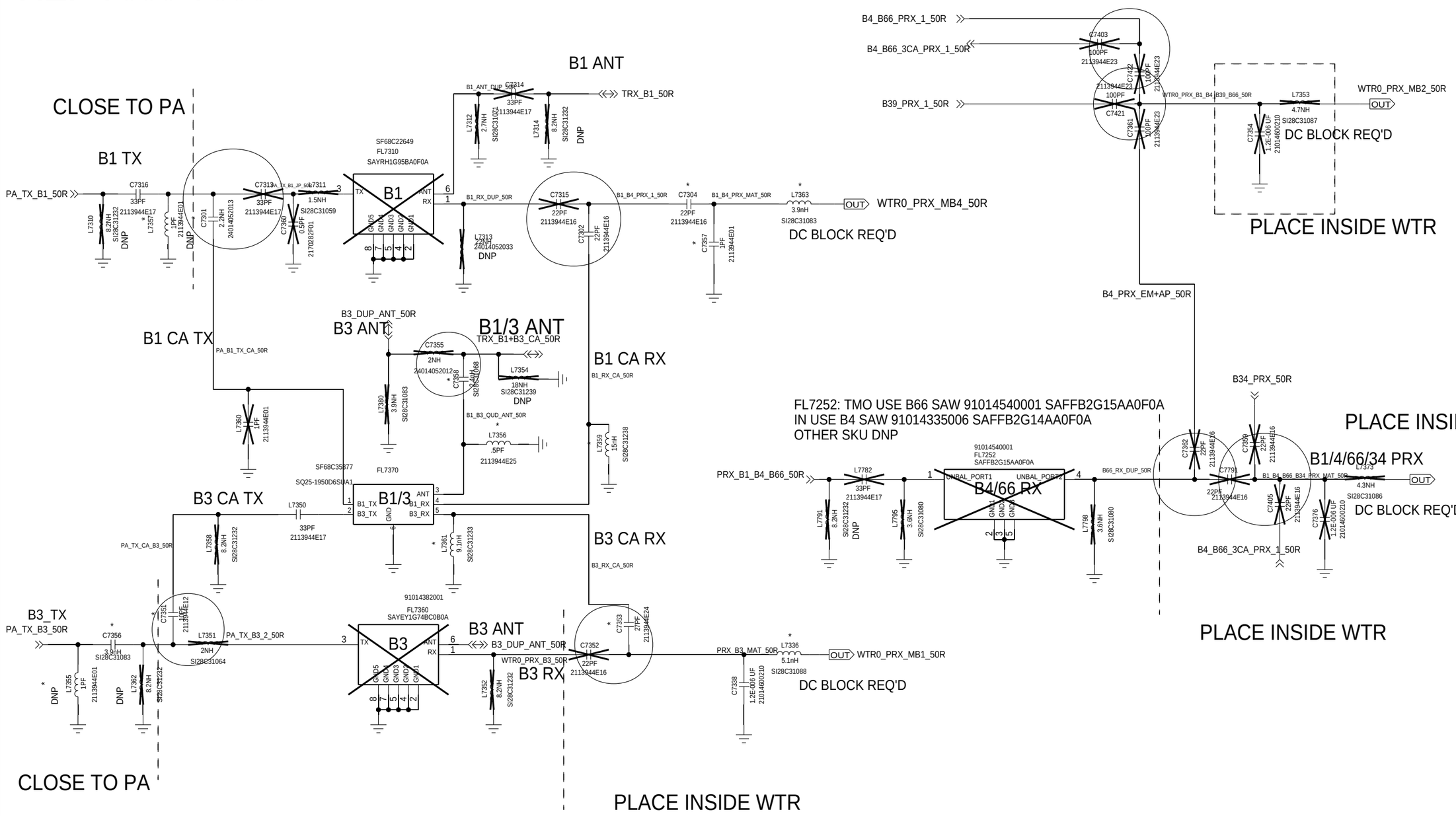


PLACE INSIDE WTR

RFFE :MB_TRX_B2,4,34,39,G1900
REF 7300-7399



RFFE: MB_TRX_B1_3_B1/3 QUAD_G1800
REF 7350-7399



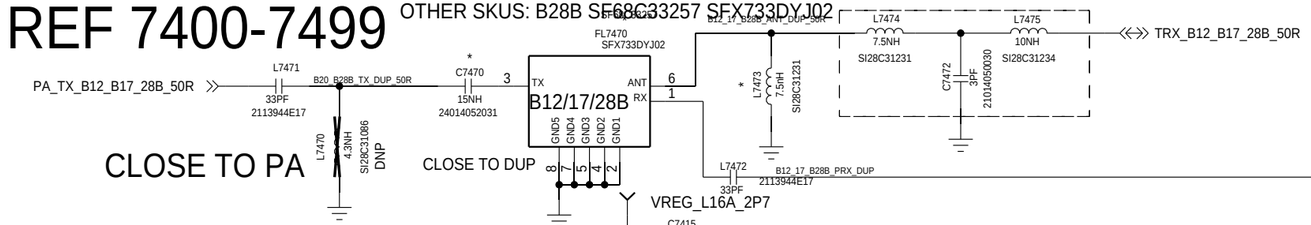
RFFE: LB_TRX_B12,17,13,20,28

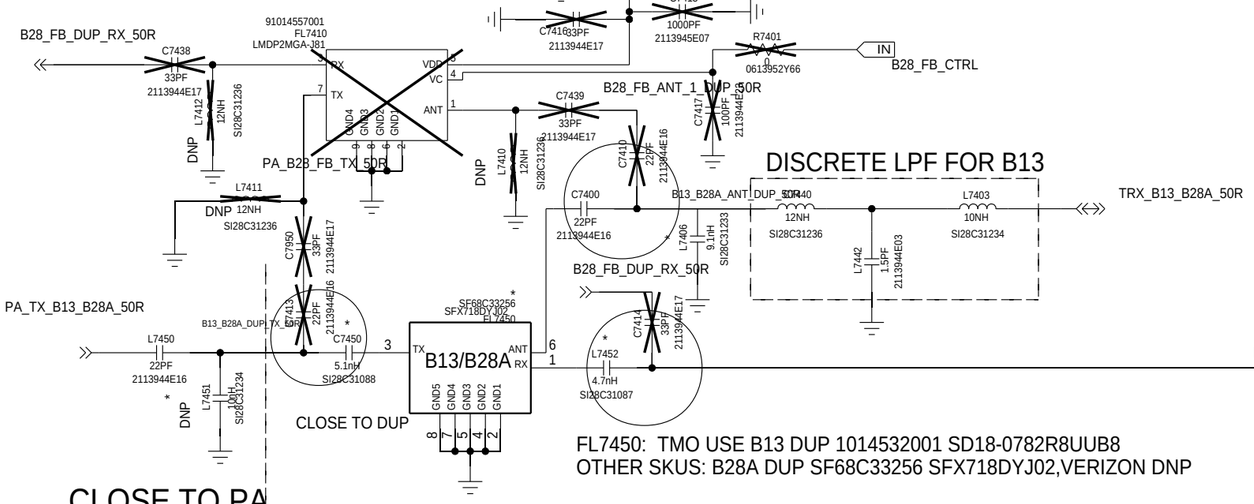
TMO/VERIZON B12/17 91014387001 D5DA737M5K2H2

OTHER SKUS: B28B SF68C33257 SFX733DYJ02

REF 7400-7499

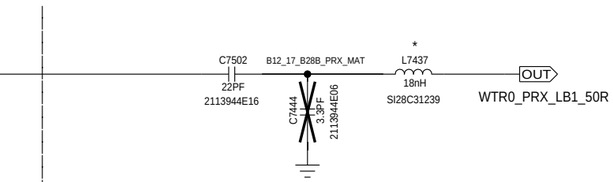
DISCRETE LPF

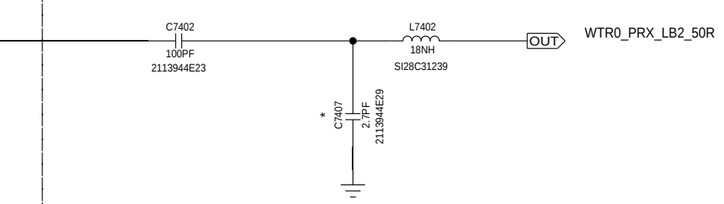




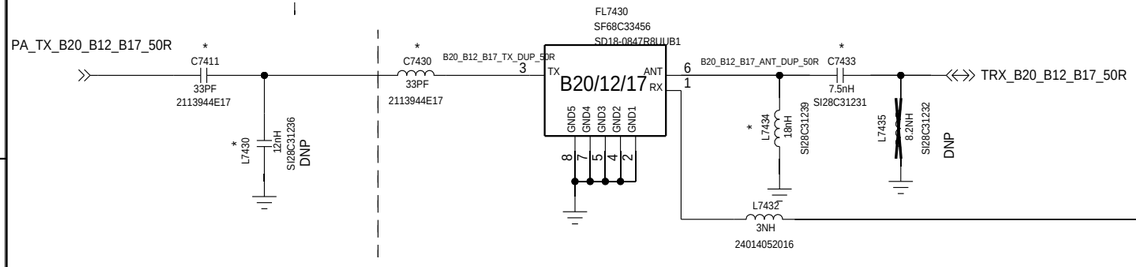
FL7450: TMO USE B13 DUP 1014532001 SD18-0782R8UUB8

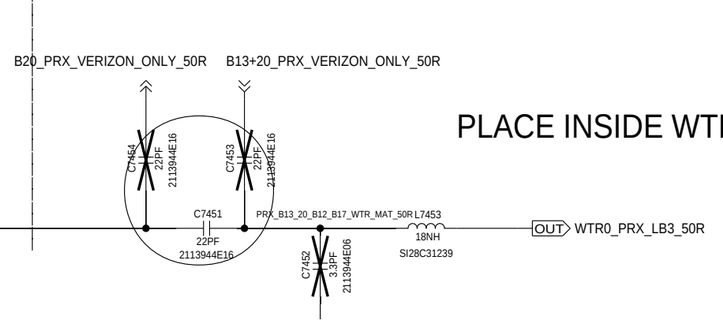
OTHER SKUS: B28A DUP SF68C33256 SFX718DYJ02,VERIZON DNP





CLOSE TO PA





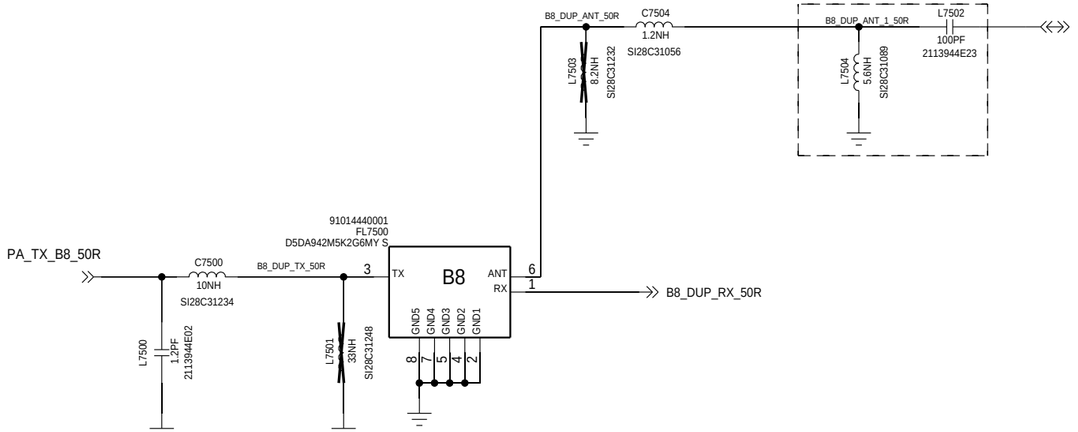
PLACE INSIDE WTR

TMO\VERIZON/WE+JANZ/IN: B20 SF68C33456 SD18-0847R8UUB1

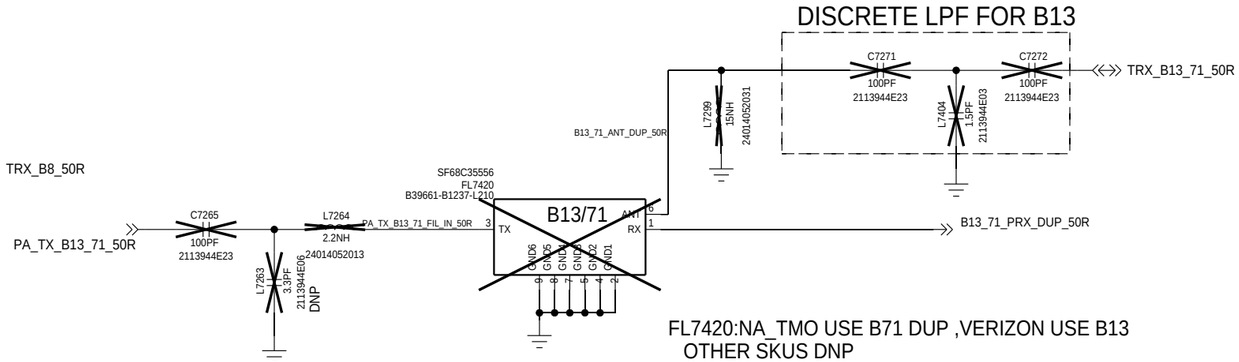
BRAZIL+LA: B12/17 91014387001 D5DA737M5K2H2

RFFE: LB_TRX_B5,8,26,71,G850/900
REF 7400-7549

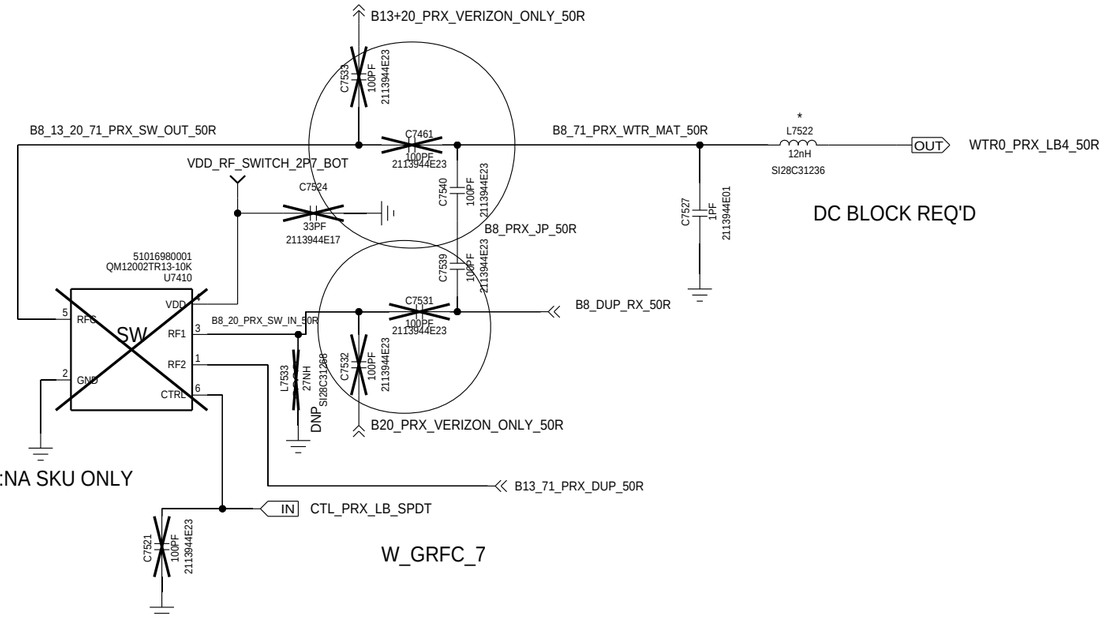
LPF FOR B3+B8 COEXISTENCE



DISCRETE LPF FOR B13



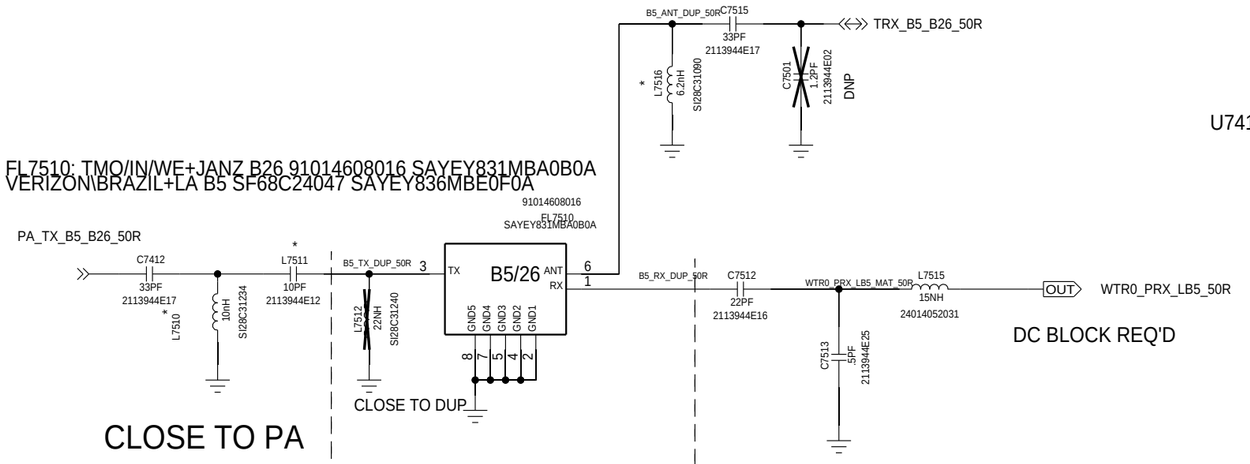
FL7420:NA_TMO USE B71 DUP ,VERIZON USE B13
OTHER SKUS DNP



U7410:NA SKU ONLY

W_GRFC_7

FL7510: TMO/IN/WE+JANZ B26 91014608016 SAYEY831MBA0B0A
VERIZON\BRAZIL+LA B5 SF68C24047 SAYEY836MBE0F0A



CLOSE TO PA

CLOSE TO DUP

DC BLOCK REQ'D

PLACE INSIDE WTR

REF 7600-7699

NON NA: B41(120MHZ) / B38 ¨C SF68C20048 (SAFFB2G59AA3F0A)
TMO B41(FULL) ¨C SF68C20051 (SAFFB2G59AA1F0A)
VERIZON\BRAZIL+LA DNP SIZE: 1109

U7610
NA: SP4T RF1648B
EM+AP+IN/WE+JAPAN: RF1621
BRAZIL+LA: DNP

U7660
NA(SP4T): RF1648B SC98C29925
OTHER SKUS: SP3T RF1621

RFFE: MB_DRX_B1,2,3,4,25,39,66

REF 7700-7749

B34/39 RX

DRX_B34_B39_50R

C7711 33PF 2113944E17

L7714 3.3NH SI28C31077 DNP

L7715 4.3NH SI28C31086

91014335014 FL7715 SAWFD1G90KA0F0A

PORT1 1 PORT2 6 PORT3 9

GND7 GND6 GND5 GND4 GND3 GND2 GND1

10 5 3 2 8 7 4

L7708 3.3NH SI28C31077 DNP

WTR0_DRX_B34_FIL_OUT

B1\4\66 OR B34

L7716 3.3NH SI28C31077 DNP

WTR0_DRX_B39_FIL_OUT

B2\25 OR B39

C7713 C 22PF 2113944E16

WTR0_DRX_B39_MAT_5_50R

C7715 1.8E-006 UF 21014600216

L7712 3.3NH SI28C31077

OUT WTR0_DRX_MB2_50R

DC BLOCK REQ'D

FL7715:TMO\VERIZON B25+B66 91014518001 SAWFD1G96AC2F0A

PRC B34+B39 91014335014 SAWFD1G90KA0F0A OTHER DNP

TMO\VERZION\PRC ONLY

DRX_B3/B2_FLOUT_50R

C7721 33PF 2113944E17

WTR0_DRX_B2_B3_MAT_50R *

C7704 1PF 2113944E01 *

L7705 5.1NH SI28C31088

OUT WTR0_DRX_MB3_50R

DC BLOCK REQ'D

DRX_B2/B3/BC1_50R

L7742 * 2.2NH 24014052013

DRX_B3/B2_FLIN_50R

L7744 3.3NH SI28C31077 DNP

L7743 * 1PF 2113944E01 DNP

91014335005 FL7710 SAFFB1G96AB0F0A

INPUT 1 OUTPUT 4

GND2 GND3 GND5

2 3 5

B3 OR B2

L7722 18NH SI28C31239 DNP

FL7710:VERZION DNP

TMO\BRAZIL+LA USE B3 FLITER 91014308001 SAFFB1G84AB0F0A

OTHER SKUS USE B2 FLITER 91014335005 SAFFB1G96AB0F0A

ALL SKUS DNP

WTR0_DRX_B34_FIL_OUT

C7705 22PF 2113944E16

C7703 22PF 2113944E16

L7703 8.2NH SI28C31232 DNP

L7704 3.6NH SI28C31080

91014540001 FL7640 SAFFB2G15AA0F0A

UNBAL_PORT1 1 UNBAL_PORT2 4

GND1 GND2 GND3

2 3 5

B66 RX

L7706 3.6NH SI28C31080

C7701 33PF 2113944E17

DRX_B1_B4_B66_SINGLE_SAW_50R

DRX_B1_B4_B66_SINGLE_SAW_FIL_IN_50R

DRX_B1_B4_B66_SINGLE_SAW_FIL_OUT_50R

WTR0_DRX_B1/4/34/66_MAT_50R

L7702 3.3NH SI28C31077

C7702 1.8E-006 UF 21014600216

OUT WTR0_DRX_HB4_50R

DC BLOCK REQ'D

DRX_CA_B1/B3/B2/B4/B25/B66_50R

C7700 * 2.0NH 24014052005

L7700 1.2NH SI28C31056 DNP

L7701 2.7NH SI28C31071

DRX_B66/4/1_FLTOUT_50R

B66/B4 OR B34

L7709 18NH SI28C31239

C7747 22PF 2113944E16

WTR0_DRX_B4/B66_MAT_50R

C7746 * 5PF 2113944E25

L7747 * 3.6nH SI28C31080

OUT WTR0_DRX_MB4_50R

DC BLOCK REQ'D

FL7700 :TMO USE B34+B39 DUAL SAW 91014335014 SAWFD1G90KA0F0A

FL7700 :BRAZIL+LA USE B25+B66 DUAL SAW 91014518001 SAWFD1G96AC2F0A

FL7700 :OTHER SKUS USE B1+B3 DUAL SAW 91014424001 SAWFD1G84AA0F0A

GND1 GND2 GND3 GND4 GND5 GND6 GND7

4 7 8 2 3 5 10

9 UNBAL_PORT_LCH

6 UNBAL_PORT_HCH

1 UNBAL_PORT_LCH_HCH

SAWFD1G84AA0F0A

FL7700 * 91014424001

B25+B66 OR B1+B3 OR B34+B39

VDD_RF_SWITCH_2P7_BOT

DRX_B25/2/3_FLOUT_50R

B25/B2 OR B39

L7731 18NH SI28C31239

C7731 22PF 2113944E16

WTR0_DRX_B2_B25_MAT_5_50R

C7732 * 5PF 2113944E25

L7737 * 5.6nH SI28C31089

OUT WTR0_DRX_MB1_50R

DC BLOCK REQ'D

PLACE INSIDE WTR

U7712 TMO/VERIZON/PRC(SP3T): RF1621 51014606014

NON NA(SPDT): RF1621A 51016674001

C7734 12PF 2113944E13

51016674001 * U7712 RF1621ATR13

VDD 7

RF1 3 RF2 5 RF3 6 RF4 2

GND2 GND1 4 9

VC1 1 VC2 8

C7736 12PF 2113944E13

C7738 12PF 2113944E13

GRFC2_GPIO94

IN CTL1_DRX_MB_SP3T

IN CTL2_DRX_MB_SP3T

GRFC3_GPIO95

J7701 NA - 09014068001W(MM8030-2610RJ3)

OTHER - SCA8C29399(818011998)

IO DIV_ANT_MB_50R

2 OUT A IN C 1

GND GND

4 3

J7701 CONN_J 09014068001W

2113944E16 22PF C7740

DIV_ANT_MB_CONNECTOR_3_50R

L7741 15NH 24014052031

L7728 5PF 2113944E25

DRX_CA_B1/B3/B2/B4/B25/B66_50R

DRX_B34_B39_50R

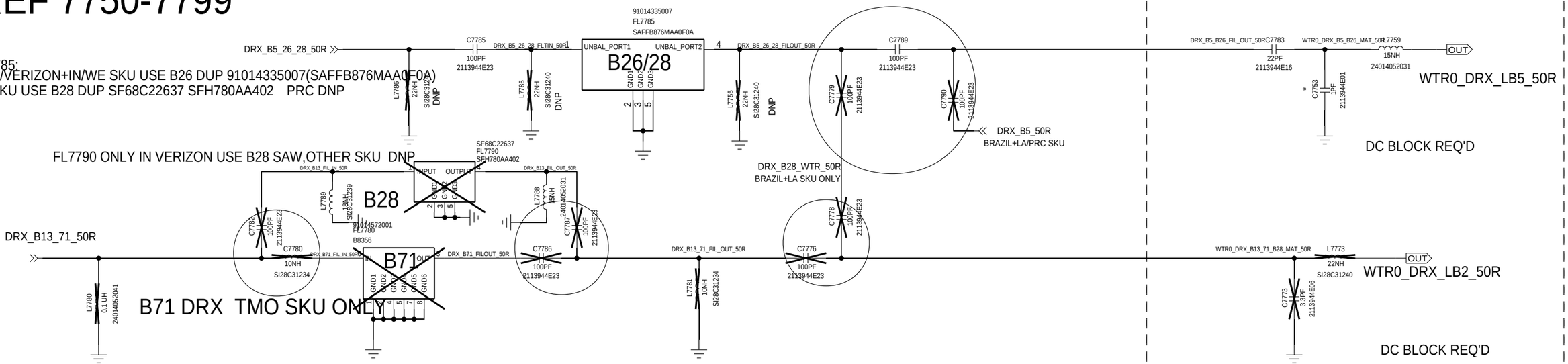
DRX_B2/B3/BC1_50R

RFFE: LB_DRX_B5,8,12,13,17,20,26,28

REF 7750-7799

FL7785:

TMO/VERIZON+IN/WE SKU USE B26 DUP 91014335007(SAFFB876MAA0F0A)
LA SKU USE B28 DUP SF68C22637 SFH780AA402 PRC DNP

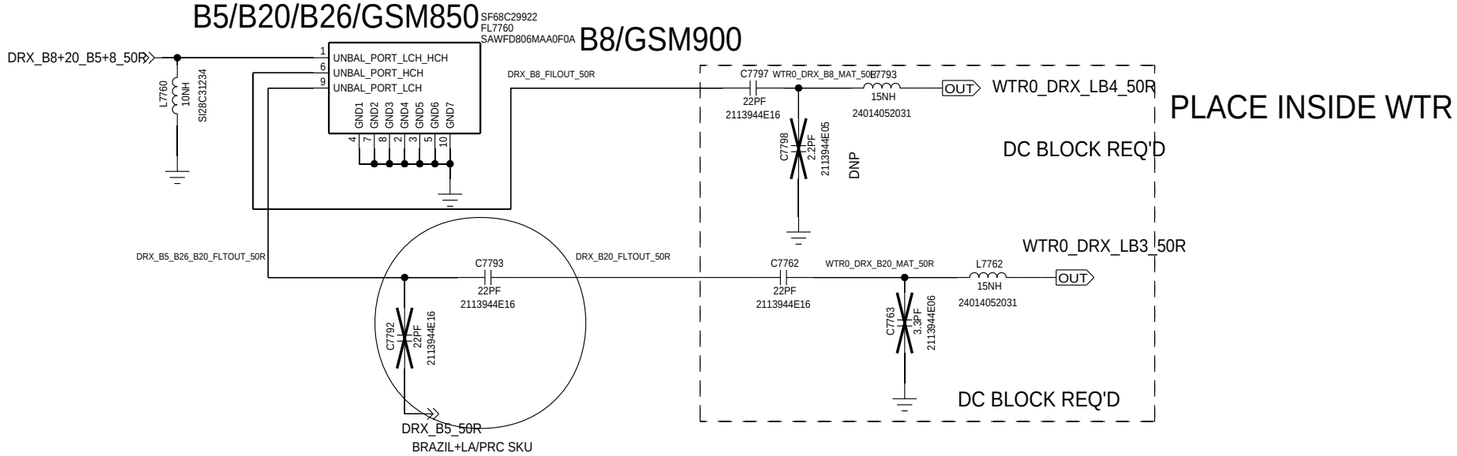


FL7750:

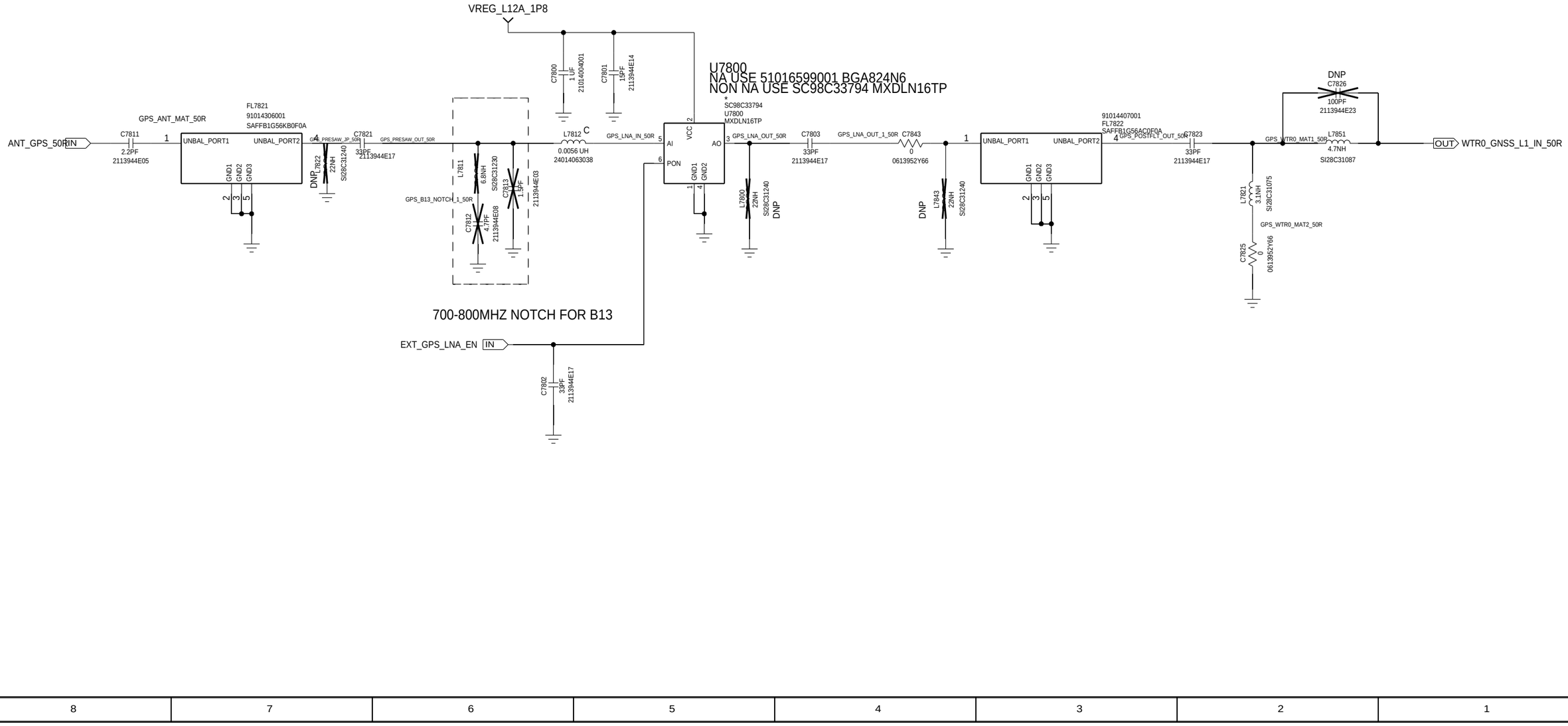
TMO/VERIZON/BRAZIL+LA: USE B12/13/17 SAW 91014395001 SAFFB742MAA0F0A
INDIA/WE SKU: USE B28 SF68C22637 SFH780AA402 PRC DNP

FL7760:

TMO/VERIZON/IN/WE+JANZ SKU USE B8+20 DUAL SAW SAWFD806MAA0F0A SF68C29922
BRAZIL+LA/PRC SKU USE B5+8 DUAL SAW SAWFD881MAA0F0A SF68C00576

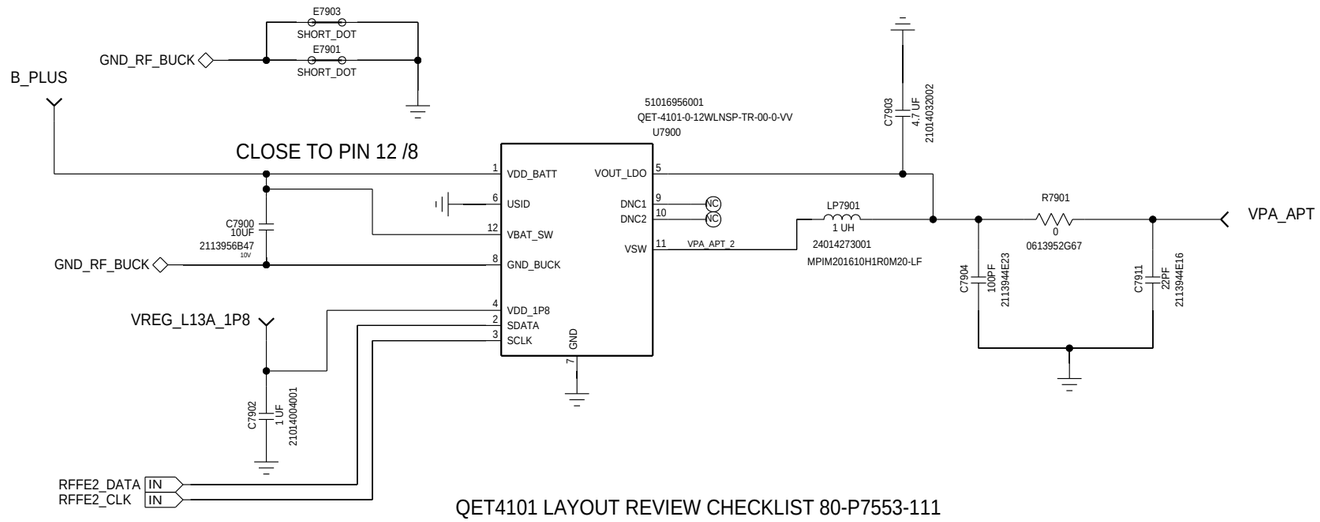


RFFE: GPS
REF7800-7899



RFFE: QFE4101&TI DCDC
REF7900-7949

APT DCDC INDUCTOR			
1ST	MPIM201610H1R0M20-LF		DCR = 58MOHM
	MICROGATE	24014273001	ISAT = 3.1A MAX, IRMS = 2.2A MAX
2ND	CIGT201610UM1R0MNE		DCR = 48MOHM
	SECOM	SI28C38192	ISAT = 3.1A MAX, IRMS = 2.8A MAX



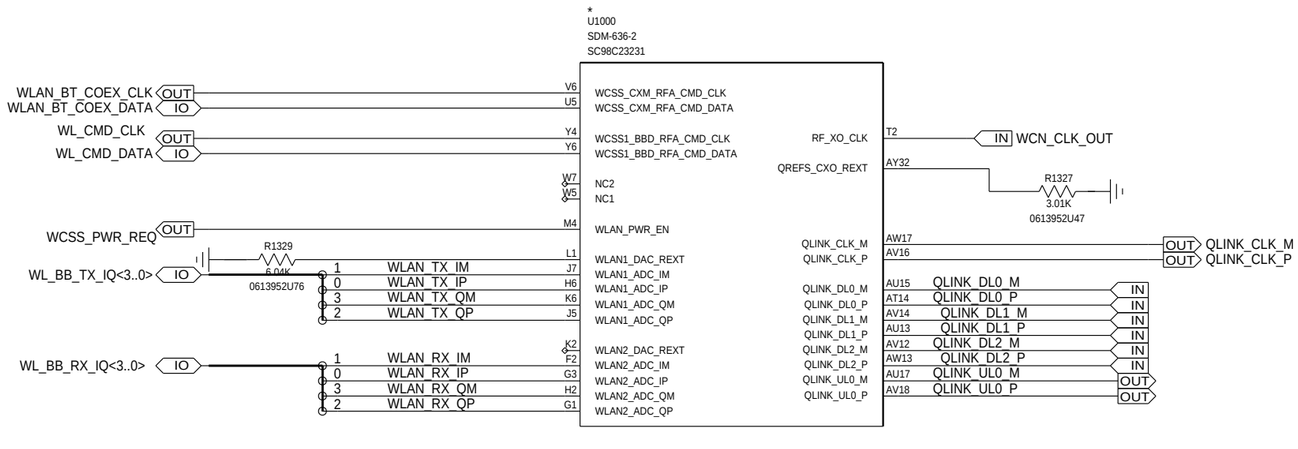
QET4101 LAYOUT REVIEW CHECKLIST 80-P7553-111

DO NOT VIA DIRECTLY TO GROUND PLANE. KEEP ISOLATED ON SURFACE LAYER

NOTE1: NO VIAS ON PIN 8 (GND_SW) AND PIN 12 (VBAT_SW), NO VIAS ON C7900 PADS. USE SHORT AND WIDE TRACES CONNECTING FROM CHIP PINS TO C7900. EXTEND THE TRACE (¡Ý 1MM), THEN VIAS DOWN AND CONNECT TO THE GROUND AND POWER PLANE/FILL ON THE NEXT LAYER. KEEP THE NEXT LAYER AS CONTINUOUS GROUND UNDERNEATH THE AREA FROM CHIP PINS TO THE C7900 CONNECTION.

MSM: RF INTERFACE

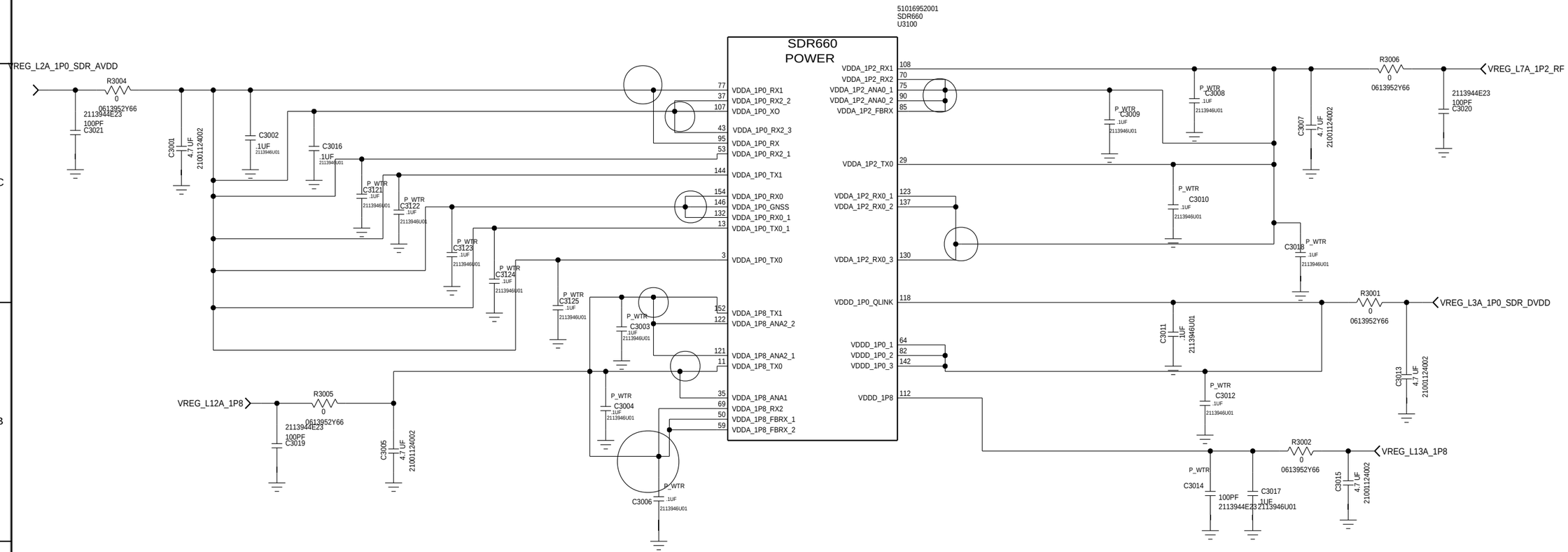
REF 1200-1299



NEED TO APPLY LC FILTER FOR REDUCE B40 RX SPURS(QC 80-NP237-56)
LC FILTER COULD BE PLACED ANYWHERE BETWEEN WTR BBRX_IQ AND MSM BBRX_IQ PINS
BUT THE GND FOR SHUNT C SHOULD NOT BE SHARED WITH EITHER WTR OR MSM GND ON ANY LAYER.
A DIRECT VIA FROM SHUNT C TO MAIN GND IS RECOMMENDED

SDR660: POWER

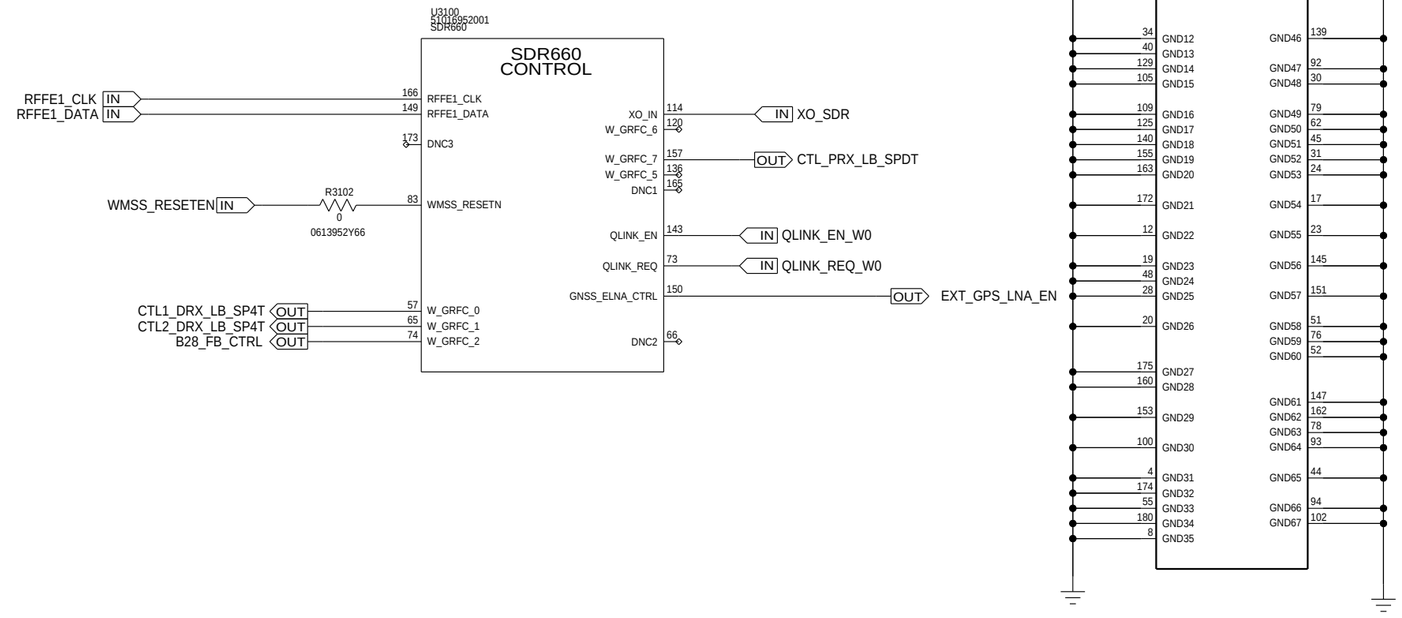
REF 3000-3099



CIRCLE PRESENT SDR660 POWER SUPPLY STAR ROUTING

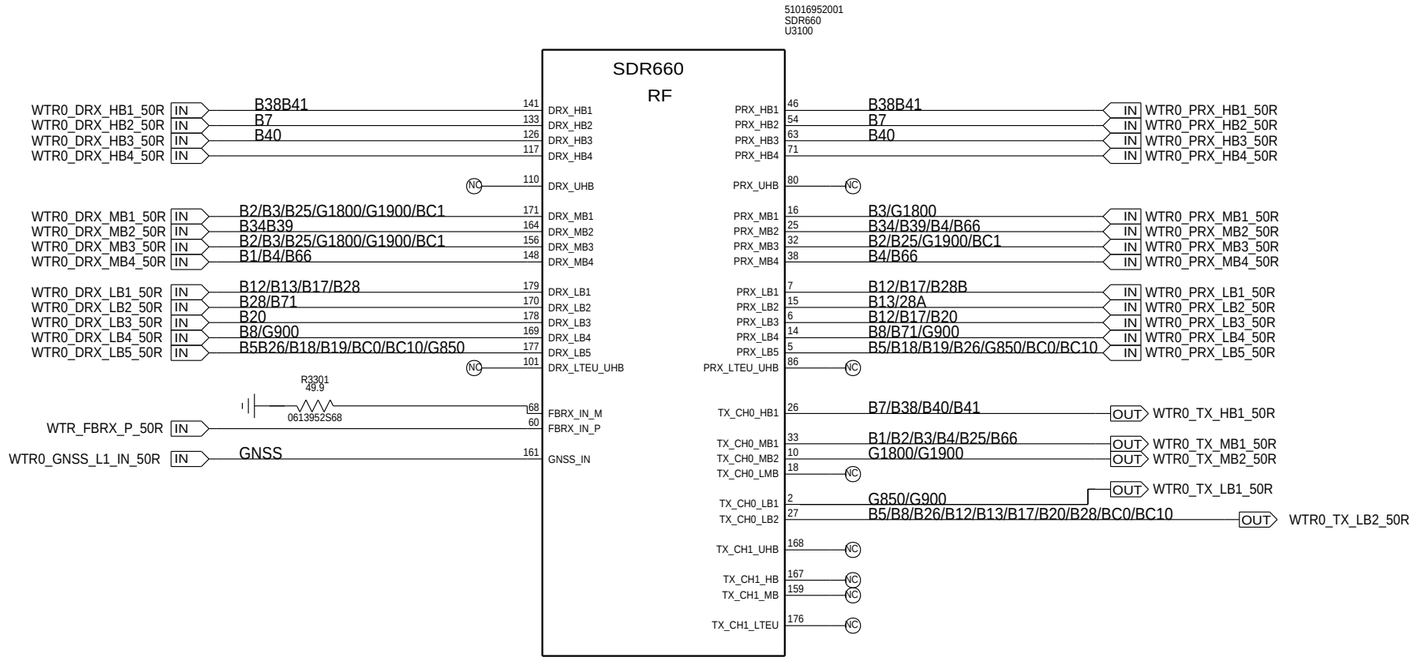
SDR660: TX/PWR/GROUND

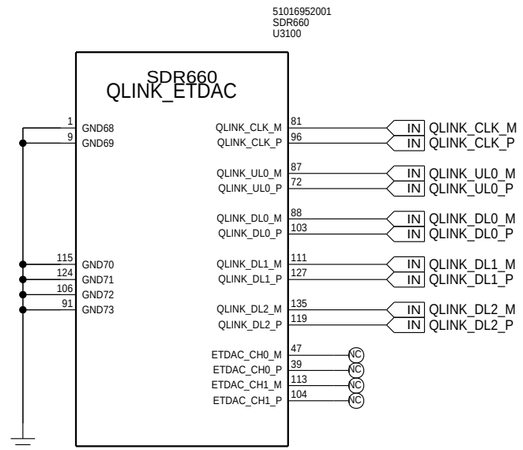
REF 3100-3199



SDR660: PRX/DRX/GPS

REF 3200-3299

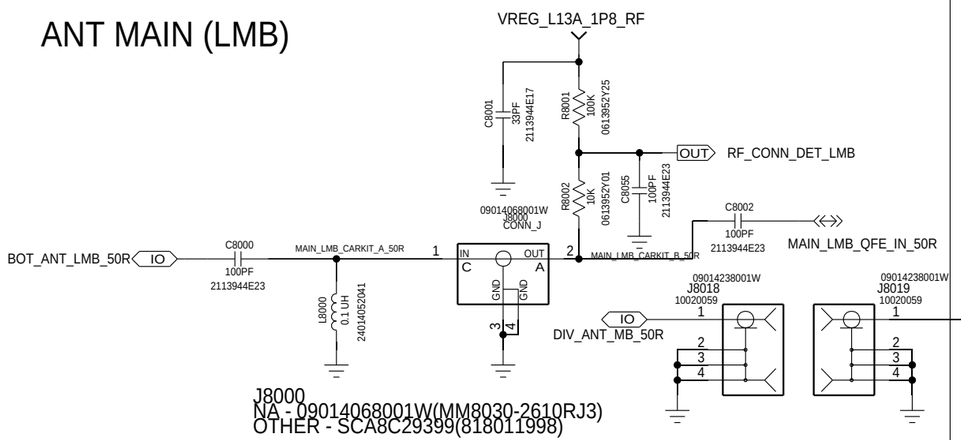




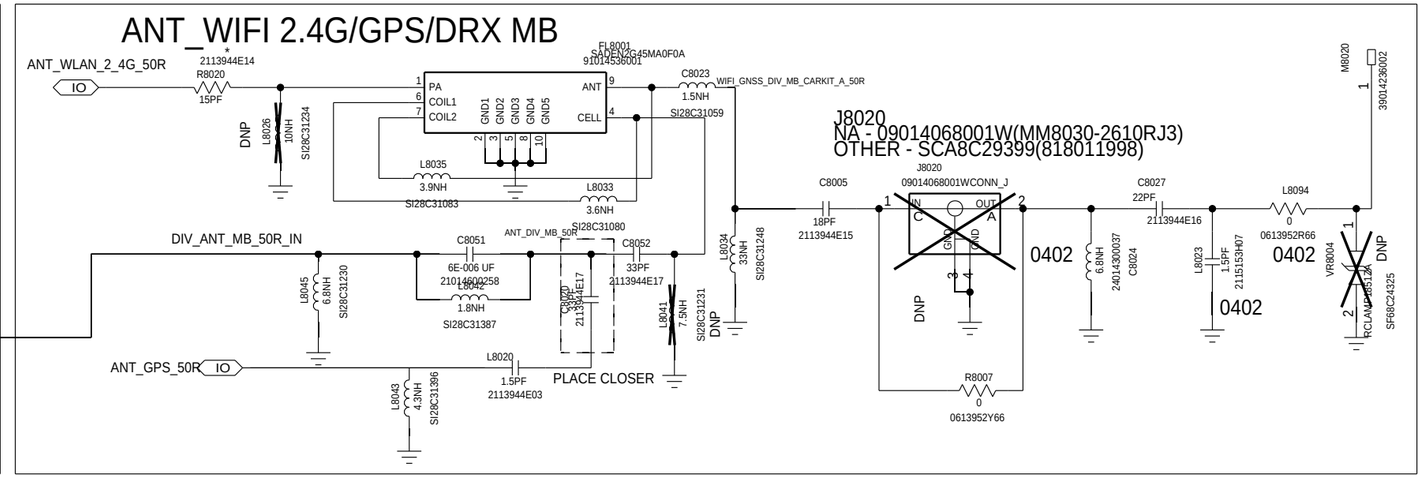
8000:antennas

REF 8000-8049

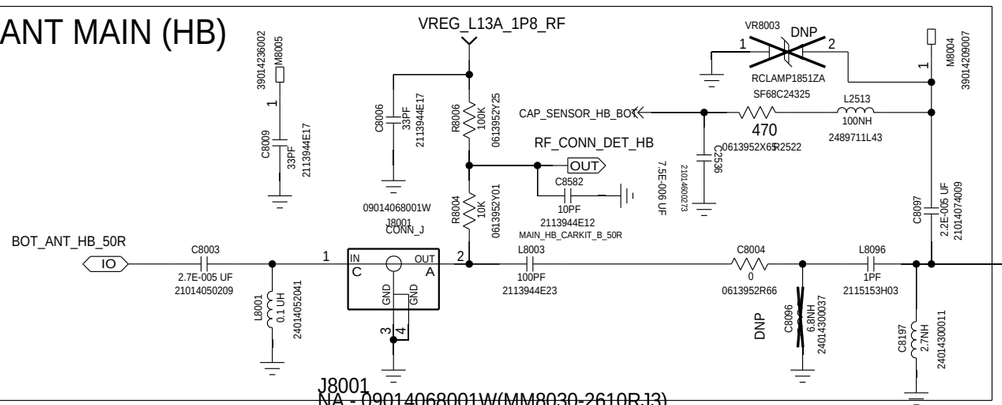
ANT MAIN (LMB)



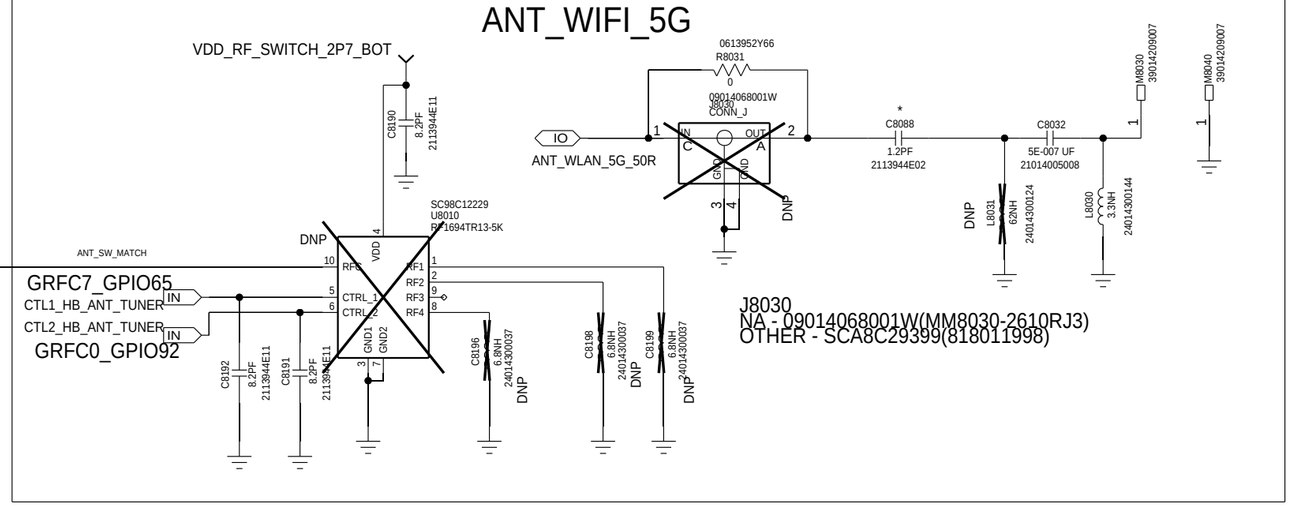
ANT_WIFI 2.4G/GPS/DRX MB



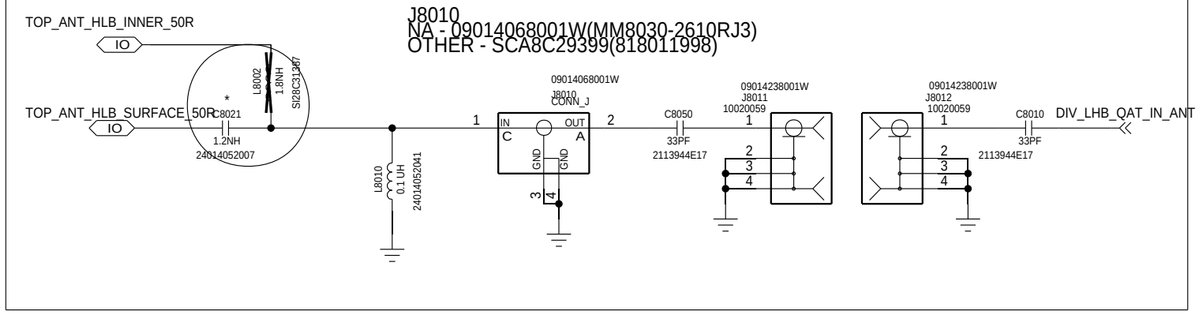
ANT MAIN (HB)



ANT_WIFI_5G



ANT DRX HLB



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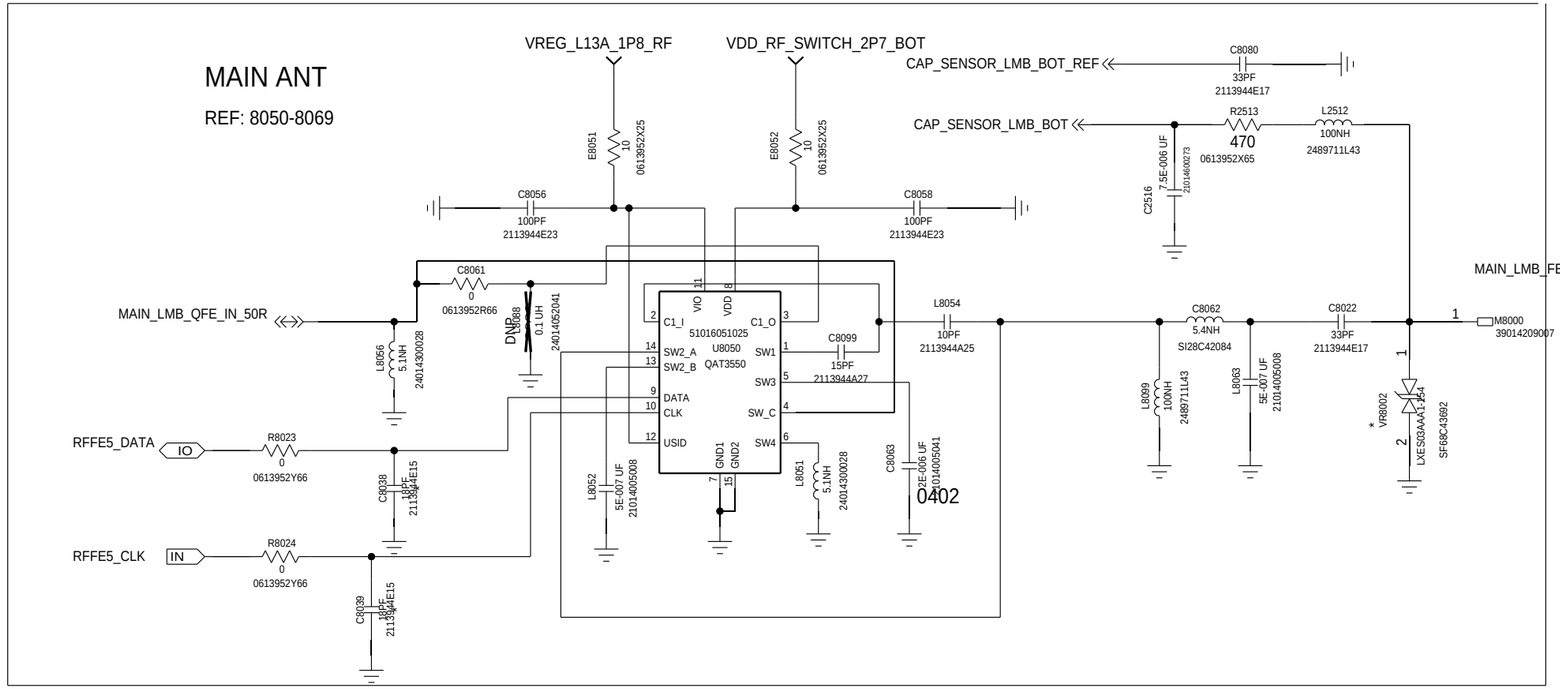

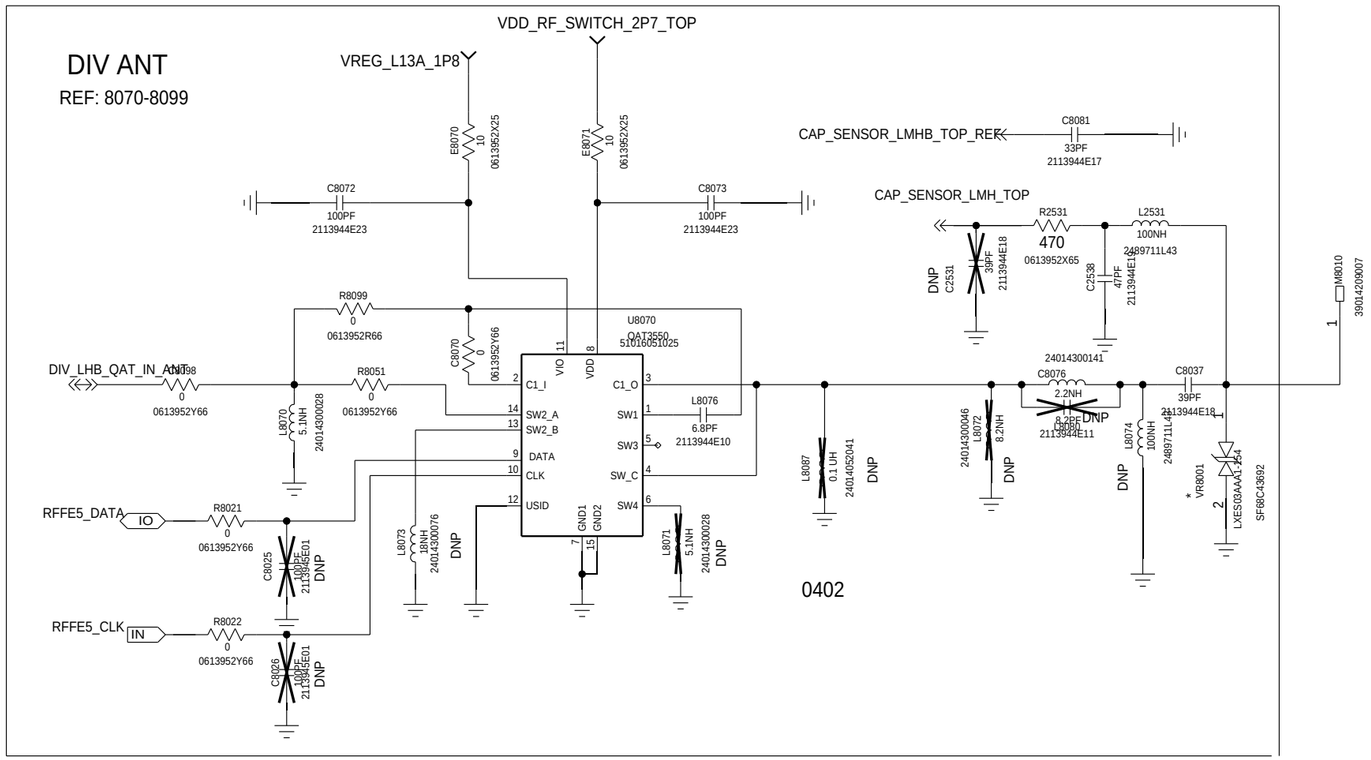

RFFE: CAP SENSOR
REF 2510-2530