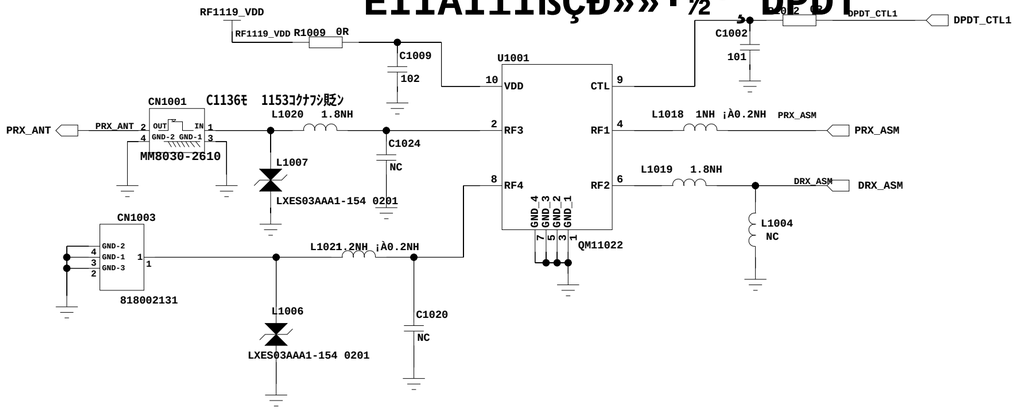
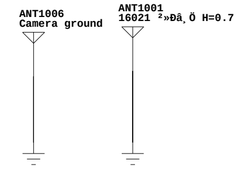
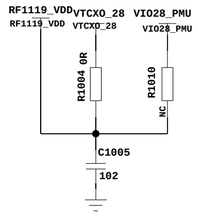
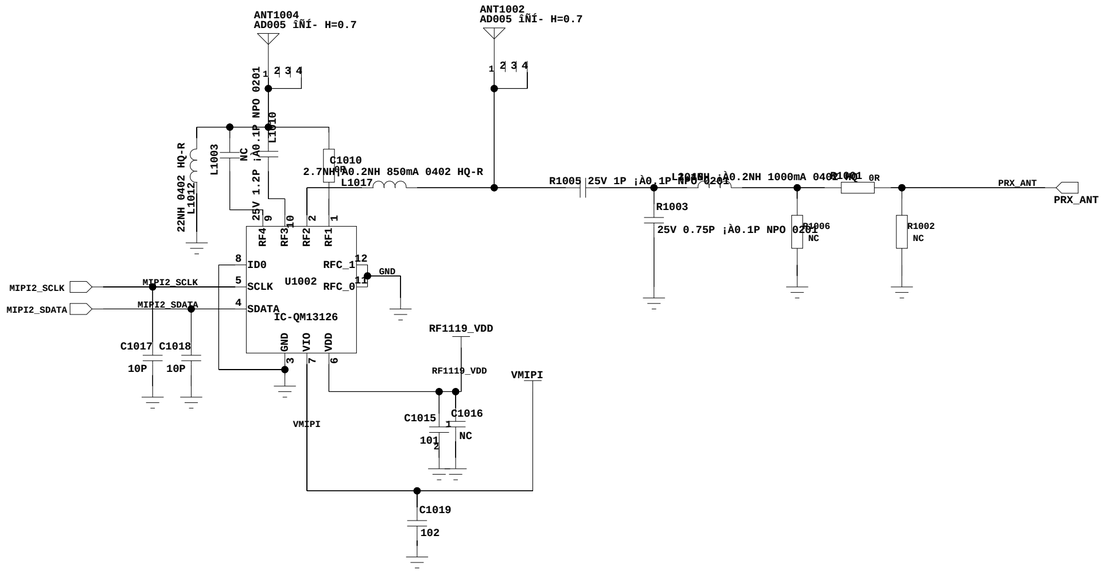
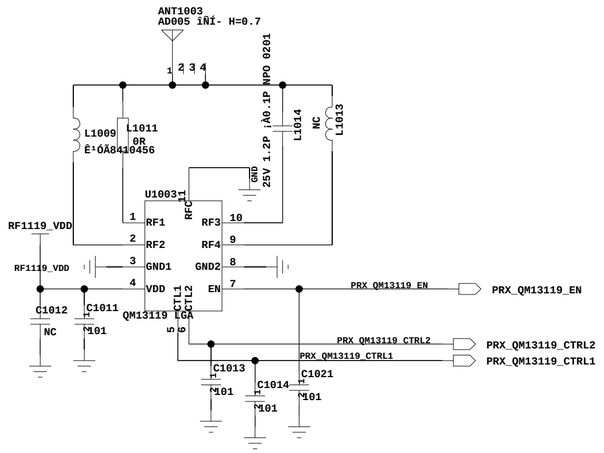
ÉÏÏÂÌìÏßÇÐ»»·½° DPDT

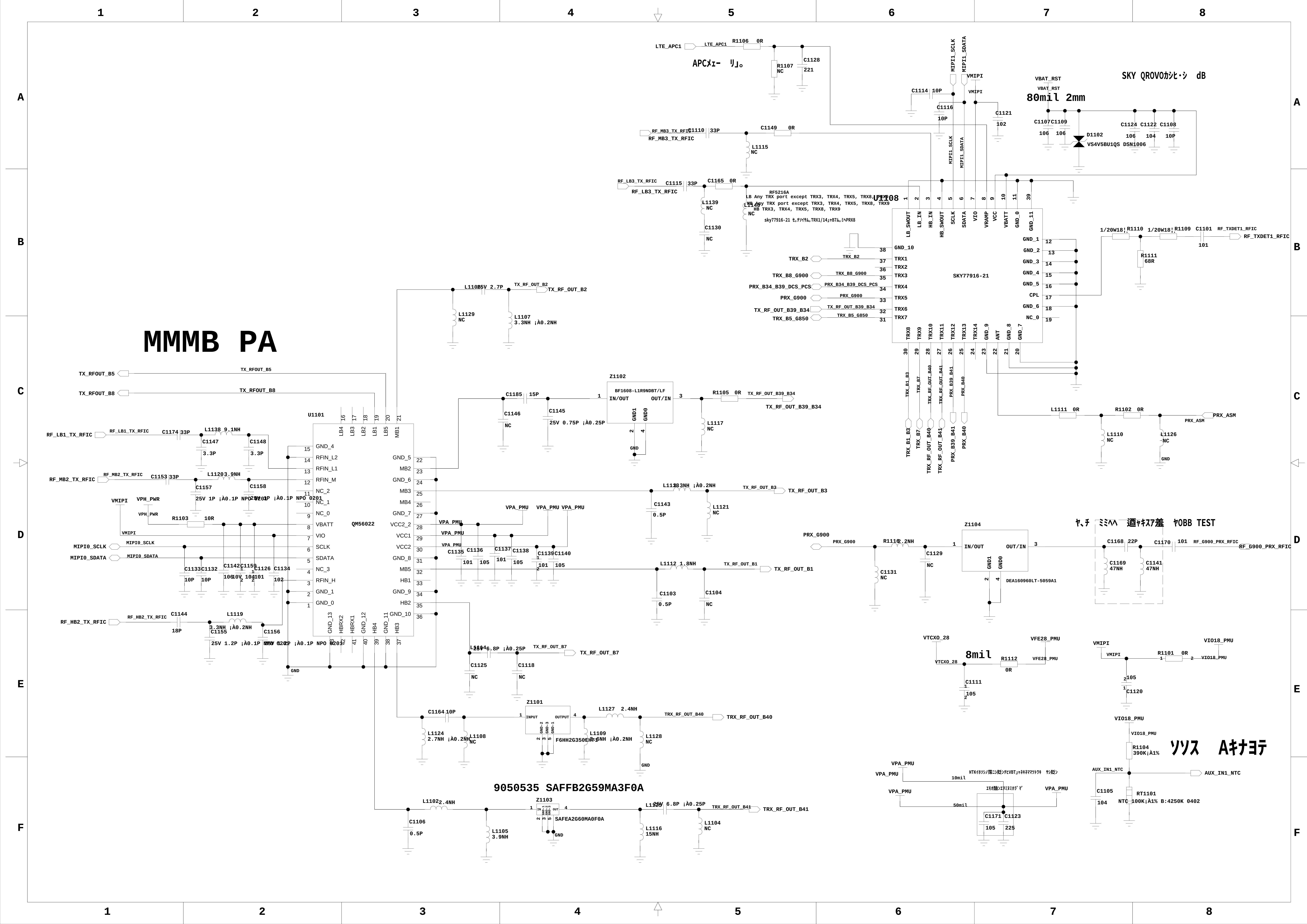






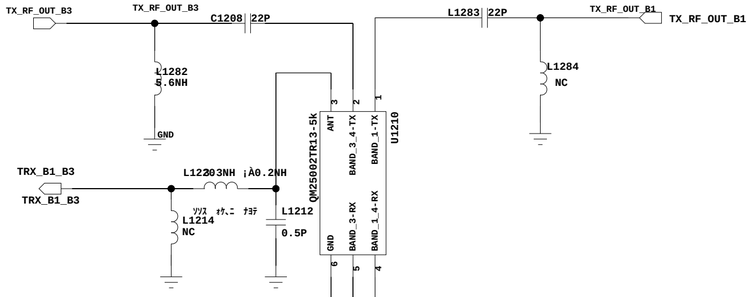






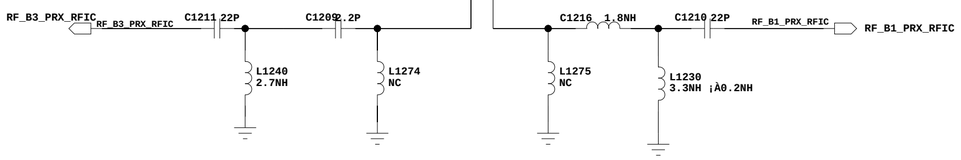
MMMB PA
U1101
QM56022
GND_4
RFIN_L2
RFIN_L1
RFIN_M
NC_2
NC_1
NC_0
VBATT
VIO
SCLK
SDATA
NC_3
RFIN_H
GND_1
GND_0
GND_5
MB2
GND_6
MB3
MB4
GND_7
VCC2_2
VCC1
VCC2
GND_8
MB5
HB1
GND_9
HB2
GND_10
LB4
LB3
LB2
LB1
LB5
MB1
GND_13
HBRX2
HBRX1
GND_12
HB4
GND_11
HB3
TX_RFOUT_B5
TX_RFOUT_B8
RF_LB1_TX_RFIC
RF_MB2_TX_RFIC
RF_HB2_TX_RFIC
VMIPI
VPH_PWR
MIPI0_SCLK
MIPI0_SDATA
VPA_PMU
R1103 10R
C1174 33P
L1138 9.1NH
C1147 3.3P
C1148 3.3P
C1153 33P
L1120 3.9NH
C1157
C1158
25V 1P ¡À0.1P NPO 0201
C1133 10P
C1132 10P
C1142 106
C1159 10V 104
C1126 101
C1134 102
C1144 18P
L1119 3.3NH ¡À0.2NH
C1155
C1156
25V 1.2P ¡À0.1P NPO 0201
25V 1.2P ¡À0.1P NPO 0201
GND
L1103 25V 2.7P
TX_RF_OUT_B2
L1129 NC
L1107 3.3NH ¡À0.2NH
C1185 15P
C1146 NC
C1145 25V 0.75P ¡À0.25P
Z1102
BF1608-L1R9NDBT/LF
IN/OUT
OUT/IN
GND1
GND0
R1105 0R
TX_RF_OUT_B39_B34
L1117 NC
L1113 3NH ¡À0.2NH
TX_RF_OUT_B3
C1143 0.5P
L1121 NC
C1135 101
C1136 105
C1137 101
C1138 105
C1139 101
C1140 105
L1112 1.8NH
TX_RF_OUT_B1
C1103 0.5P
C1104 NC
L1114 25V 6.8P ¡À0.25P
TX_RF_OUT_B7
C1125 NC
C1118 NC
Z1101
INPUT
OUTPUT
F6HH2G350EH72
C1164 10P
L1124 2.7NH ¡À0.2NH
L1108 NC
L1127 2.4NH
L1109 2.6NH ¡À0.2NH
L1128 NC
TRX_RF_OUT_B40
9050535 SAFFB2G59MA3F0A
L1102 2.4NH
Z1103
SAFEA2G60MA0F0A
C1106 0.5P
L1105 3.9NH
L1123 25V 6.8P ¡À0.25P
TRX_RF_OUT_B41
L1116 15NH
L1104 NC
LTE_APC1
R1106 0R
R1107 NC
C1128 221
APCﾒｰ ﾘｼﾞｮ
RF_MB3_TX_RFIC
C1110 33P
C1149 0R
L1115 NC
RF_LB3_TX_RFIC
C1115 33P
C1165 0R
L1139 NC
C1130 NC
L1140 NC
RF5216A
LB Any TRX port except TRX3, TRX4, TRX5, TRX8, TRX9
MB Any TRX port except TRX3, TRX4, TRX5, TRX8, TRX9
HB TRX3, TRX4, TRX5, TRX8, TRX9
sky77916-21
U1108
SKY77916-21
MIPI1_SCLK
MIPI1_SDATA
VMIPI
C1114 10P
C1116 10P
C1121 102
VBAT_RST
80mil 2mm
SKY QROVOｶｼﾋ･ｼ dB
C1107 106
C1109 106
D1102 VS4V5BU1QS DSN1006
C1124 106
C1122 104
C1108 10P
LB_SWOUT
LB_IN
HB_IN
HB_SWOUT
SCLK
SDATA
VIO
VRAMP
VCC
VBATT
GND_0
GND_11
GND_10
TRX1
TRX2
TRX3
TRX4
TRX5
TRX6
TRX7
GND_1
GND_2
GND_3
GND_4
GND_5
CPL
GND_6
NC_0
TRX8
TRX9
TRX10
TRX11
TRX12
TRX13
TRX14
GND_9
ANT
GND_8
GND_7
TRX_B2
TRX_B8_G900
PRX_B34_B39_DCS_PCS
PRX_G900
TX_RF_OUT_B39_B34
TRX_B5_G850
TRX_B1_B3
TRX_B7
TRX_RF_OUT_B40
TRX_RF_OUT_B41
PRX_B39_B41
PRX_B40
1/20W18¦ R1110
1/20W18¦ R1109
C1101 101
RF_TXDET1_RFIC
R1111 68R
L1111 0R
R1102 0R
PRX_ASM
L1110 NC
L1126 NC
ﾔ､ﾁ ﾐﾐﾍﾍ 適ｬｷｽｱ差 ﾔOBB TEST
PRX_G900
R1110 2.2NH
C1129 NC
C1131 NC
Z1104
DEA160960LT-5059A1
C1168 22P
C1170 101
C1169 47NH
C1141 47NH
RF_G900_PRX_RFIC
VTCXO_28
8mil
R1112 0R
VFE28_PMU
C1111 105
VMIPI
R1101 0R
VIO18_PMU
C1120 105
ｿｿｽ Aｷﾅﾖﾃ
R1104 390K¡À1%
AUX_IN1_NTC
C1105 104
RT1101 NTC 100K¡À1% B:4250K 0402
VPA_PMU
10mil
50mil
C1171 105
C1123 225

B1B/B3B CA TRX



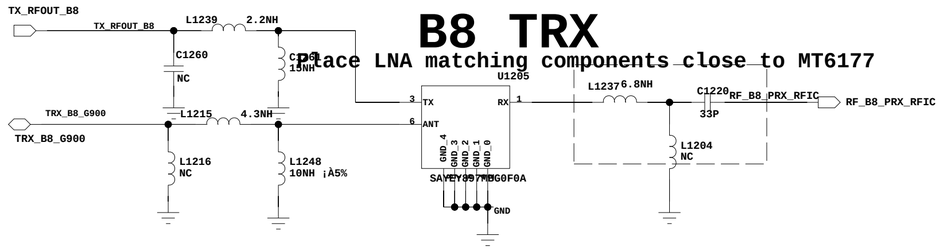
Place LNA matching components close to MT6177

Place LNA matching components close to MT6177

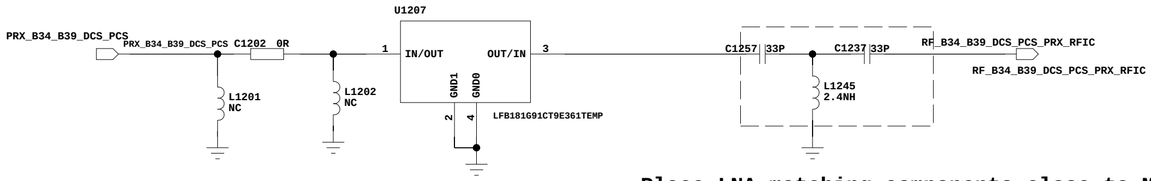


B8 TRX

Place LNA matching components close to MT6177

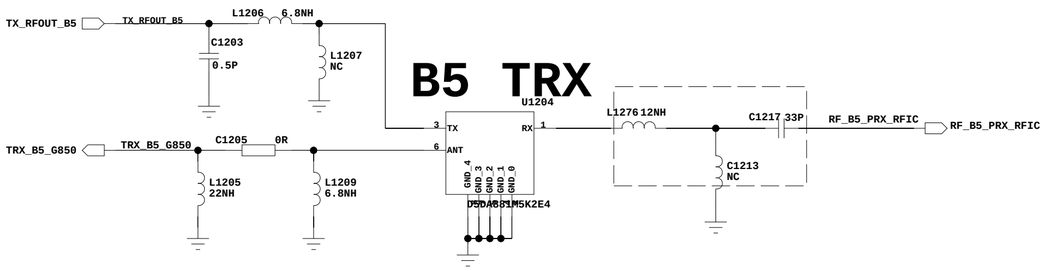


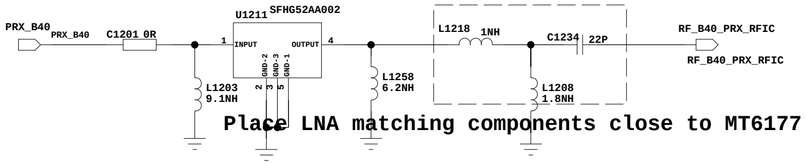
B34_B39_DCS_PCS sawless RX



Place LNA matching components close to MT61

B5 TRX

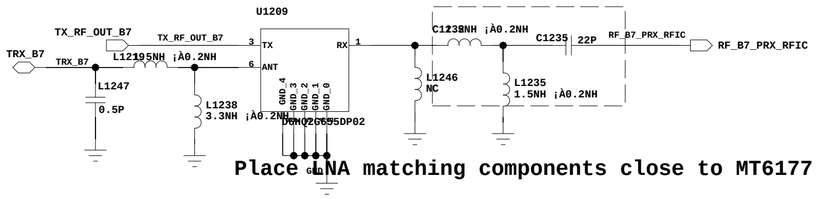




Place LNA matching components close to MT6177

¼æÈÝPRX B40Í¨Â·

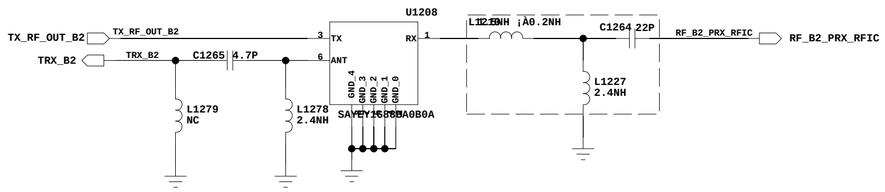
B7 TRX



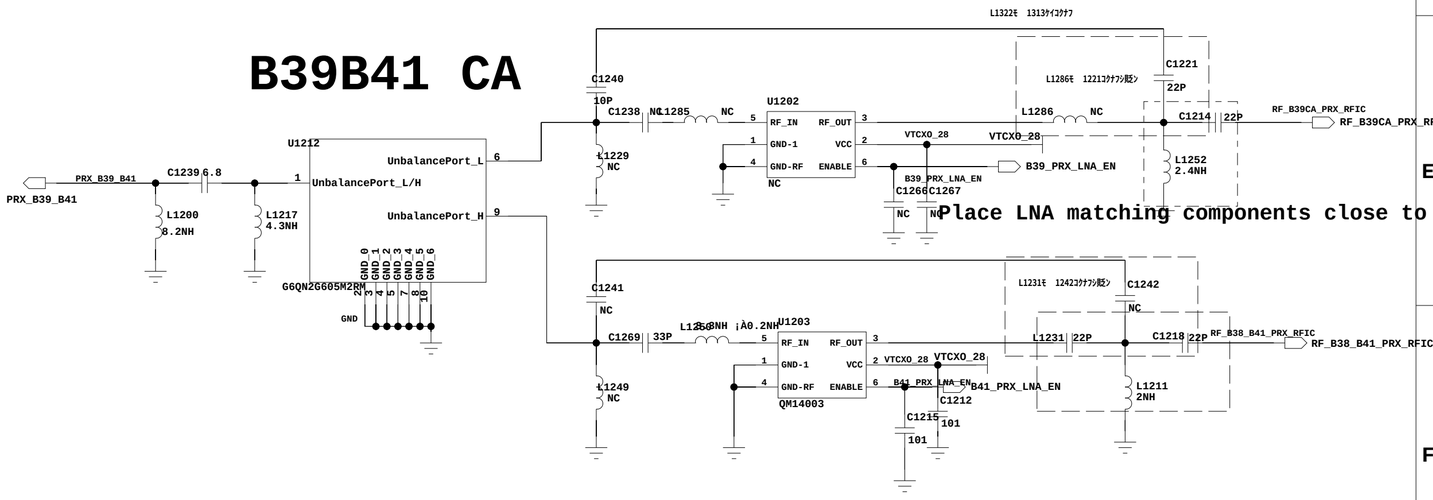
Place LNA matching components close to MT6177

B2 TRX

Place LNA matching components close to MT6177



B39B41 CA

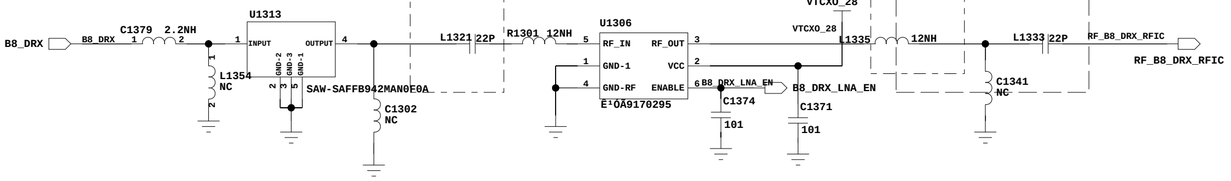


Place LNA matching components close to MT

LTE DRX

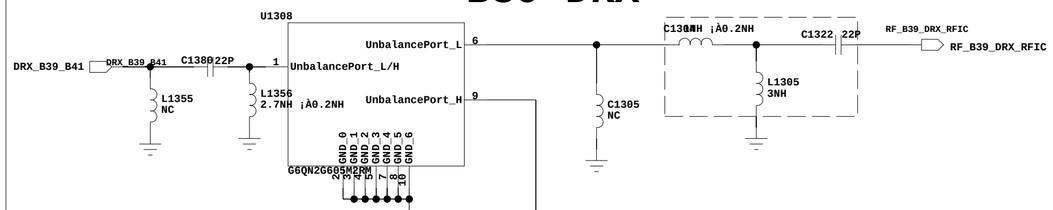
B8 DRX

Place LNA matching components close to MT6177



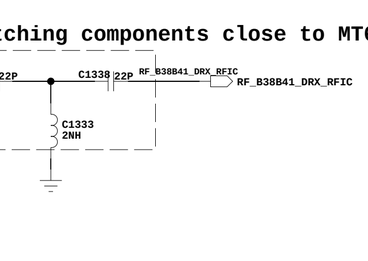
B39 DRX

Place LNA matching components close to MT6177



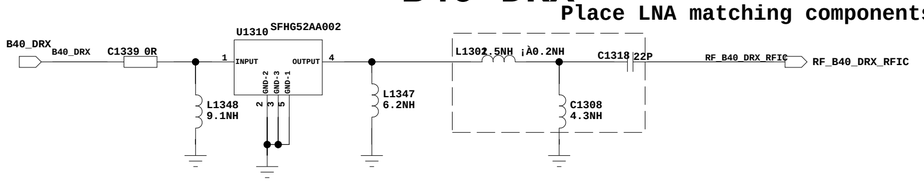
B38B41 DRX

Place LNA matching components close to MT6177



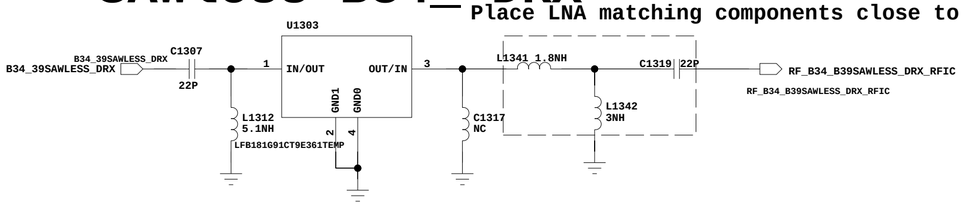
B40 DRX

Place LNA matching components close to MT6177

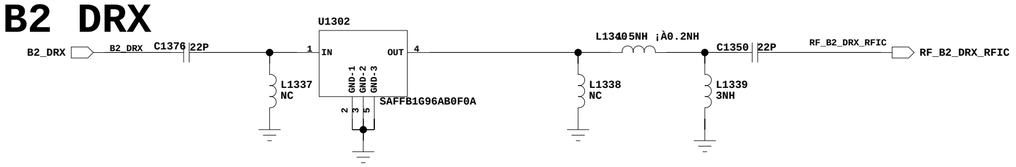


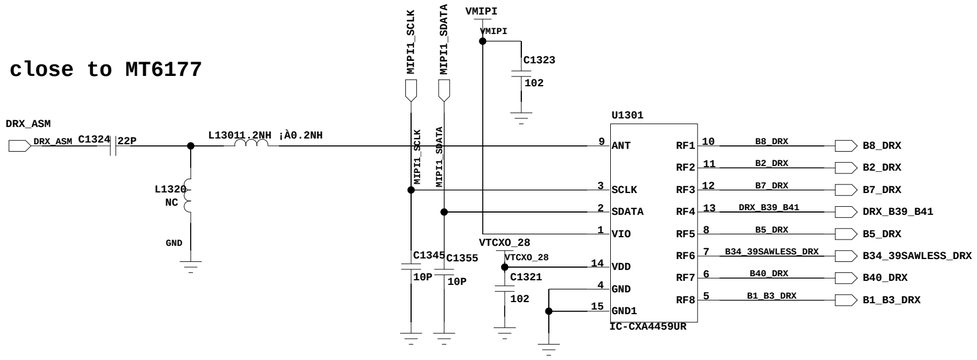
SAWless B34_ DRX

Place LNA matching components close to MT6177



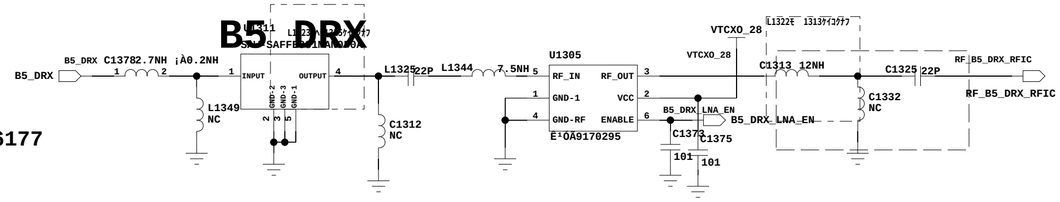
B2 DRX





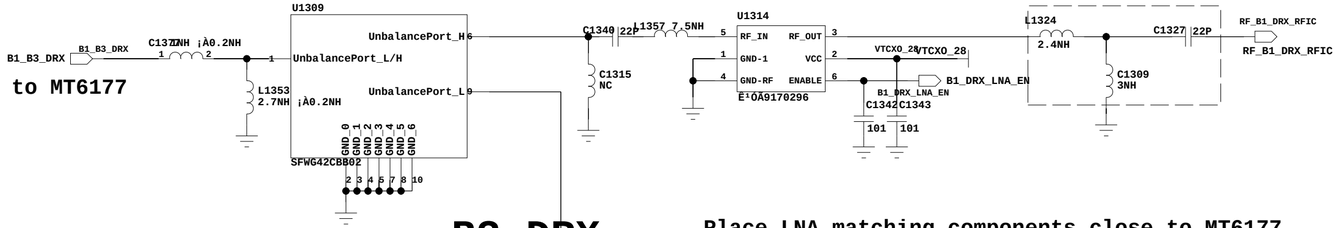
Place LNA matching components close t

B5 DRX



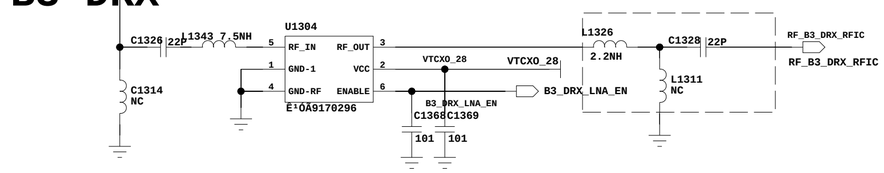
B1 DRX

Place LNA matching components close to MT6177



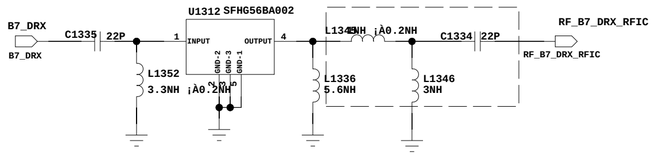
B3 DRX

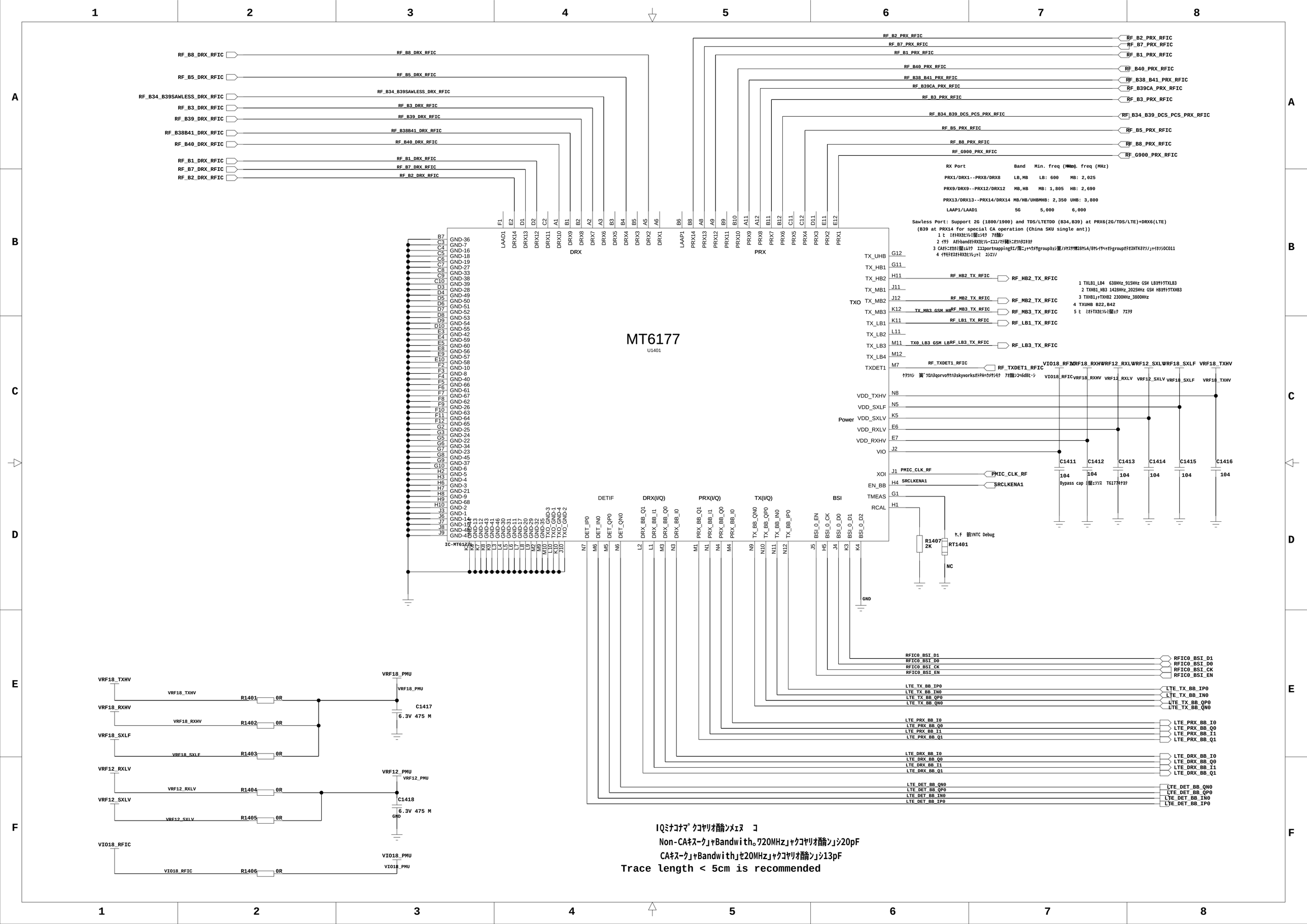
Place LNA matching components close to MT6177

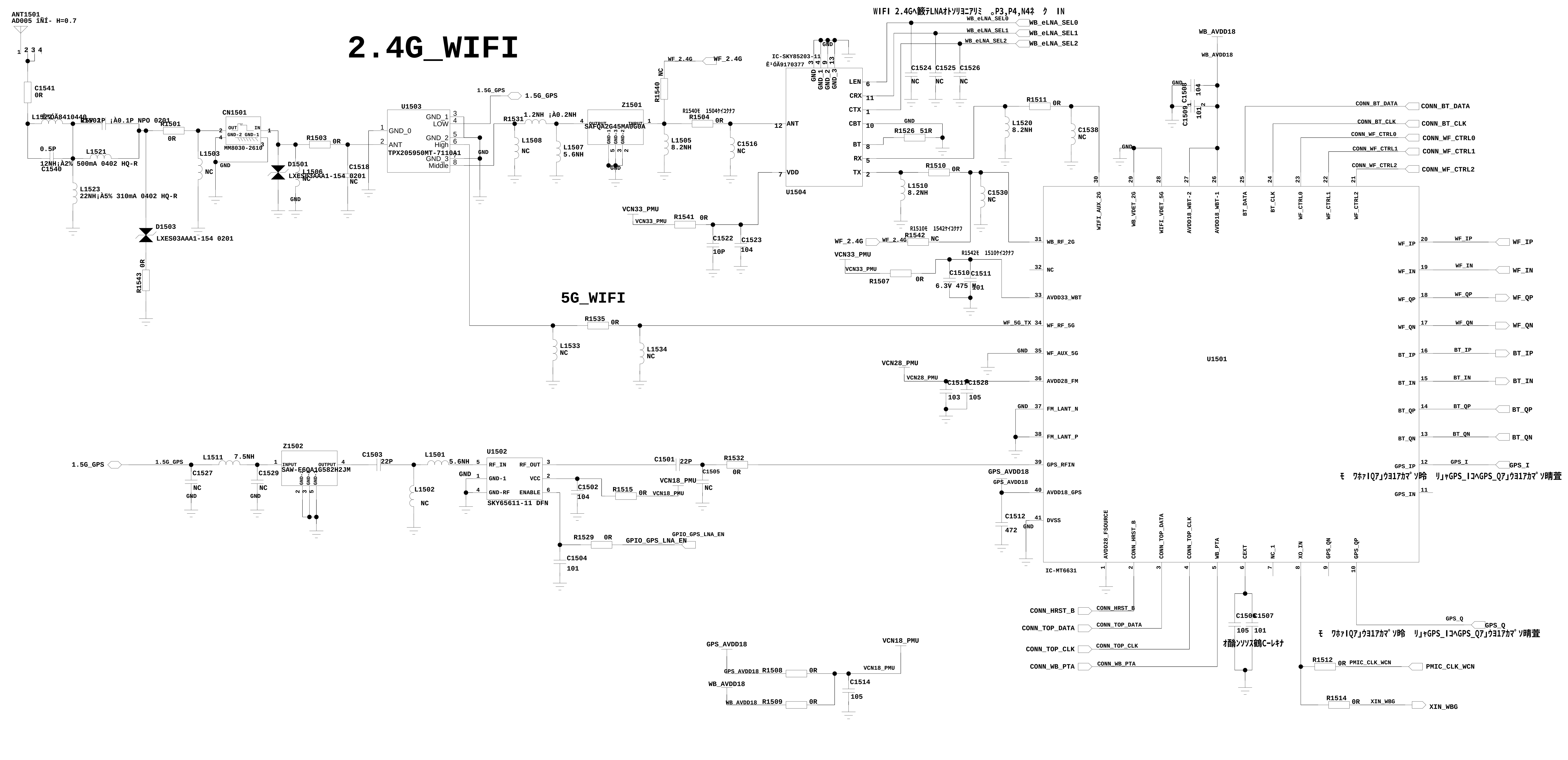


B7 DRX

Place LNA matching components close to MT6177




RF_B8_DRX_RFIC
RF_B5_DRX_RFIC
RF_B34_B39SAWLESS_DRX_RFIC
RF_B3_DRX_RFIC
RF_B39_DRX_RFIC
RF_B38B41_DRX_RFIC
RF_B40_DRX_RFIC
RF_B1_DRX_RFIC
RF_B7_DRX_RFIC
RF_B2_DRX_RFIC
DRX
PRX
MT6177
U1401
RF_B2_PRX_RFIC
RF_B7_PRX_RFIC
RF_B1_PRX_RFIC
RF_B40_PRX_RFIC
RF_B38_B41_PRX_RFIC
RF_B39CA_PRX_RFIC
RF_B3_PRX_RFIC
RF_B34_B39_DCS_PCS_PRX_RFIC
RF_B5_PRX_RFIC
RF_B8_PRX_RFIC
RF_G900_PRX_RFIC
RX Port Band Min. freq (MHz) Max. freq (MHz)
PRX1/DRX1--PRX8/DRX8 LB,MB LB: 600 MB: 2,025
PRX9/DRX9--PRX12/DRX12 MB,HB MB: 1,805 HB: 2,690
PRX13/DRX13--PRX14/DRX14 MB/HB/UHBMHB: 2,350 UHB: 3,800
LAAP1/LAAD1 5G 5,000 6,000
Sawless Port: Support 2G (1800/1900) and TDS/LTETDD (B34,B39) at PRX6(2G/TDS/LTE)+DRX6(LTE)
(B39 at PRX14 for special CA operation (China SKU single ant))
TXO
RF_HB2_TX_RFIC
RF_MB2_TX_RFIC
RF_MB3_TX_RFIC
RF_LB1_TX_RFIC
RF_LB3_TX_RFIC
RF_TXDET1_RFIC
Power
VIO18_RFIC
VRF18_RXHV
VRF12_RXLV
VRF12_SXLV
VRF18_SXLF
VRF18_TXHV
C1411
C1412
C1413
C1414
C1415
C1416
104
XOI
EN_BB
TMEAS
RCAL
PMIC_CLK_RF
SRCLKENA1
R1407
2K
RT1401
NC
GND
DETIF
DRX(I/Q)
PRX(I/Q)
TX(I/Q)
BSI
RFIC0_BSI_D1
RFIC0_BSI_D0
RFIC0_BSI_CK
RFIC0_BSI_EN
LTE_TX_BB_IP0
LTE_TX_BB_IN0
LTE_TX_BB_QP0
LTE_TX_BB_QN0
LTE_PRX_BB_I0
LTE_PRX_BB_Q0
LTE_PRX_BB_I1
LTE_PRX_BB_Q1
LTE_DRX_BB_I0
LTE_DRX_BB_Q0
LTE_DRX_BB_I1
LTE_DRX_BB_Q1
LTE_DET_BB_QN0
LTE_DET_BB_QP0
LTE_DET_BB_IN0
LTE_DET_BB_IP0
VRF18_TXHV
VRF18_RXHV
VRF18_SXLF
VRF12_RXLV
VRF12_SXLV
VIO18_RFIC
R1401 0R
R1402 0R
R1403 0R
R1404 0R
R1405 0R
R1406 0R
VRF18_PMU
VRF12_PMU
VIO18_PMU
C1417
C1418
6.3V 475 M
GND
IC-MT6177
Trace length < 5cm is recommended



GPS_AVDD18 20mA£º10mil

WB_AVDD18 50mA£º12mil

VCN18_PMU 80mA£º15mil

VCN33_PMU 300mA£º25mil

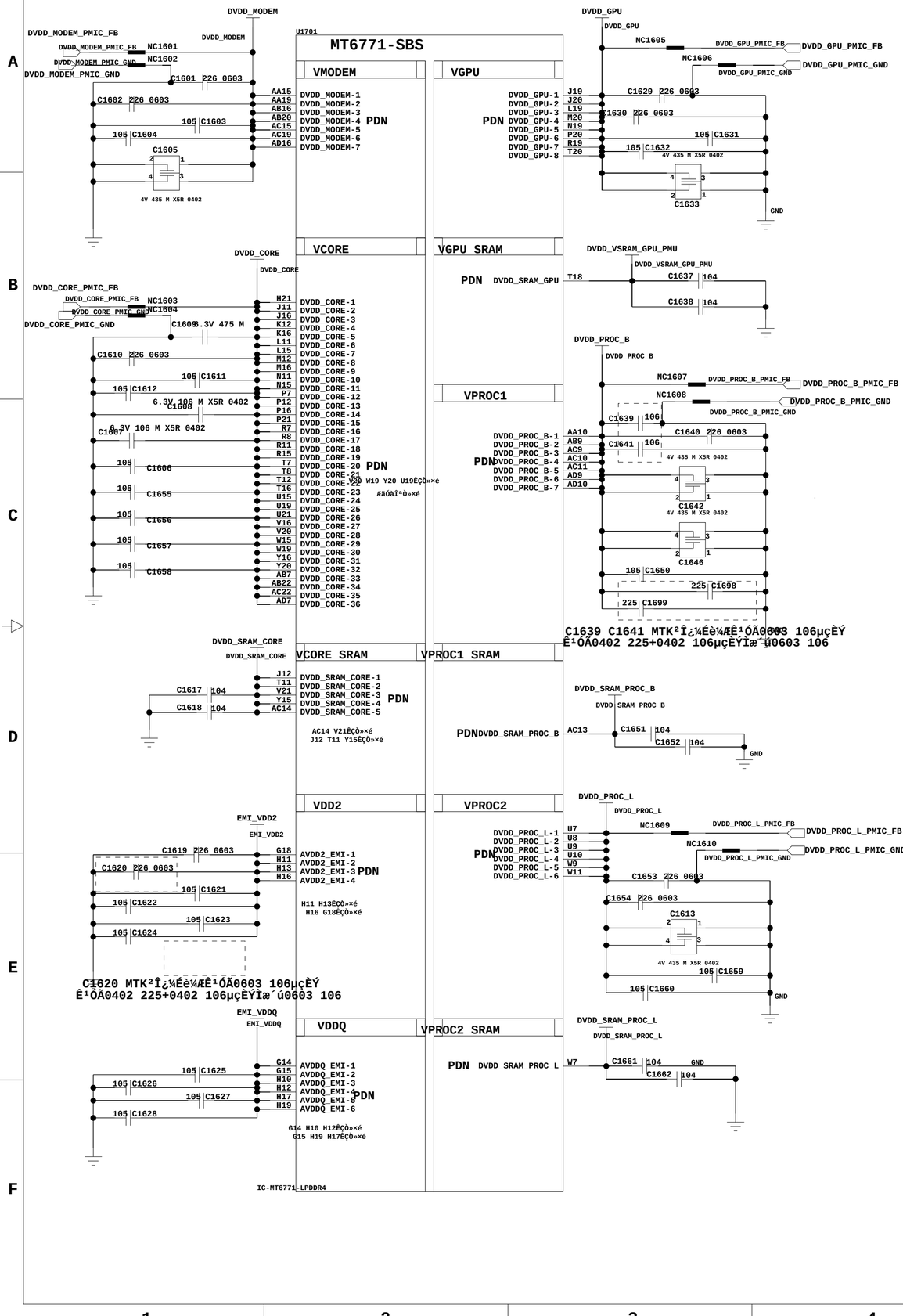
VCN28_PMU 20mA£º10mil

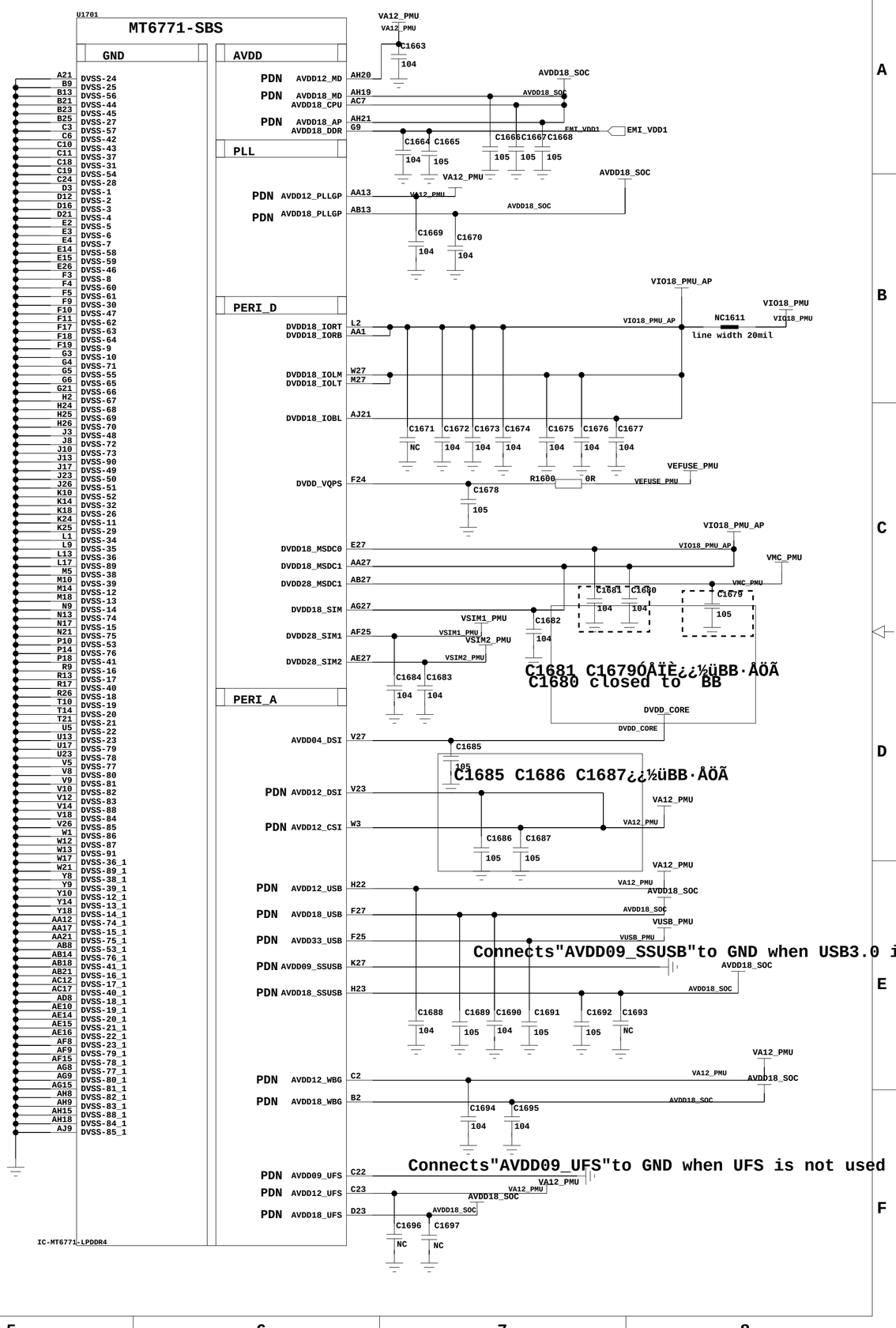
IQÏß³É¶Ô°üµØ£¬£¨7£¬40£©mm

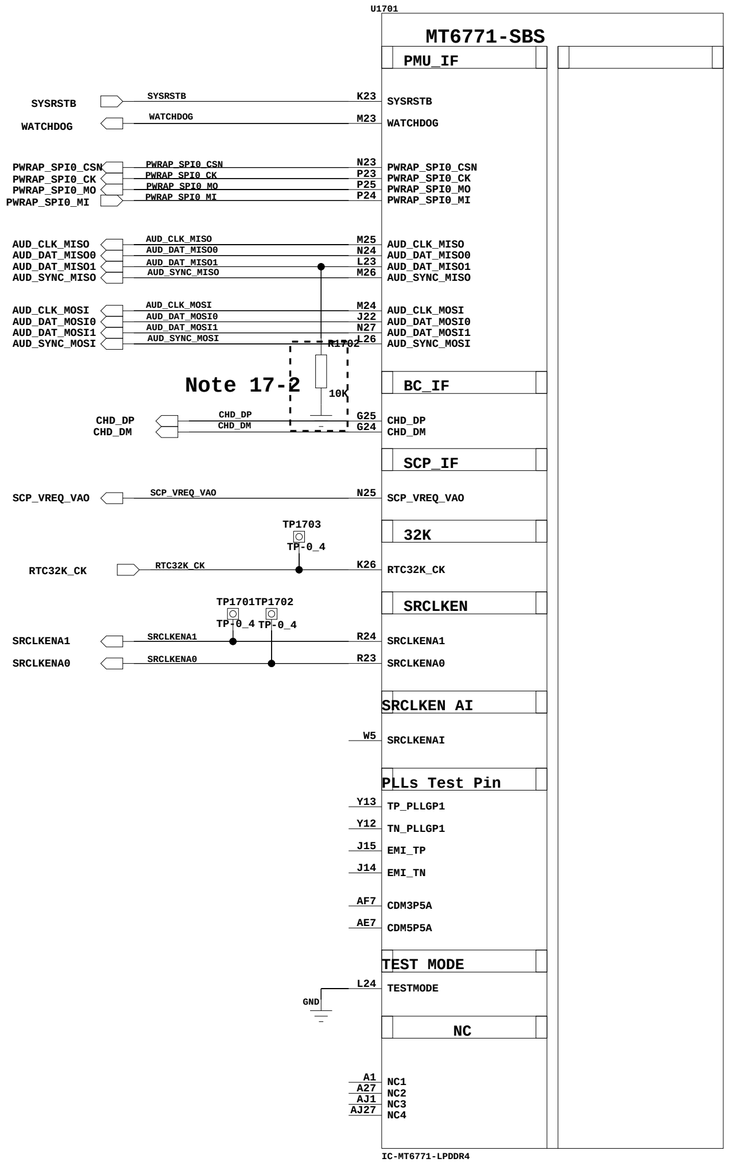
VCN33ÐèÒª20mil¿í£¬³¤¿í±ÈÐ¡ÓÚ310£¬¹ý¿×Á½¸öÒÔÉÏ

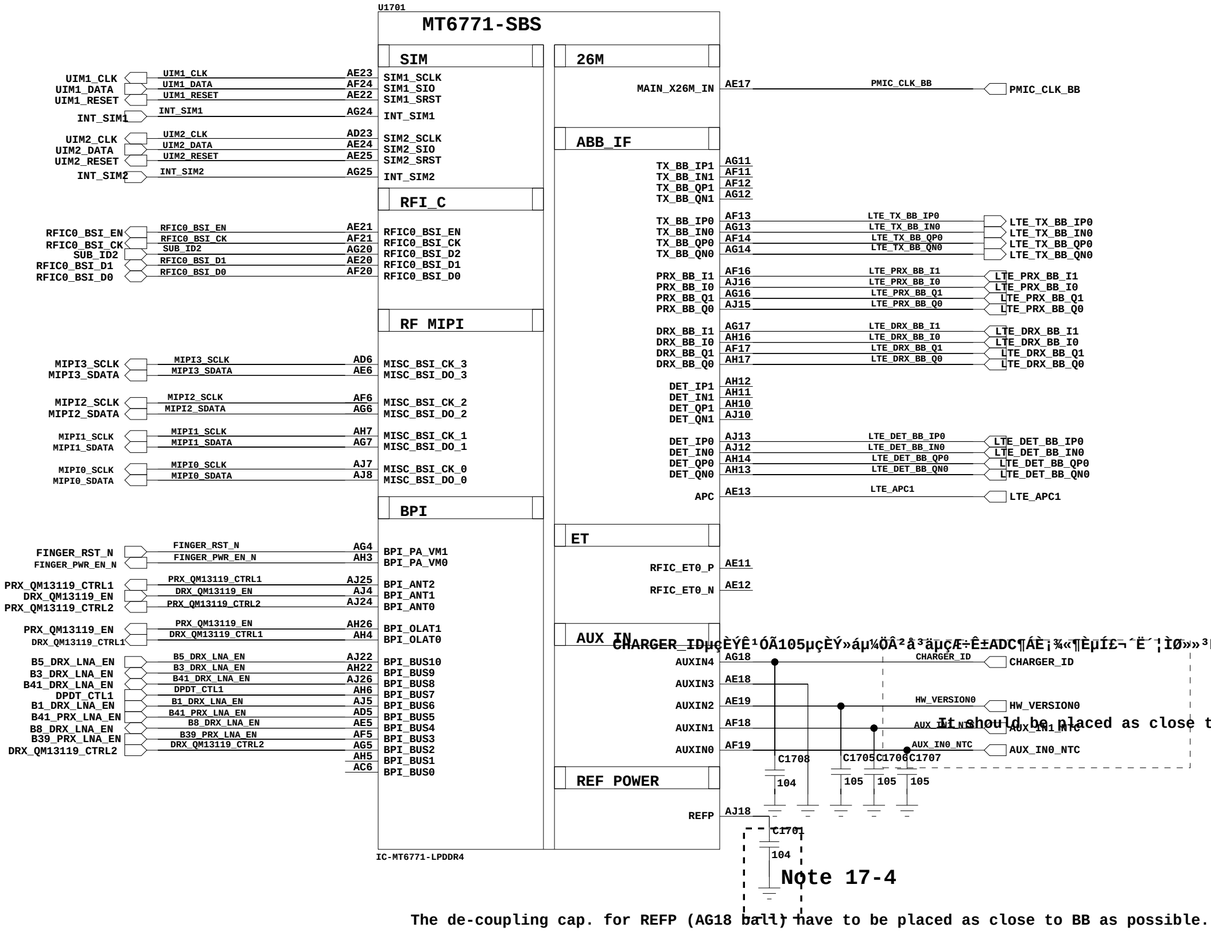
VCN33ÐèÒª°´ÕÕ300mA PeakµçÁ÷À´ÆÀ¹À

VCN33µçÔ´¿í¶È²»Âú×ãÒªÇó»áµ¼ÖÂWIFI TX POWER²»×¼or EVM¶ñ»¯


MT6771-SBS
U1701
VMODEM
VGPU
VCORE
VGPU_SRAM
VPROC1
VCORE_SRAM
VPROC1_SRAM
VDD2
VPROC2
VDDQ
VPROC2_SRAM
DVDD_MODEM
DVDD_GPU
DVDD_CORE
DVDD_VSRAM_GPU_PMU
DVDD_PROC_B
DVDD_SRAM_CORE
DVDD_SRAM_PROC_B
DVDD_PROC_L
EMI_VDD2
EMI_VDDQ
PDN
GND
C1639 C1641 MTK²Î¿¼ÉèÁÆÊ¹ÓÃ0603 106µçÈÝ
Ê¹ÓÃ0402 225+0402 106µçÈÝÎª ú0603 106
C1620 MTK²Î¿¼ÉèÁÆÊ¹ÓÃ0603 106µçÈÝ
Ê¹ÓÃ0402 225+0402 106µçÈÝÎª ú0603 106
IC-MT6771-LPDDR4

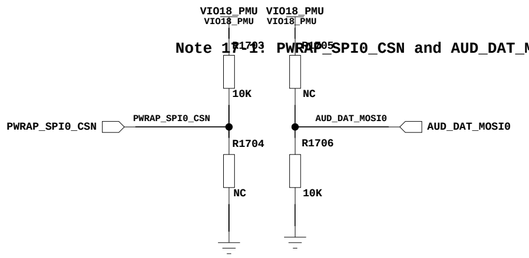

MT6771-SBS
U1701
GND
AVDD
PLL
PERI_D
PERI_A
VA12_PMU
AVDD18_SOC
EMI_VDD1
VIO18_PMU_AP
VIO18_PMU
VEFUSE_PMU
VMC_PMU
VSIM1_PMU
VSIM2_PMU
C1681 C1679ÓÅÏÈ¿¿½üBB·ÅÖÃ
C1680 closed to BB
C1685 C1686 C1687¿¿½üBB·ÅÖÃ
Connects"AVDD09_SSUSB"to GND when USB3.0 is
Connects"AVDD09_UFS"to GND when UFS is not used
IC-MT6771-LPDDR4





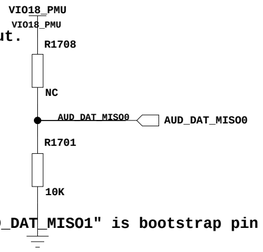
Note 17-2:

"AUD_DAT_MISO0" is bootstrap pin to enable serial JTAG output over USB2.0 interface or ont.
When "AUD_DAT_MISO0" is pluued to high in system start up and then USB2.0 interface will be swithec into serial JTAG mode.



Note 17-3: PWRAP_SPI0_CSN and AUD_DAT_MOSI are bootstrap pin to slect which interface will be the JTAG pin out.

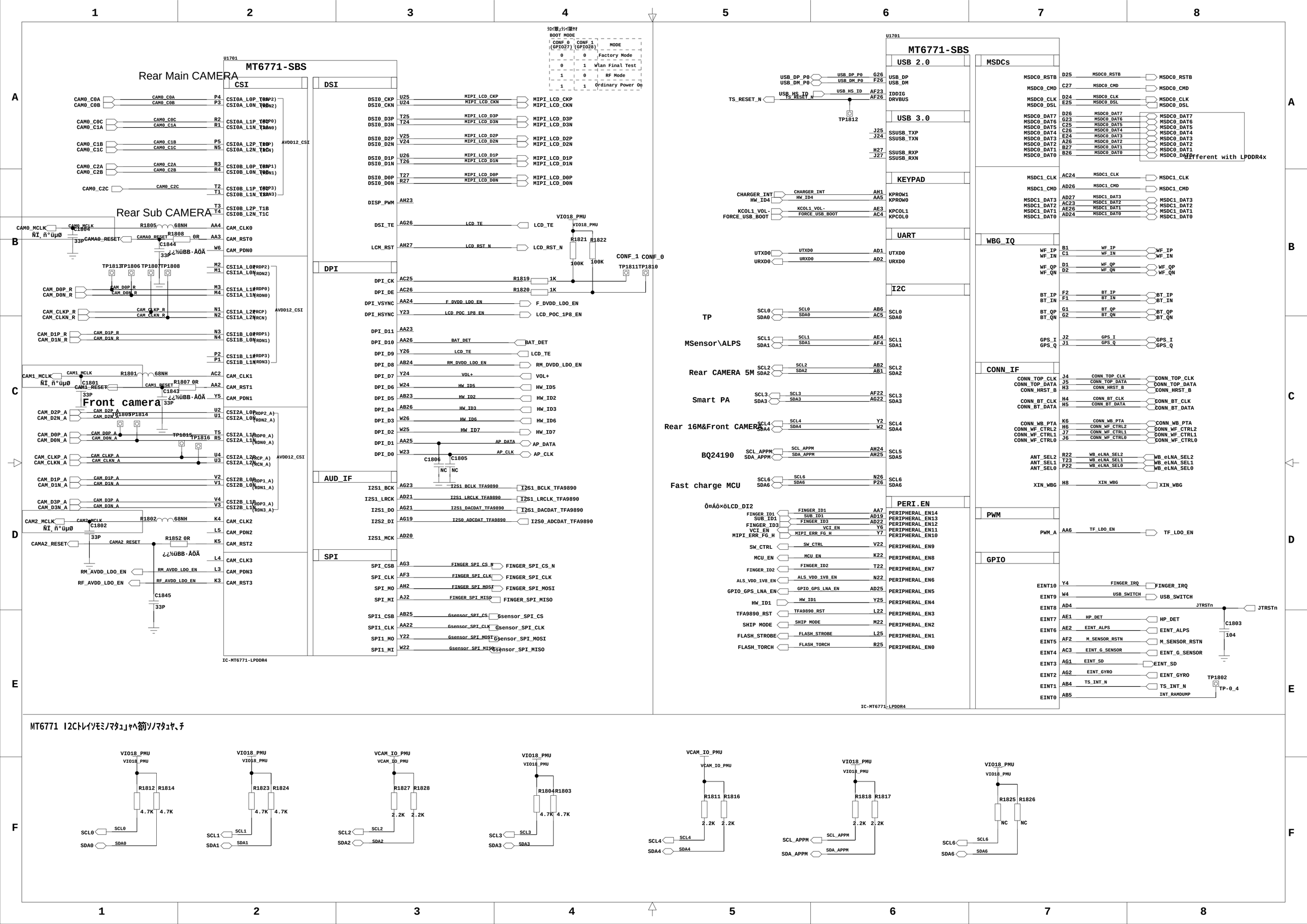
PWRAP_SPI0_CSN	AUD_DAT_MOSI0	AP_JTAG	IO_JTAG
HI	LO	N/A£¨Default£©	N/A£¨Default£©
HI	HI	SPI_CSB/SPI_CLK/SPI_MO/SPI_MI/EINT8	DPI_11/DPI_HSYNC/DPI_VSYNC DPI_DE/DPI_CK/DPI_D8/DPI_D9
LO	LO	SPI_CSB/SPI_CLK/SPI_MO/SPI_MI/EINT8	N/A£¨Default£©
LO	HI	MSDC1_CLK/MSDC1_CMD/MSDC1_DAT0 /MSDC1_DAT1/MSDC1_DAT2	N/A£¨Default£©

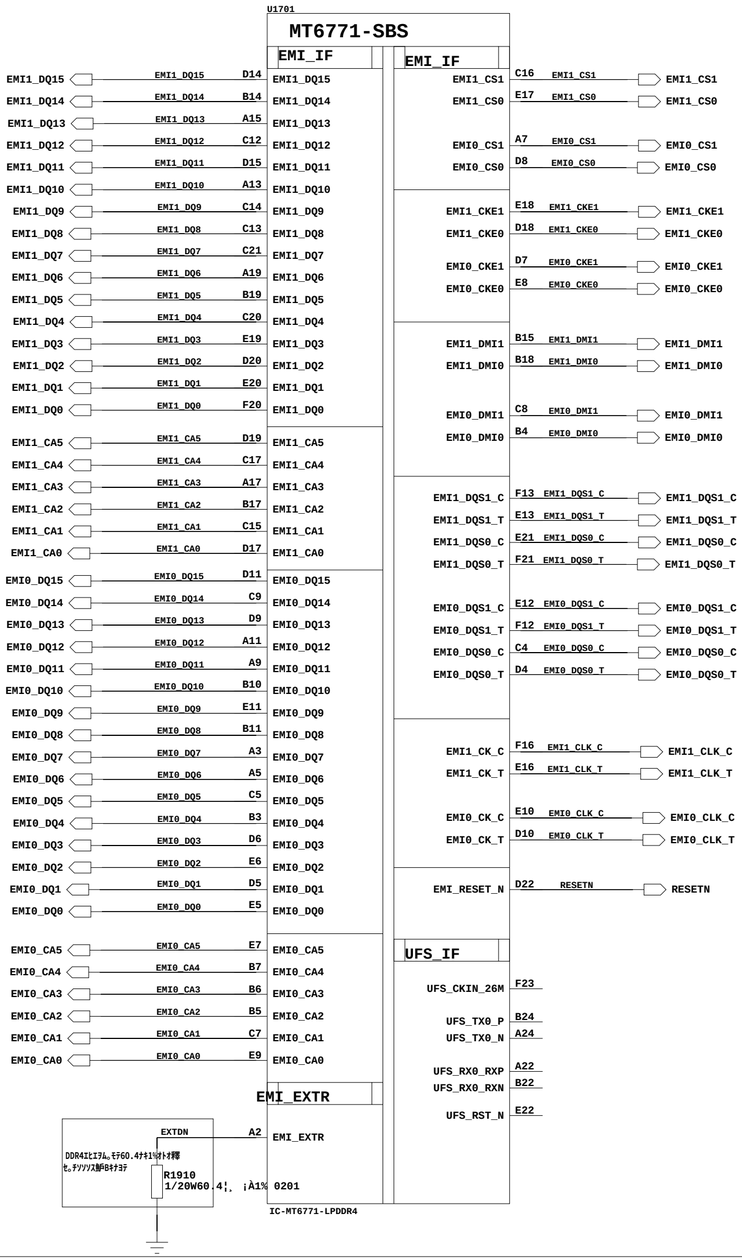


AUD_DAT_MISO0	USB/JTAG
LO	USB2.0
HI	DP/DM output JTAG

"AUD_DAT_MISO1" is bootstrap pin to select system booting up from eMMC or UFS device.

AUD_DAT_MISO1	Booting device
LO	eMMC
HI	UFS

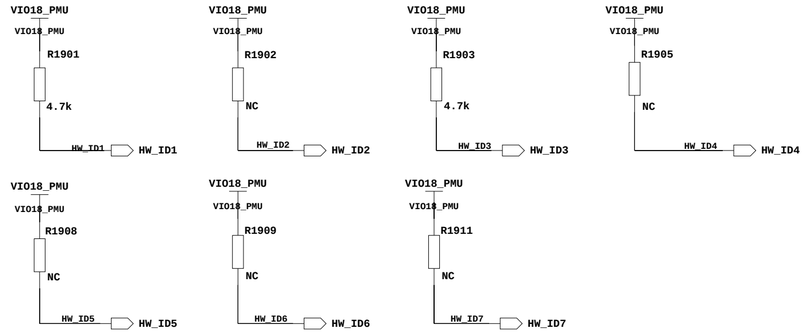

BOOT MODE
CONF 0 (GPIO27)
CONF 1 (GPIO28)
MODE
0 0 Factory Mode
0 1 Wlan Final Test
1 0 RF Mode
1 1 Ordinary Power On
U1701
MT6771-SBS
Rear Main CAMERA
CSI
DSI
DPI
AUD_IF
SPI
Rear Sub CAMERA
Front camera
IC-MT6771-LPDDR4
USB 2.0
USB 3.0
KEYPAD
UART
I2C
PERI.EN
MSDCs
WBG_IQ
CONN_IF
PWM
GPIO
TP
MSensor\ALPS
Rear CAMERA 5M
Smart PA
Rear 16M&Front CAMERA
BQ24190
Fast charge MCU
MT6771 I2C
VIO18_PMU
VCAM_IO_PMU

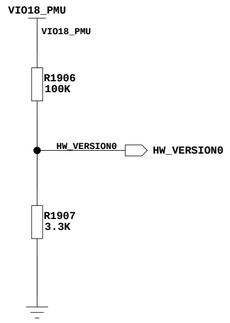


ﾖﾆﾊｽ	HW_ID1 GPIO68	HW_ID2 GPIO66	HW_ID3 GPIO65
ﾄﾚﾏ	1	0	1
ﾒﾆｶｯｶｨﾖﾆ	0	1	1
ﾌｨｰﾄ	1	1	1

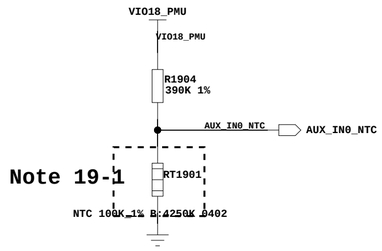
ﾉ幕ｵｵﾚｶ ﾗﾊﾔｴ	HW_ID4 GPIO92	HW_ID5 GPIO50

GPIOﾅ葷ﾃﾊ菠 ﾂﾀｭ ﾗ OMﾊｱﾗ「ﾒ筌ｬﾒｴNCｲｻﾍｬｵﾄｵ釋





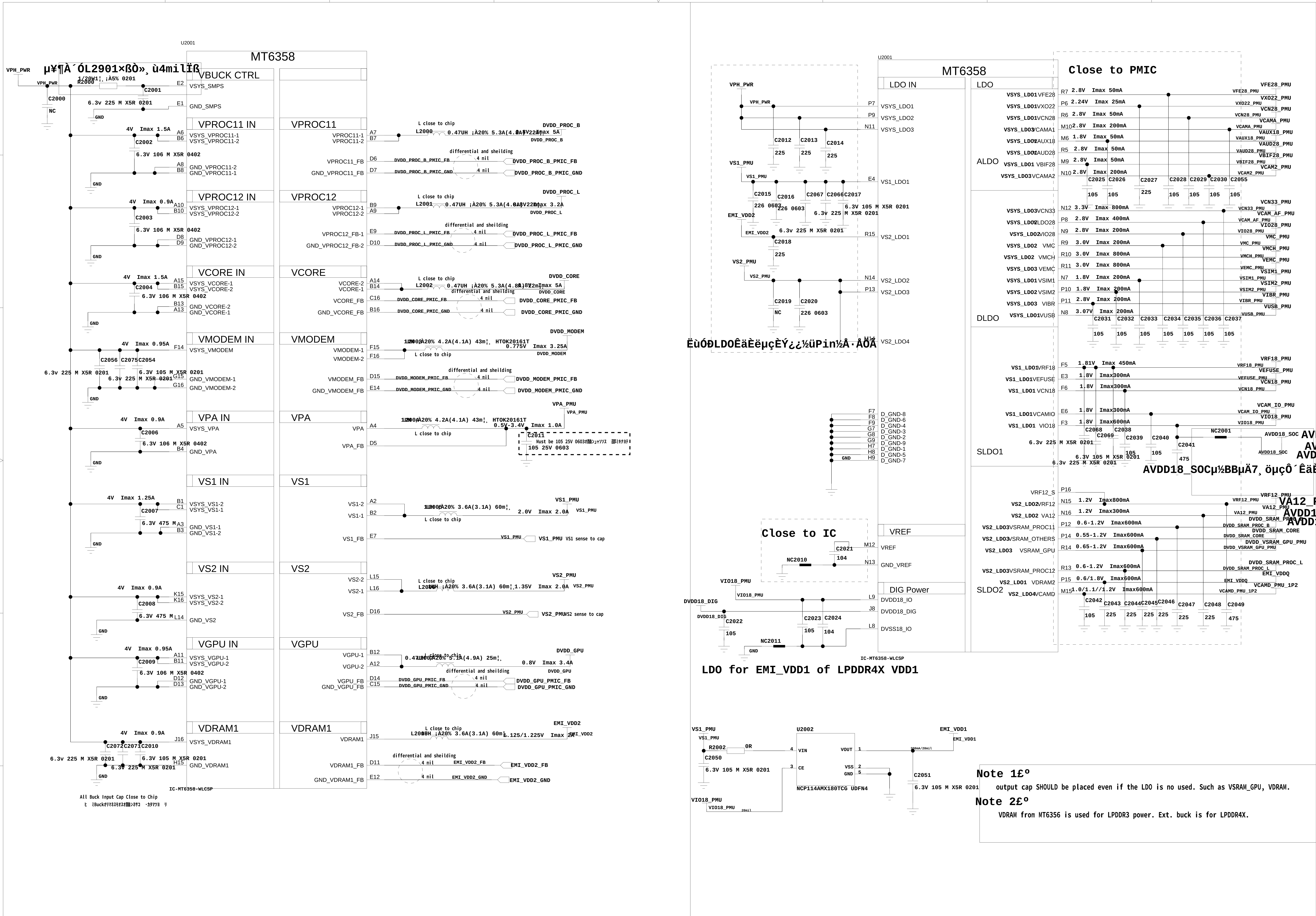
ﾖ 蟆豎ｾ	R1907	ｾｫｶﾈ	min(V)	typ(V)	max(V)	R1907ﾁﾏｺﾅ
V1.0(T0)	5.1K	1%	0.0785	0.0873	0.097	8241153
V1.1(EVT)	10K	1%	0.1473	0.1636	0.1816	8241105
V1.2(DVT)	39K	1%	0.4597	0.505	0.554	8241225
V1.3(PVT)	68K	1%	0.668	0.7285	0.793	8241250
V1.4(MP)	100K	1%	0.84	0.9	0.955	8241032



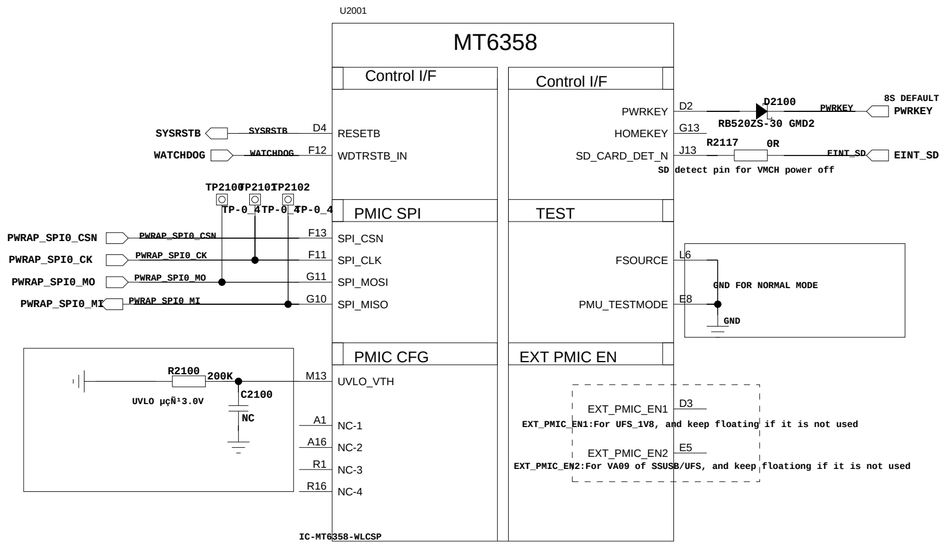
Note 19-1

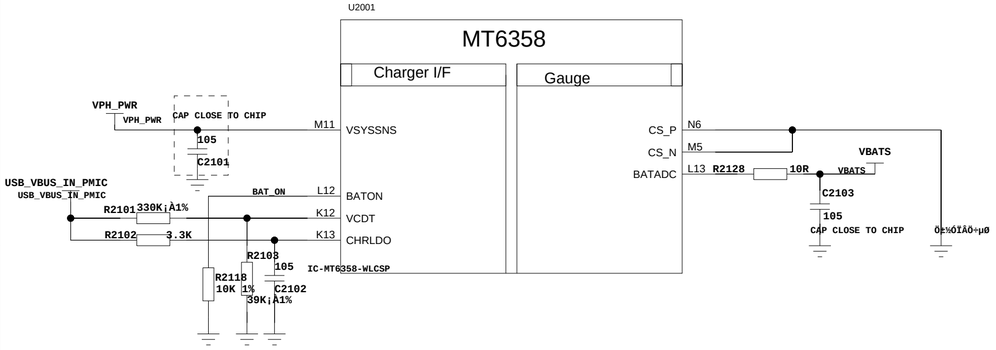
Note 19-1£º

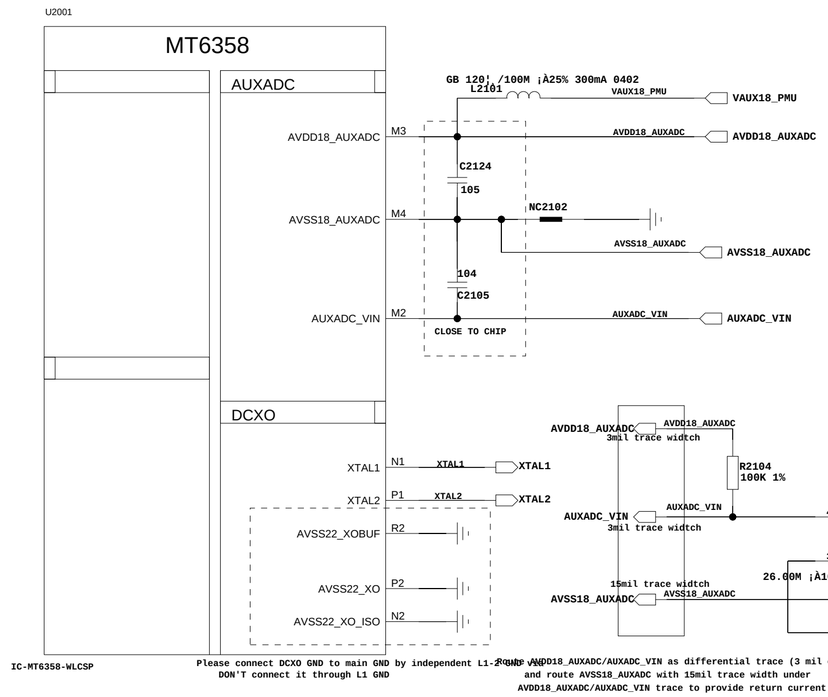
Distance to AP is 5-7mm and away form other heat resource 10-12mm

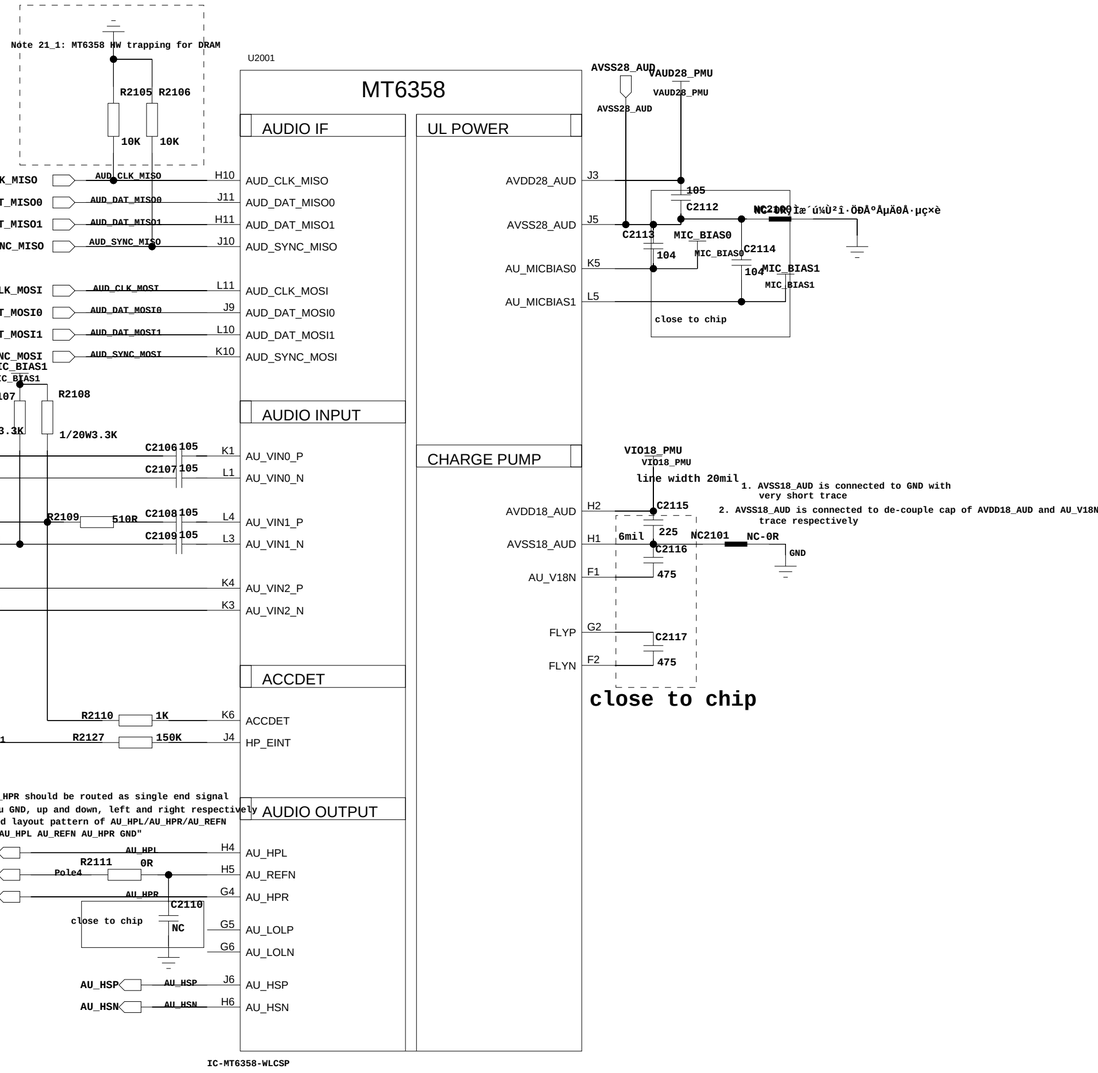


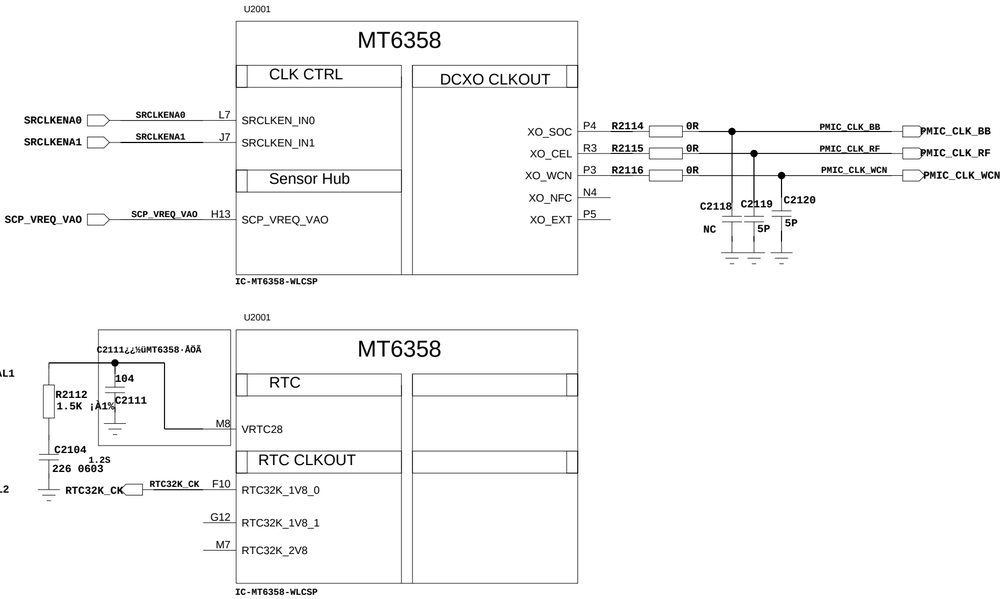
U2001
MT6358
VBUCK CTRL
VPH_PWR
R2000
C2000
NC
C2001
VSYS_SMPS
GND_SMPS
6.3v 225 M X5R 0201
VPROC11 IN
VPROC11
VSYS_VPROC11-1
VSYS_VPROC11-2
GND_VPROC11-1
GND_VPROC11-2
4V Imax 1.5A
C2002
6.3V 106 M X5R 0402
L2000
0.47UH ¡À20% 5.3A(4.8A)
DVDD_PROC_B
DVDD_PROC_B_PMIC_FB
DVDD_PROC_B_PMIC_GND
L close to chip
differential and sheilding
4 mil
VPROC12 IN
VPROC12
VSYS_VPROC12-1
VSYS_VPROC12-2
GND_VPROC12-1
GND_VPROC12-2
4V Imax 0.9A
C2003
L2001
DVDD_PROC_L
Imax 3.2A
DVDD_PROC_L_PMIC_FB
DVDD_PROC_L_PMIC_GND
VCORE IN
VCORE
VSYS_VCORE-1
VSYS_VCORE-2
GND_VCORE-1
GND_VCORE-2
C2004
L2002
DVDD_CORE
Imax 5A
DVDD_CORE_PMIC_FB
DVDD_CORE_PMIC_GND
VMODEM IN
VMODEM
VSYS_VMODEM
GND_VMODEM-1
GND_VMODEM-2
4V Imax 0.95A
C2056
C2075
C2054
6.3v 225 M X5R 0201
6.3V 105 M X5R 0201
HTOK20161T
0.775V Imax 3.25A
DVDD_MODEM
DVDD_MODEM_PMIC_FB
DVDD_MODEM_PMIC_GND
VPA IN
VPA
VSYS_VPA
GND_VPA
C2006
6.3V 106 M X5R 0402
VPA_PMU
0.5V-3.4V Imax 1.0A
C2011
105 25V 0603
VPA_FB
VS1 IN
VS1
VSYS_VS1-1
VSYS_VS1-2
GND_VS1-1
GND_VS1-2
4V Imax 1.25A
C2007
6.3V 475 M
VS1_PMU
2.0V Imax 2.0A
VS1_FB
VS1 sense to cap
VS2 IN
VS2
VSYS_VS2-1
VSYS_VS2-2
GND_VS2
C2008
VS2_PMU
1.35V Imax 2.0A
VS2_FB
VS2 sense to cap
VGPU IN
VGPU
VSYS_VGPU-1
VSYS_VGPU-2
GND_VGPU-1
GND_VGPU-2
C2009
DVDD_GPU
0.8V Imax 3.4A
DVDD_GPU_PMIC_FB
DVDD_GPU_PMIC_GND
VDRAM1
VSYS_VDRAM1
GND_VDRAM1
C2072
C2071
C2010
EMI_VDD2
1.125/1.225V Imax 2A
EMI_VDD2_FB
EMI_VDD2_GND
IC-MT6358-WLCSP
All Buck Input Cap Close to Chip
LDO IN
VSYS_LDO1
VSYS_LDO2
VSYS_LDO3
VS1_LDO1
VS2_LDO1
VS2_LDO2
VS2_LDO3
VS2_LDO4
C2012
C2013
C2014
225
VS1_PMU
C2015
C2016
C2067
C2066
C2017
226 0603
6.3V 105 M X5R 0201
EMI_VDD2
C2018
VS2_PMU
C2019
C2020
D_GND-1 ... D_GND-8
Close to IC
VREF
GND_VREF
C2021
104
NC2010
DIG Power
DVDD18_IO
DVDD18_DIG
DVSS18_IO
VIO18_PMU
C2022
C2023
C2024
NC2011
IC-MT6358-WLCSP
LDO for EMI_VDD1 of LPDDR4X VDD1
Close to PMIC
LDO
ALDO
VFE28
VXO22
VCN28
VCAMA1
VAUX18
VAUD28
VBIF28
VCAMA2
2.8V Imax 50mA
2.24V Imax 25mA
2.8V Imax 200mA
1.8V Imax 50mA
VFE28_PMU
VXO22_PMU
VCN28_PMU
VCAMA_PMU
VAUX18_PMU
VAUD28_PMU
VBIF28_PMU
VCAM2_PMU
C2025
C2026
C2027
C2028
C2029
C2030
C2055
DLDO
VCN33
VLDO28
VIO28
VMC
VMCH
VEMC
VSIM1
VSIM2
VIBR
VUSB
3.3V Imax 800mA
2.8V Imax 400mA
3.0V Imax 200mA
3.0V Imax 800mA
1.8V Imax 200mA
3.07V Imax 200mA
VCN33_PMU
VCAM_AF_PMU
VIO28_PMU
VMC_PMU
VMCH_PMU
VEMC_PMU
VSIM1_PMU
VSIM2_PMU
VIBR_PMU
VUSB_PMU
C2031
C2032
C2033
C2034
C2035
C2036
C2037
SLDO1
VRF18
VEFUSE
VCN18
VCAMIO
VIO18
1.81V Imax 450mA
1.8V Imax300mA
1.8V Imax600mA
VRF18_PMU
VEFUSE_PMU
VCN18_PMU
VCAM_IO_PMU
VIO18_PMU
C2068
C2069
C2038
C2039
C2040
C2041
NC2001
AVDD18_SOC
SLDO2
VRF12_S
VRF12
VA12
VSRAM_PROC11
VSRAM_OTHERS
VSRAM_GPU
VSRAM_PROC12
VDRAM2
VCAMD
1.2V Imax800mA
1.2V Imax300mA
0.6-1.2V Imax600mA
0.55-1.2V Imax600mA
0.65-1.2V Imax600mA
0.6/1.8V Imax600mA
VRF12_PMU
VA12_PMU
DVDD_SRAM_PROC_B
DVDD_SRAM_CORE
DVDD_VSRAM_GPU_PMU
DVDD_SRAM_PROC_L
EMI_VDDQ
VCAMD_PMU_1P2
C2042
C2043
C2044
C2045
C2046
C2047
C2048
C2049
U2002
VIN
CE
VOUT
VSS
GND
R2002
0R
C2050
C2051
VS1_PMU
VIO18_PMU
EMI_VDD1
NCP114AMX180TCG UDFN4
6.3V 105 M X5R 0201
Note 1£º
output cap SHOULD be placed even if the LDO is no used. Such as VSRAM_GPU, VDRAM.
Note 2£º
VDRAM from MT6356 is used for LPDDR3 power. Ext. buck is for LPDDR4X.


U2001
MT6358
Control I/F
SYSRSTB
SYSRSTB
D4
RESETB
WATCHDOG
WATCHDOG
F12
WDTRSTB_IN
PMIC SPI
PWRAP_SPI0_CSN
PWRAP_SPI0_CSN
F13
SPI_CSN
PWRAP_SPI0_CK
PWRAP_SPI0_CK
F11
SPI_CLK
PWRAP_SPI0_MO
PWRAP_SPI0_MO
G11
SPI_MOSI
PWRAP_SPI0_MI
PWRAP_SPI0_MI
G10
SPI_MISO
PMIC CFG
R2100 200K
UVLO_VTH
M13
UVLO µçÑ¹3.0V
C2100
NC
NC-1
A1
NC-2
A16
NC-3
R1
NC-4
R16
IC-MT6358-WLCSP
Control I/F
PWRKEY
D2
D2100
RB520ZS-30 GMD2
PWRKEY
8S DEFAULT
PWRKEY
HOMEKEY
G13
SD_CARD_DET_N
J13
R2117 0R
EINT_SD
EINT_SD
SD detect pin for VMCH power off
TEST
FSOURCE
L6
GND FOR NORMAL MODE
PMU_TESTMODE
E8
GND
EXT PMIC EN
EXT_PMIC_EN1
D3
EXT_PMIC_EN1:For UFS_1V8, and keep floating if it is not used
EXT_PMIC_EN2
E5
EXT_PMIC_EN2:For VA09 of SSUSB/UFS, and keep floationg if it is not used


U2001
MT6358
Charger I/F
VPH_PWR
VPH_PWR
CAP CLOSE TO CHIP
105
C2101
M11
VSYSSNS
USB_VBUS_IN_PMIC
USB_VBUS_IN_PMIC
R2101 330K¡Á1%
R2102 3.3K
BAT_ON
L12
BATON
K12
VCDT
K13
CHRLDO
R2103
105
C2102
R2118 10K 1%
39K¡Á1%
IC-MT6358-WLCSP
Gauge
CS_P
N6
CS_N
M5
BATADC
L13
R2128 10R
VBATS
C2103
105
CAP CLOSE TO CHIP
Ò£¾ÓÍÂÔ÷µ0

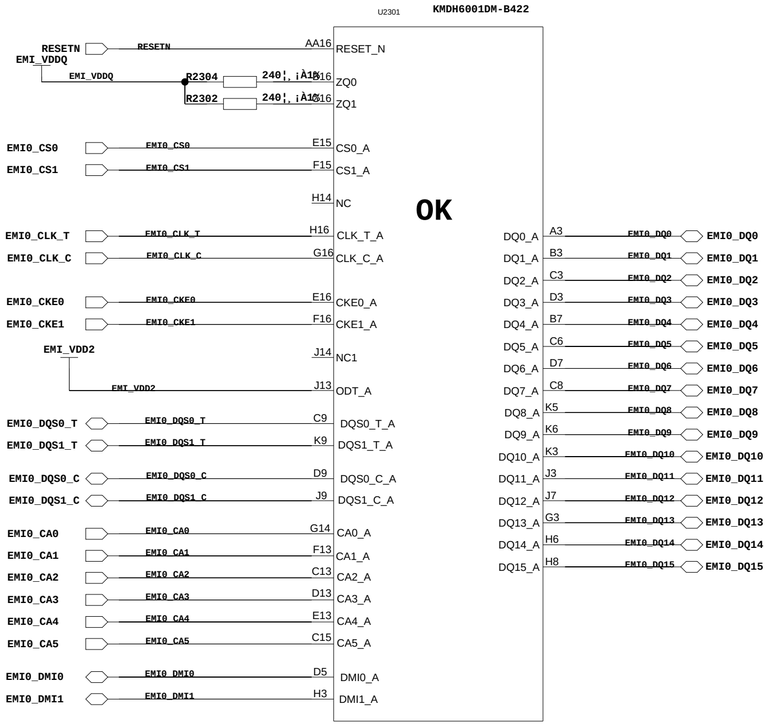

U2001
MT6358
AUXADC
GB 120¦ /100M ¡Á25% 300mA 0402
L2101
VAUX18_PMU
VAUX18_PMU
AVDD18_AUXADC
M3
AVDD18_AUXADC
AVDD18_AUXADC
C2124
105
AVSS18_AUXADC
M4
NC2102
AVSS18_AUXADC
AVSS18_AUXADC
104
C2105
AUXADC_VIN
M2
AUXADC_VIN
AUXADC_VIN
CLOSE TO CHIP
DCXO
XTAL1
N1
XTAL1
XTAL1
XTAL2
P1
XTAL2
XTAL2
AVSS22_XOBUF
R2
AVSS22_XO
P2
AVSS22_XO_ISO
N2
IC-MT6358-WLCSP
Please connect DCXO GND to main GND by independent L1-GND and
DON'T connect it through L1 GND
AVDD18_AUXADC
3mil trace width
R2104
100K 1%
AUXADC_VIN
3mil trace width
X2101
4
Sensor
HOT-2
1
XTAL1
XTAL1
3
HOT-1
GND
2
26.00M ¡À10PPM 2520?4 7P 100K NDK
15mil trace width
AVSS18_AUXADC
AVSS18_AUXADC
XTAL2
XTAL2
Route AVDD18_AUXADC/AUXADC_VIN as differential trace (3 mil each)with well GND shielding
and route AVSS18_AUXADC with 15mil trace width under
AVDD18_AUXADC/AUXADC_VIN trace to provide return current path.


Note 21_1: MT6358 HW trapping for DRAM
R2105 R2106
10K 10K
U2001
MT6358
AUDIO IF
AUD_CLK_MISO
AUD_CLK_MISO
H10
AUD_CLK_MISO
AUD_DAT_MISO0
AUD_DAT_MISO0
J11
AUD_DAT_MISO0
AUD_DAT_MISO1
AUD_DAT_MISO1
H11
AUD_DAT_MISO1
AUD_SYNC_MISO
AUD_SYNC_MISO
J10
AUD_SYNC_MISO
AUD_CLK_MOSI
AUD_CLK_MOSI
L11
AUD_CLK_MOSI
AUD_DAT_MOSI0
AUD_DAT_MOSI0
J9
AUD_DAT_MOSI0
AUD_DAT_MOSI1
AUD_DAT_MOSI1
L10
AUD_DAT_MOSI1
AUD_SYNC_MOSI
AUD_SYNC_MOSI
K10
AUD_SYNC_MOSI
MIC_BIAS1
MIC_BIAS1
R2107
R2108
1/20W3.3K
1/20W3.3K
AUDIO INPUT
CDC_IN0_P
CDC_IN0_P
C2106 105
K1
AU_VIN0_P
CDC_IN0_M
CDC_IN0_M
C2107 105
L1
AU_VIN0_N
CDC_IN1_P
CDC_IN1_P
R2109 510R
C2108 105
L4
AU_VIN1_P
CDC_IN1_M
CDC_IN1_M
C2109 105
L3
AU_VIN1_N
CDC_IN2_P
CDC_IN2_P
K4
AU_VIN2_P
CDC_IN2_M
CDC_IN2_M
K3
AU_VIN2_N
ACCDET
R2110 1K
K6
ACCDET
HP_DET1
HP_DET1
R2127 150K
J4
HP_EINT
AUDIO OUTPUT
AU_HPL and AU_HPR should be routed as single end signal
and be fuarded bu GND, up and down, left and right respectively
The suggested layout pattern of AU_HPL/AU_HPR/AU_REFN
is "GND AU_HPL AU_REFN AU_HPR GND"
AU_HPL
AU_HPL
H4
AU_HPL
R2111 0R
Pole4
Pole4
H5
AU_REFN
AU_HPR
AU_HPR
G4
AU_HPR
C2110
close to chip
NC
G5
AU_LOLP
G6
AU_LOLN
AU_HSP
AU_HSP
J6
AU_HSP
AU_HSN
AU_HSN
H6
AU_HSN
IC-MT6358-WLCSP
UL POWER
AVSS28_AUD
VAUD28_PMU
VAUD28_PMU
AVSS28_AUD
AVDD28_AUD
J3
105
C2112
AVSS28_AUD
J5
C2113
MIC_BIAS0
104
MIC_BIAS0
C2114
104
MIC_BIAS1
MIC_BIAS1
AU_MICBIAS0
K5
AU_MICBIAS1
L5
close to chip
CHARGE PUMP
VIO18_PMU
VIO18_PMU
line width 20mil
1. AVSS18_AUD is connected to GND with
very short trace
2. AVSS18_AUD is connected to de-couple cap of AVDD18_AUD and AU_V18N with 6mi
trace respectively
AVDD18_AUD
H2
C2115
AVSS18_AUD
H1
6mil
225
NC2101
NC-0R
C2116
GND
AU_V18N
F1
475
FLYP
G2
C2117
FLYN
F2
475
close to chip

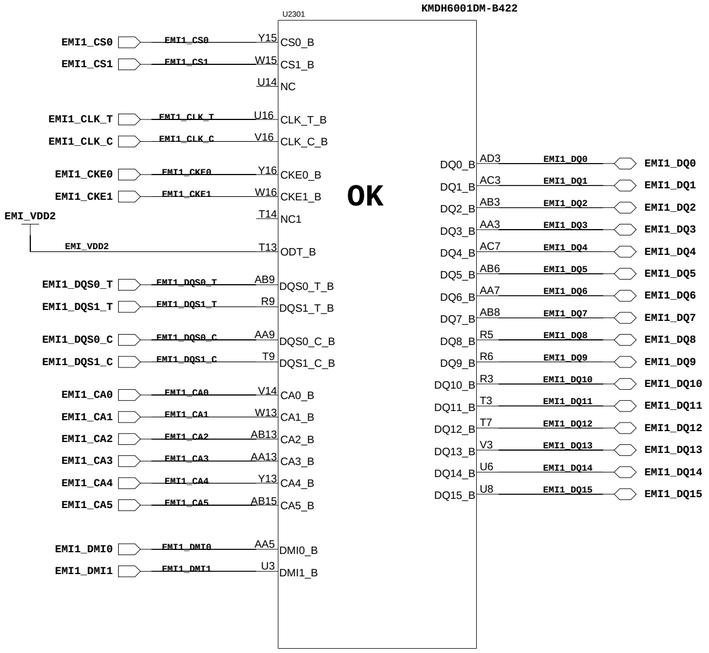

U2001
MT6358
CLK CTRL
SRCLKENA0
SRCLKENA0
L7
SRCLKEN_IN0
SRCLKENA1
SRCLKENA1
J7
SRCLKEN_IN1
Sensor Hub
SCP_VREQ_VAO
SCP_VREQ_VAO
H13
SCP_VREQ_VAO
DCXO CLKOUT
XO_SOC
P4
R2114 0R
PMIC_CLK_BB
PMIC_CLK_BB
XO_CEL
R3
R2115 0R
PMIC_CLK_RF
PMIC_CLK_RF
XO_WCN
P3
R2116 0R
PMIC_CLK_WCN
PMIC_CLK_WCN
XO_NFC
N4
XO_EXT
P5
C2118
C2119
C2120
NC
5P
5P
IC-MT6358-WLCSP

U2001
MT6358
C2111¿¿¼ü¡¢MT6358·ÀÔÃ
104
C2111
R2112
1.5K ¡Á1%
RTC
VRTC28
M8
C2104
1.2S
226 0603
RTC CLKOUT
RTC32K_CK
RTC32K_CK
F10
RTC32K_1V8_0
G12
RTC32K_1V8_1
M7
RTC32K_2V8
IC-MT6358-WLCSP

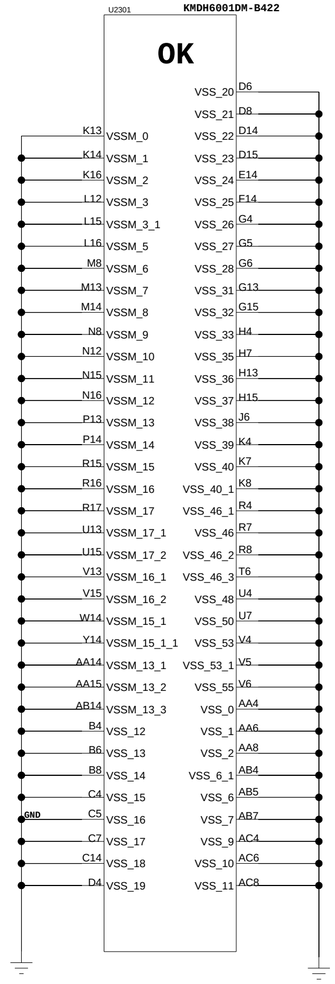
EMCP_EBI0



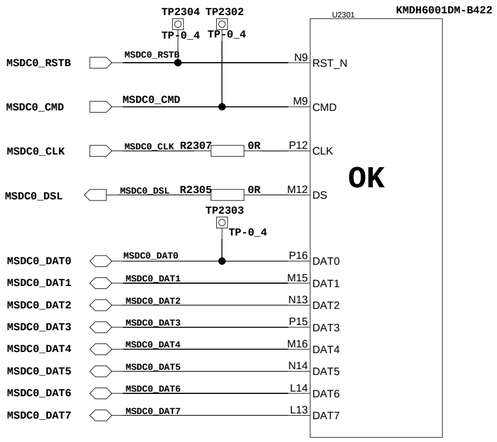
EMCP_EMI1



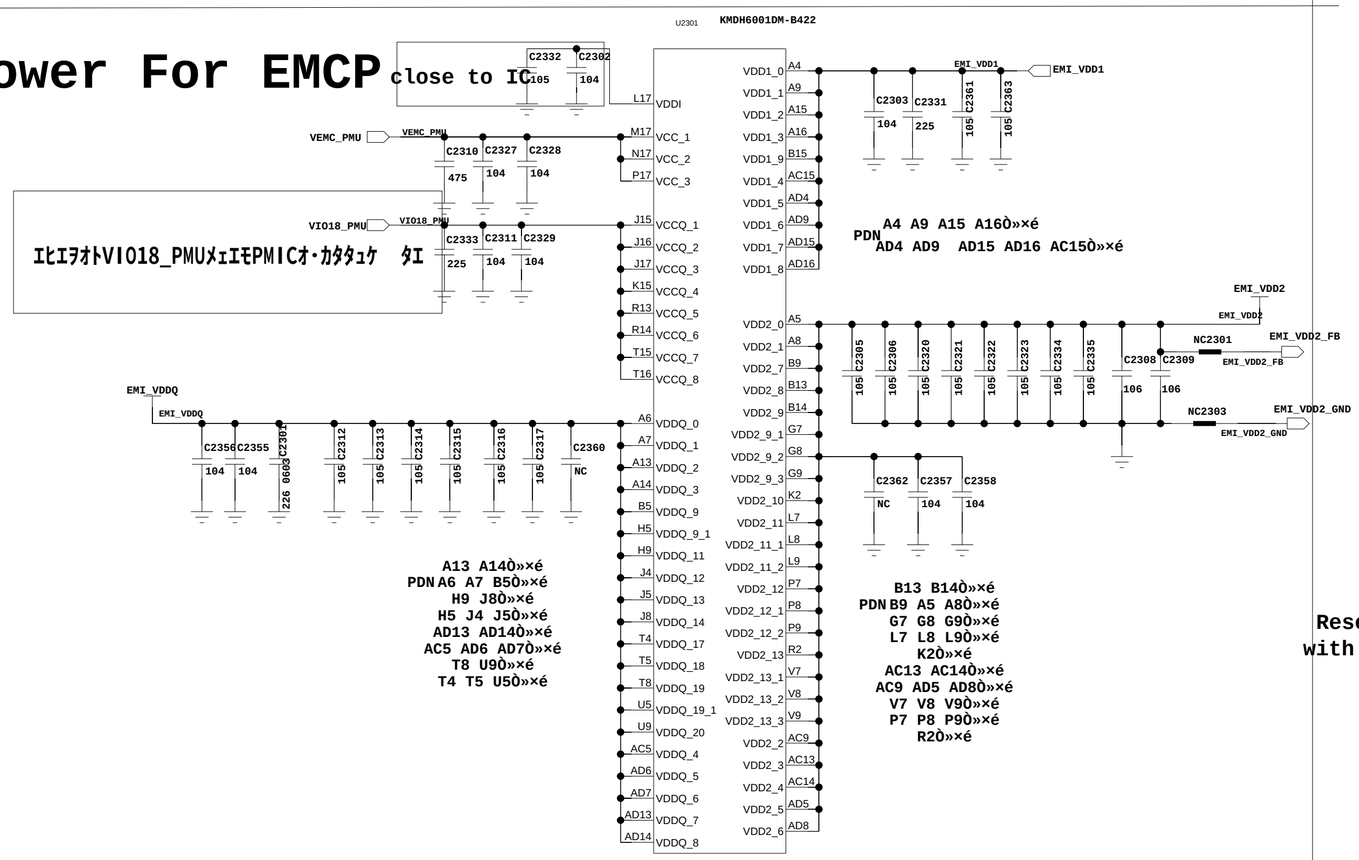
EMCP_GND

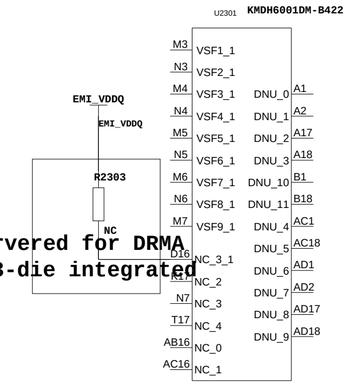


EMCP_SDC



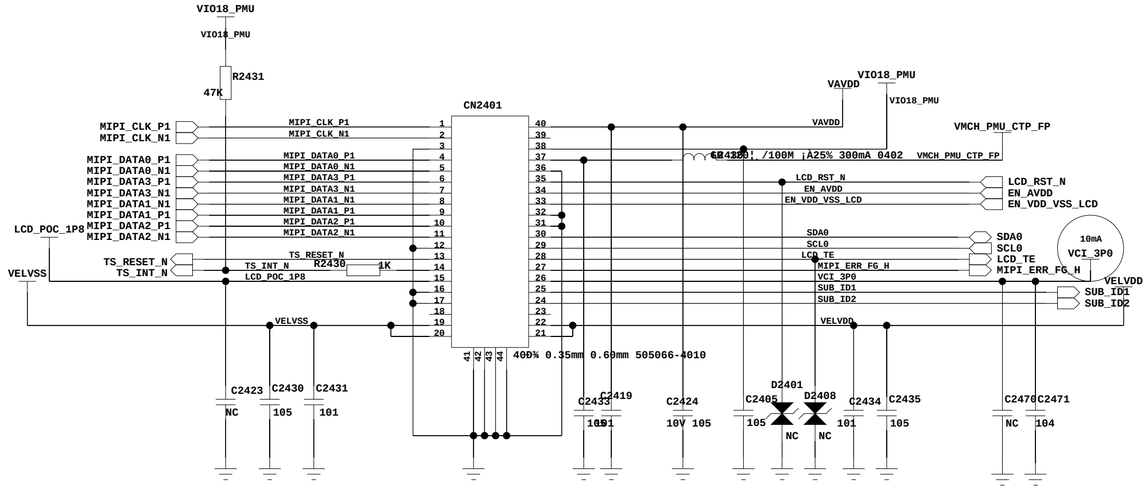
Power For EMCP



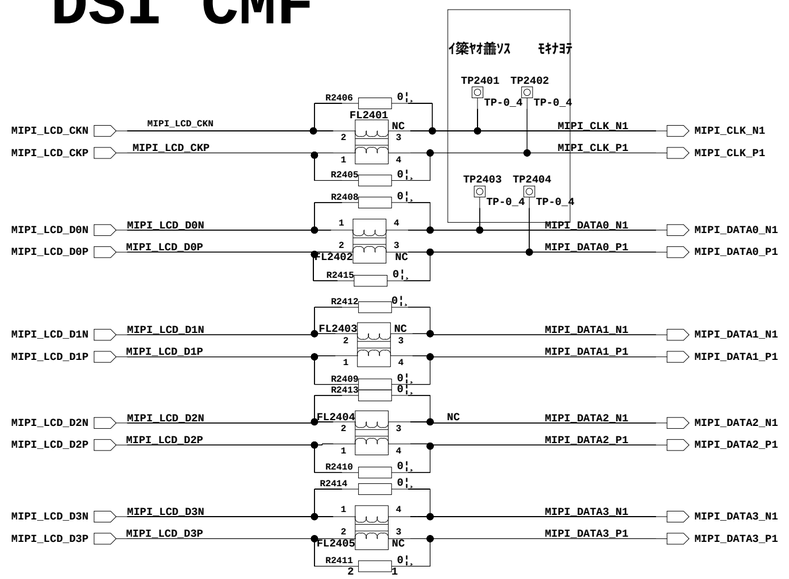


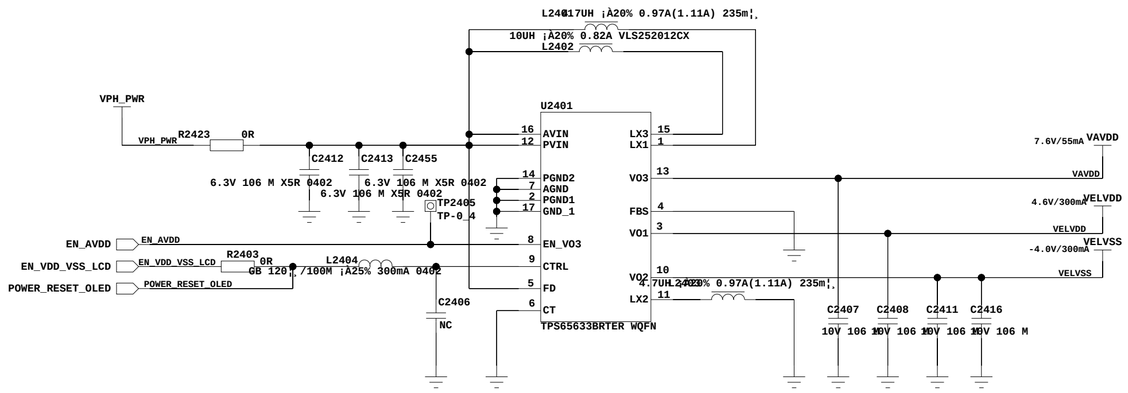
LCM Connector

TD4310 IIC address」ｲR:0x21; W:0x20」ｳ

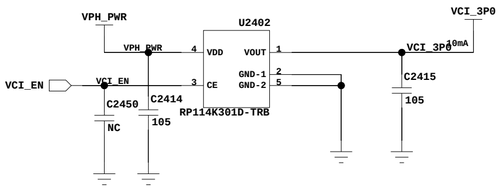


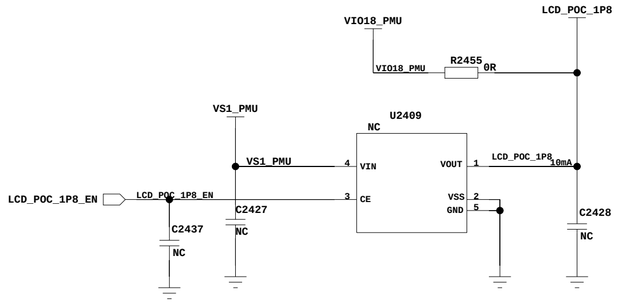
DSI CMF

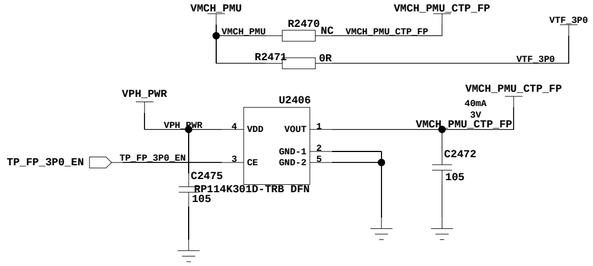




LCD IO LDO

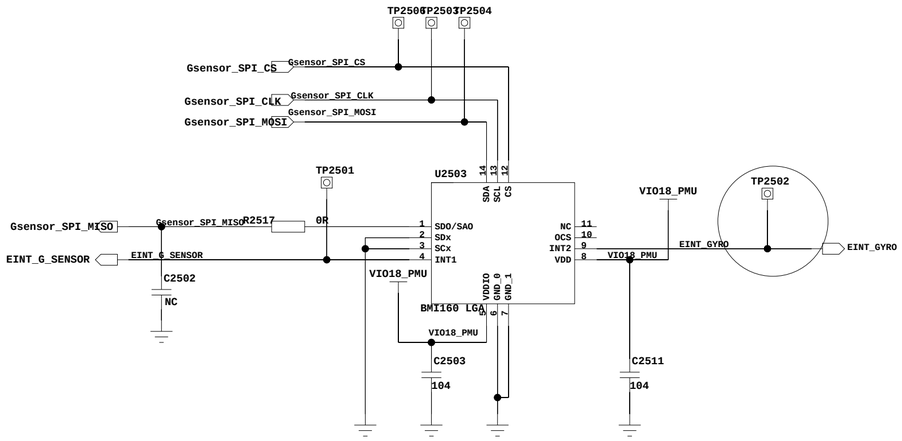






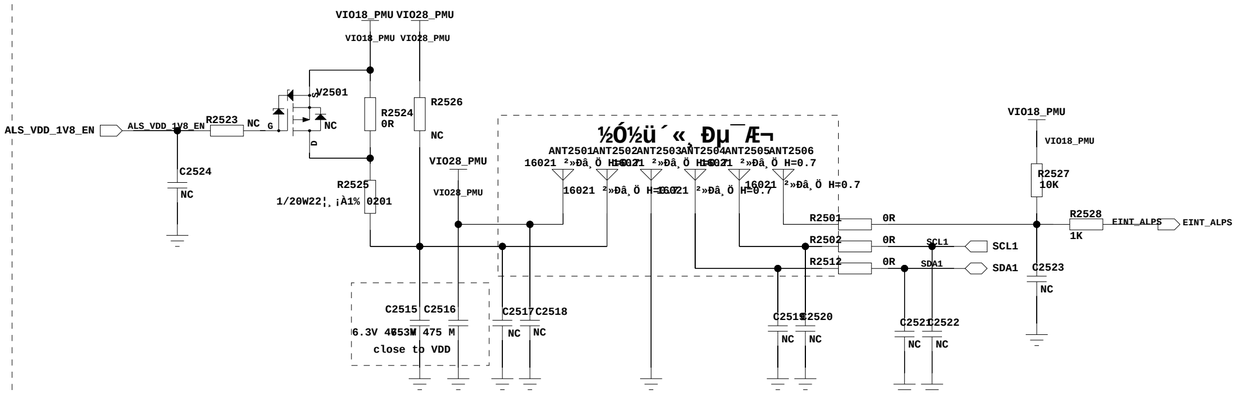
G-Sensor

LIS3DH I2C Address (R:0x33; W:0x32)



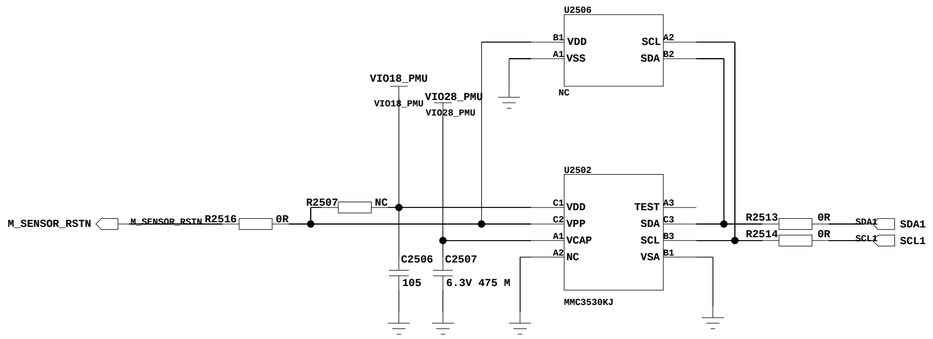
A.L.S.+P.S sensor

TMD2725 OX72(ΞI)/OX73(カチ)

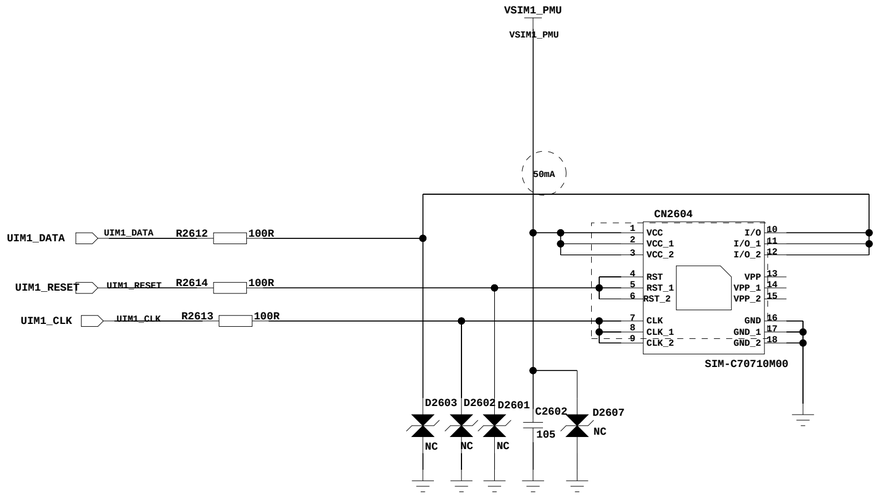


M Sensor

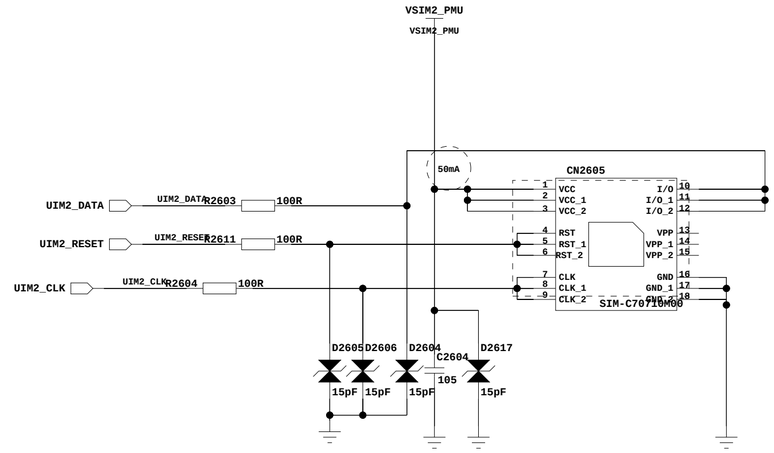
AK09911 I2C Address (R:0x19; W:0x18)



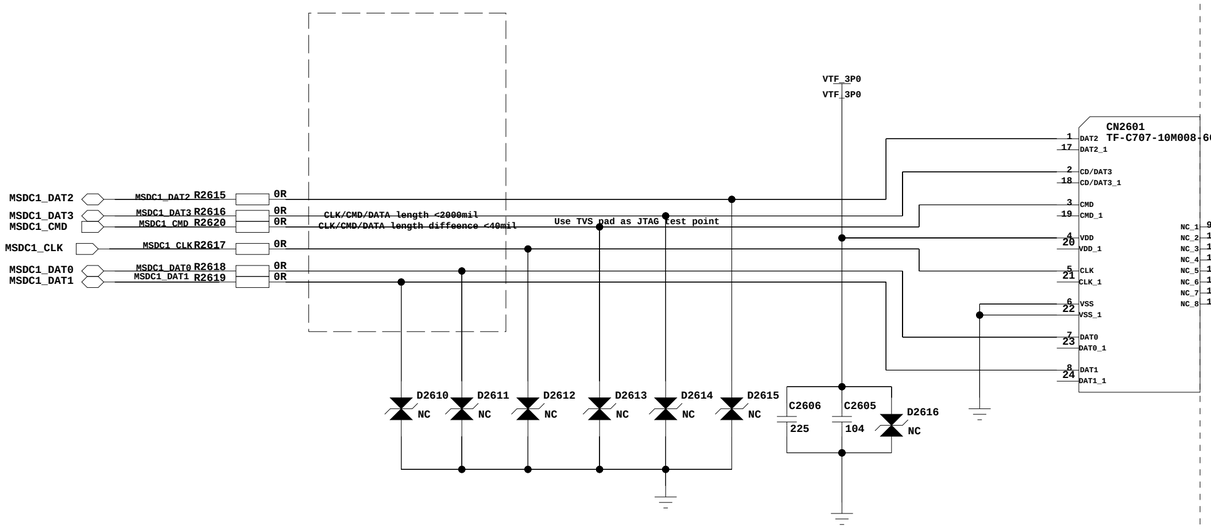
SIM1 Card



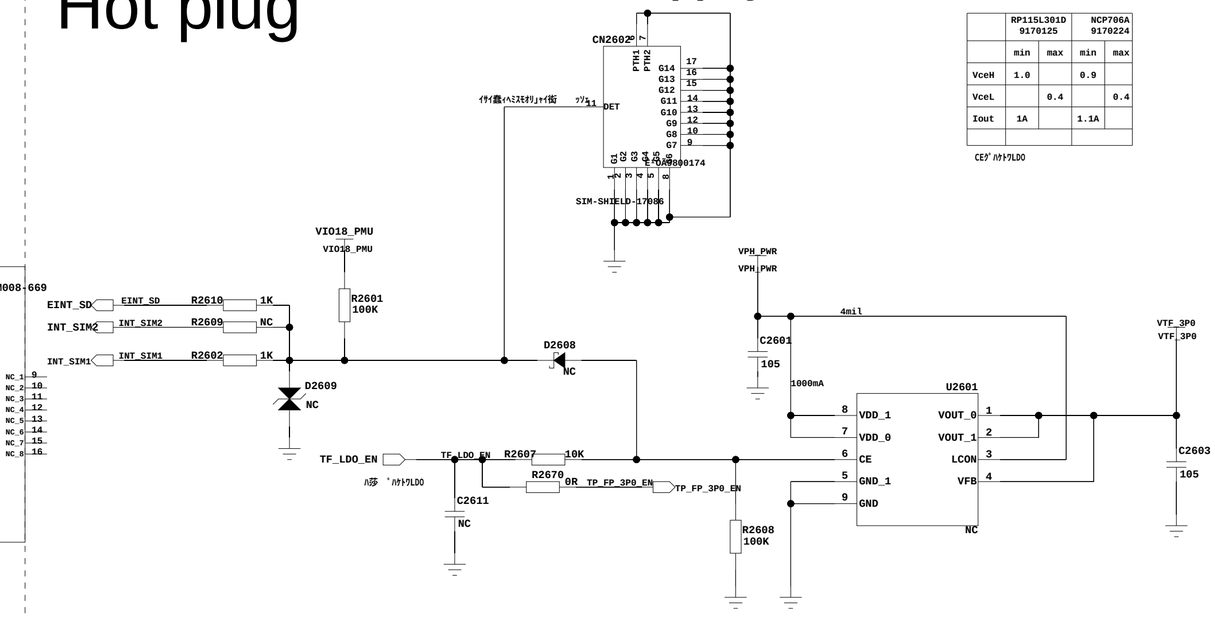
SIM2 Card



TF_CARD



Hot plug T¿" Ext 2.95V Supply

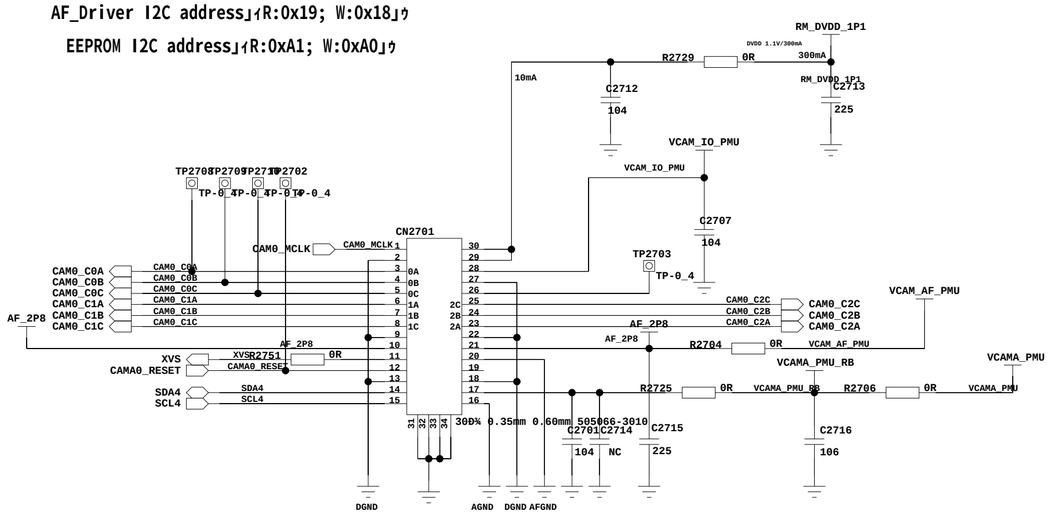


	RP115L301D 9170125		NCP706A 9170224	
	min	max	min	max
VceH	1.0		0.9	
VceL		0.4		0.4
Iout	1A		1.1A	

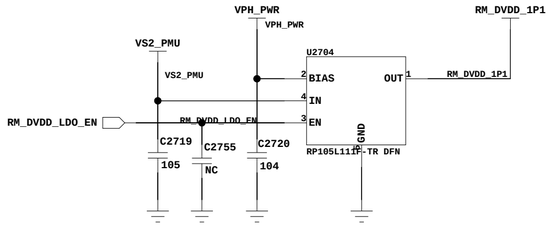
CEﾀﾞﾊﾝﾄｳLDO

Main CAMERA

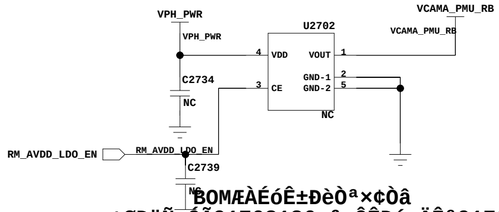
IMX398 I2C address:W:0x35; W:0x34
AF_Driver I2C address:R:0x19; W:0x18
EEPROM I2C address:R:0xA1; W:0xA0



REAR DVDD



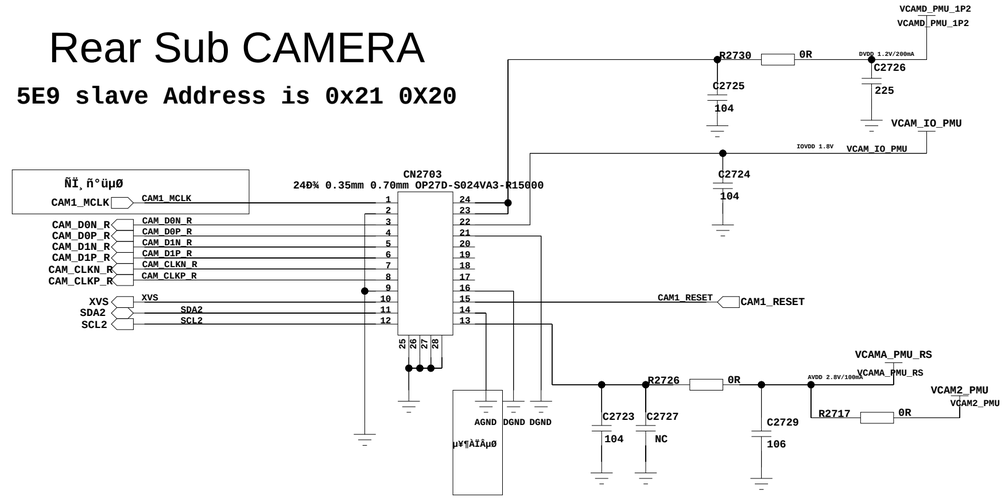
REAR AVDD



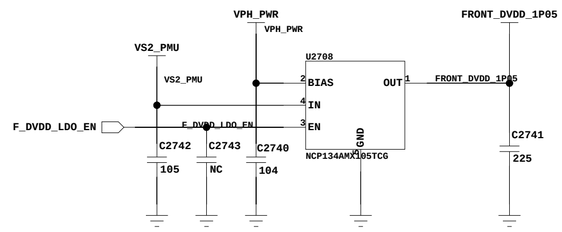
BOMÆÀÈóÊ±ÐèÒª×¢ÒâÎ
±ØÐëÑ¡ÓÃ9170313£¬²»ÔÊÐí¸ÄÎª9170316£¬PSRRµÍ£¬ÔÚR11ºÍR11plusÉÏ³ö¹ýÎÆ²¨ÎÊÌâ

Rear Sub CAMERA

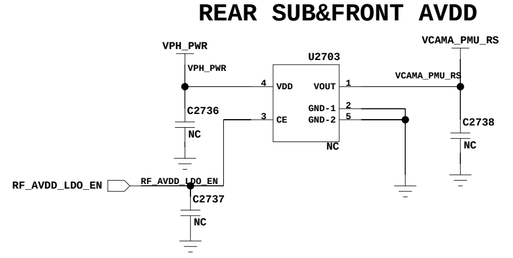
5E9 slave Address is 0x21 0X20



FRONT DVDD

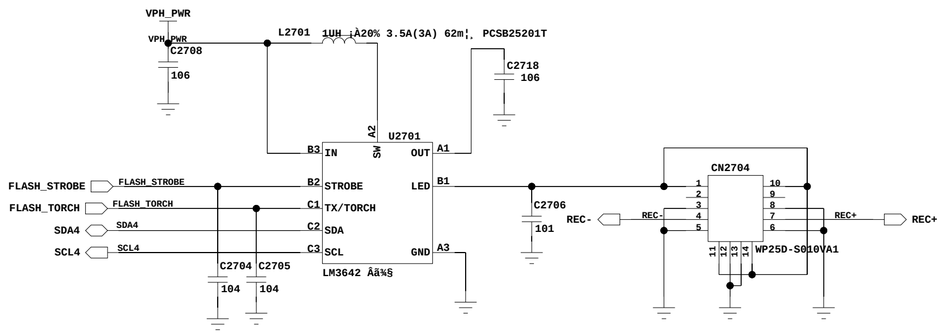


REAR SUB&FRONT AVDD



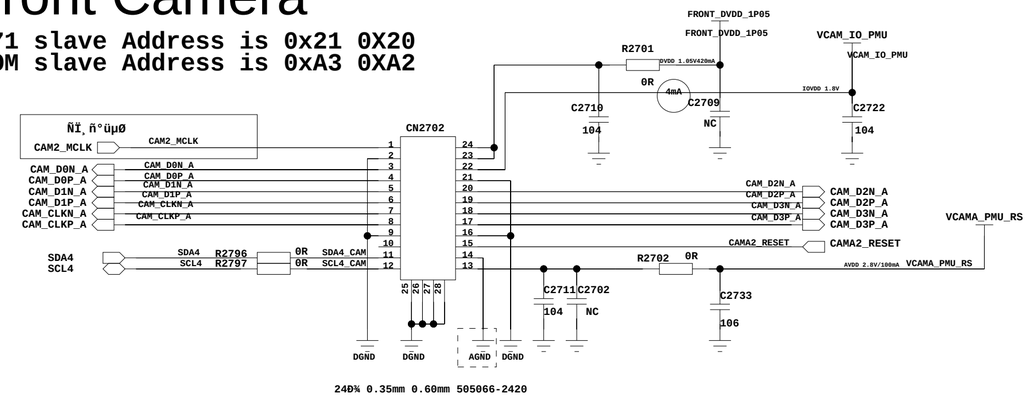
Flash LED Driver

LM3642 slave Address is 0xC6 0XC7



Front Camera

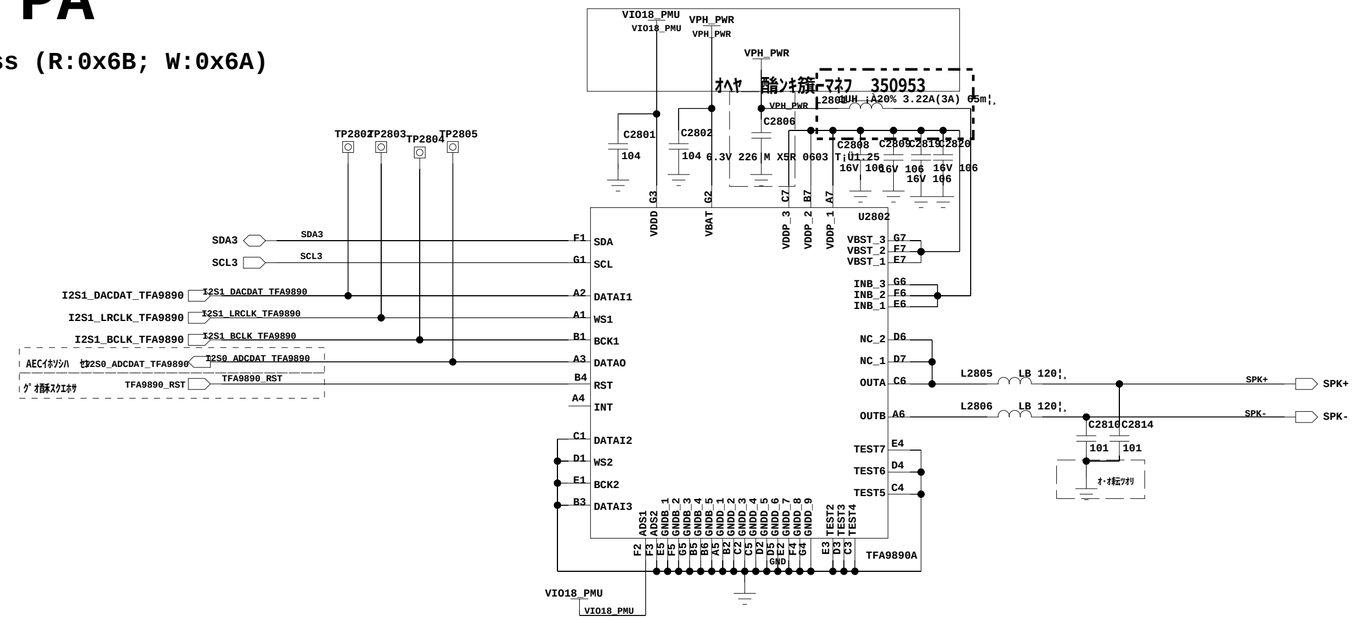
IMX371 slave Address is 0x21 0X20
EEPROM slave Address is 0xA3 0XA2



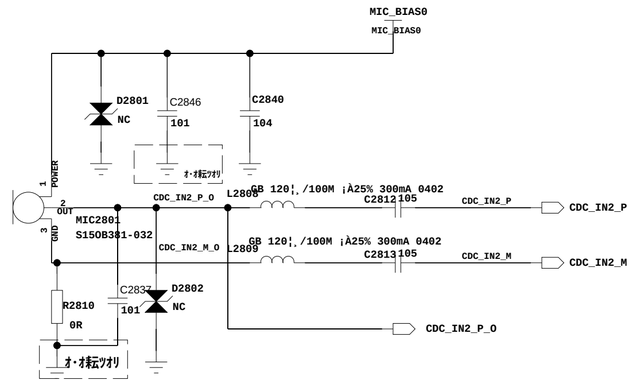
24Þ¾ 0.35mm 0.60mm 505066-2420

SMART PA

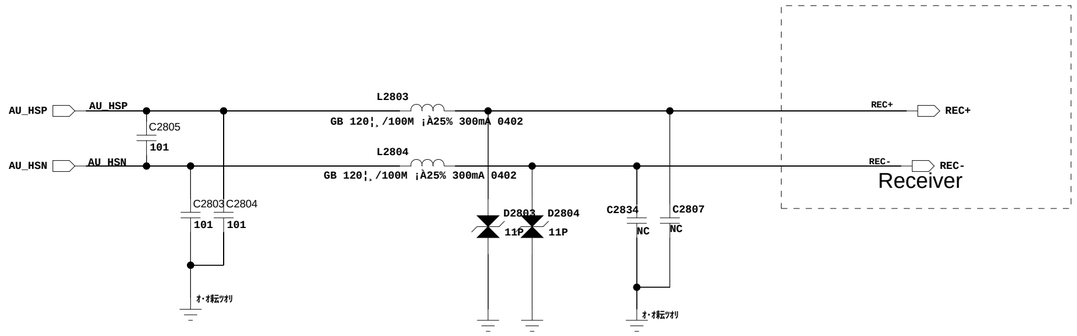
TFA9890A I2C Address (R:0x6B; W:0x6A)

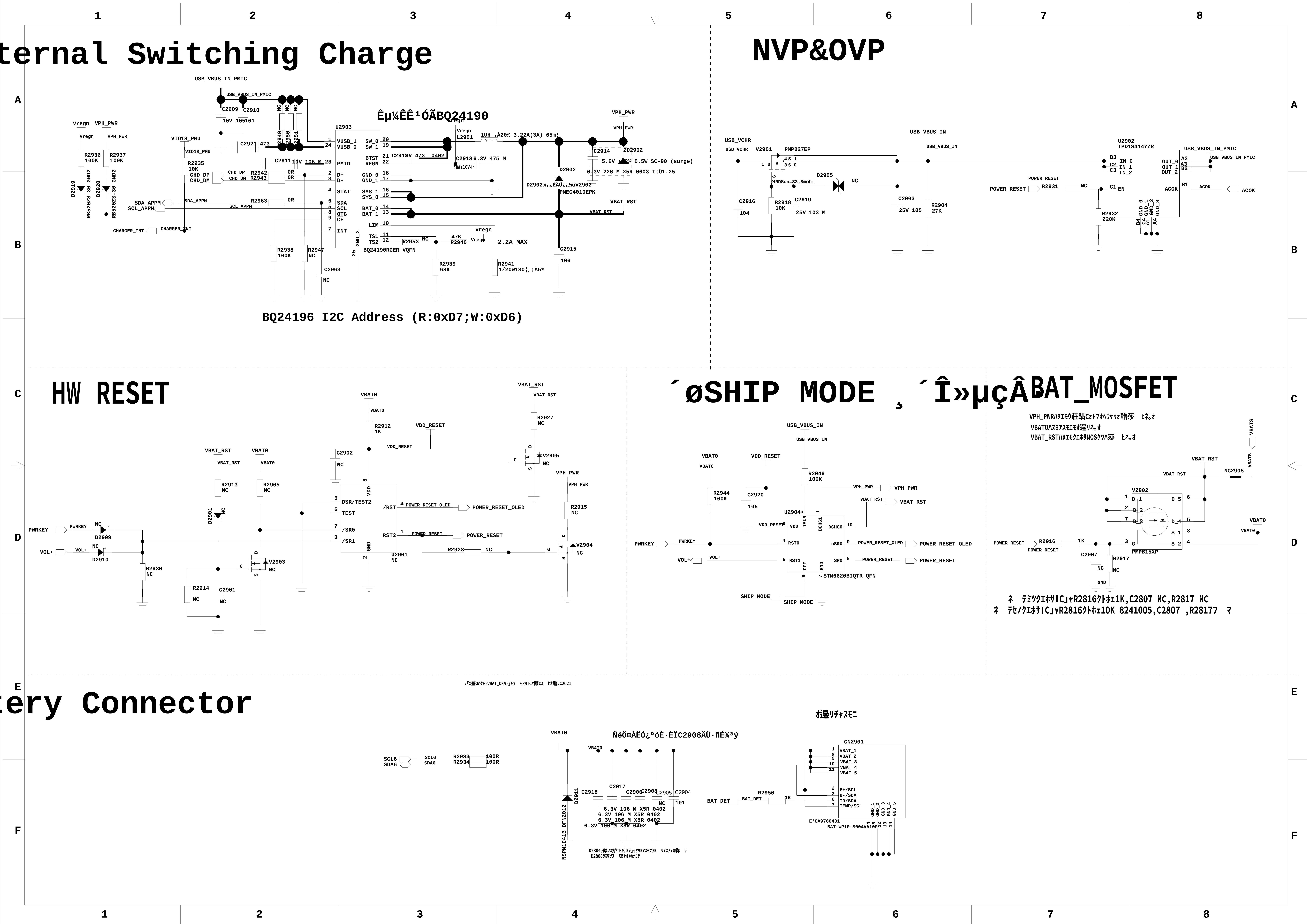


Ant-Noise MIC

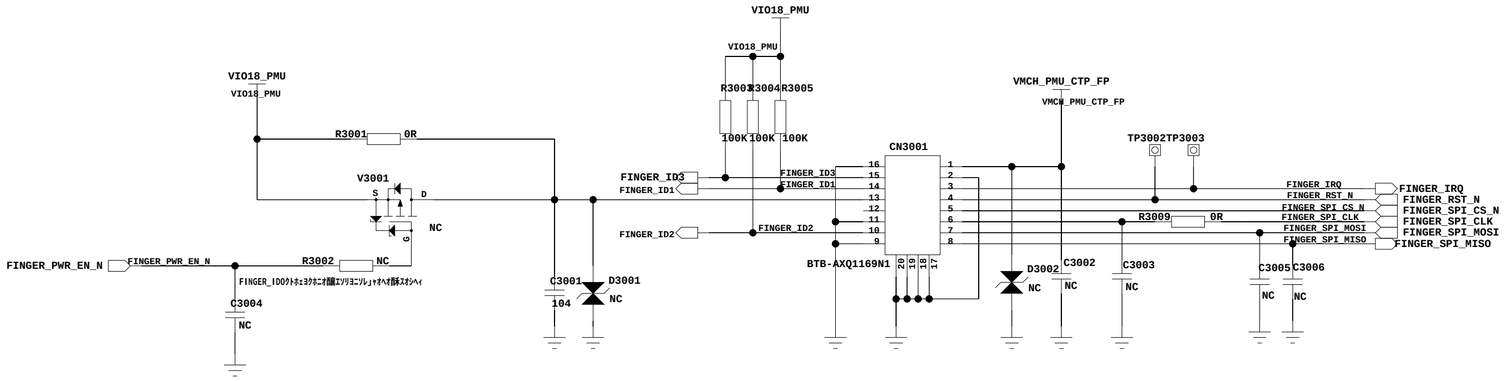


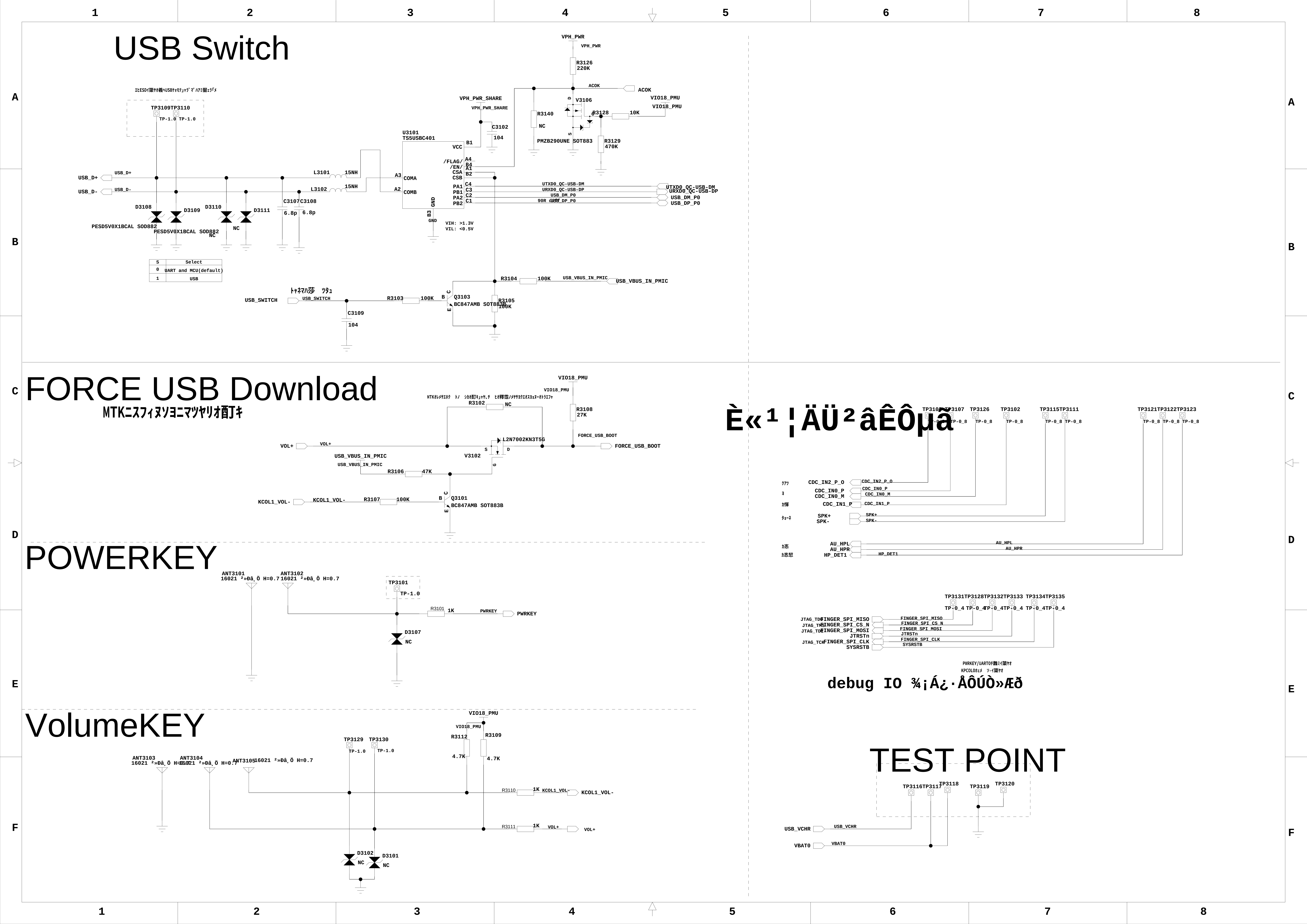
Receiver



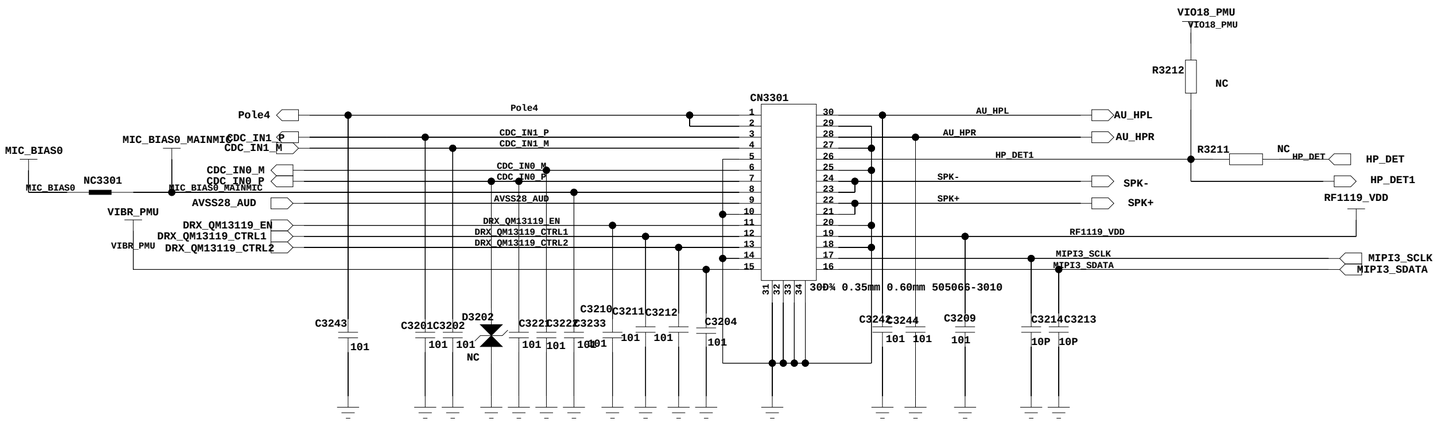


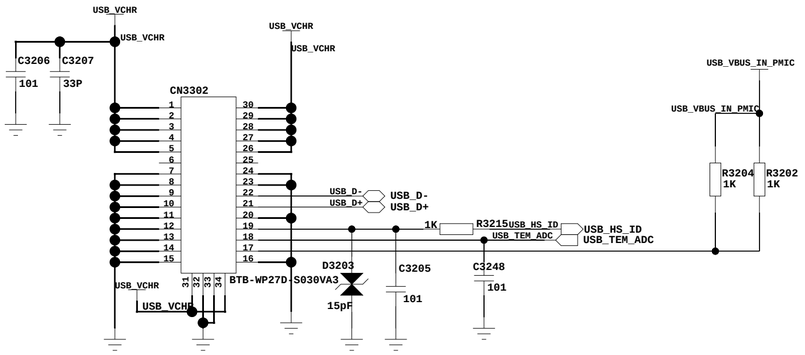
ternal Switching Charge
NVP&OVP
HW RESET
´øSHIP MODE ¸´Î»µçÂ·
BAT_MOSFET
tery Connector
BQ24196 I2C Address (R:0xD7;W:0xD6)
U2903
BQ24190RGER VQFN
USB_VBUS_IN_PMIC
VPH_PWR
VBAT_RST
2.2A MAX
L2901
1UH ¡À20% 3.22A(3A) 65m¦
D2902
PMEG4010EPK
ZD2902
5.6V 0.5W SC-90 (surge)
U2902
TPD1S414YZR
V2901
PMPB27EP
USB_VCHR
USB_VBUS_IN
POWER_RESET
ACOK
U2901
VDD_RESET
POWER_RESET_OLED
PWRKEY
VOL+
U2904
STM6620BIQTR QFN
SHIP MODE
V2902
PMPB15XP
CN2901
BAT-WP10-S004VA10P
SCL6
SDA6
BAT_DET
D2911
NSPM1041B DFN2012

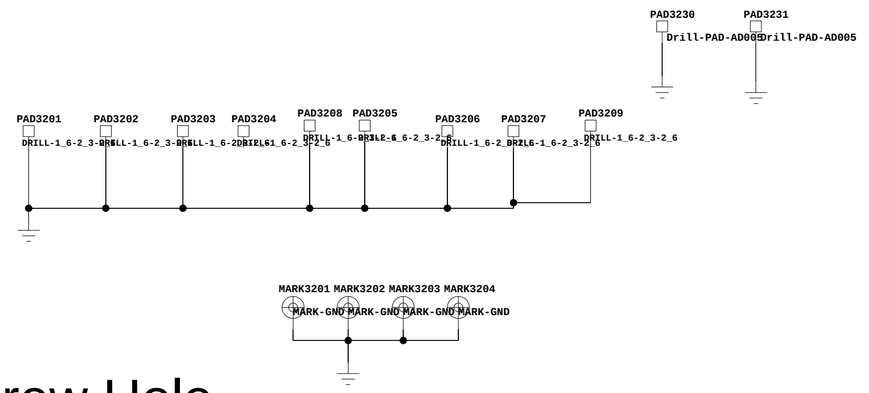

VIO18_PMU
VIO18_PMU
R3001 0R
V3001
S
D
G
NC
FINGER_PWR_EN_N
FINGER_PWR_EN_N
R3002 NC
FINGER_IDOウトネエヨケヨニオ前面エソリヨニソルョオヘオ前豚スオシヘィ
C3004
NC
VIO18_PMU
VIO18_PMU
R3003 R3004 R3005
100K 100K 100K
FINGER_ID3
FINGER_ID1
FINGER_ID2
C3001
104
D3001
NC
CN3001
FINGER_ID3
FINGER_ID1
FINGER_ID2
BTB-AXQ1169N1
VMCH_PMU_CTP_FP
VMCH_PMU_CTP_FP
D3002
NC
C3002
NC
C3003
NC
TP3002 TP3003
R3009 0R
C3005
NC
C3006
NC
FINGER_IRQ
FINGER_RST_N
FINGER_SPI_CS_N
FINGER_SPI_CLK
FINGER_SPI_MOSI
FINGER_SPI_MISO
FINGER_IRQ
FINGER_RST_N
FINGER_SPI_CS_N
FINGER_SPI_CLK
FINGER_SPI_MOSI
FINGER_SPI_MISO


USB Switch
FORCE USB Download
POWERKEY
VolumeKEY
TEST POINT
debug IO
VPH_PWR
R3126
220K
ACOK
VIO18_PMU
VPH_PWR_SHARE
R3140
NC
V3106
R3128
10K
PMZB290UNE SOT883
R3129
470K
C3102
104
U3101
TS5USBC401
VCC
COMA
COMB
GND
/FLAG/
/EN/
CSA
CSB
PA1
PB1
PA2
PB2
TP3109
TP3110
TP-1.0
USB_D+
USB_D-
L3101
L3102
15NH
D3108
D3109
D3110
D3111
PESD5V0X1BCAL SOD882
C3107
C3108
6.8p
UTXD0_QC-USB-DM
URXD0_QC-USB-DP
USB_DM_P0
USB_DP_P0
90R diff
VIH: >1.3V
VIL: <0.5V
S
Select
0
UART and MCU(default)
1
USB
R3104
100K
USB_VBUS_IN_PMIC
USB_SWITCH
R3103
Q3103
BC847AMB SOT883B
R3105
C3109
R3102
R3108
27K
L2N7002KN3T5G
V3102
FORCE_USB_BOOT
VOL+
R3106
47K
KCOL1_VOL-
R3107
Q3101
ANT3101
ANT3102
16021
H=0.7
TP3101
R3101
1K
PWRKEY
D3107
TP3129
TP3130
R3112
R3109
4.7K
ANT3103
ANT3104
ANT3105
R3110
R3111
D3102
D3101
TP3103
TP3107
TP3126
TP3102
TP3115
TP3111
TP3121
TP3122
TP3123
TP-0_8
CDC_IN2_P_O
CDC_IN0_P
CDC_IN0_M
CDC_IN1_P
SPK+
SPK-
AU_HPL
AU_HPR
HP_DET1
TP3131
TP3128
TP3132
TP3133
TP3134
TP3135
TP-0_4
JTAG_TDO
JTAG_TMS
JTAG_TDI
JTAG_TCK
FINGER_SPI_MISO
FINGER_SPI_CS_N
FINGER_SPI_MOSI
JTRSTn
FINGER_SPI_CLK
SYSRSTB
TP3116
TP3117
TP3118
TP3119
TP3120
USB_VCHR
VBAT0

FPC CONNECT BTB





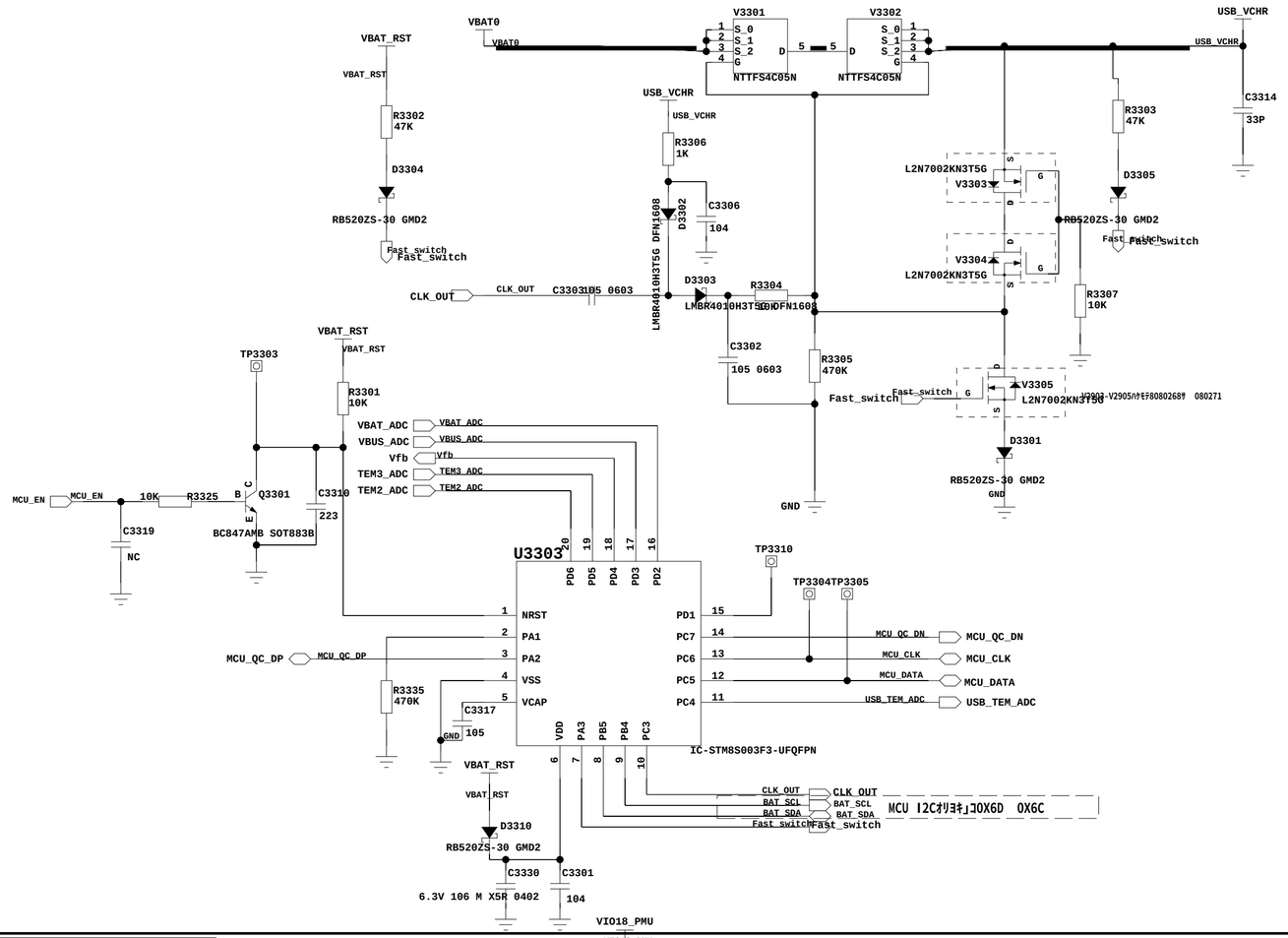


Screw Hole

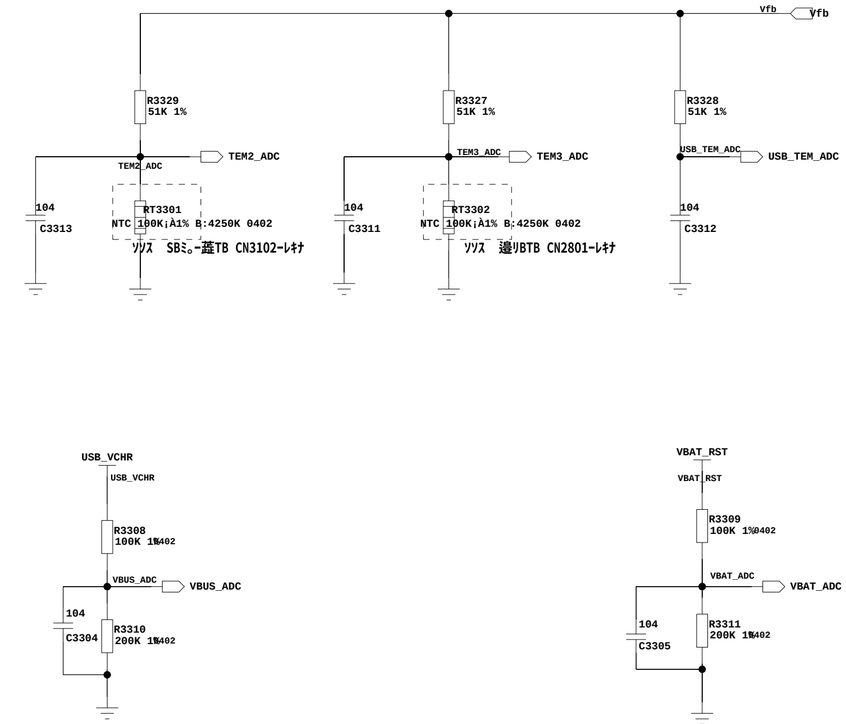
TOP	BOTTOM		
SH1 BB-MCP WJ-DC023-BB-SHIELDING	SH5 RF-PA WJ-DC023-RF-SHIELDING	SH10 sub MIC WJ-DC023-SUB-MIC-FRAME	
SH2 Flash Driver WJ-DC023-FLASH-DRV-SHIELDING	SH6 PMU WJ-DC023-PMU-SHIELDING	SH11 Battery BTB WJ-DC023-BTB-HOLDER-BUCKLE-SMT	
SH3 Charger IC WJ-DC023-CHG-SHIELDING	SH7 GPS WJ-DC023-GPS-SHIELDING	SH12 Battery BTB 2 WJ-DC023-SMT	
SH4 T Card 8.2¡Á1.5¡Á0.25 Á×ÇàÍ- ¶Å½ð	Flash LED	SH13 Fringer BTB WJ-DC023-FING	
	SH9 RF1117/9 bynner shielding WJ-DC023-TUNNER-SHIELDING		

SH14 WJ-DC023-SH1-HOLDER
SH15 WJ-DC023-SH1-HOLDER
SH16 WJ-DC023-SH1-HOLDER
SH17 WJ-DC023-SH1-HOLDER
SH18 WJ-DC023-SH1-HOLDER
SH8 WJ-DC023-FLASH-LED-FRAME

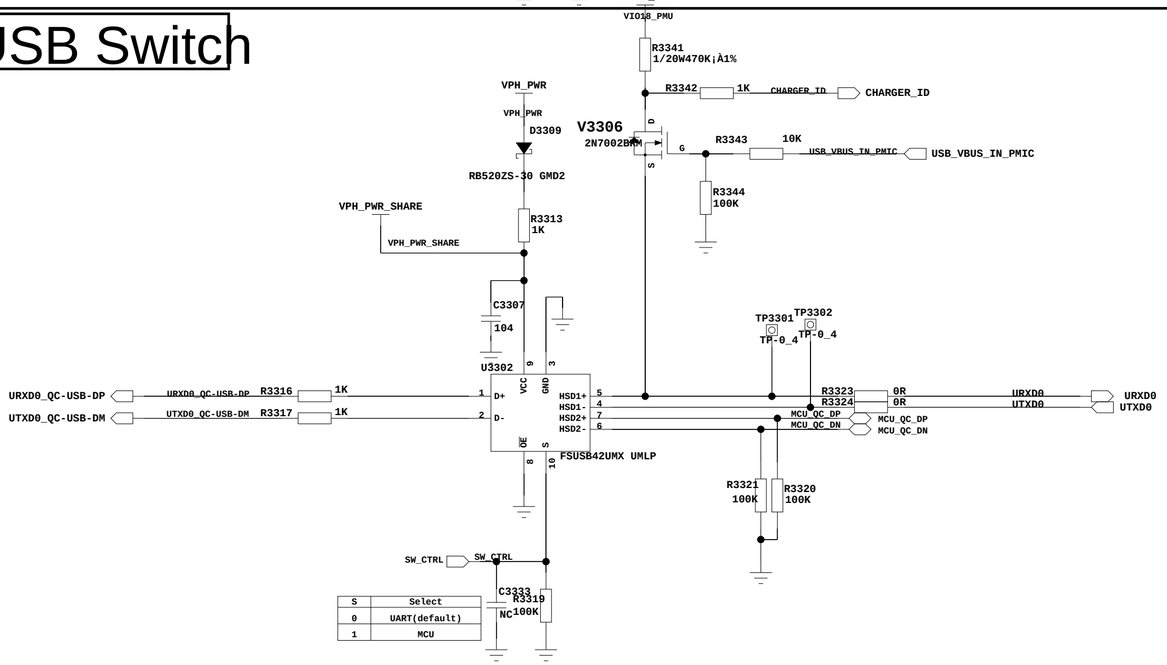
Fast Charge



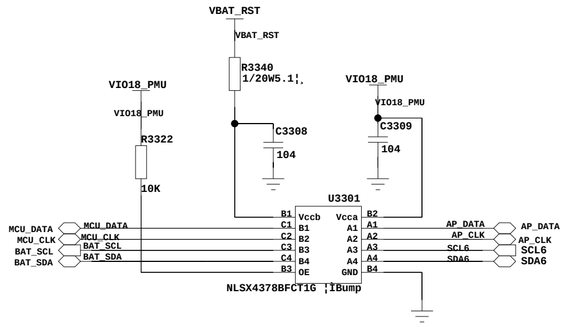
Thermistor

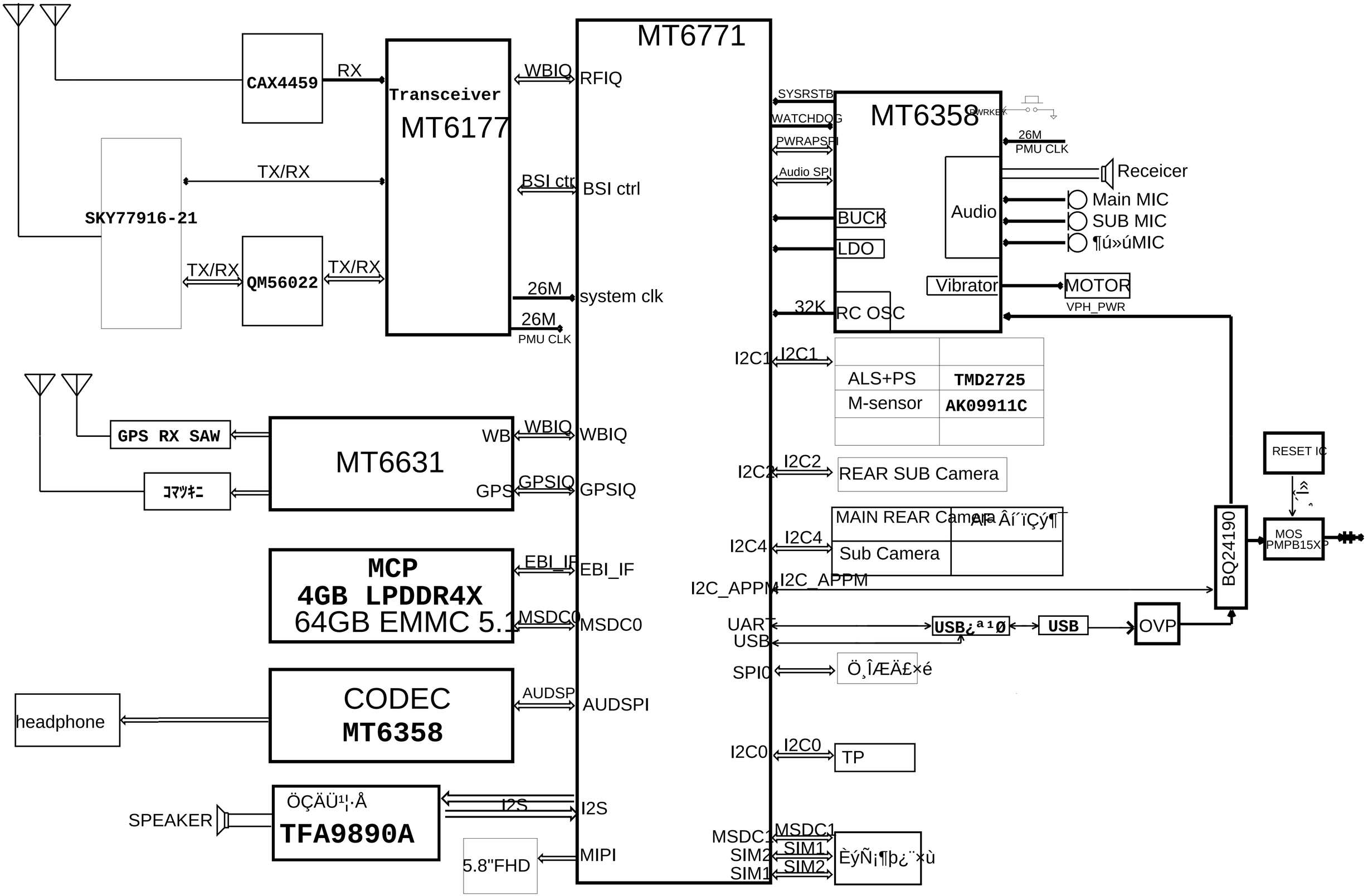


USB Switch



Level Switch




MT6771
CAX4459
RX
Transceiver
MT6177
WBIQ
RFIQ
SKY77916-21
TX/RX
BSI ctr
BSI ctrl
TX/RX
QM56022
TX/RX
26M
system clk
26M
PMU CLK
SYSRSTB
WATCHDOG
PWRAPSPI
Audio SPI
MT6358
PWRKEY
26M
PMU CLK
Receicer
Main MIC
SUB MIC
¶ú»úMIC
Audio
BUCK
LDO
Vibrator
MOTOR
VPH_PWR
32K
RC OSC
I2C1
I2C1
ALS+PS
TMD2725
M-sensor
AK09911C
GPS RX SAW
MT6631
WB
WBIQ
WBIQ
GPS
GPSIQ
GPSIQ
I2C2
I2C2
REAR SUB Camera
MAIN REAR Camera
Sub Camera
I2C4
I2C4
MCP
4GB LPDDR4X
64GB EMMC 5.1
EBI_IF
EBI_IF
MSDC0
MSDC0
I2C_APPM
I2C_APPM
UART
USB
USB¿ª1Ø
USB
OVP
BQ24190
RESET IC
MOS
PMPB15X
SPI0
Ö¸ÎÆÄ£×é
CODEC
MT6358
AUDSP
AUDSPI
headphone
I2C0
I2C0
TP
SPEAKER
ÖÇÄÜ¹¦·Å
TFA9890A
I2S
I2S
MSDC1
MSDC1
SIM2
SIM1
ÈýÑ¡¶þ¿¨×ù
SIM1
SIM2
5.8"FHD
MIPI