

FIH CONFIDENTIAL

MODEL NAME: DVX Big (DBU)
Version: PCR

Revision History and Current Revision :

Revision	Description Of Changes	Date (M-D-Y)	Phase
A00	Initial schematic		PR1

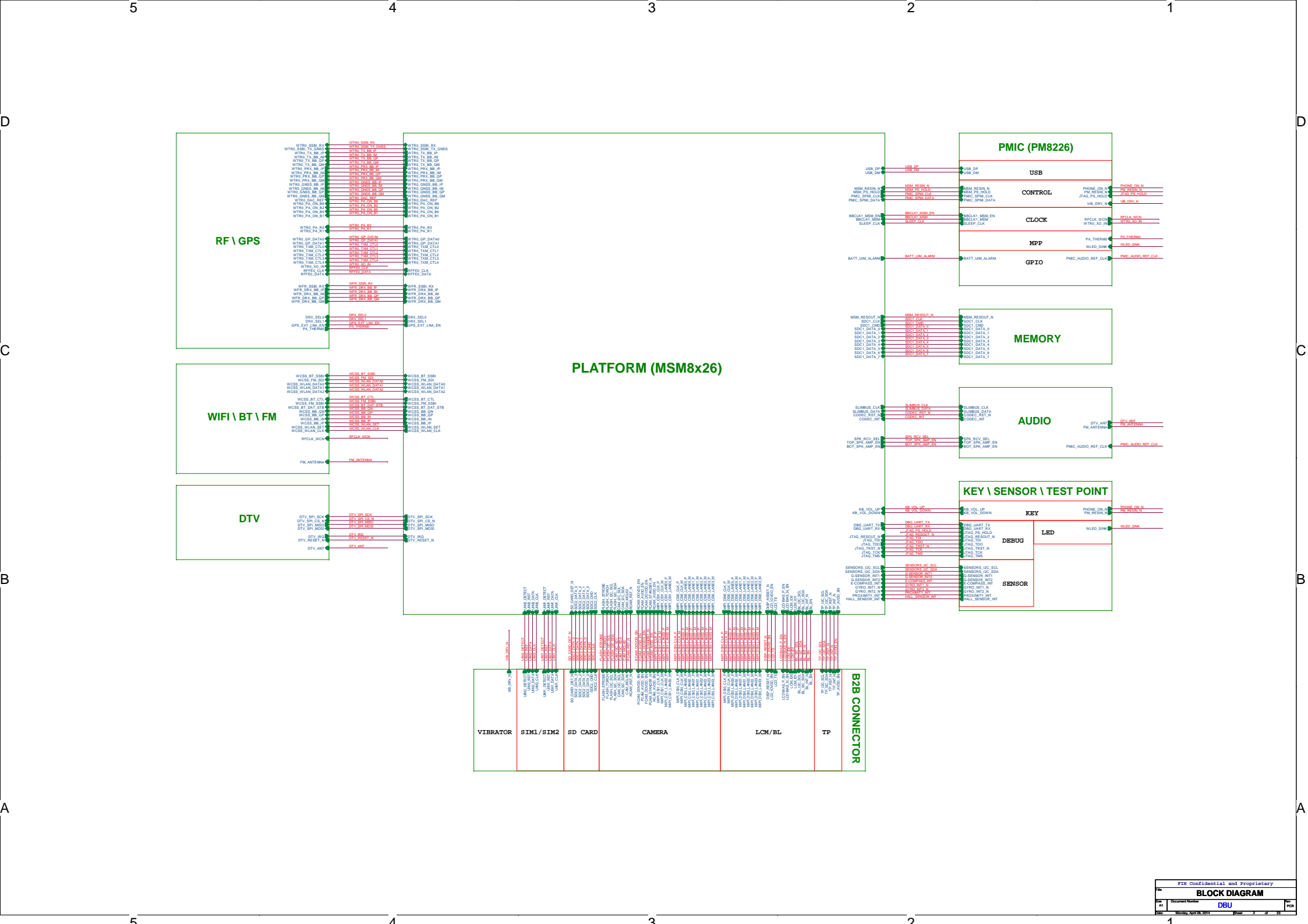
Page Description

Application Pages Summary

Modem Pages Summary

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- 07: MSM8x26_POWER-1
- 08: MSM8x26_POWER-2
- 09: MSM8x26_GND
- 10: PM8226_CHARGING
- 11: PM8226_CONTROL/CLK/GPIO
- 12: PM8226_SMPS
- 13: PM8226_LDO
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- 28: B2/B5/BC10 TRX
- 29: Diversity_SP4T
- 30: WFR2600 Diversity
- 31: WTR2605_GPS RX
- 32: WCN3620
- 33: DTV



RF \ GPS

WIFI \ BT \ FM

DTV

PLATFORM (MSM8x26)

PMIC (PM8226)

MEMORY

AUDIO

KEY \ SENSOR \ TEST POINT

B2B CONNECTOR

VIBRATOR
VIB_VIB_EN, VIB_VIB_DIS, VIB_VIB_TEST

SIM1/SIM2
SIM1_VDD, SIM1_GND, SIM1_RST, SIM1_DATA, SIM2_VDD, SIM2_GND, SIM2_RST, SIM2_DATA

SD CARD
SD_VDD, SD_GND, SD_CMD, SD_DATA0, SD_DATA1, SD_DATA2, SD_DATA3

CAMERA
CAM_VDD, CAM_GND, CAM_CLK, CAM_DATA, CAM_RST, CAM_FOCUS, CAM_ZOOM

LCM/BL
LCM_VDD, LCM_GND, LCM_DATA, LCM_RST, LCM_FOCUS, LCM_ZOOM

TP
TP_VDD, TP_GND, TP_RST, TP_DATA

GPIO	Net Name	Wakeup
GPIO_0	DTV_SPI_MOSI	
GPIO_1	DTV_SPI_MISO	V
GPIO_2	DTV_SPI_CS_N	
GPIO_3	DTV_SPI_SCK	
GPIO_4	BL_INT_N	V
GPIO_5	BL_EN	V
GPIO_6	SENSORS_I2C_SDA	
GPIO_7	SENSORS_I2C_SCL	
GPIO_8	DBG_UART_TX	
GPIO_9	DBG_UART_RX	V
GPIO_10	LCD_IOVDD_EN	
GPIO_11	LCM_ID0	
GPIO_12	LCD_BIAS_P_EN	
GPIO_13	LCD_BIAS_N_EN	V
GPIO_14	BL_I2C_SDA	
GPIO_15	BL_I2C_SCL	
GPIO_16	TP_RST_N	
GPIO_17	TP_INT_N	V
GPIO_18	TP_I2C_SDA	
GPIO_19	TP_I2C_SCL	
GPIO_20	DTV_RESET_N	
GPIO_21	DTV_IRQ	V
GPIO_22	FLASH_I2C_SDA	
GPIO_23	FLASH_I2C_SCL	
GPIO_24	LCD_TE	
GPIO_25	DISP_RESET_N	
GPIO_26	CAM_MCLK0	
GPIO_27	RCAM_AVDD_EN	V
GPIO_28		
GPIO_29	CAM_I2C_SDA	V
GPIO_30	CAM_I2C_SCL	
GPIO_31	FLASH_TORCH	V
GPIO_32	FLASH_STROBE	
GPIO_33	RCAM_DOVDD_EN	V
GPIO_34	FCAM_AVDD_EN	
GPIO_35	FCAM_STANDBY_N	V

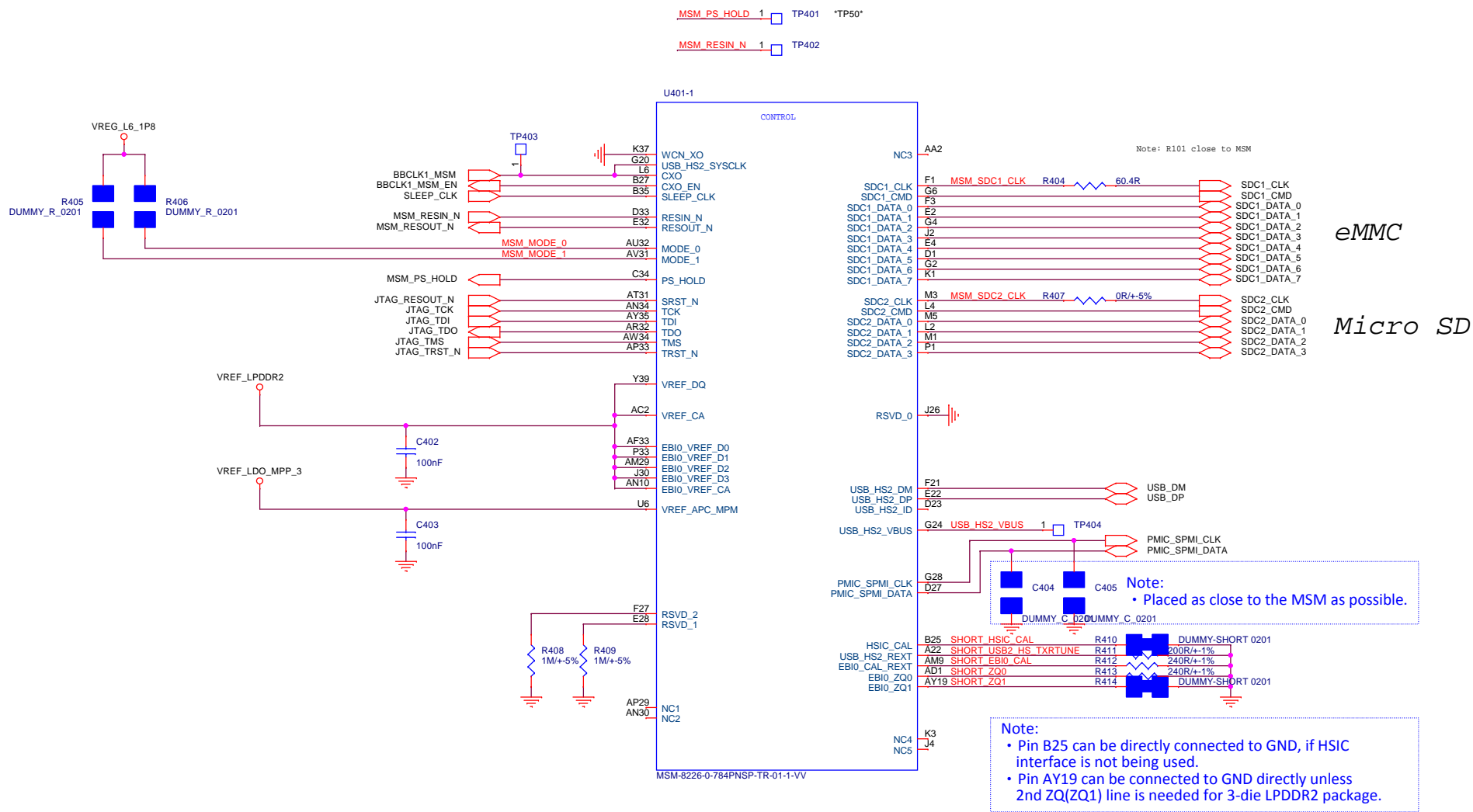
GPIO	Net Name	Wakeup
GPIO_36	FCAM_DOVDD_EN	
GPIO_37	RCAM_RST_N	V
GPIO_38	SD_CARD_DET_N	V
GPIO_39	WCSS_BT_SSBI	V
GPIO_40	WCSS_WLAN_DATA2	
GPIO_41	WCSS_WLAN_DATA1	V
GPIO_42	WCSS_WLAN_DATA0	
GPIO_43	WCSS_WLAN_SET	
GPIO_44	WCSS_WLAN_CLK	
GPIO_45	WCSS_FM_SSBI	
GPIO_46	WCSS_FM_SDI	V
GPIO_47	WCSS_BT_CTL	
GPIO_48	WCSS_BT_DAT_STB	V
GPIO_49	G-SENSOR_INT2	V
GPIO_50	TOP_SPK_AMP_EN	V
GPIO_51	BOT_SPK_AMP_EN	V
GPIO_52	SPK_RCV_SEL	V
GPIO_53	UIM2_DATA	
GPIO_54	UIM2_CLK	V
GPIO_55	UIM2_RST	
GPIO_56	UIM2_DETECT	
GPIO_57	UIM1_DATA	
GPIO_58	UIM1_CLK	
GPIO_59	UIM1_RST	
GPIO_60	UIM1_DETECT	
GPIO_61	BATT_UIM_ALARM	
GPIO_62	GYRO_INT2_N	V
GPIO_63	G-SENSOR_INT1	V
GPIO_64	GYRO_INT1_N	V
GPIO_65	PROXIMITY_INT	V
GPIO_66	E-COMPASS_INT	V
GPIO_67	LCM_ID1	V
GPIO_68	CODEC_INT	V
GPIO_69		V
GPIO_70	SLIMBUS_CLK	
GPIO_71	SLIMBUS_DATA	V

GPIO	Net Name	Wakeup
GPIO_72	CODEC_RST_N	V
GPIO_73	TP_AVDD_EN	
GPIO_74		
GPIO_75	WTR0_PA_ON_B1	
GPIO_76	WTR0_PA_ON_B2	
GPIO_77	WTR0_PA_ON_B5	
GPIO_78	WTR0_PA_ON_B8	
GPIO_79	WTR0_TXM_CTL0	
GPIO_80		
GPIO_81	WTR0_PA_R0	
GPIO_82	WTR0_PA_R1	
GPIO_83	WTR0_TXM_CTL1	
GPIO_84	WTR0_TXM_CTL2	
GPIO_85	WTR0_TXM_CTL3	
GPIO_86	WTR0_TXM_CTL4	
GPIO_87		
GPIO_88		
GPIO_89		
GPIO_90		
GPIO_91		
GPIO_92		
GPIO_93	DRX_SELO	
GPIO_94	DRX_SEL1	
GPIO_95	WTR0_GP_DATA0	
GPIO_96	WTR0_GP_DATA1	
GPIO_97		
GPIO_98		
GPIO_99	RFFE0_CLK	
GPIO_100	RFFE0_DATA	
GPIO_101	WTR0_SSBI_RX	
GPIO_102	WTR0_SSBI_TX_GNSS	
GPIO_103	WFR_SSBI_RX	
GPIO_104		
GPIO_105	GPS_EXT_LNA_EN	
GPIO_106	KB_VOL_UP	V
GPIO_107	KB_VOL_DOWN	V

GPIO	Net Name	Wakeup
GPIO_108		V
GPIO_109	HALL_SENSOR_INT	V
GPIO_110		V
GPIO_111		V
GPIO_112		
GPIO_113		V
GPIO_114		
GPIO_115		V
GPIO_116		

Function	IC	I2C Address
Gyro	BMG160	0x68
G-Sensor	BMC150	0x11
E-Compass	BMC150	0x13
PS+ALS	STK3310	0x48
Backlight	LM3630ATMX	0x38
TP	S2716	0x20
DTV	NMI326AFB	0x61 (RSVD)
Flash LED Driver	LM3642TLX NOPB	0x63
Rear Cam.	IMX179QQH5-C	0x10
Front Cam.	IMX132TQH5-C	0x36
LCM Bias	TPS65132A0YFFR	0x3E

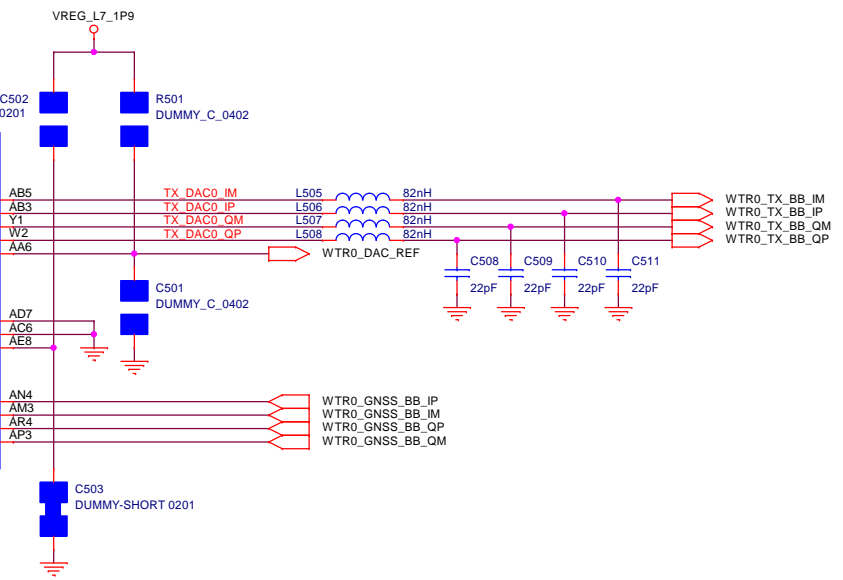
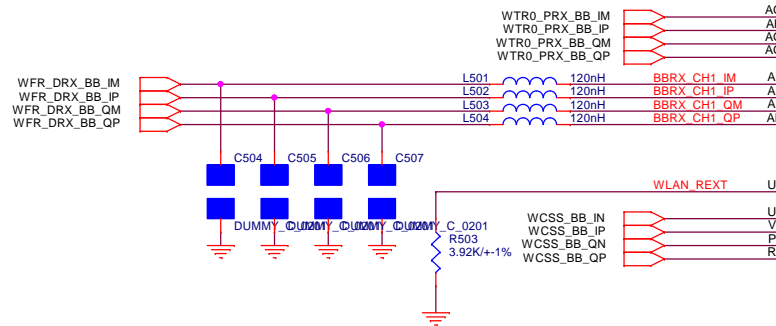
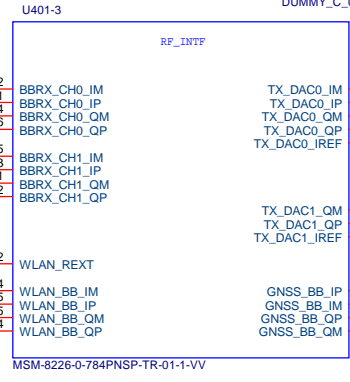
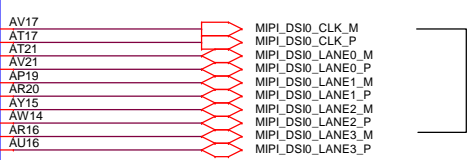
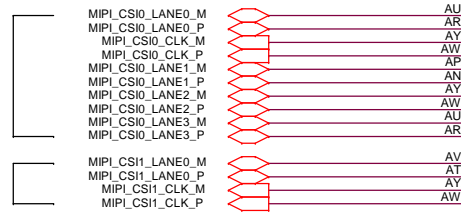
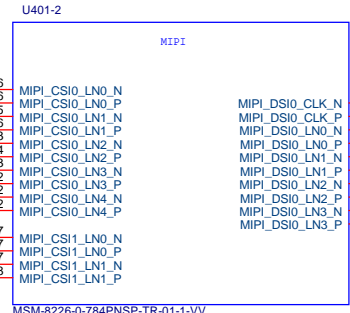
FIH Confidential and Proprietary			
Title	GPIO/I2C LIST		
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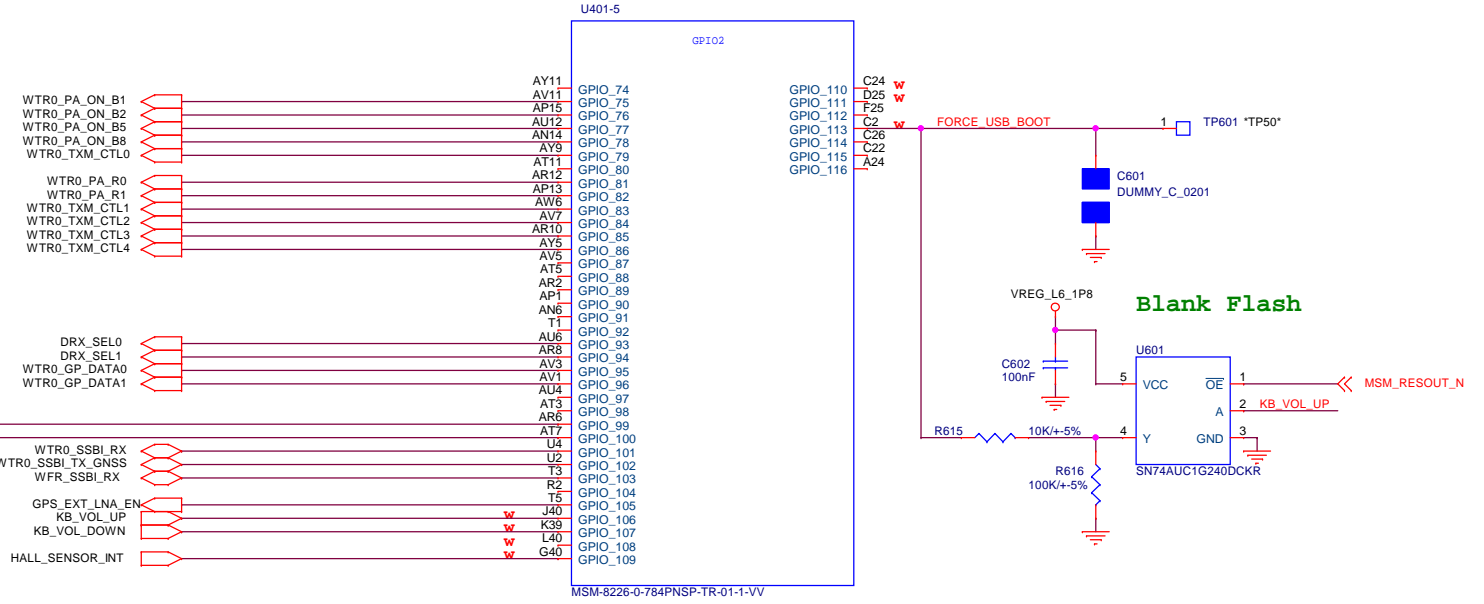
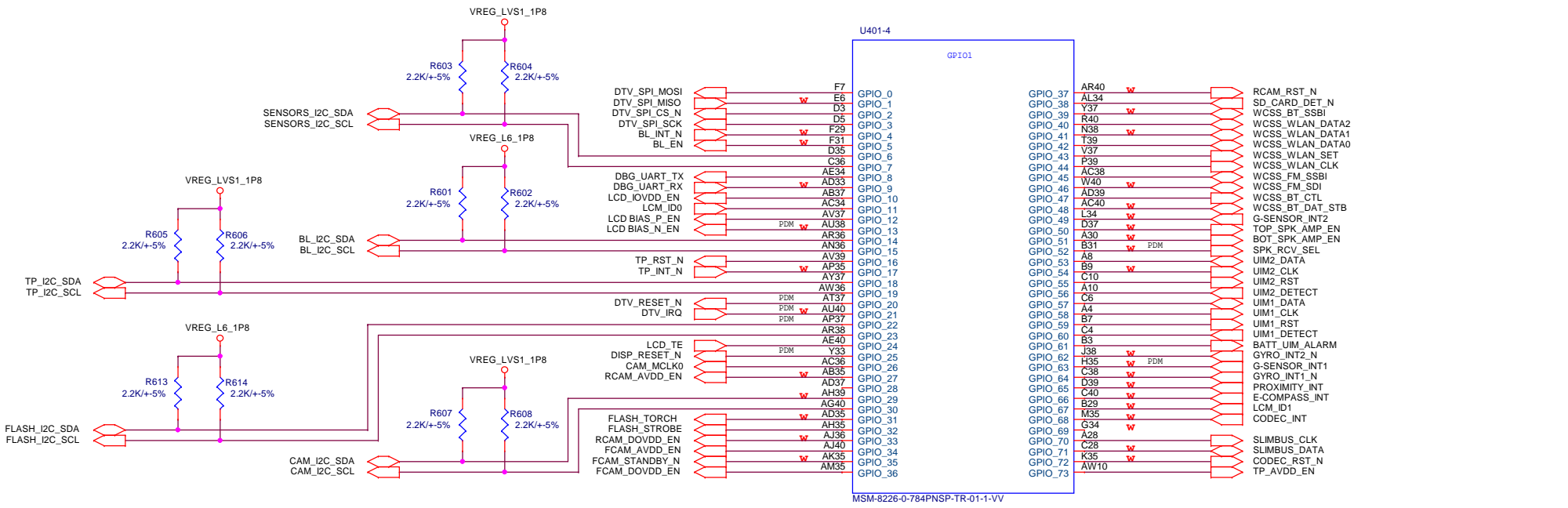
REAR CAMERA

FRONT CAMERA

DISPLAY



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GPIOs	Corresponding fuse	Function
GPIO[82]	FAST_BOOT[1]	The fast boot options configure the external boot device used to boot from, as shown in the table below.
GPIO[83]	FAST_BOOT[2]	
GPIO[84]	FAST_BOOT[3]	Development board - BOOT_CONFIG general-purpose input/output (GPIOs) should be used.
GPIO[85]	FAST_BOOT[4]	Production board - FAST_BOOT fuses should be blown.

BOOT_CONFIG [4:1]	MAPPING
0b0000	eMMC (default) at SDCl, followed by USB from SDC2
0b0001	SDC2 followed by SDCl
0b0010	eMMC at SDCl
0b0011	FSB

MSM Boot Config Pin: Internal PD

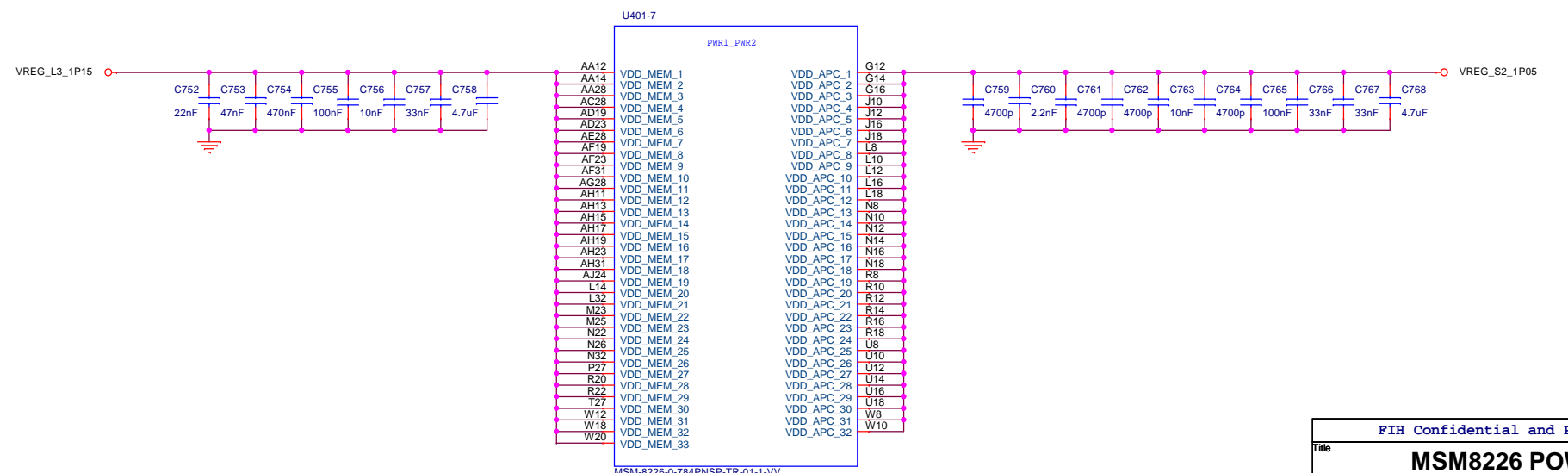
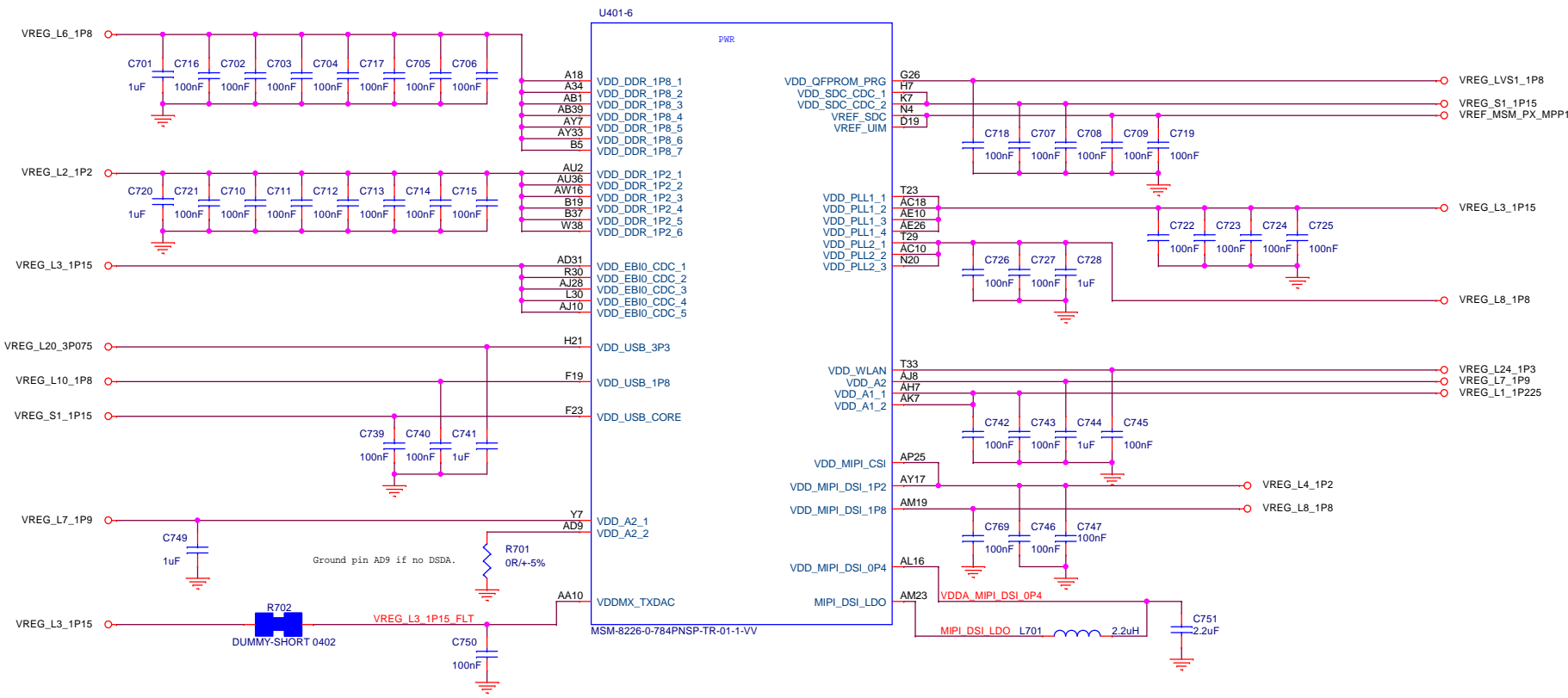
FORCE_USB_BOOT (GPIO_113) is checked first during the boot device detection prior to BOOT_CONFIG GPIOs.
 GPIO_113 = 1 will force the MSM device to boot from USB_HS port.
 The fuse FORCE_USB_BOOT_DISABLE can be blown to disable the feature to force USB boot using GPIO_113.

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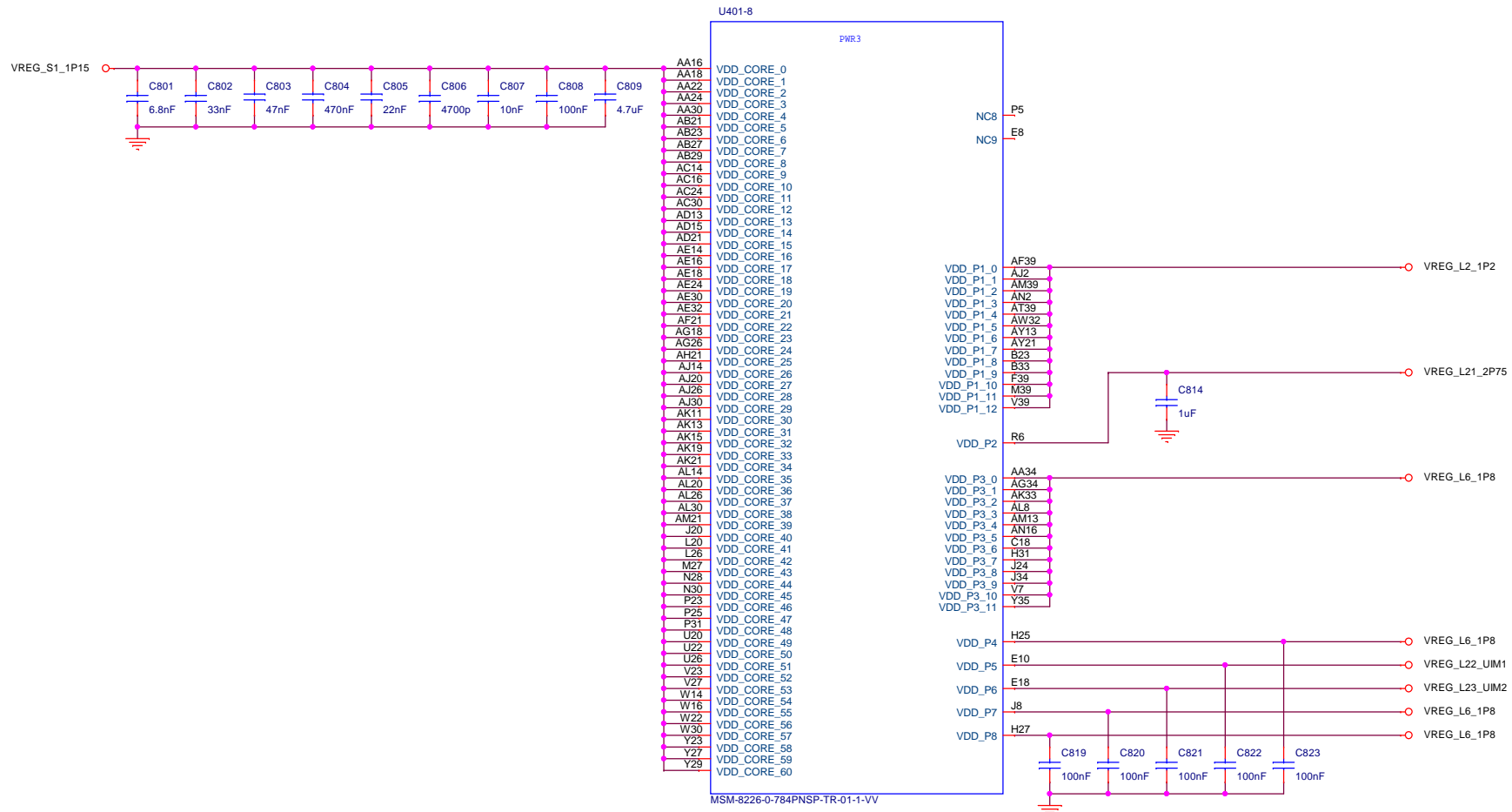
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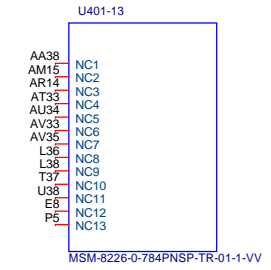
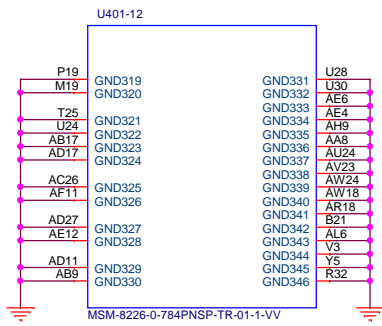
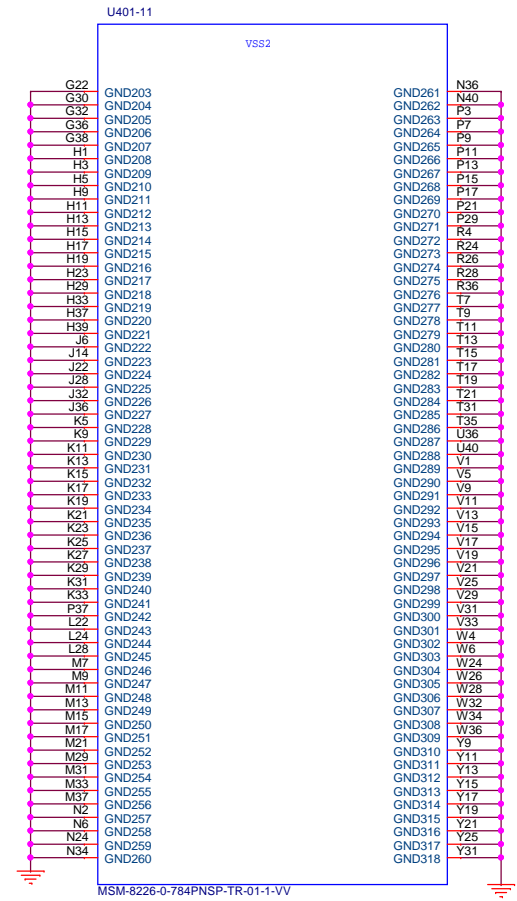
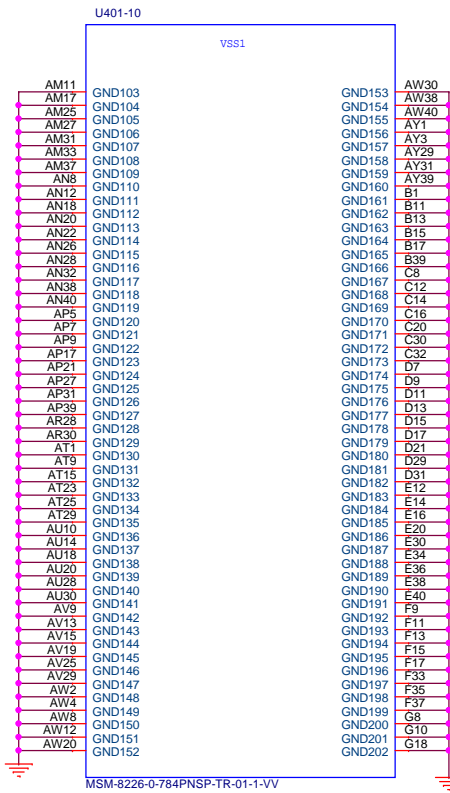
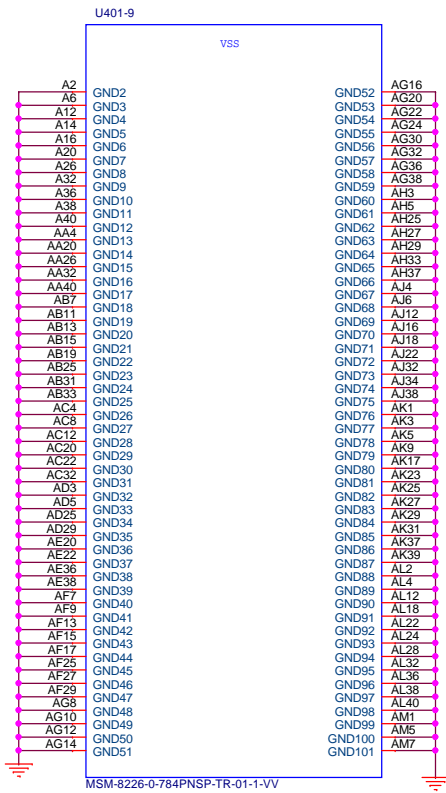
Size Document Number **DBU** **Rev** **PCR**

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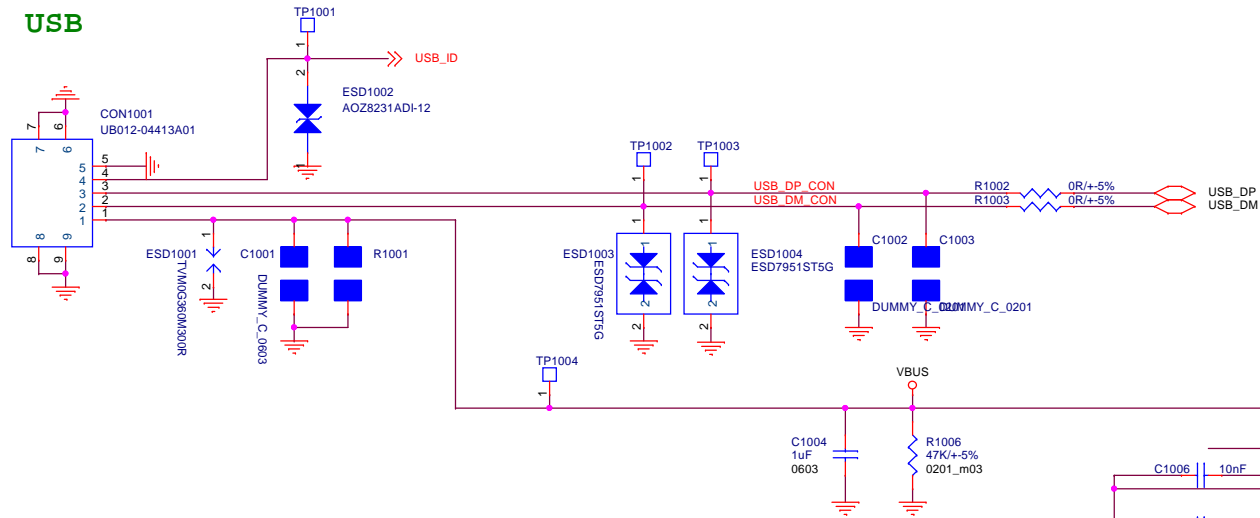


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MSM8226 POWER-1			
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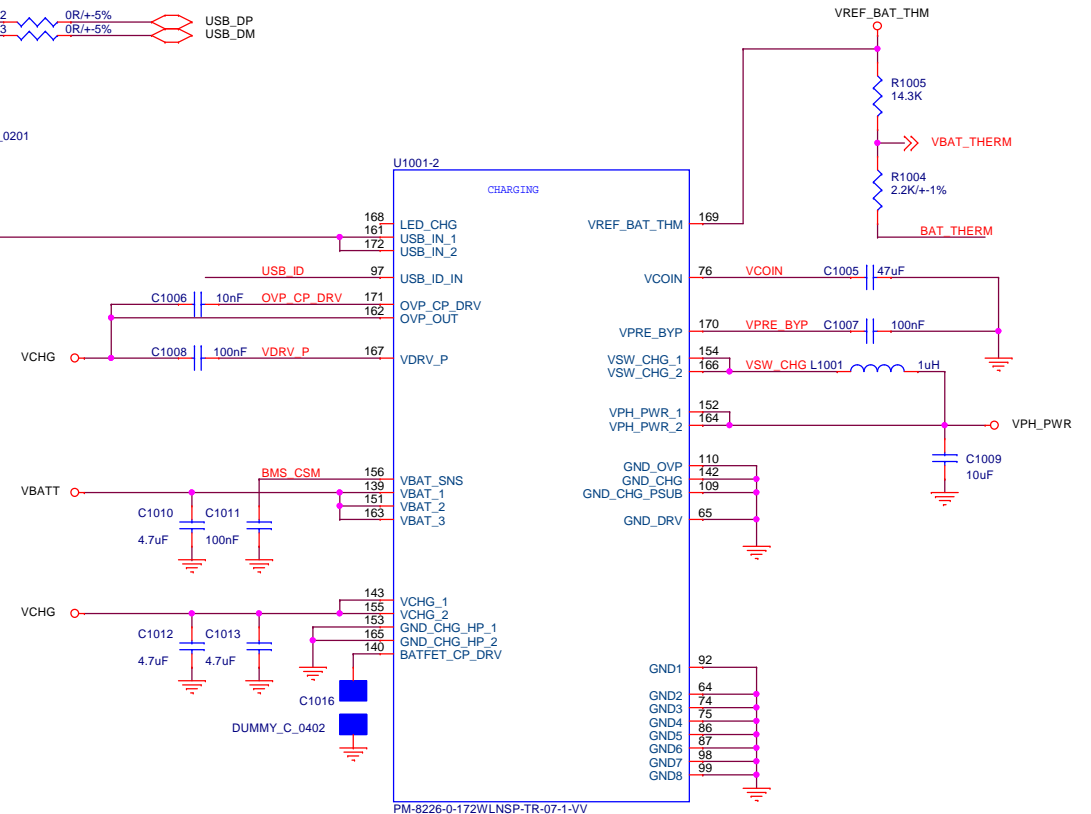
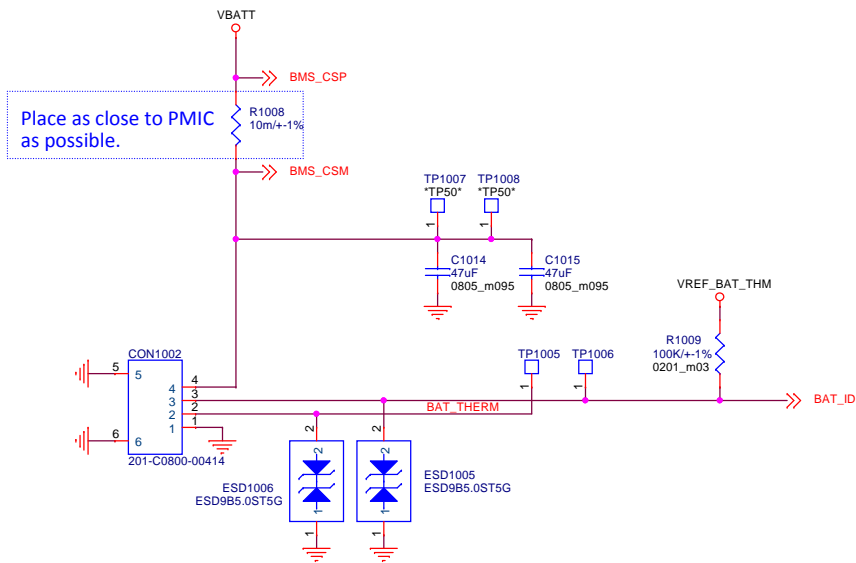




USB

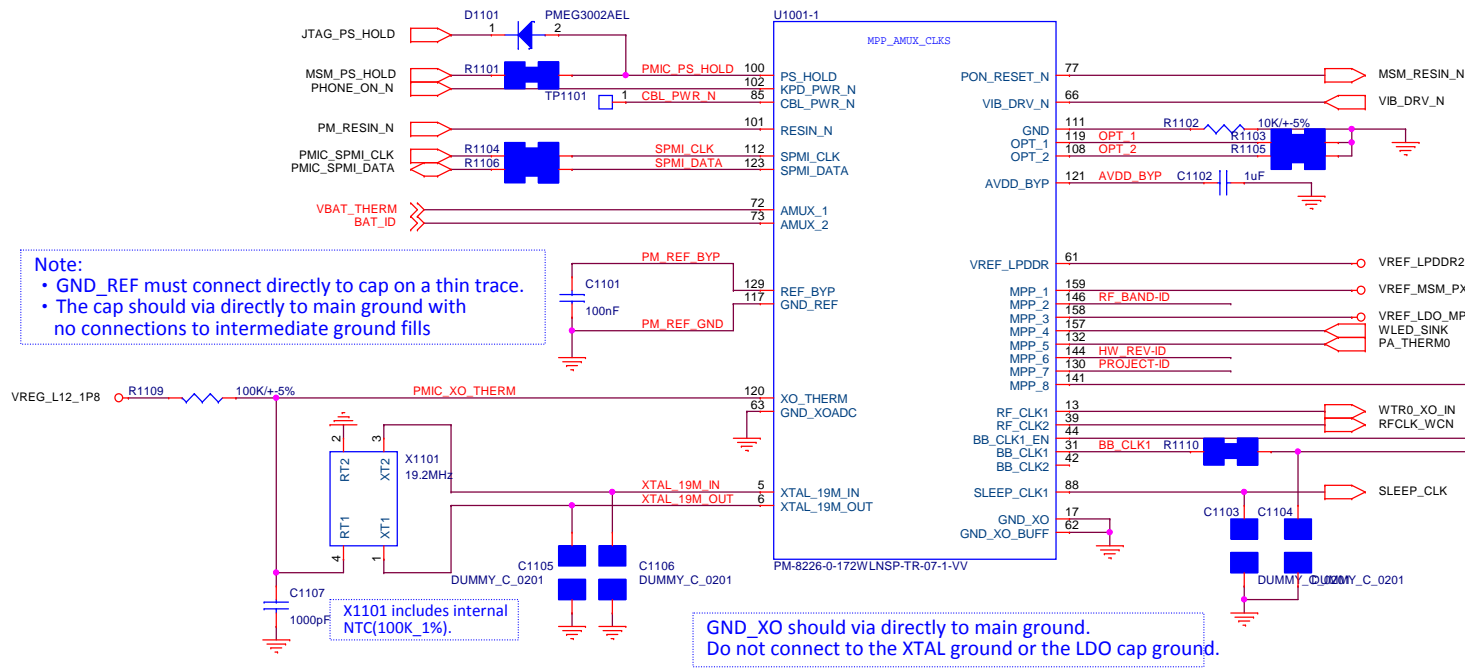


BATTERY CONNECT

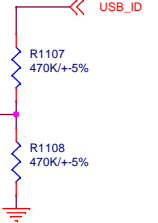


Note:

- GND_REF must connect directly to cap on a thin trace.
- The cap should via directly to main ground with no connections to intermediate ground fills

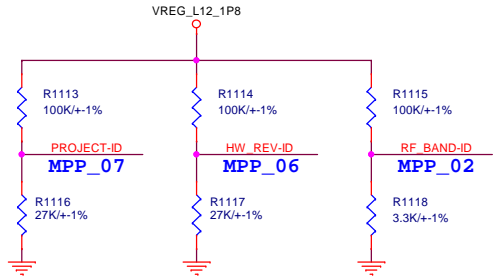
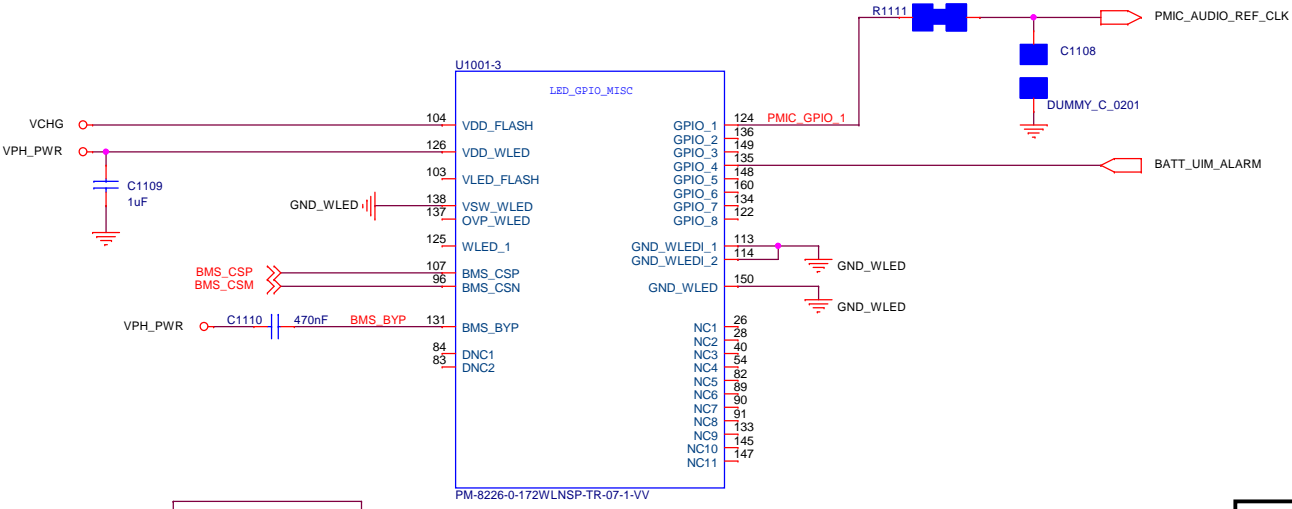


For Factory cable usage.



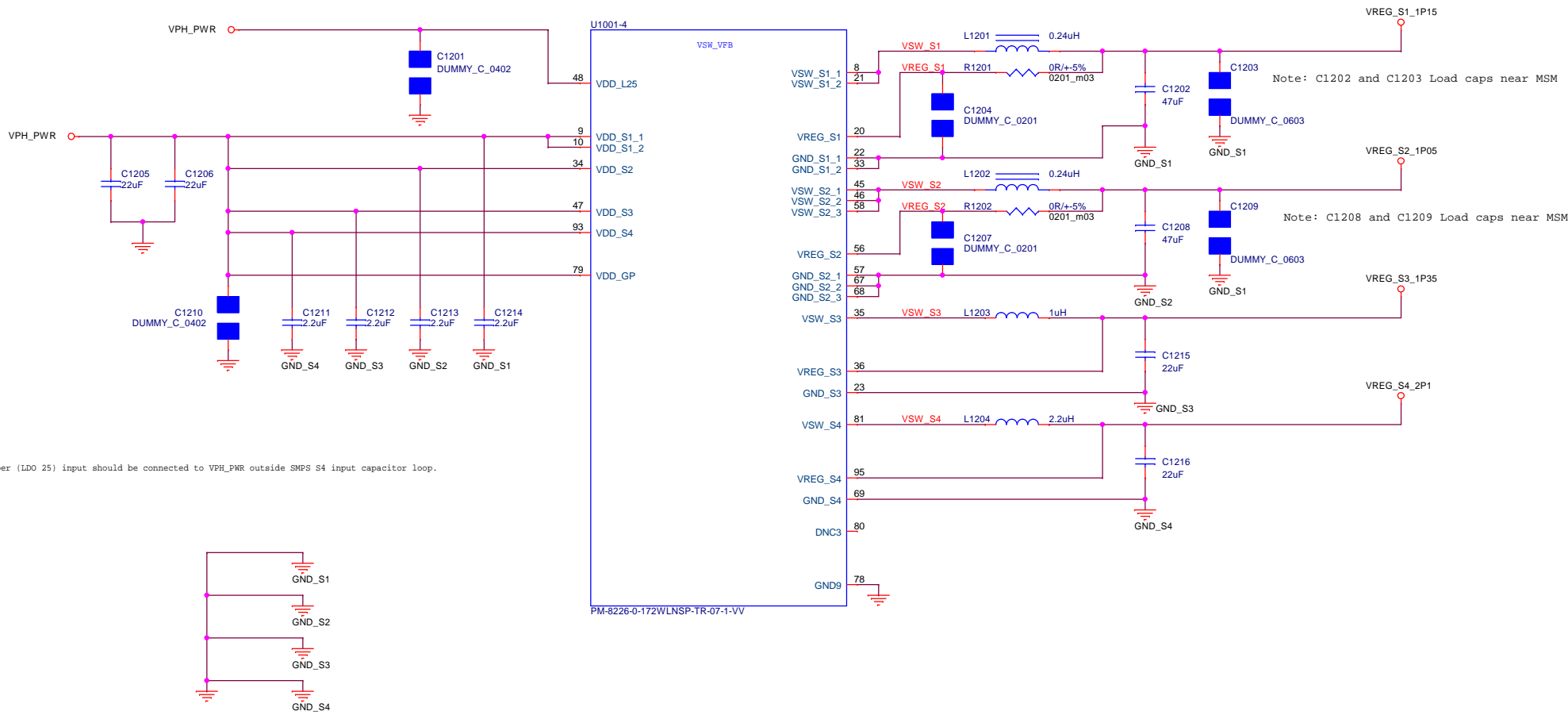
X1101 includes internal NTC(100K_1%).

GND_XO should via directly to main ground. Do not connect to the XTAL ground or the LDO cap ground.



PROJECT-ID **HW_REV-ID** **RF_BAND-ID**

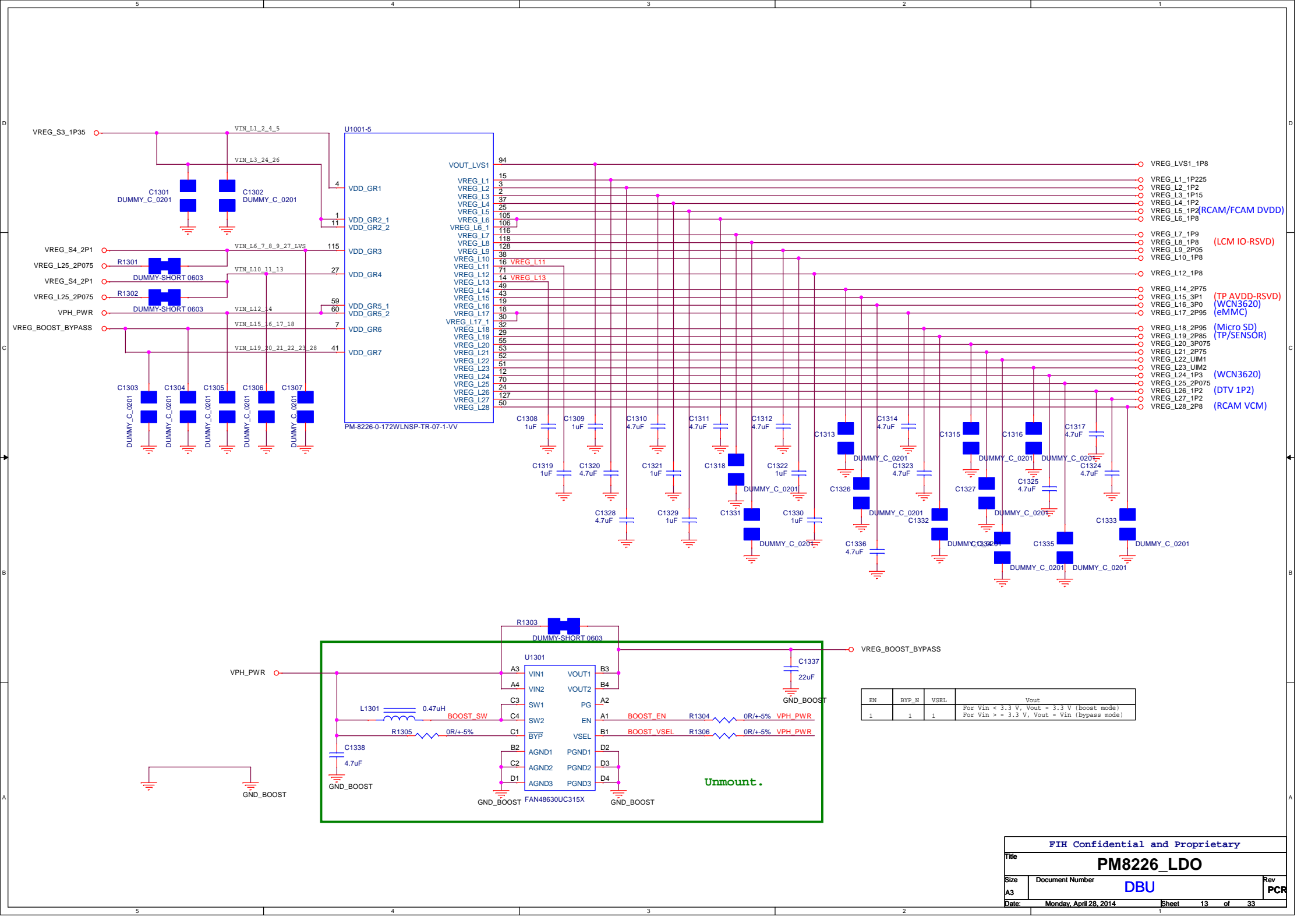
Note: 0.1R shunts are for proto only.



Bhelper (LDO 25) input should be connected to VPH_PWR outside SMPS S4 input capacitor loop.

Note:0.1R shunts are for proto only.

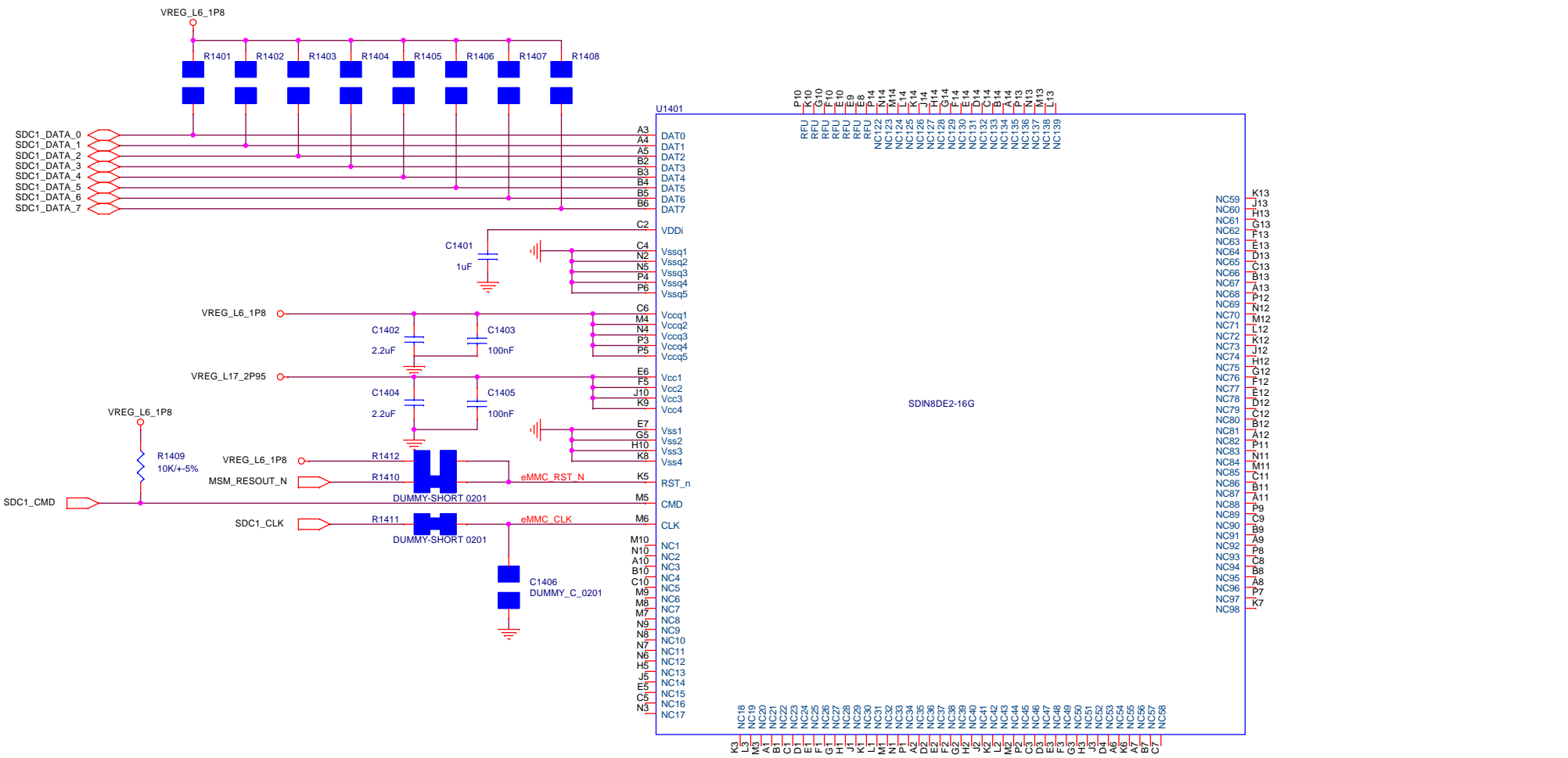
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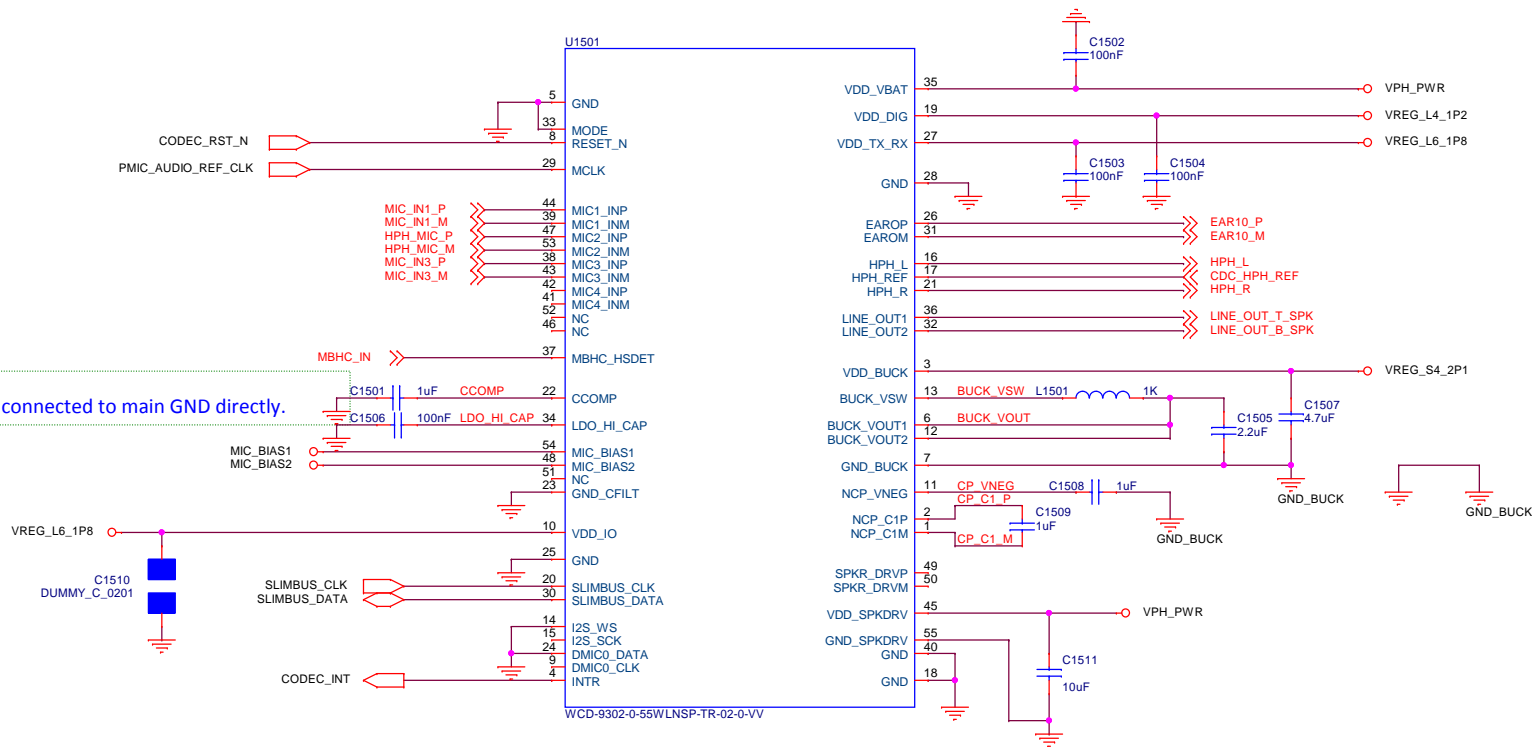
- VREG_LV1_1P8
- VREG_L1_1P225
- VREG_L2_1P2
- VREG_L3_1P15
- VREG_L4_1P2
- VREG_L5_1P2 (RCAM/FCAM DVDD)
- VREG_L6_1P8
- VREG_L7_1P9
- VREG_L8_1P8 (LCM IO-RSVD)
- VREG_L9_2P05
- VREG_L10_1P8
- VREG_L12_1P8
- VREG_L14_2P75
- VREG_L15_3P1 (TP AVDD-RSVD)
- VREG_L16_3P0 (WCN3620)
- VREG_L17_2P95 (eMMC)
- VREG_L18_2P95 (Micro SD)
- VREG_L19_2P85 (TP/SENSOR)
- VREG_L20_3P075
- VREG_L21_2P75
- VREG_L22_UIM1
- VREG_L23_UIM2 (WCN3620)
- VREG_L24_1P3
- VREG_L25_2P075 (DTW 1P2)
- VREG_L26_1P2
- VREG_L27_1P2 (RCAM VCM)
- VREG_L28_2P8

EN	BYP_N	VSEL	Vout
1	1	1	For Win < 3.3 V, Vout = 3.3 V (boost mode) For Win > 3.3 V, Vout = Vin (bypass mode)

Unmount.



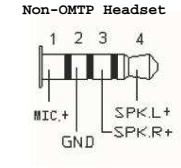
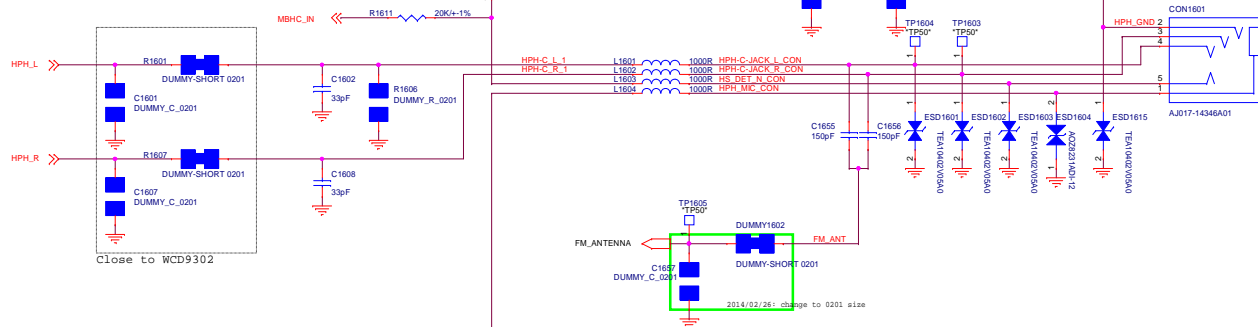
U1402-POP
LPDDR2-8Gb EDB8132B3PB-1D-F (SA0B8132010)



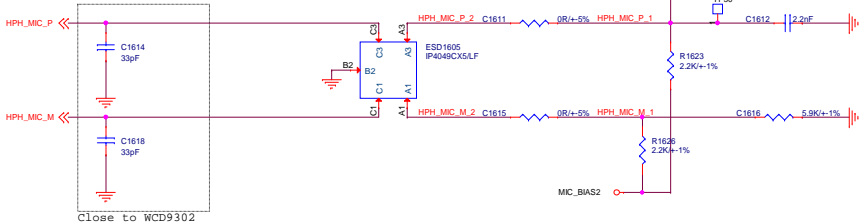
Note:
This bypass cap should be connected to main GND directly.

Note:
 • Pin 18, 23 and pin 40 should be connected to main GND directly.
 • Pin 55 should be connected to the GND side of C1511 and directly connected to the main GND with dedicated vias.

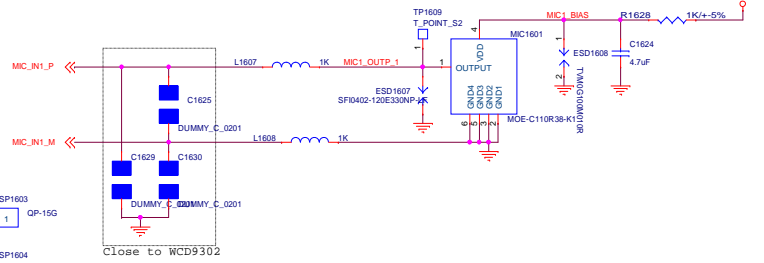
HEADSET



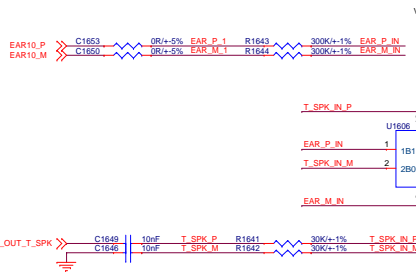
HEADSET MIC



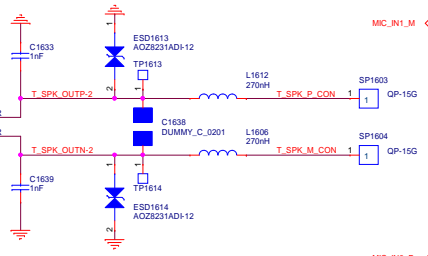
MAIN MIC



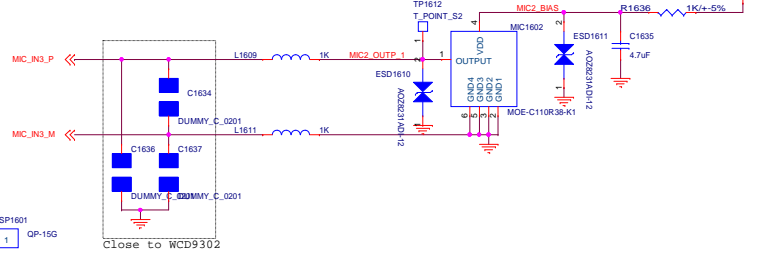
SPK/RCV SWITCH



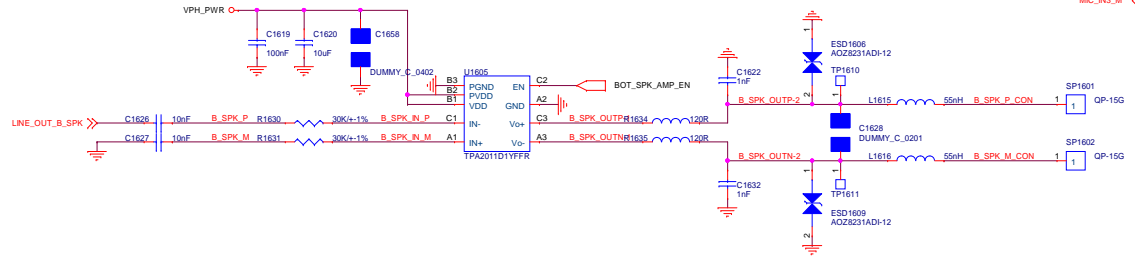
TOP SPEAKER AMP



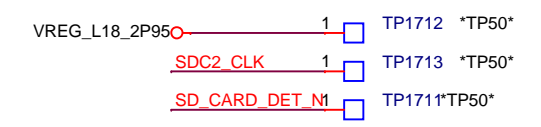
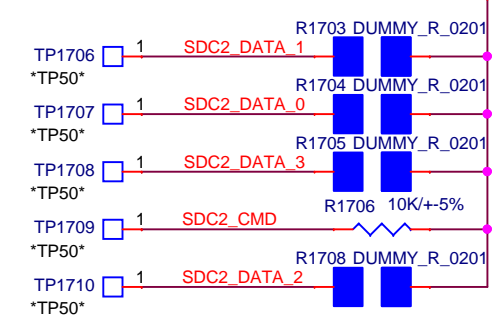
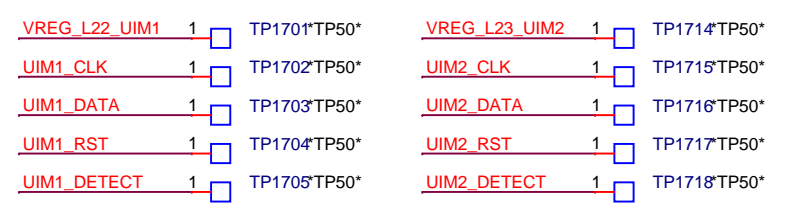
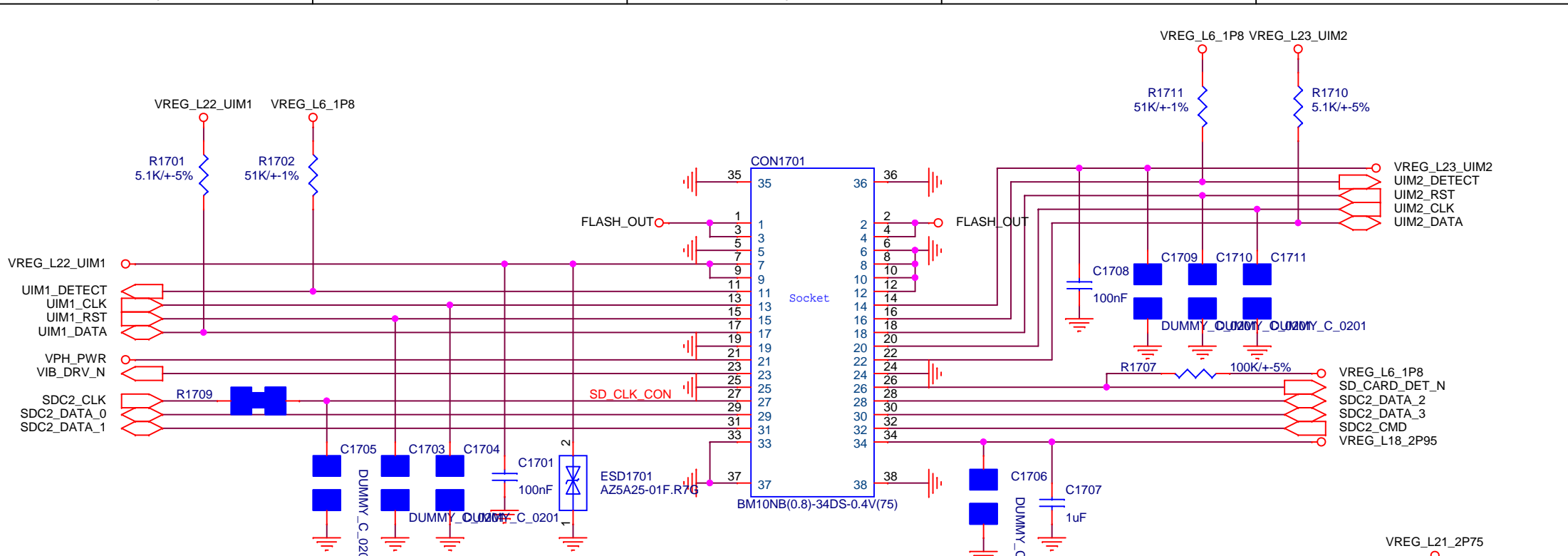
ECHO MIC

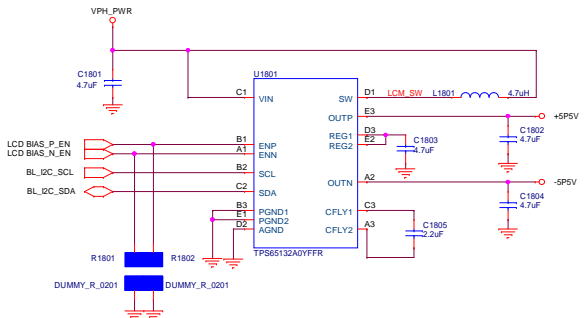
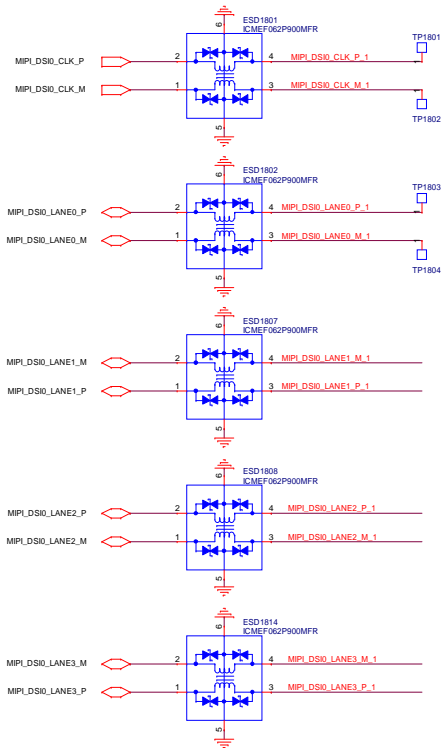


BOTTOM SPEAKER AMP

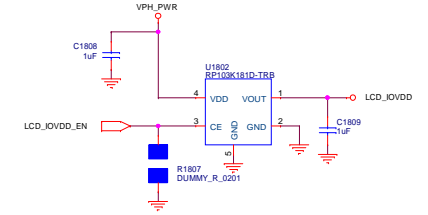


U1606	
SPK_RCV_SEL	HIGH
RCV	HIGH
SPK	LOW

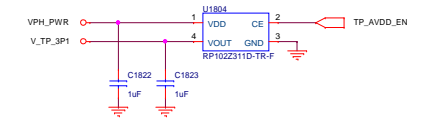




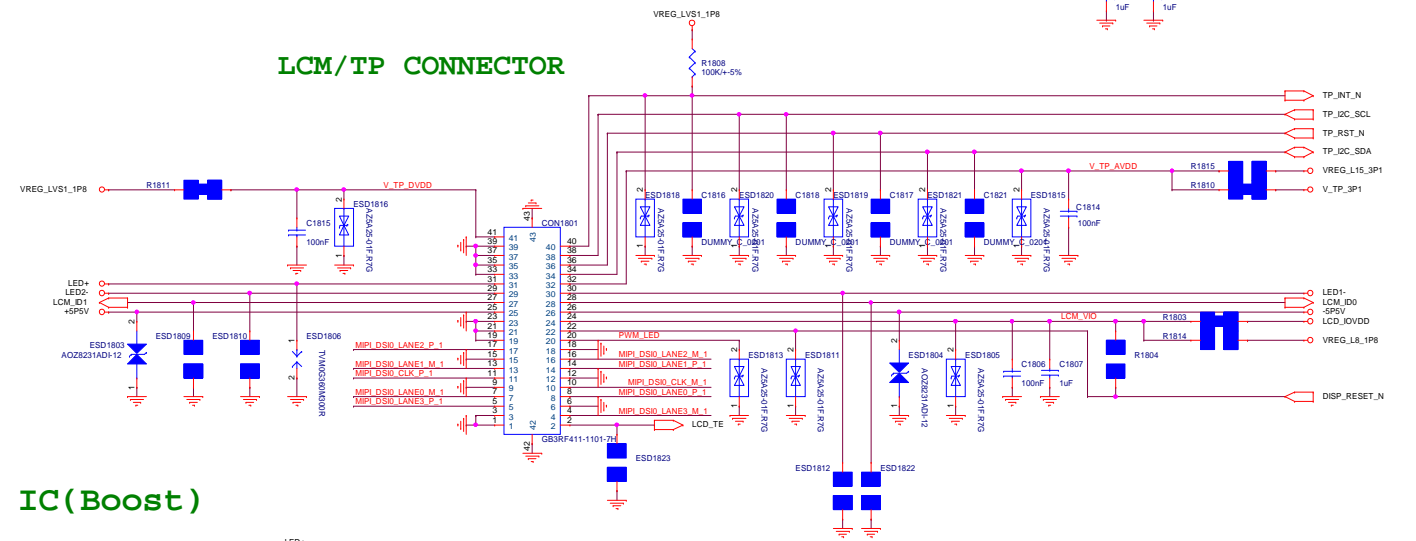
LCM IO POWER



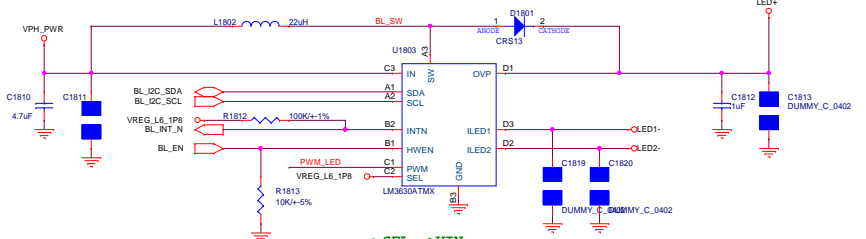
TP AVDD POWER



LCM/TP CONNECTOR

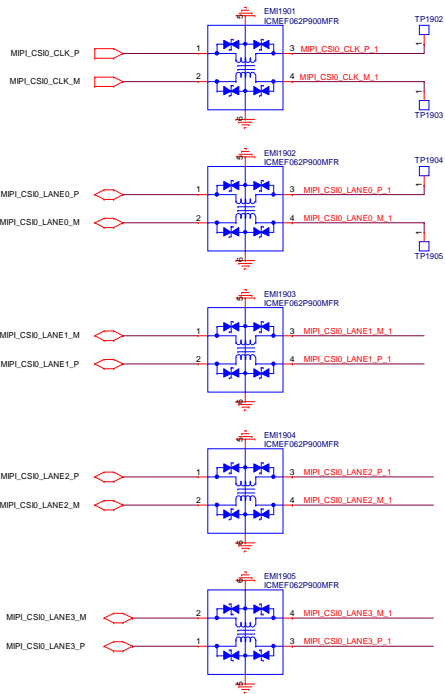


Back Light IC(Boost)

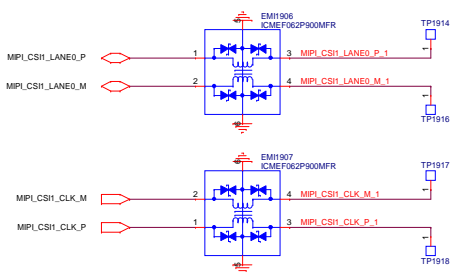


- SEL-->VIN
 I2C address: 0x38
- SEL-->GND
 I2C address: 0x36

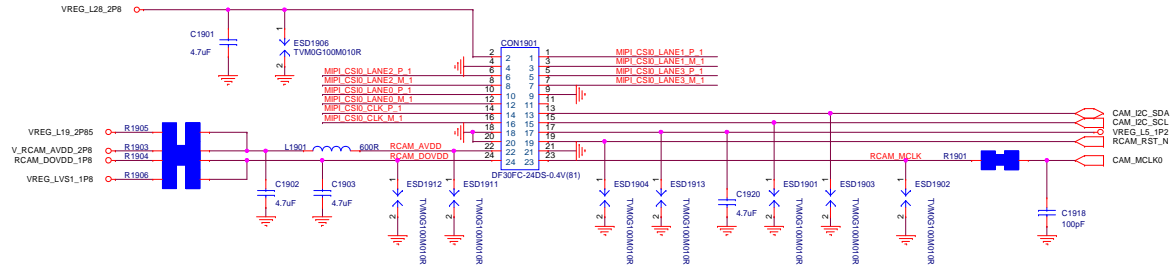
REAR CAMERA MIPI EMI



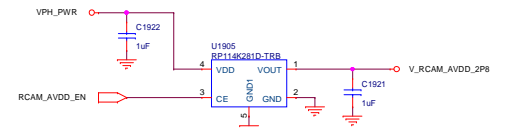
FRONT CAMERA MIPI EMI



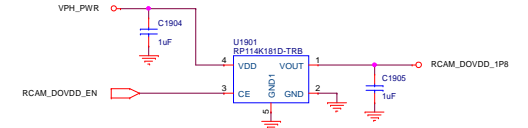
8M REAR CAMERA



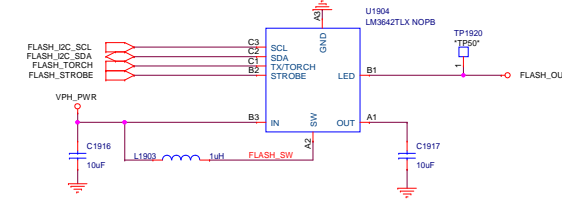
REAR CAM AVDD POWER



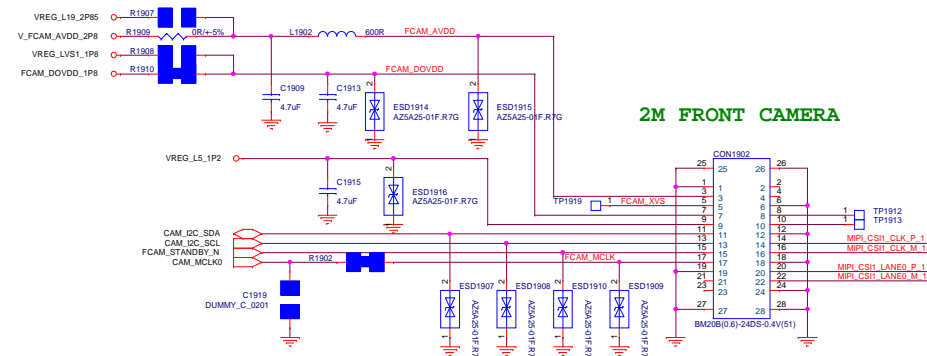
REAR CAM DOVDD POWER



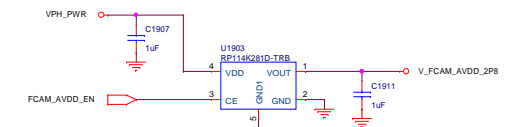
Flash LED Driver



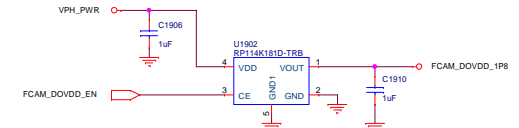
2M FRONT CAMERA

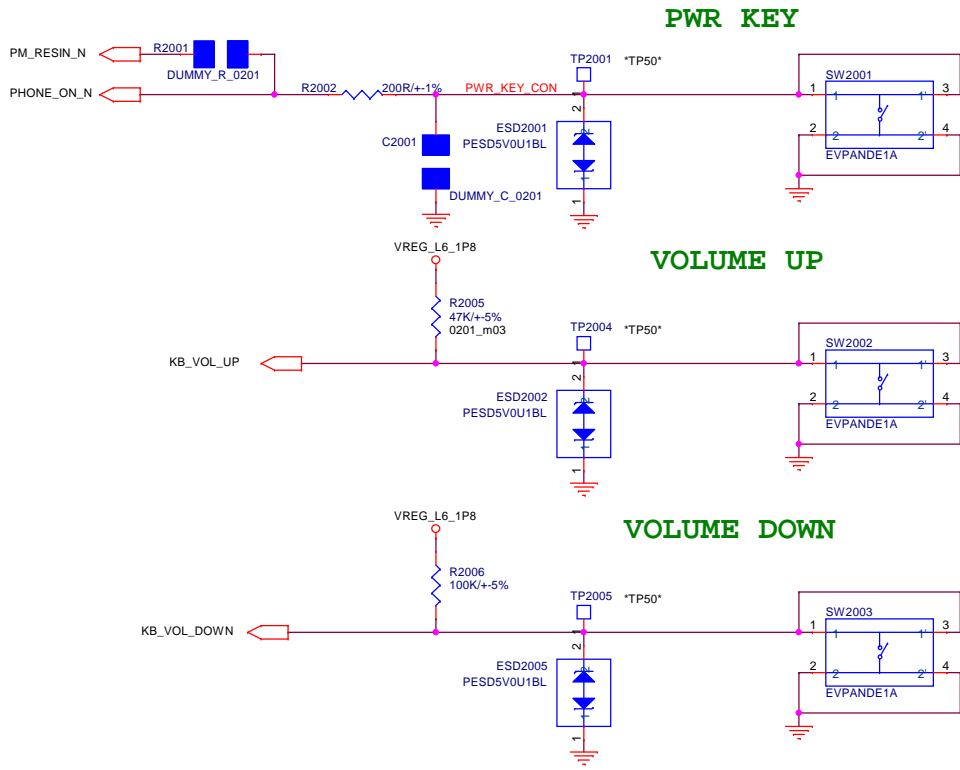


FRONT CAM AVDD POWER

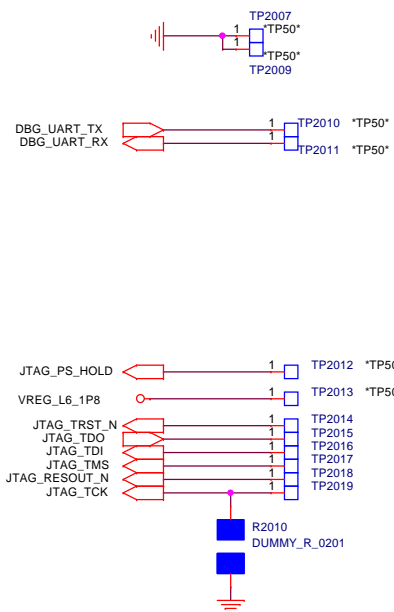


FRONT CAM DOVDD POWER

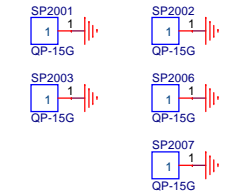




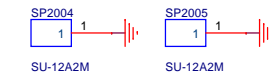
TEST POINTS



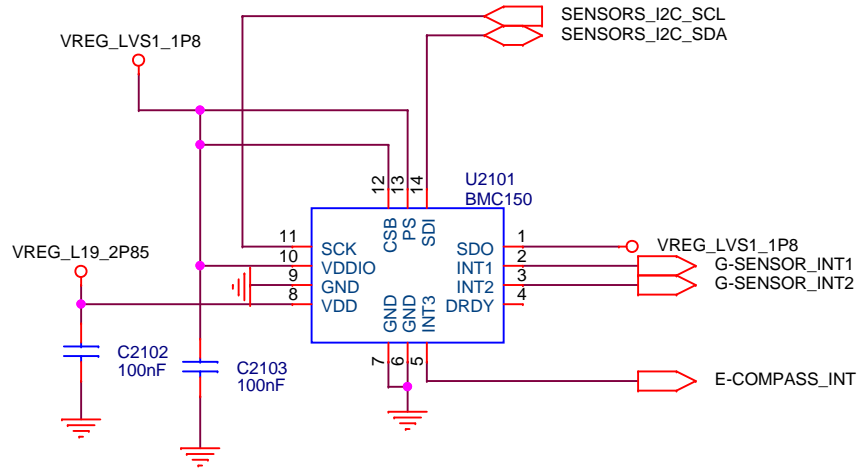
GND SPRING



RF Cable Hold Housing



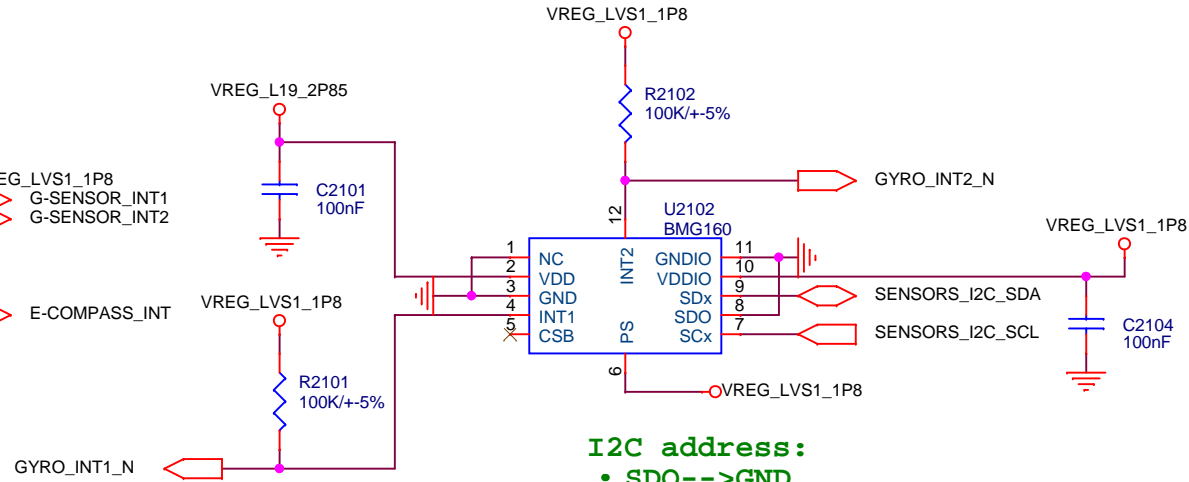
G-Sensor + E-Compass



I2C address:

- SDO-->VIO
G-Sensor: 0x11 E-Compass: 0x13
- SDO-->GND
G-Sensor: 0x10 E-Compass: 0x12

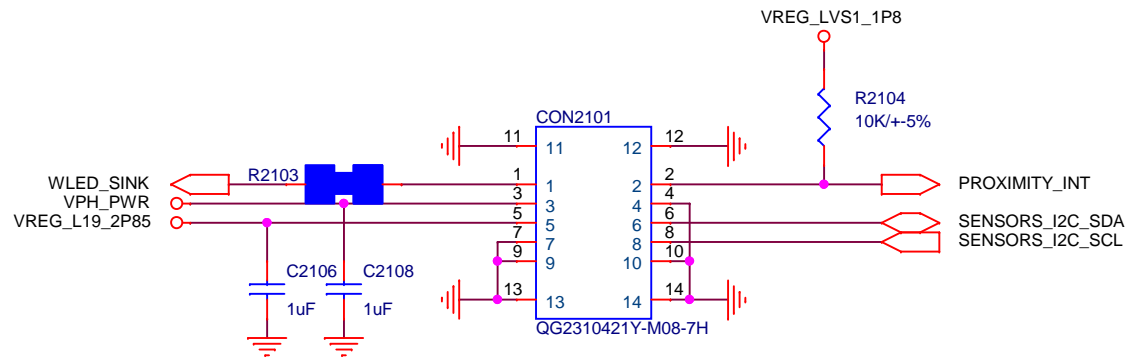
Gyro



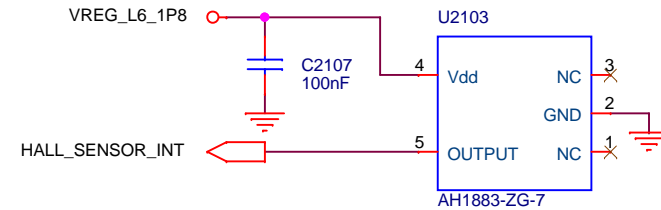
I2C address:

- SDO-->GND
Gyro: 0x68
- SDO-->VIO
Gyro: 0x69

P+ALS SENSOR/INDICATOR CONNECTOR



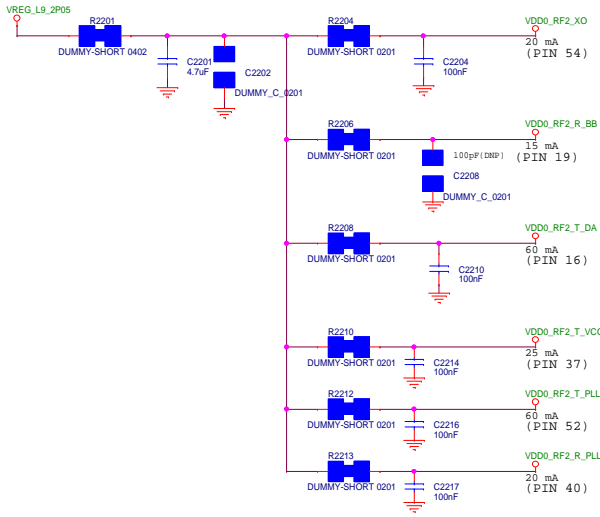
HALL SENSOR



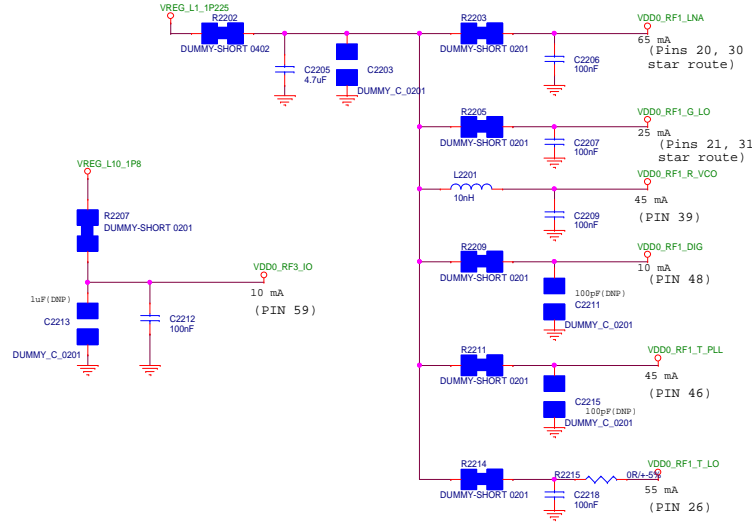
FIH Confidential and Proprietary			
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WTR2605

WTR POWER DISTRIBUTION 1.8V & 2.05V

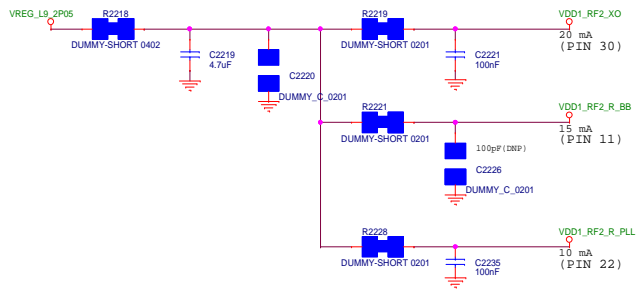


WTR POWER DISTRIBUTION 1.225V

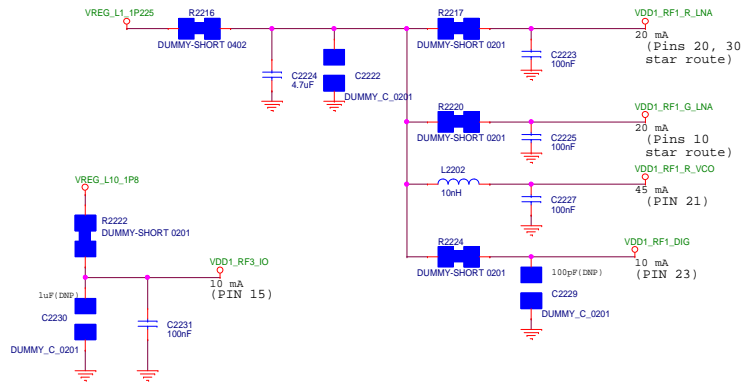


WFR2600

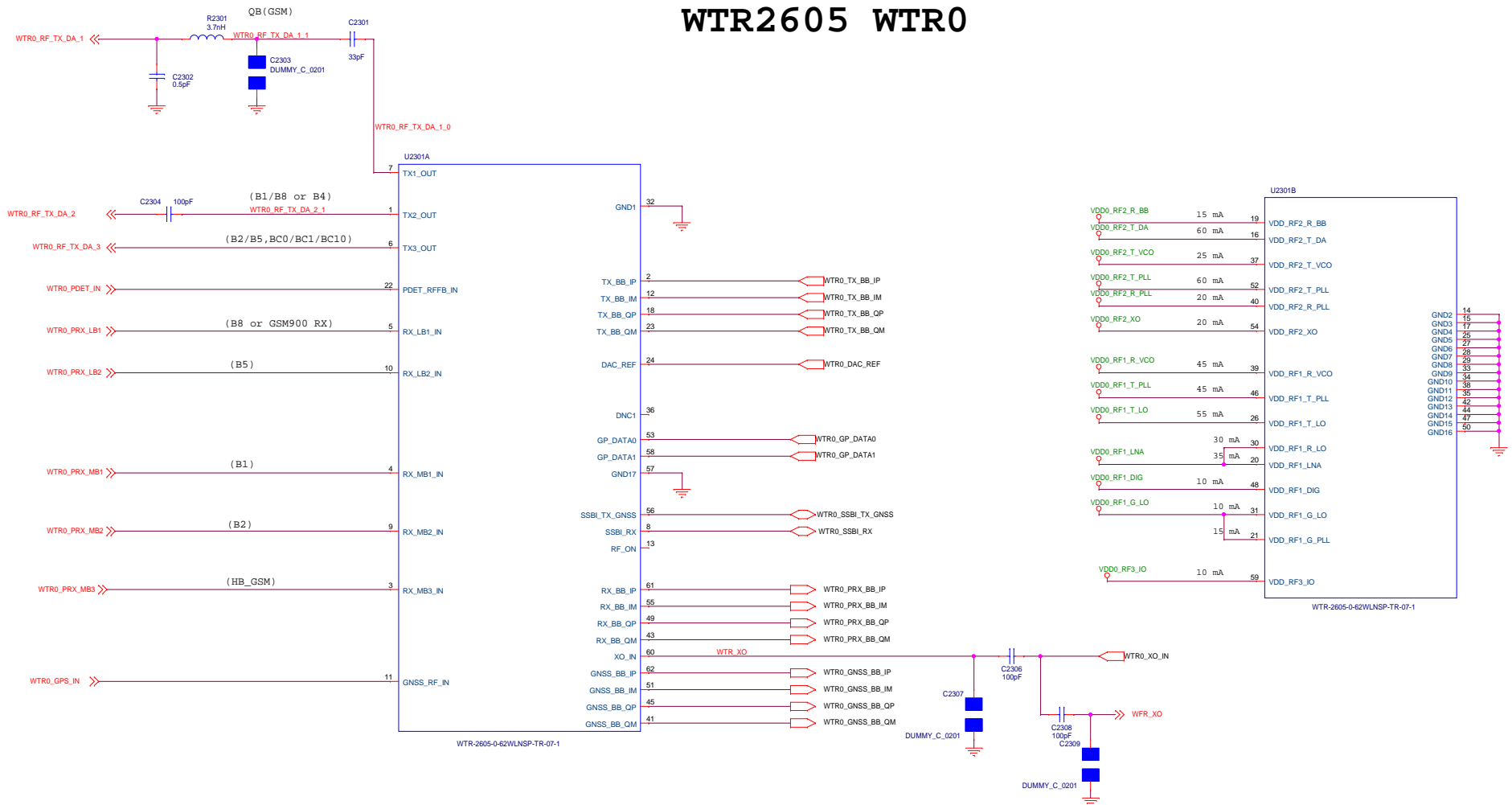
WTR POWER DISTRIBUTION 1.8V & 2.05V



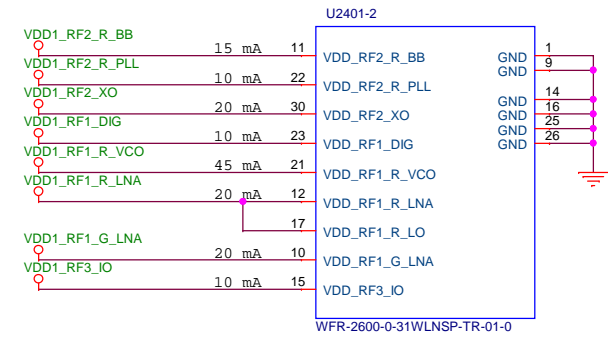
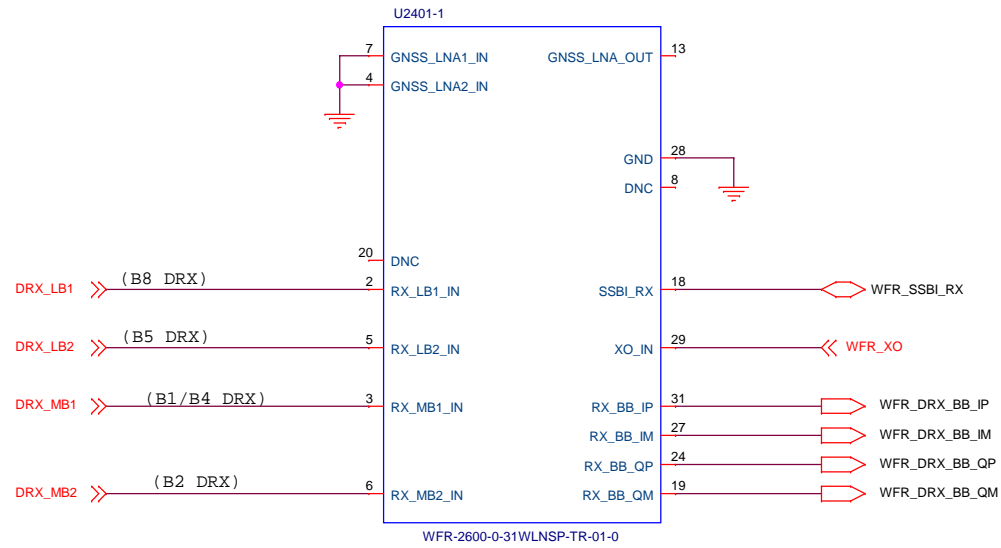
WTR POWER DISTRIBUTION 1.225V



WTR2605 WTR0



WFR2600 WTR1

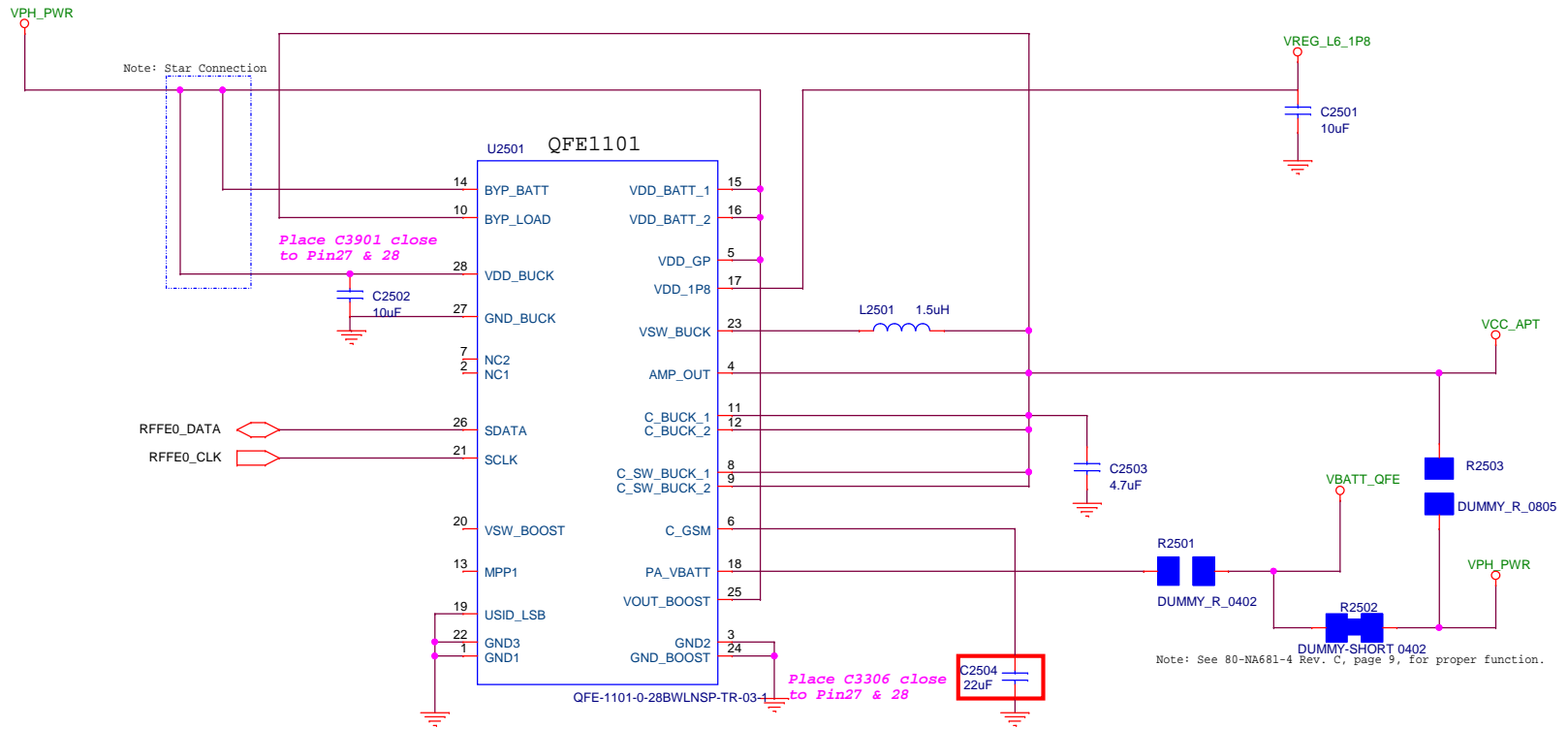


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QFE1101

80-NA437-46 Rev.B

Note: QFE1100 ES2 is available end of February 2013.
QFE1100 ES2 + L3304 + C3303 changes are needed to support low voltage battery and LTE 1RB over all technology.

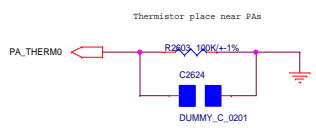
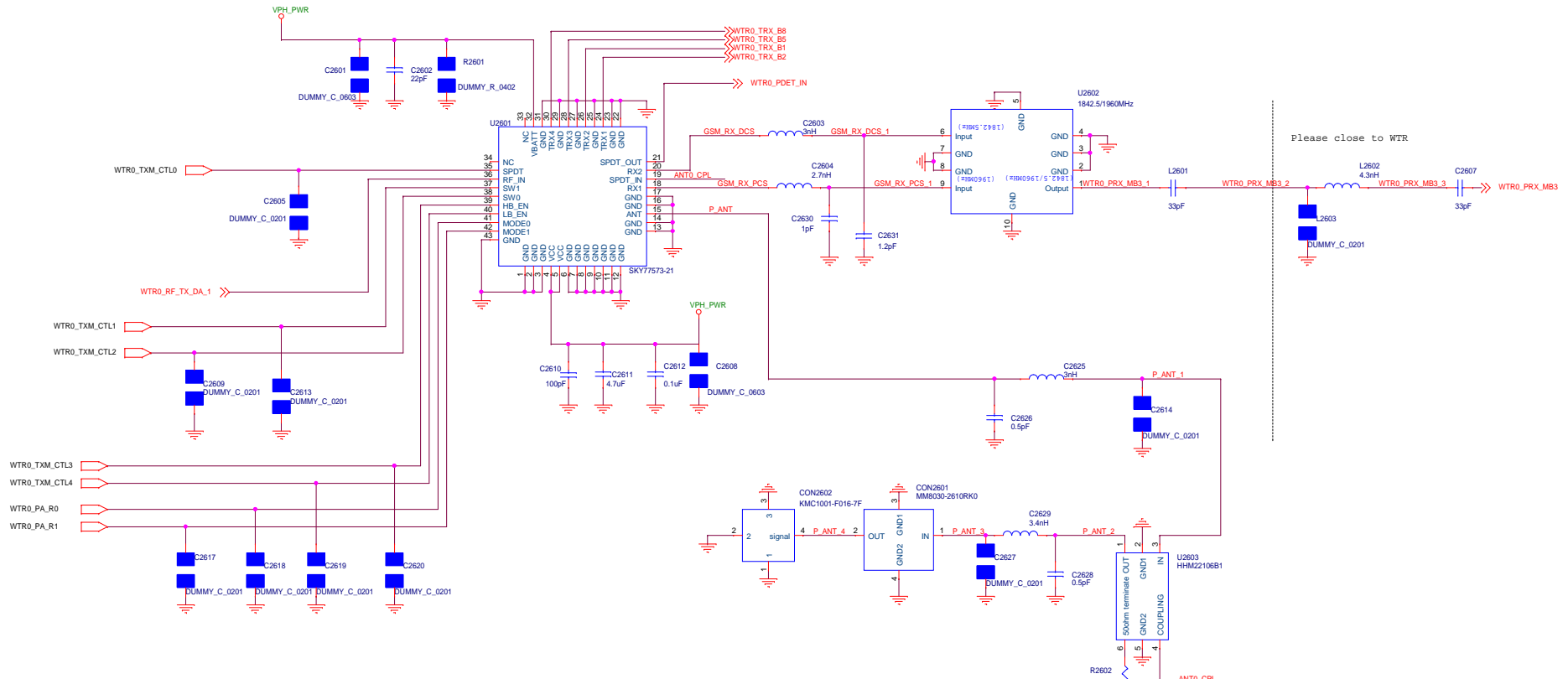


Note: QFE1100 ES2 pin 13 connection to PMIC HKADC is for ET envelope gain calibration.

Note: Pin 13 cannot be pulled up to VDD:
 - If using PMIC8941, please config PMIC Internal Pull-up switch to "NC" via software setting.
 - If using PMIC8019, please remove external Pull-up resistor on Baseband card.

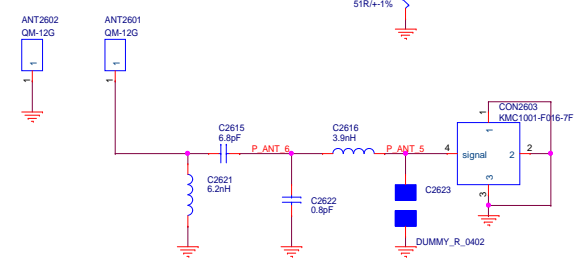
FIH Confidential and Proprietary			
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WTR0_TXM



TXM BAND SELECT LOGIC

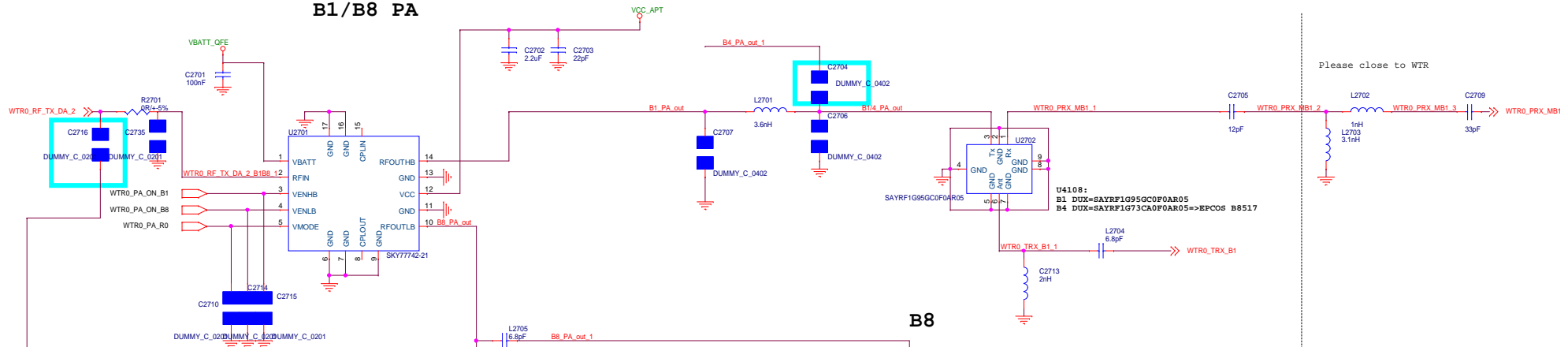
	TXM_CTL				PA_R		
	0	1	2	3	4	0	1
STANDBY	L	L	L	L	L	X	X
ISOLATION	L	L	L	L	H	X	X
LB_SPDT_10_HPM	L	L	H	L	H	L	L
LB_SPDT_10_MPM	L	L	H	L	H	L	H
LB_SPDT_10_LPM	L	L	H	L	H	H	L
LB_SPDT_10_ULPM	L	L	H	L	H	H	H
HB_SPDT_10_HPM	L	H	L	L	H	L	L
HB_SPDT_10_MPM	L	H	L	L	H	L	H
HB_SPDT_10_LPM	L	H	L	L	H	H	L
HB_SPDT_10_ULPM	L	H	L	L	H	H	H
TRX1_SPDT_0	H	L	L	L	H	X	X
TRX2_SPDT_0	H	L	L	H	H	X	X
TRX3_SPDT_0	H	L	H	L	H	X	X
TRX4_SPDT_0	H	L	H	H	H	X	X
RX1	H	H	H	H	L	X	X
RX2	H	H	H	H	H	X	X



Please close to WTR

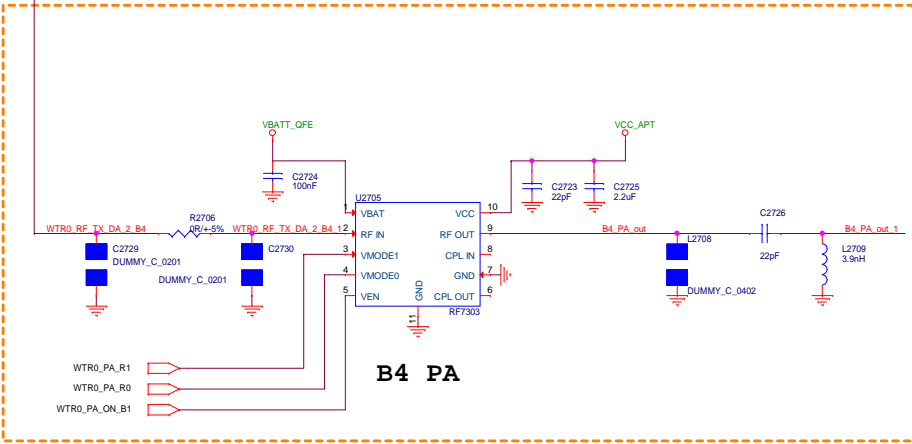
B1/B8/B4/GSMRX

B1/B8 PA

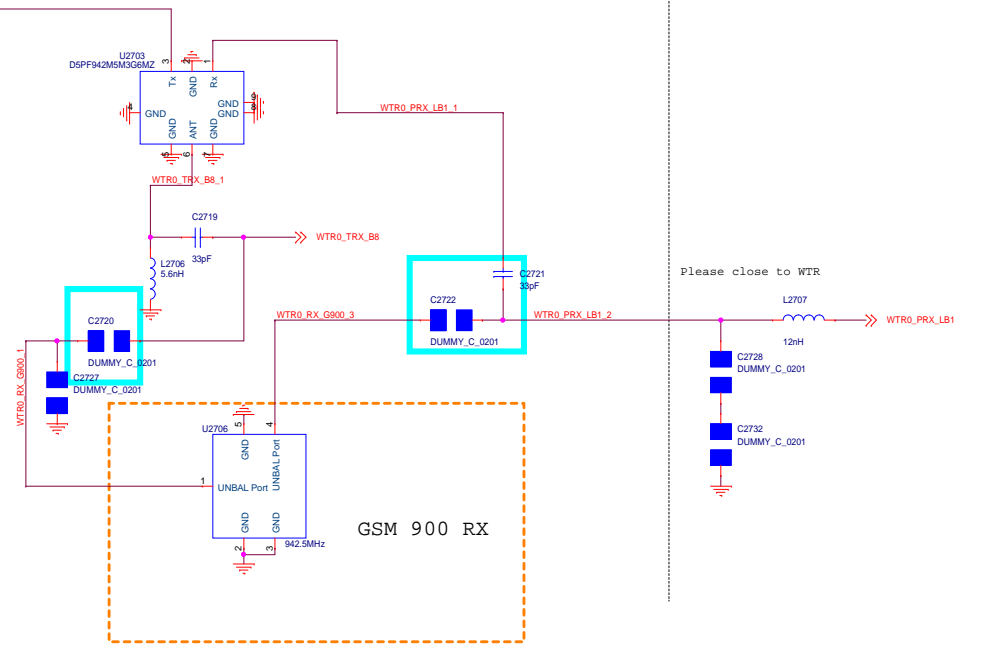


No needed for UMTS STV Dual SIM
(No Band 4)

B4 PA



B8



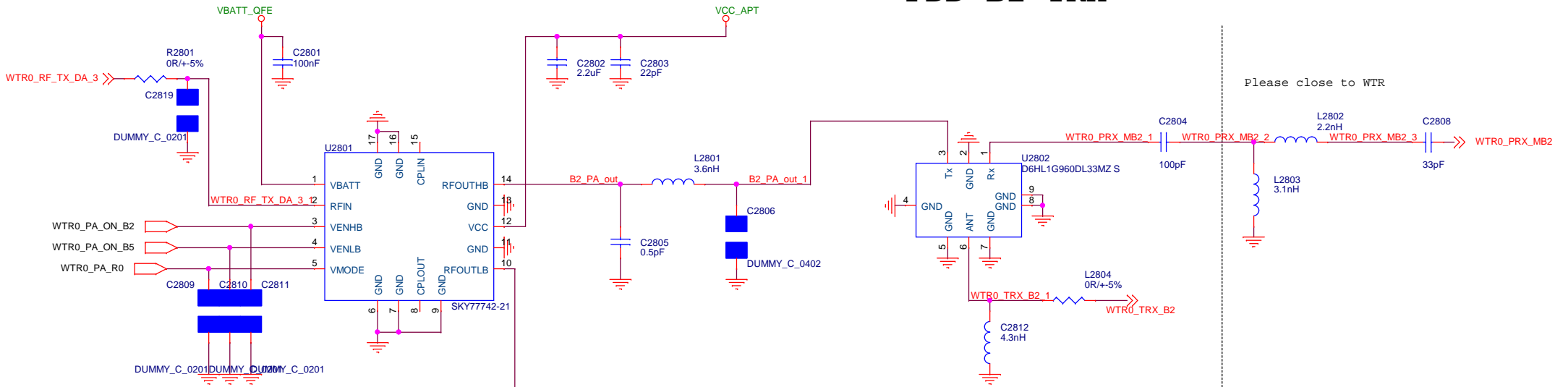
Truth Table

RF7303 Operating Logic Table					
V _{EN}	V _{MODE1}	V _{MODE1}	V _{BAT}	V _{CC}	Conditions/Comments
Low	Low	Low	3.0V to 4.2V	0.5V to 4.2V	Power Down Mode
Low	X	X	3.0V to 4.2V	0.5V to 4.2V	Standby Mode
High	Low	Low	3.0V to 4.2V	0.5V to 4.2V	High Power State
High	High	Low	3.0V to 4.2V	0.5V to 4.2V	Medium Power State
High	High	High	3.0V to 4.2V	0.5V to 4.2V	Low Power State

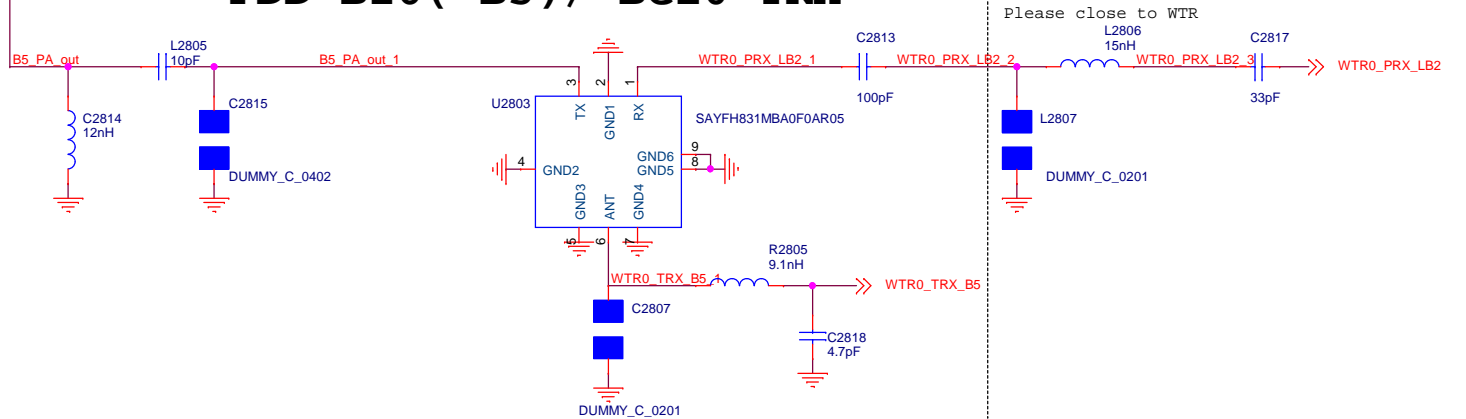
Condition	V _{EN_LB}	V _{EN_HB}	V _{MODE}	V _{CC}
Power Down / PA Off	Low	Low	Low	On
Both PA's in stand-by mode	Low	Low	X	On
Both PA's in stand-by mode	High	High	X	On
B8 HPM	High	Low	Low	On
B8 LPM	High	Low	High	On
B1 HPM	Low	High	Low	On
B1 LPM	Low	High	High	On

B2/B5 PA

FDD B2 TRX



FDD B26(B5)/ BC10 TRX



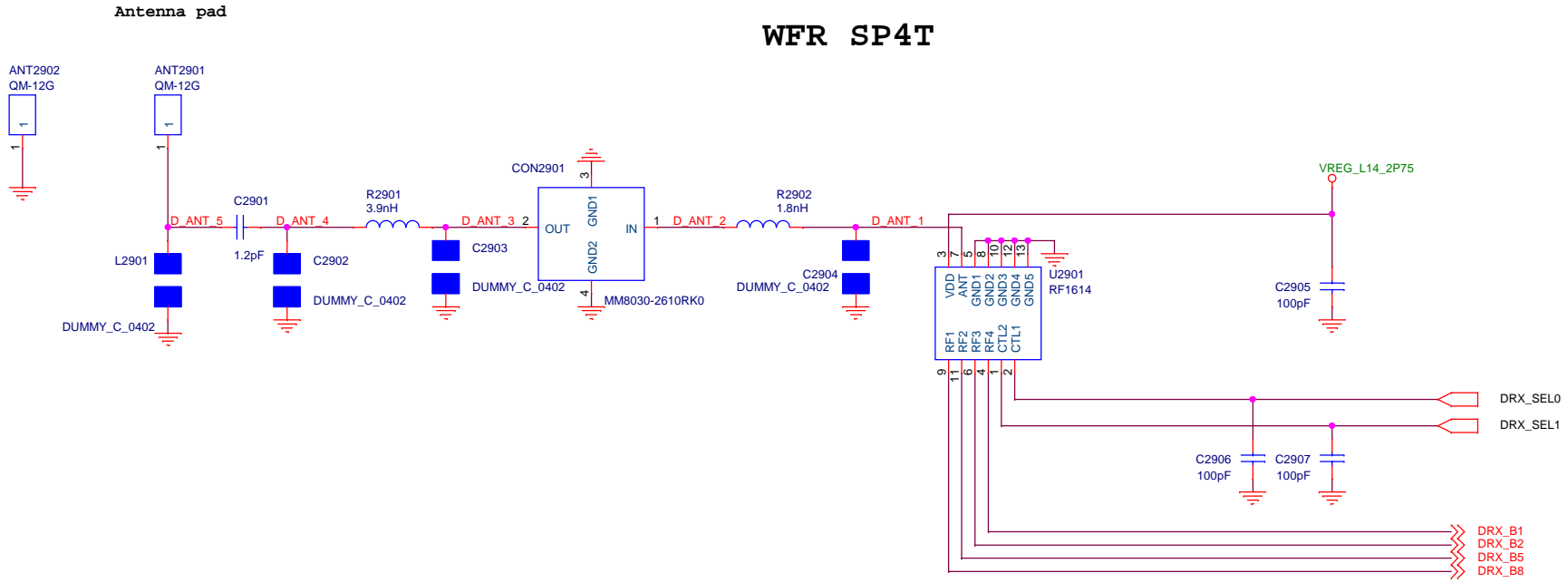
Truth Table

Condition	V _{EN_LB}	V _{EN_HB}	V _{MODE}	V _{CC}
Power Down / PA Off	Low	Low	Low	On
Both PA's in stand-by mode	Low	Low	X	On
Both PA's in stand-by mode	High	High	X	On
B5 HPM	High	Low	Low	On
B5 LPM	High	Low	High	On
B2 HPM	Low	High	Low	On
B2 LPM	Low	High	High	On

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Title		B2/B5/BC10 TRX	
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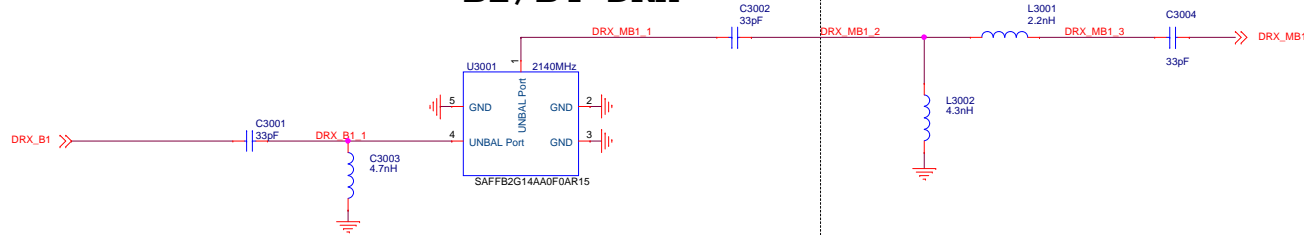
WFR SP4T



This SP4T switch is controlled by CTL1 and CTL2.

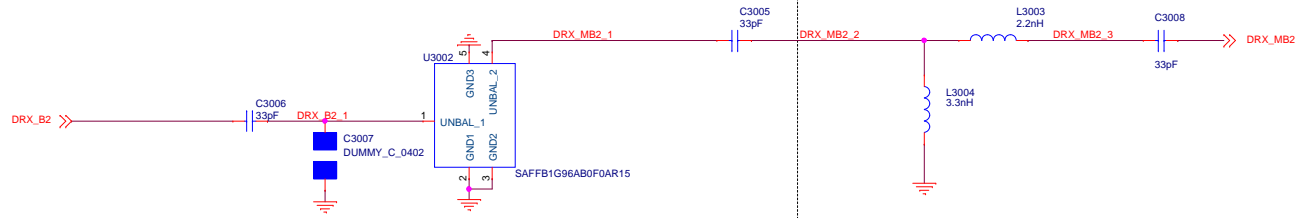
Mode	CTL1	CTL2
RF1 - ANT	High	Low
RF2 - ANT	Low	High
RF3 - ANT	High	High
RF4 - ANT	Low	Low

B1/B4 DRX



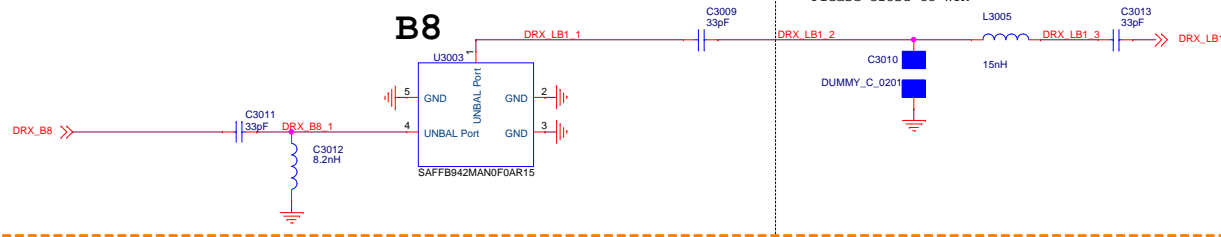
No needed for UMTS STV Dual SIM

B2/BC1

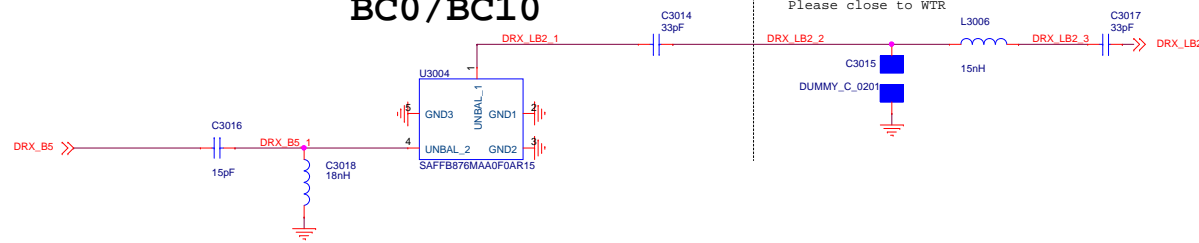


No needed for UMTS STV Dual SIM

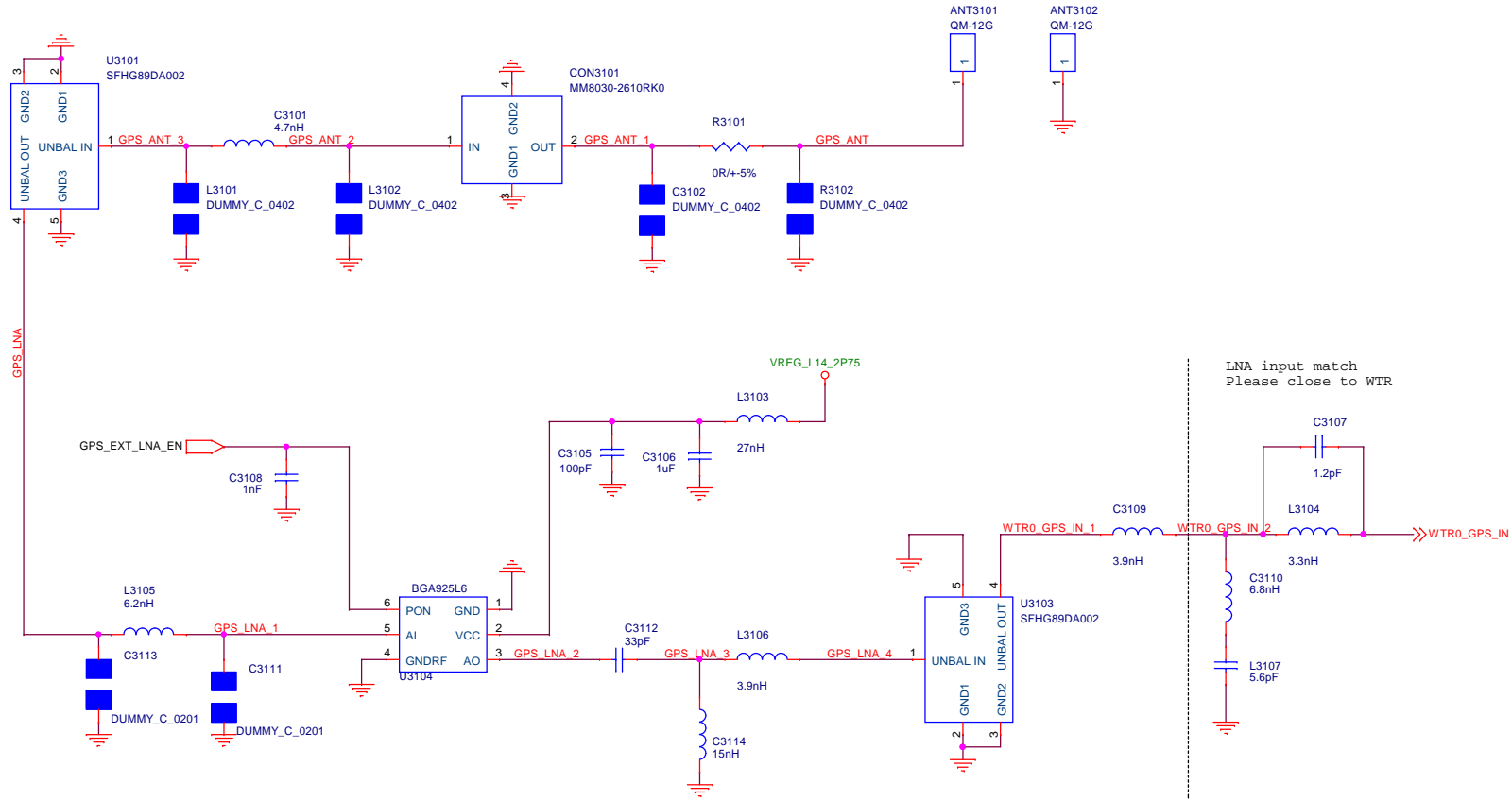
B8



BC0/BC10

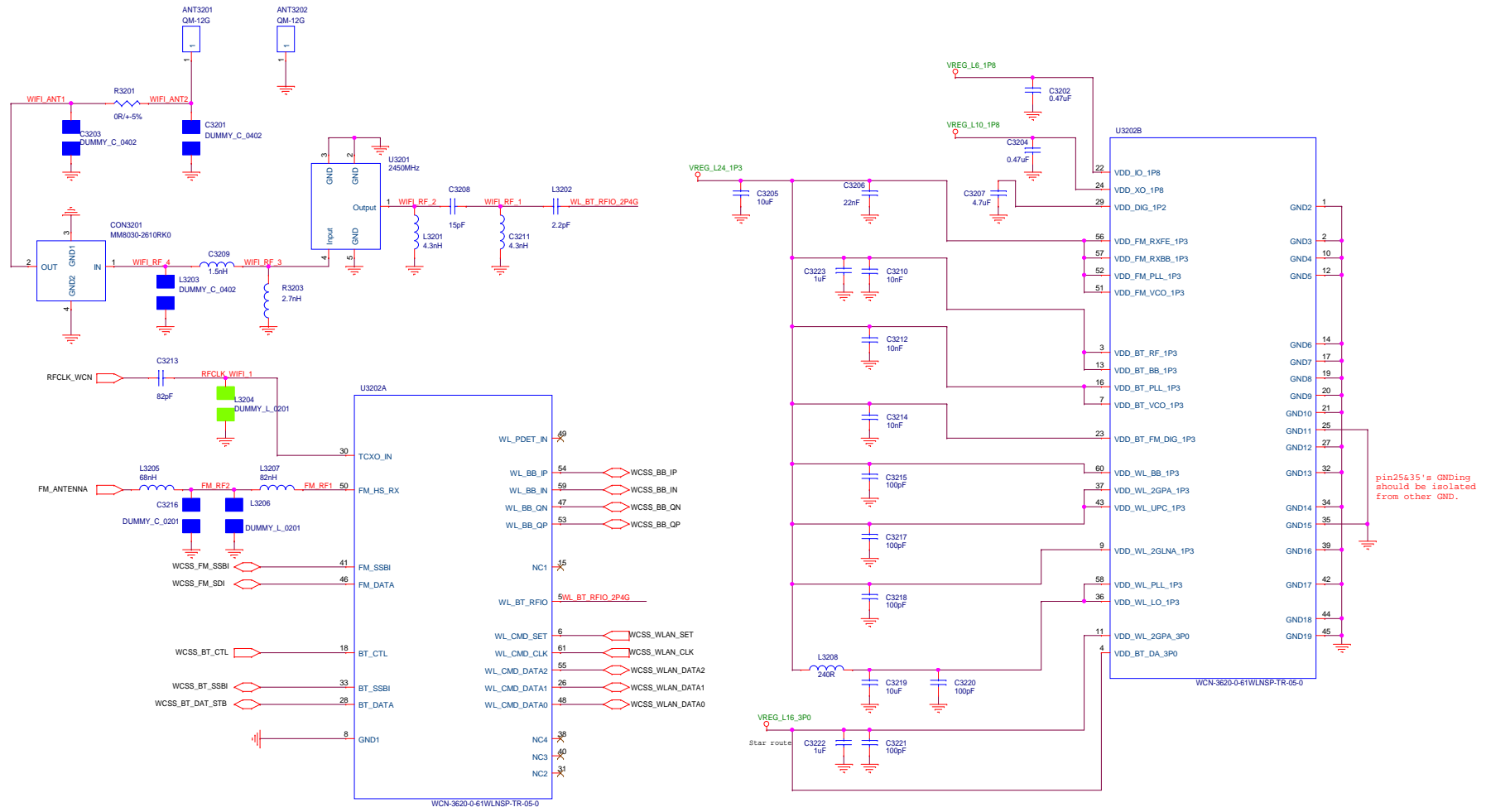


GPS RX FRONT END



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pin25635's GNDing should be isolated from other GND.

