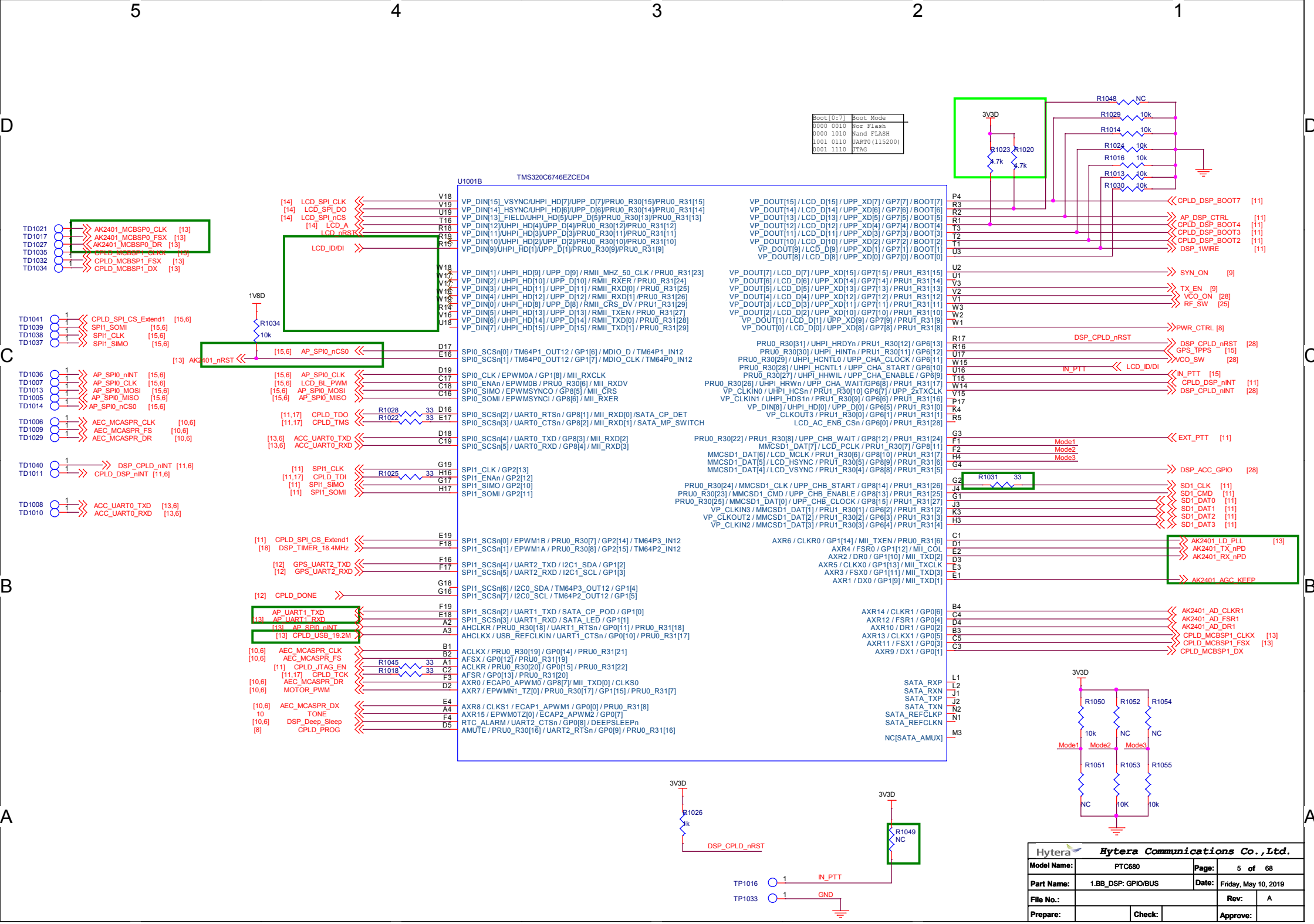
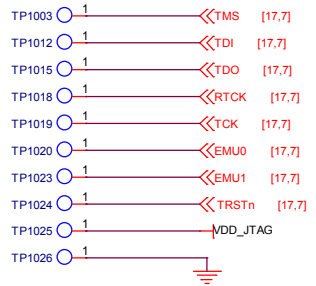
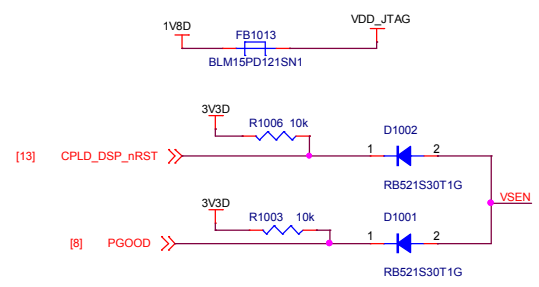




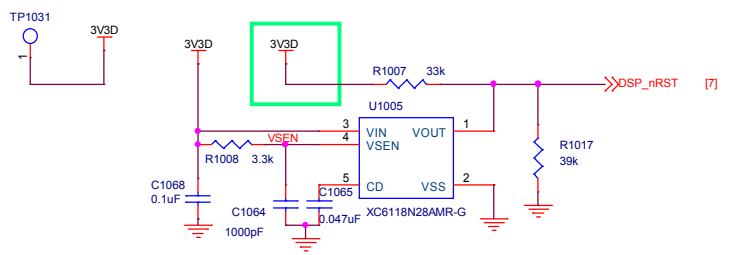
D



C

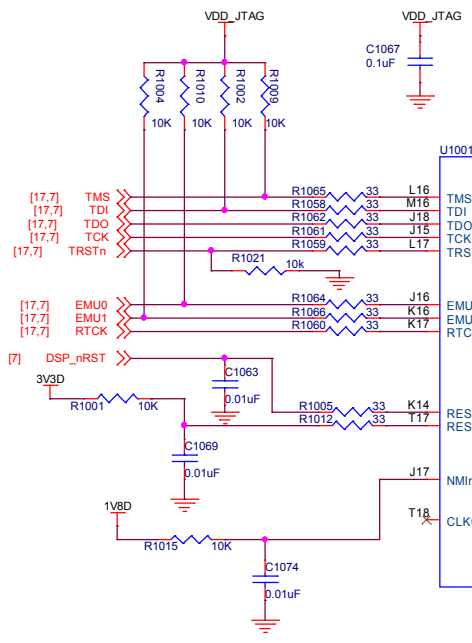


B

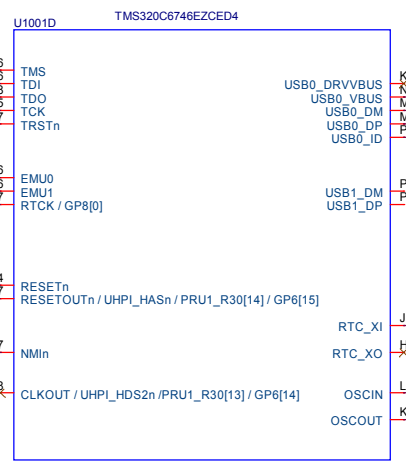


A

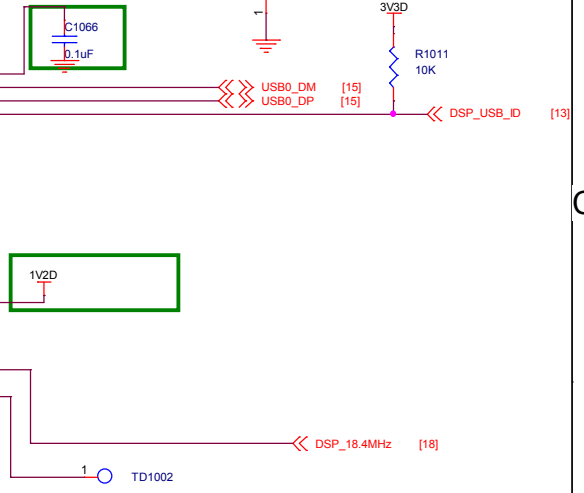
4



3



2



1

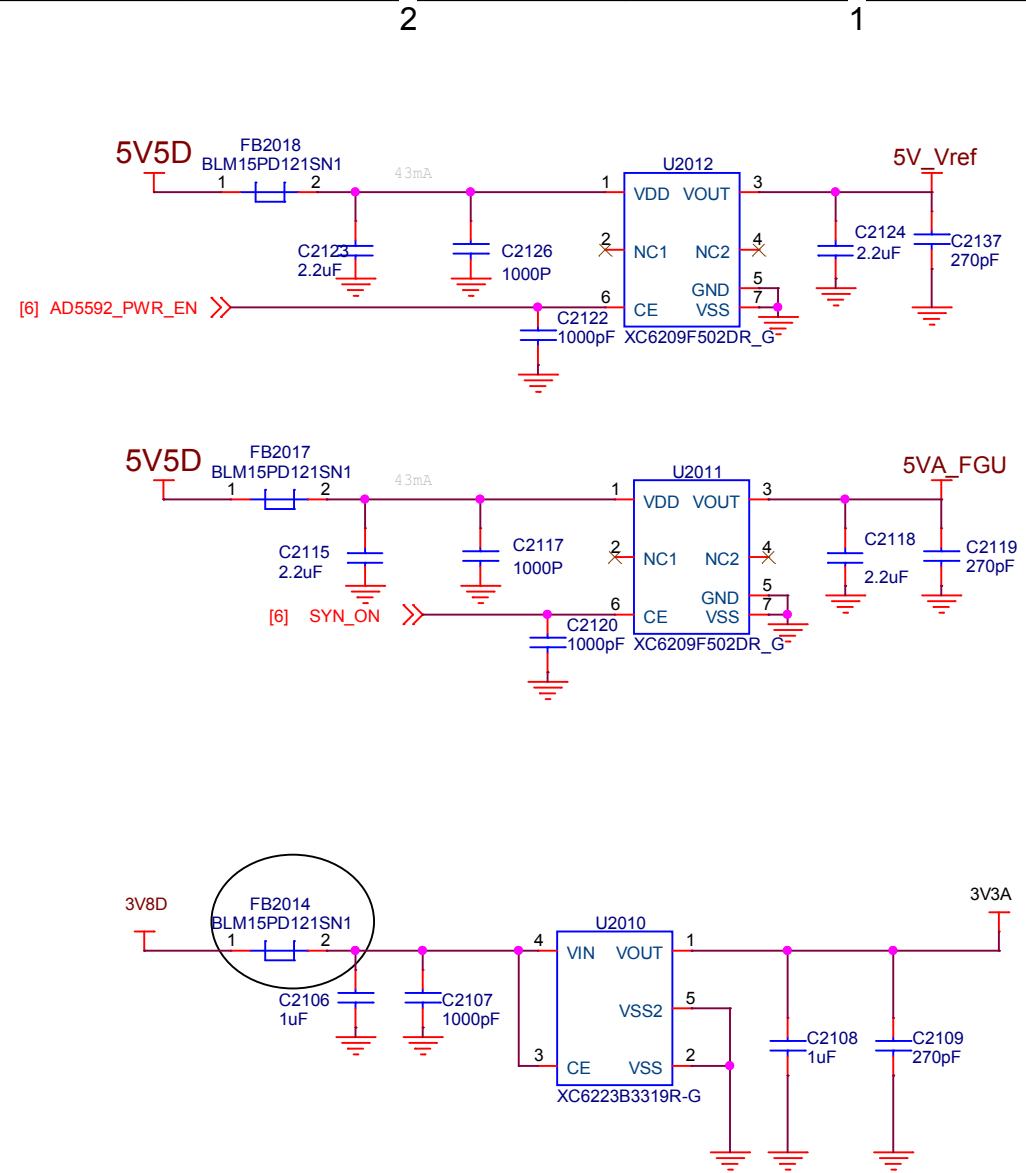
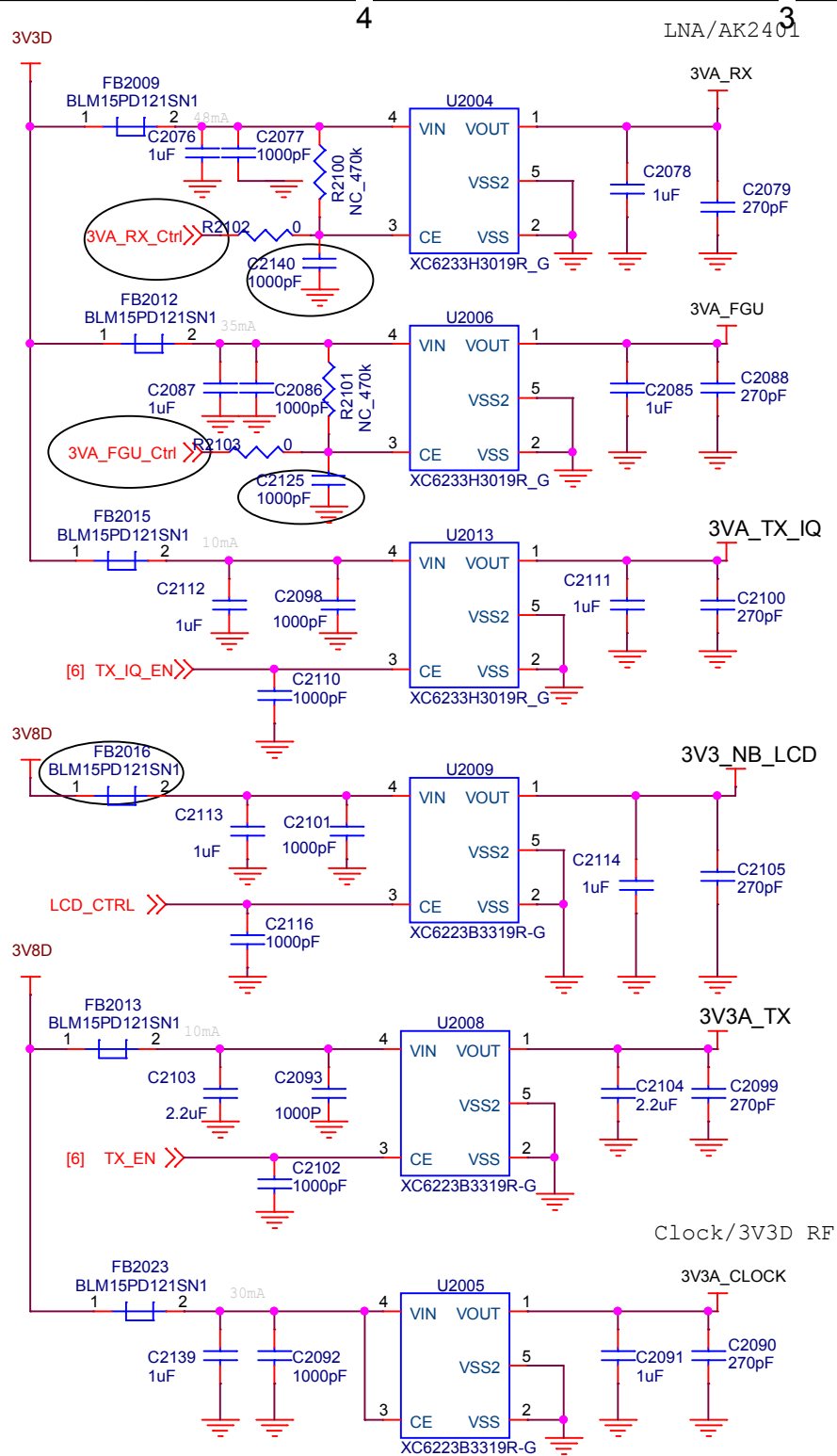
Hytera Hytera Communications Co., Ltd.			
Model Name:	PTC680	Page:	6 of 68
Part Name:	1.BB_DSP:USB/JTAG	Date:	Friday, May 10, 2019
File No.:		Rev:	A
Prepare:		Check:	Approve:

D

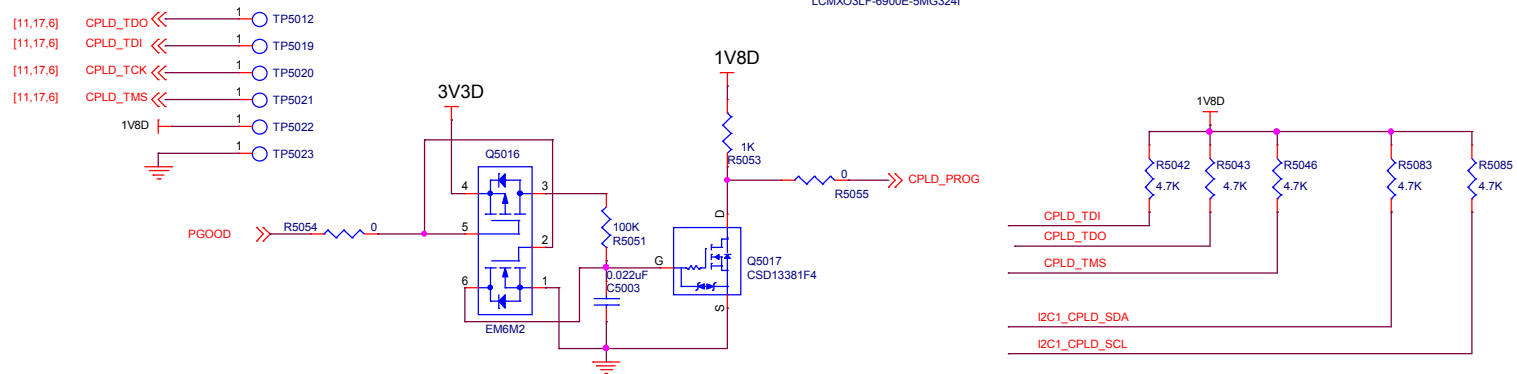
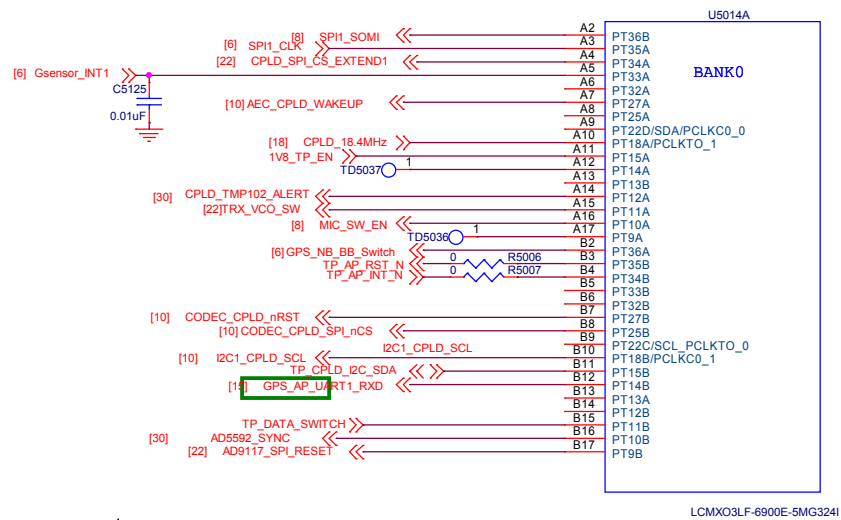
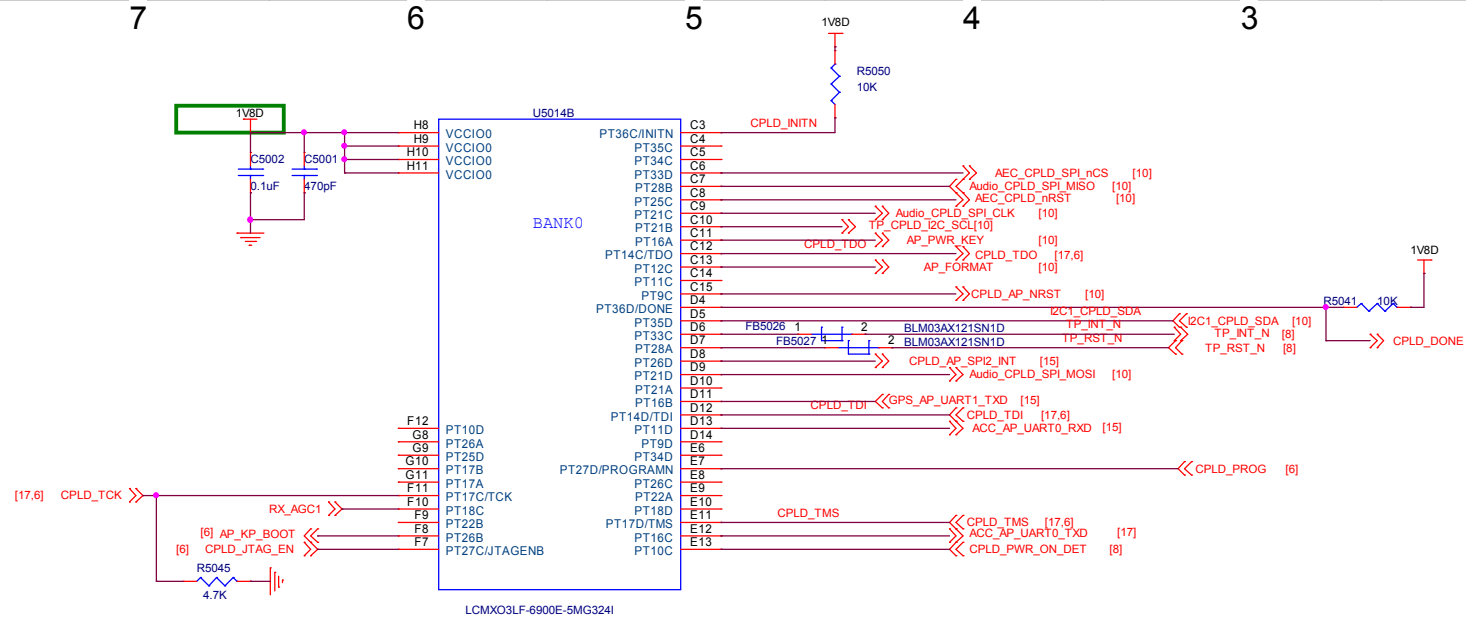
C

B

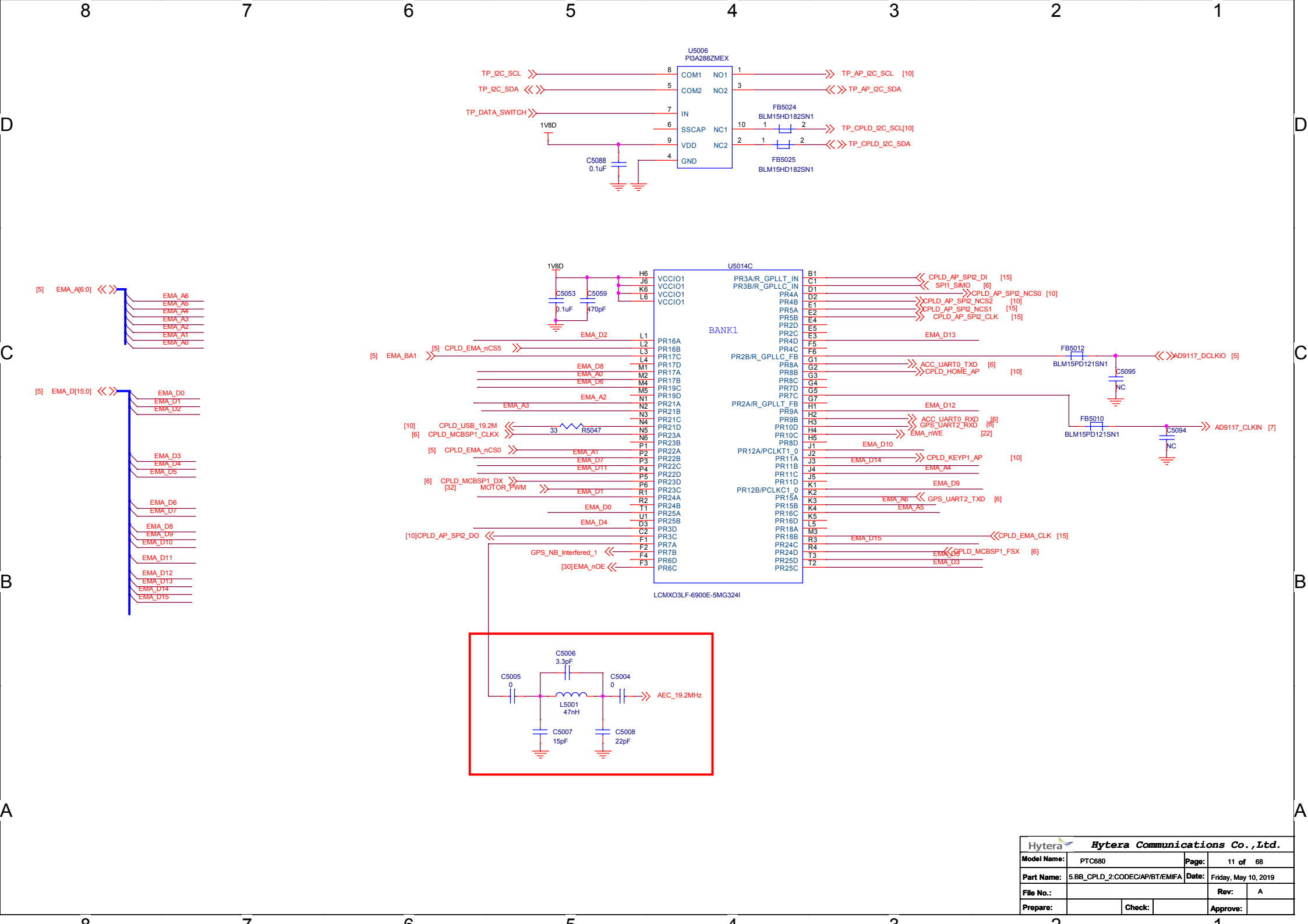
A

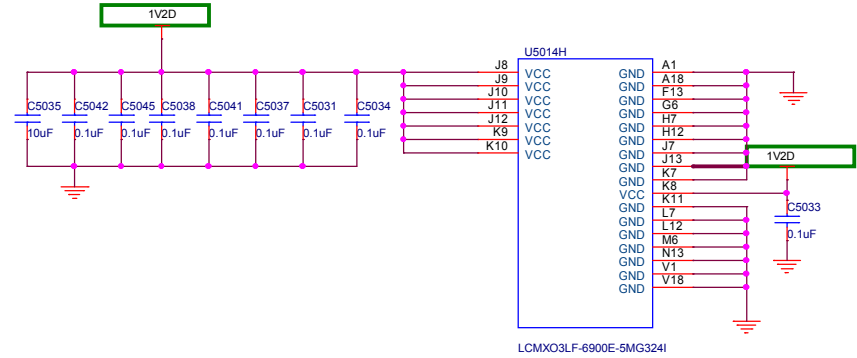
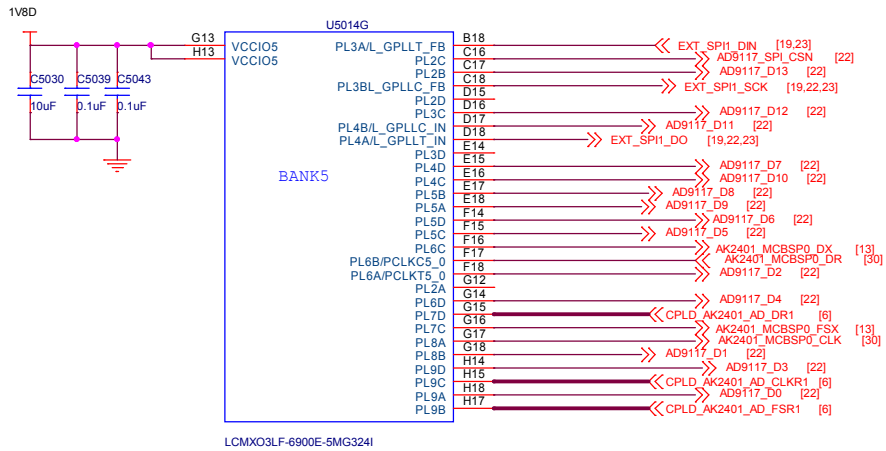
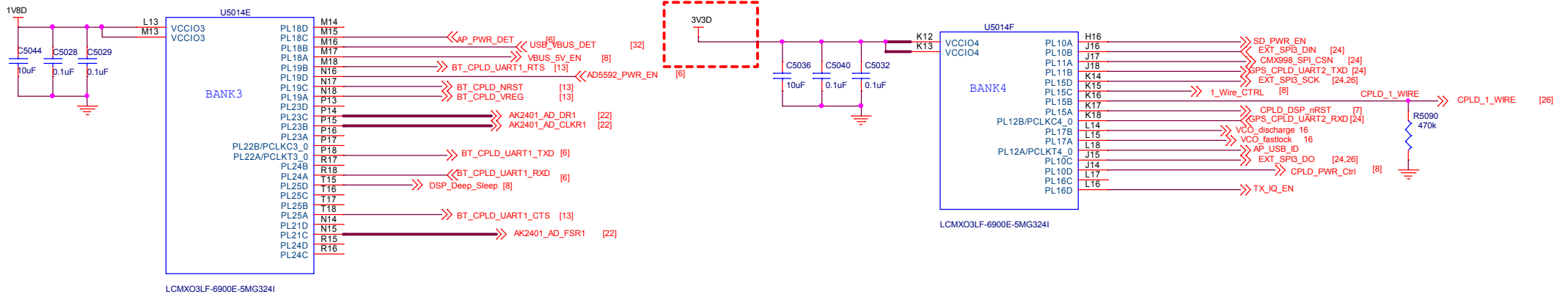


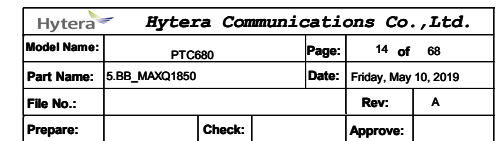
Hytera <i>Hytera Communications Co., Ltd.</i>			
Model Name:	G2.0 JUPITER	Page:	8 of 68
Part Name:	DC-DC	Date:	
File No.:		Rev:	V1.0
Prepare:		Check:	Friday, May 10, 2019
		Approve:	

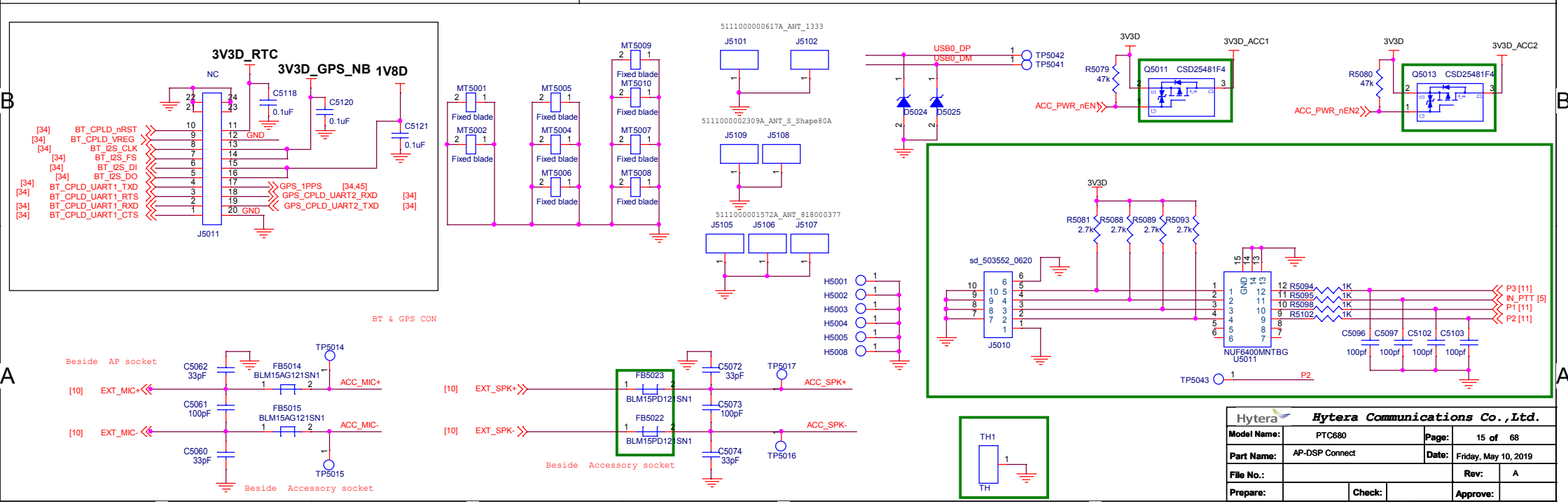
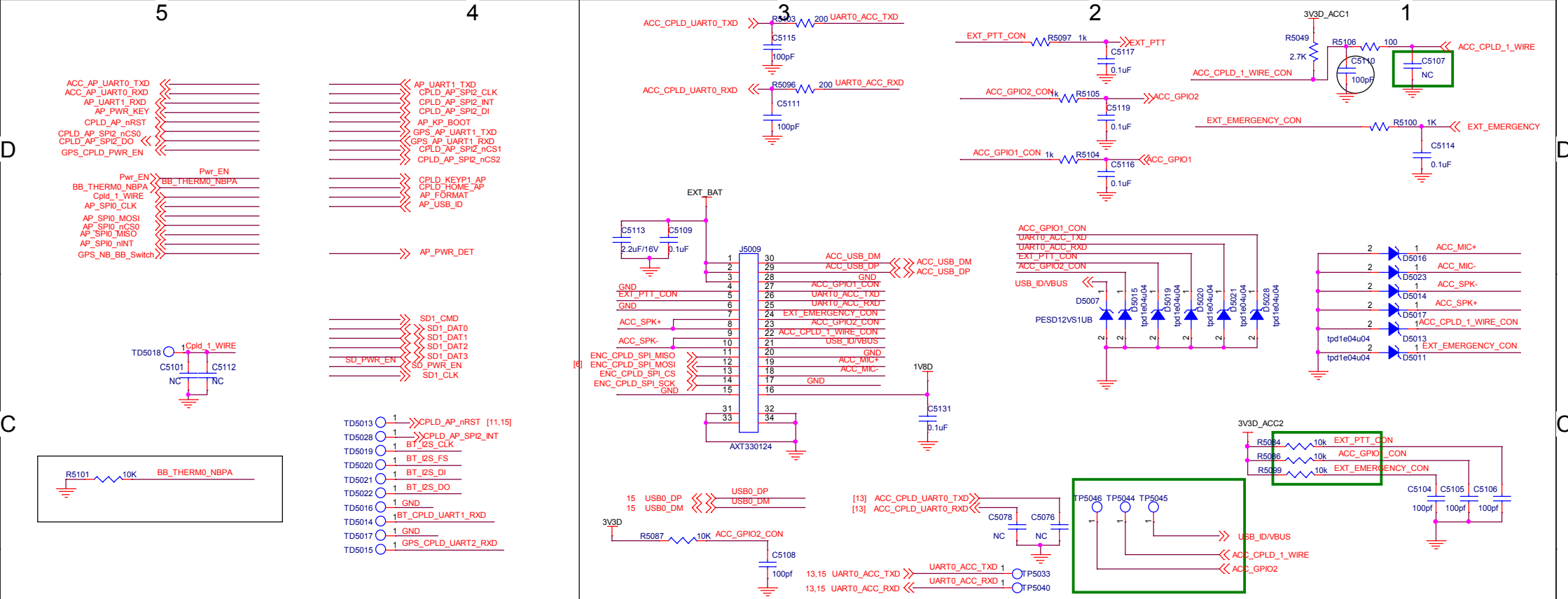


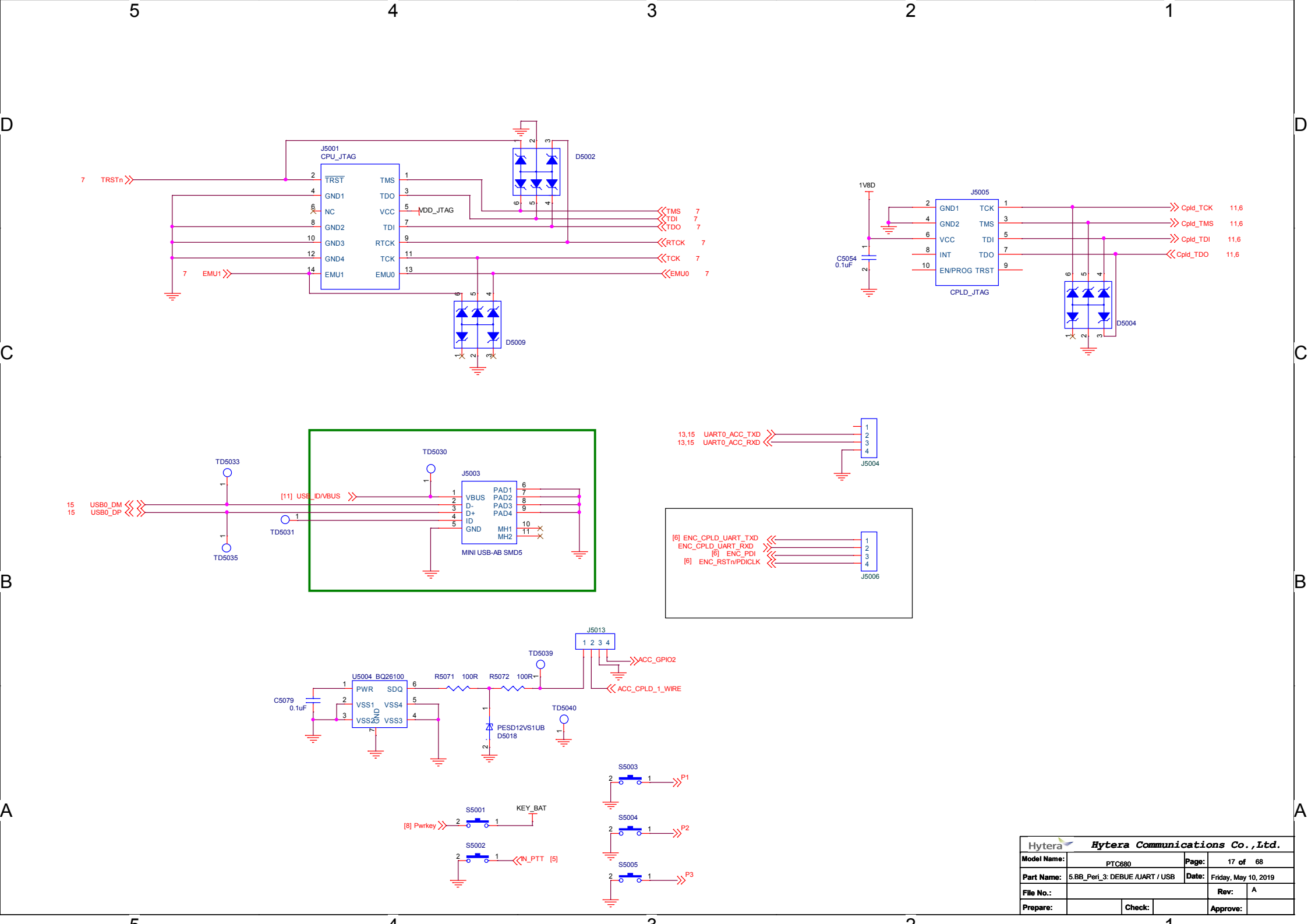
 Hytera Communications Co., Ltd.			
Model Name:		PTC680	Page: 10 of 68
Part Name:		5.BB_CPLD_1:PLL/AD/DAK/B/JTAG	Date: Friday, May 10, 2019
File No.:			Rev: A
Prepare:		Check:	Approve:











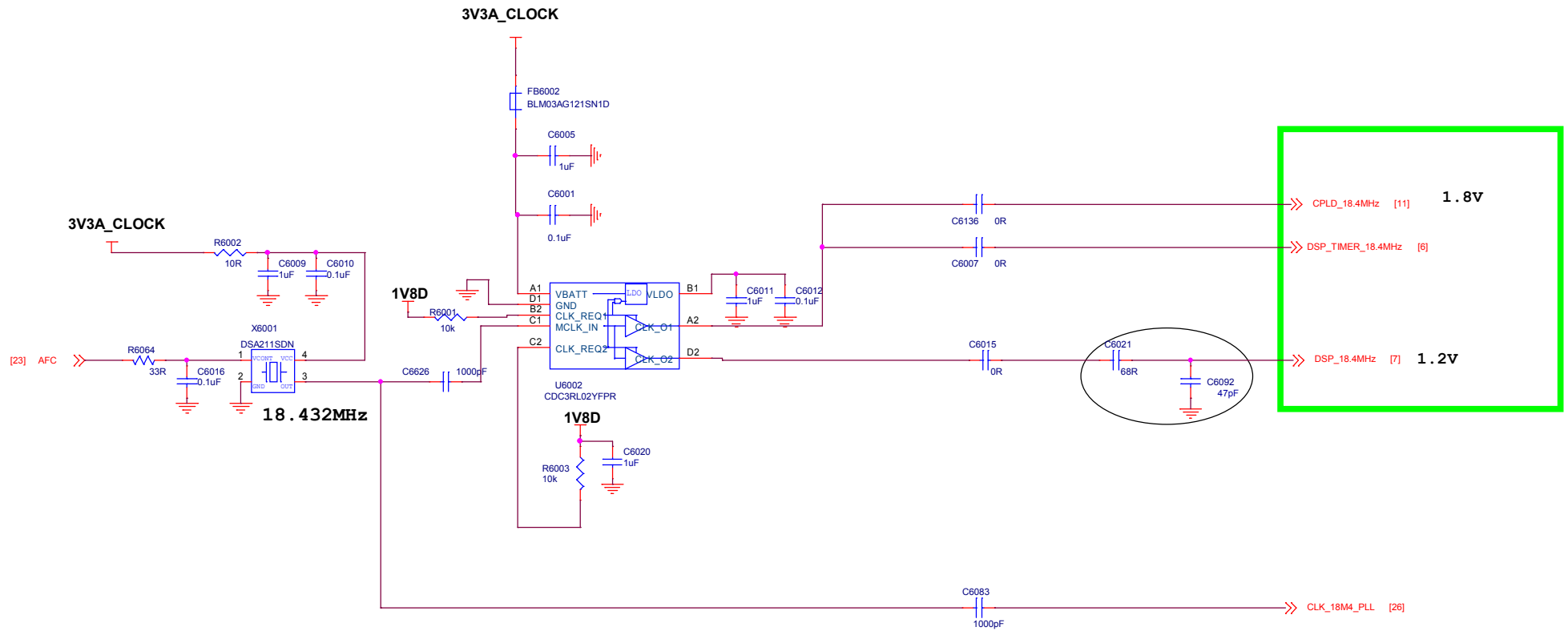
5

4

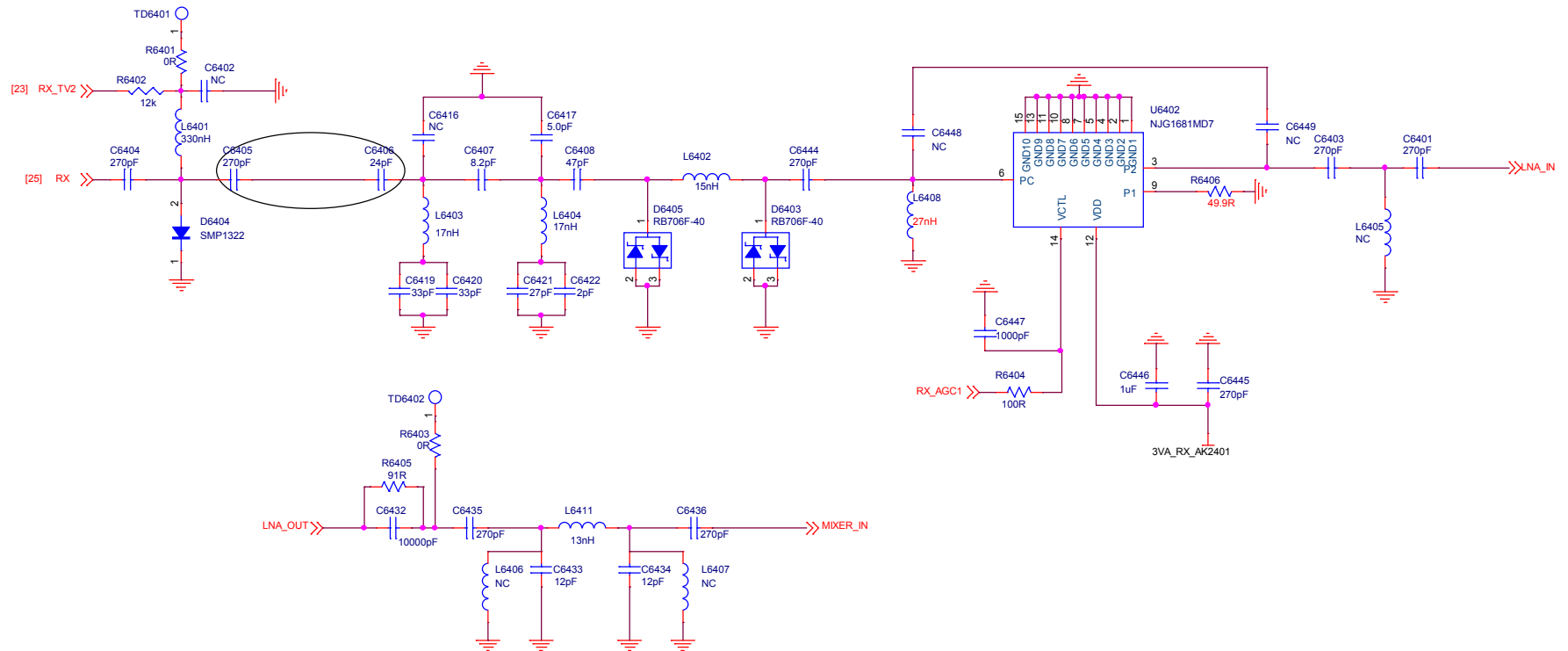
3

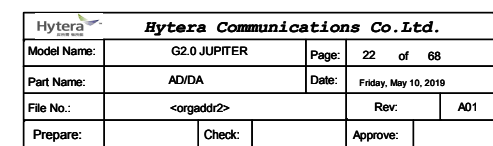
2

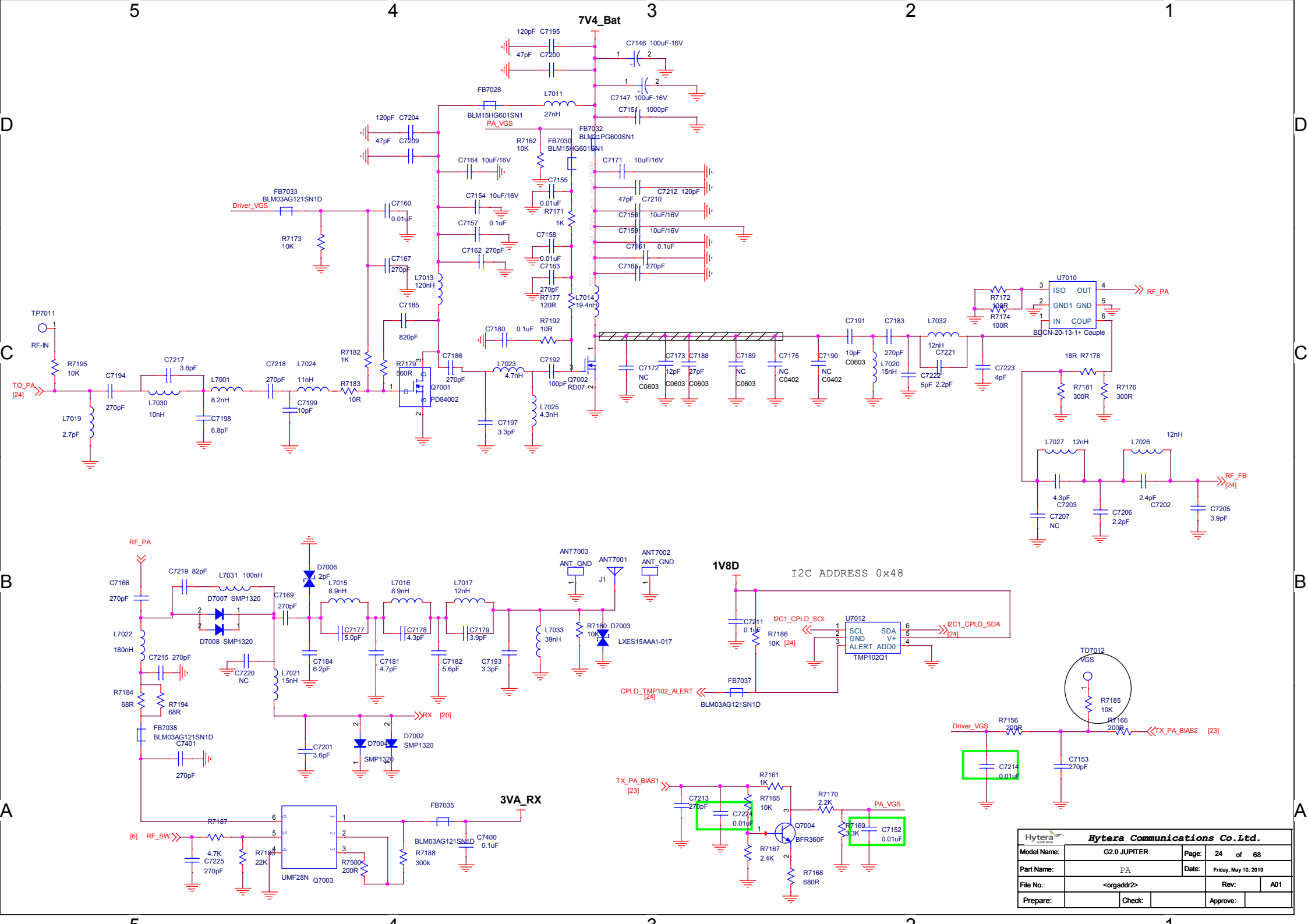
1



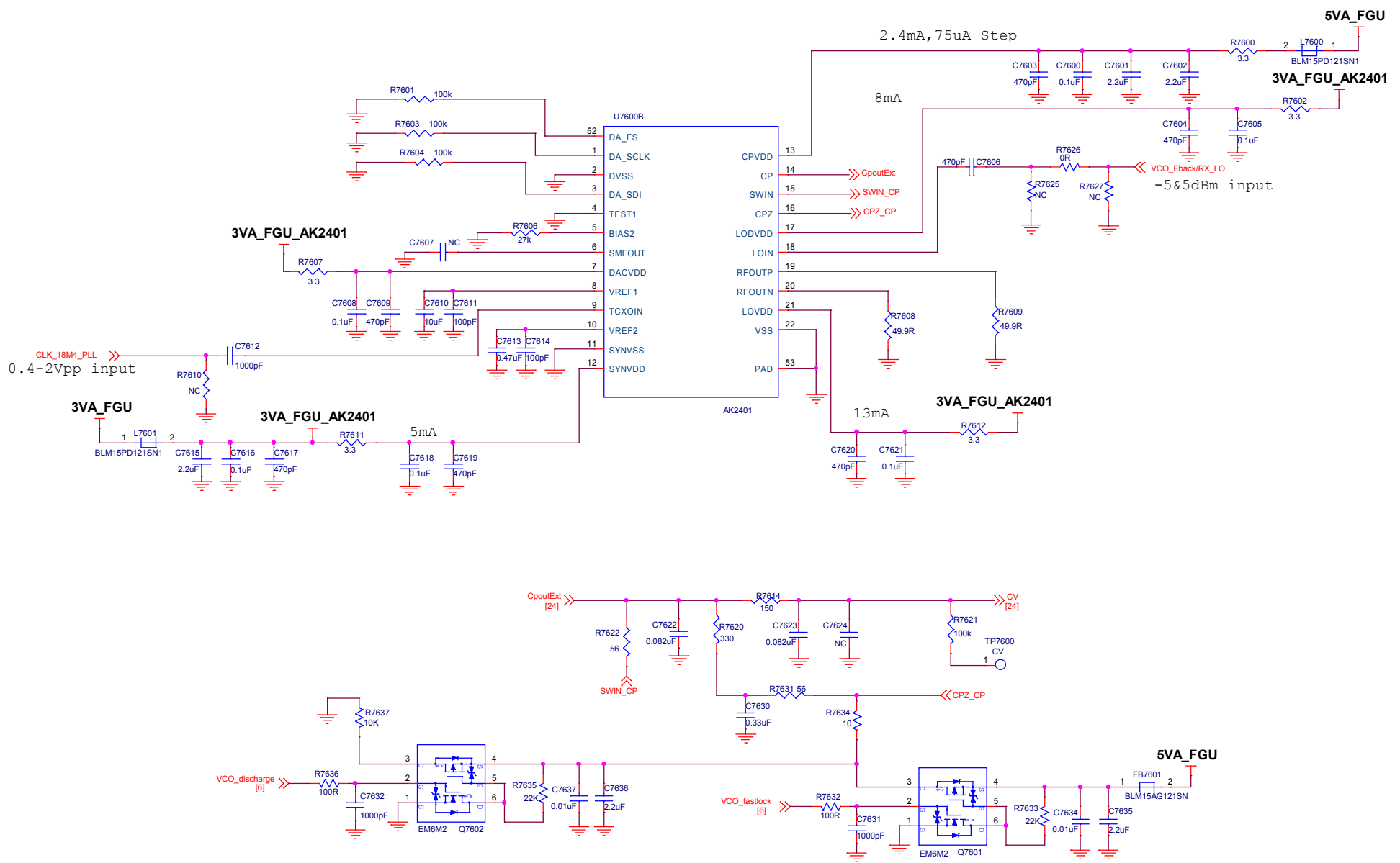
RX-FRONT-END

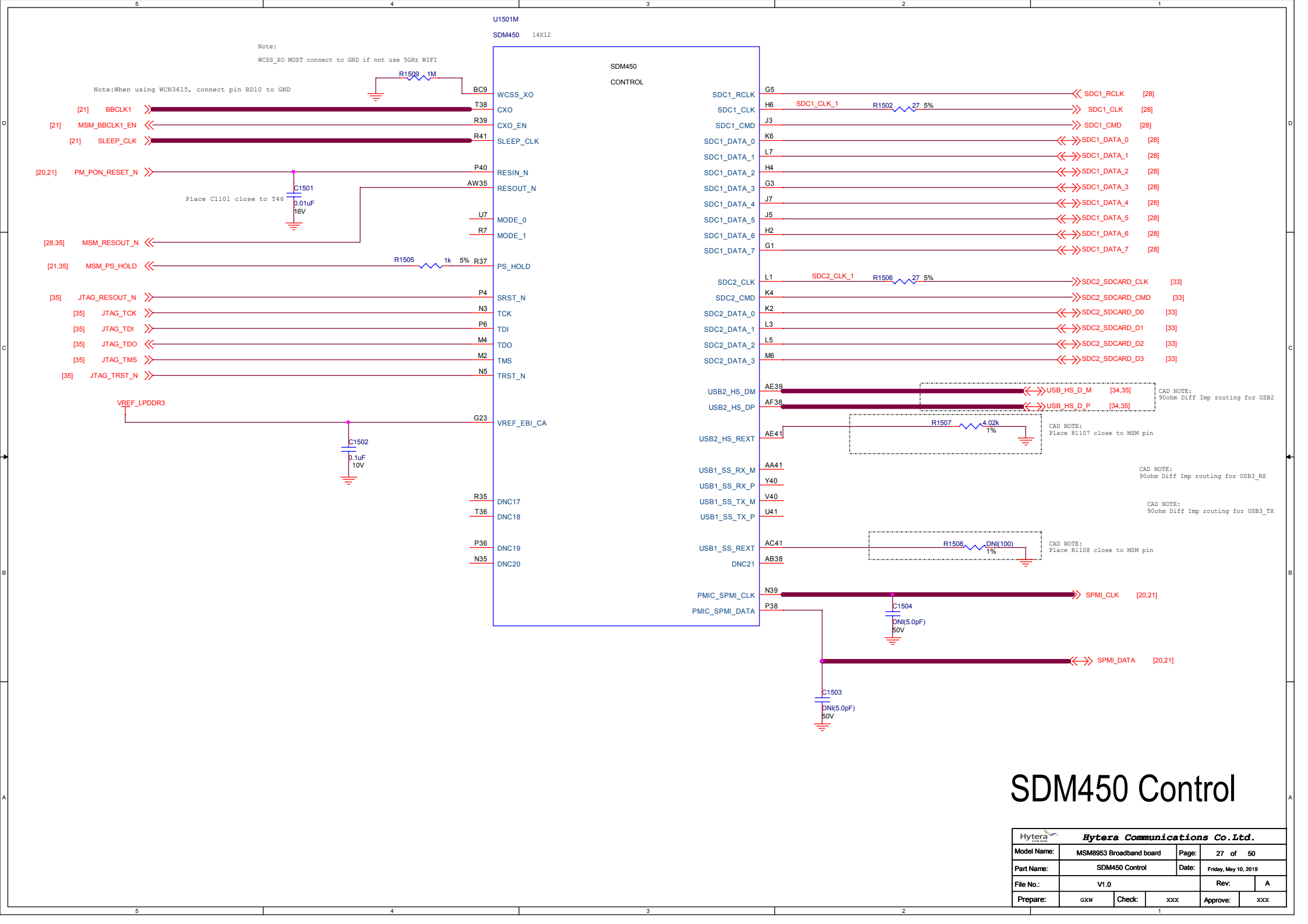


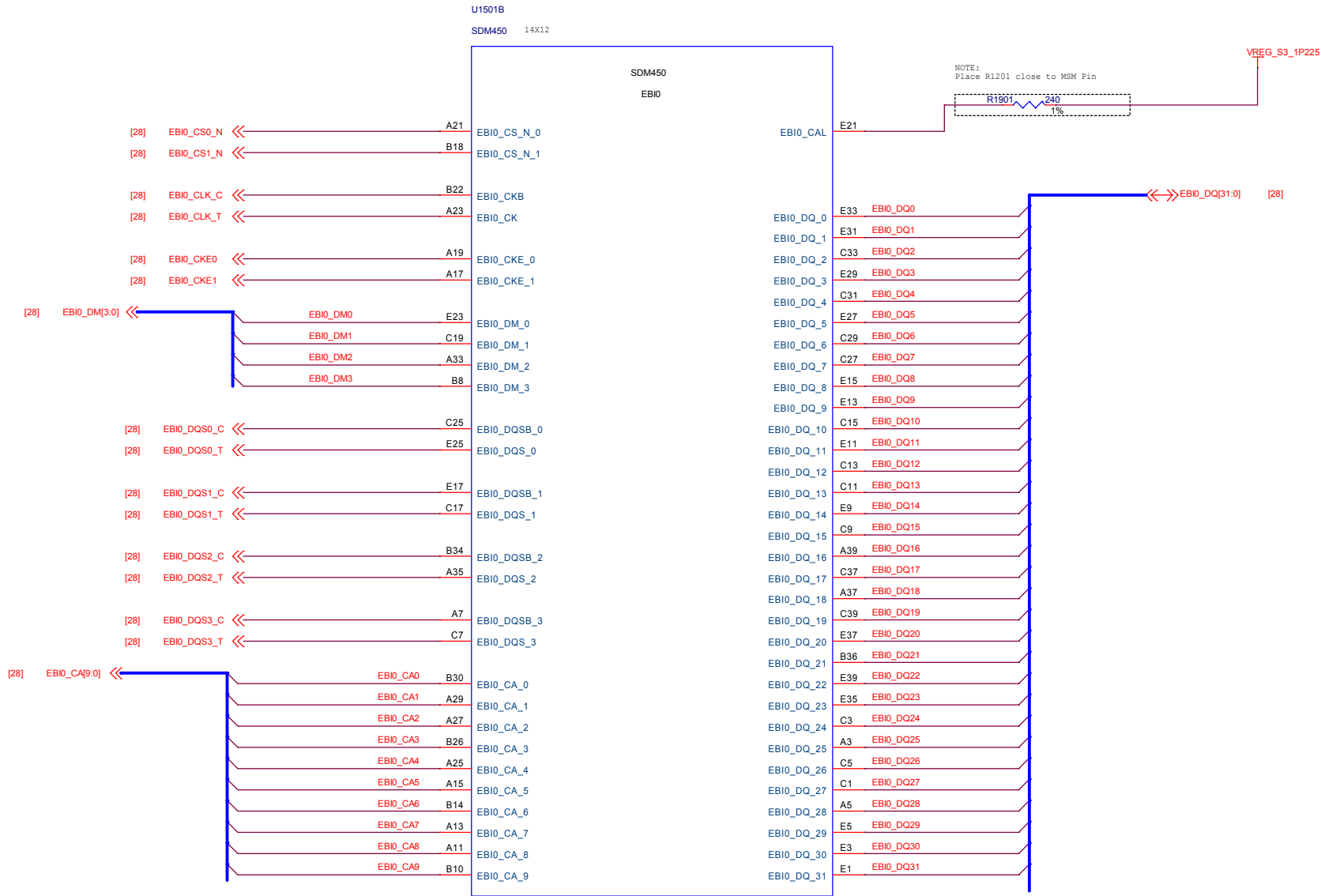




FGU-PLL

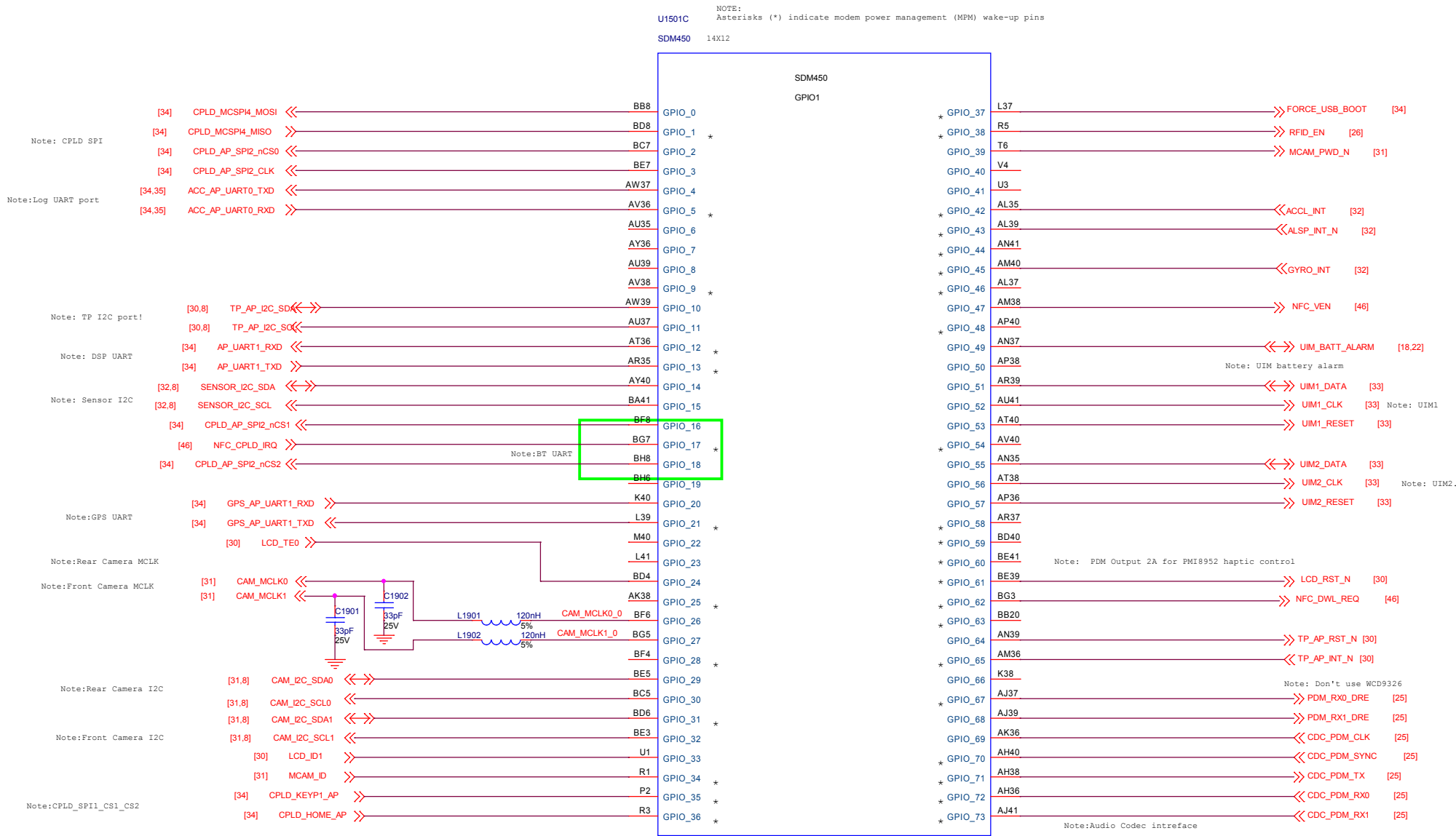




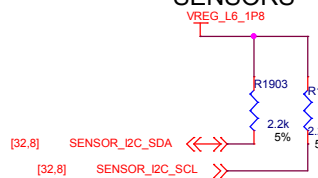


MSM8953 EBI

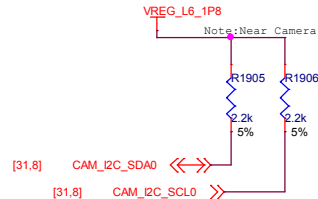
Hytera		Hytera Communications Co.Ltd.			
Model Name:	MSM8953 Broadband board			Page:	28 of 50
Part Name:	MSM8953 EBI			Date:	Friday, May 10, 2019
File No.:	V1.0			Rev:	A
Prepare:	GXW	Check:	xxx	Approve:	xxx



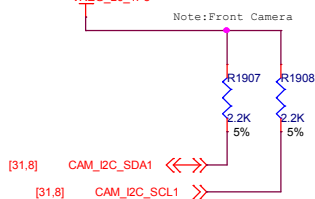
SENSORS



CAMERAS



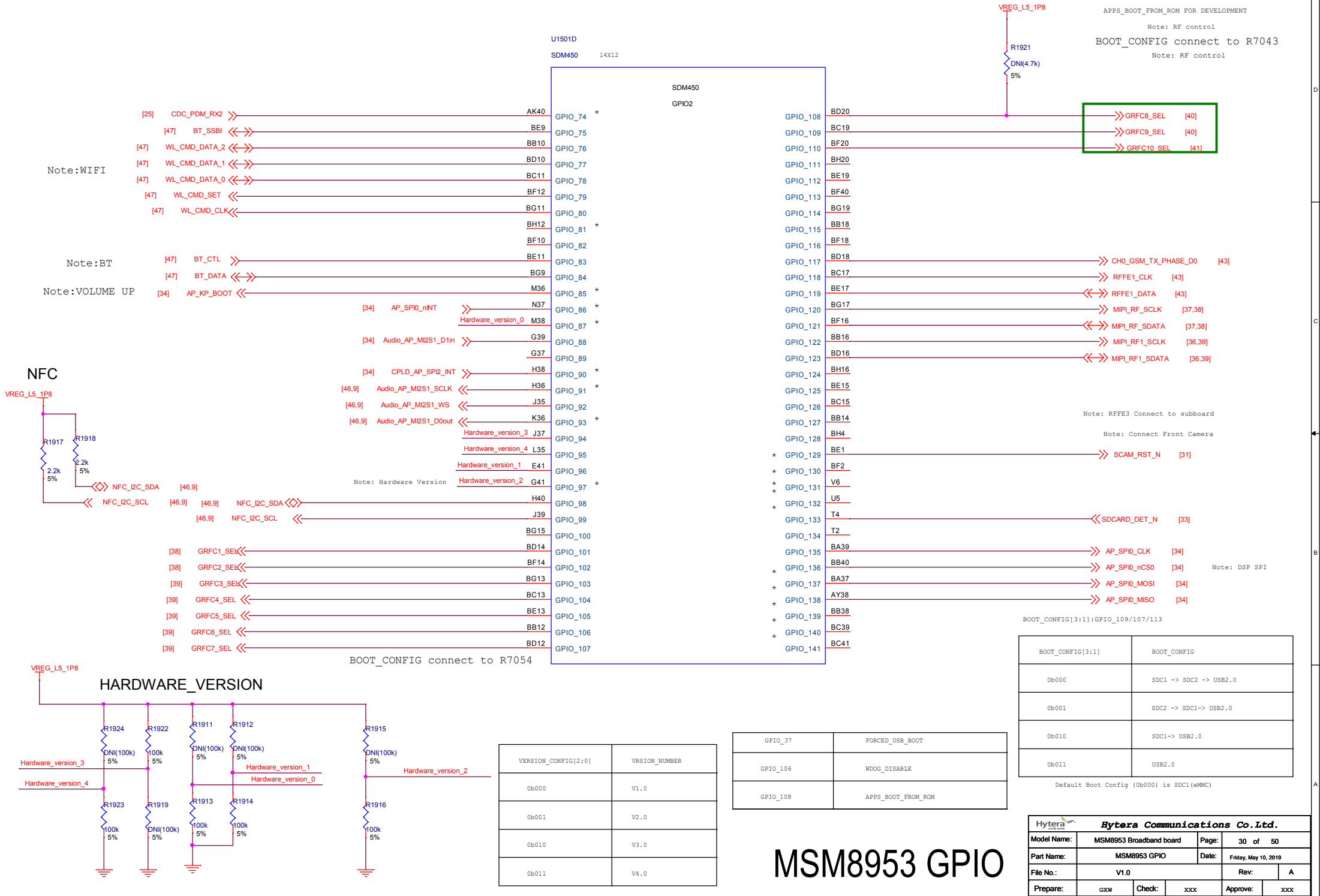
CAMERAS



TOUCHSCREEN

MSM8953 GPIO

Hytera Communications Co.Ltd.			
Model Name:	MSM8953 Broadband board	Page:	29 of 50
Part Name:	MSM8953 GPIO	Date:	Friday, May 10, 2019
File No.:	V1.0	Rev:	A
Prepare:	GXW	Check:	xxx
Approve:	xxx		



Note:WIFI

Note:BT

Note:VOLUME UP

NFC

HARDWARE_VERSION

BOOT_CONFIG connect to R7054

APPS_BOOT_FROM_ROM FOR DEVELOPMENT

Note: RF control

BOOT_CONFIG connect to R7043

Note: RF control

Note: RFFE3 Connect to subboard

Note: Connect Front Camera

Note: DSP SPI

BOOT_CONFIG[3:1]:GPIO_109/107/113

BOOT_CONFIG[3:1]	BOOT_CONFIG
0b000	SDC1 -> SDC2 -> USB2.0
0b001	SDC2 -> SDC1-> USB2.0
0b010	SDC1-> USB2.0
0b011	USB2.0

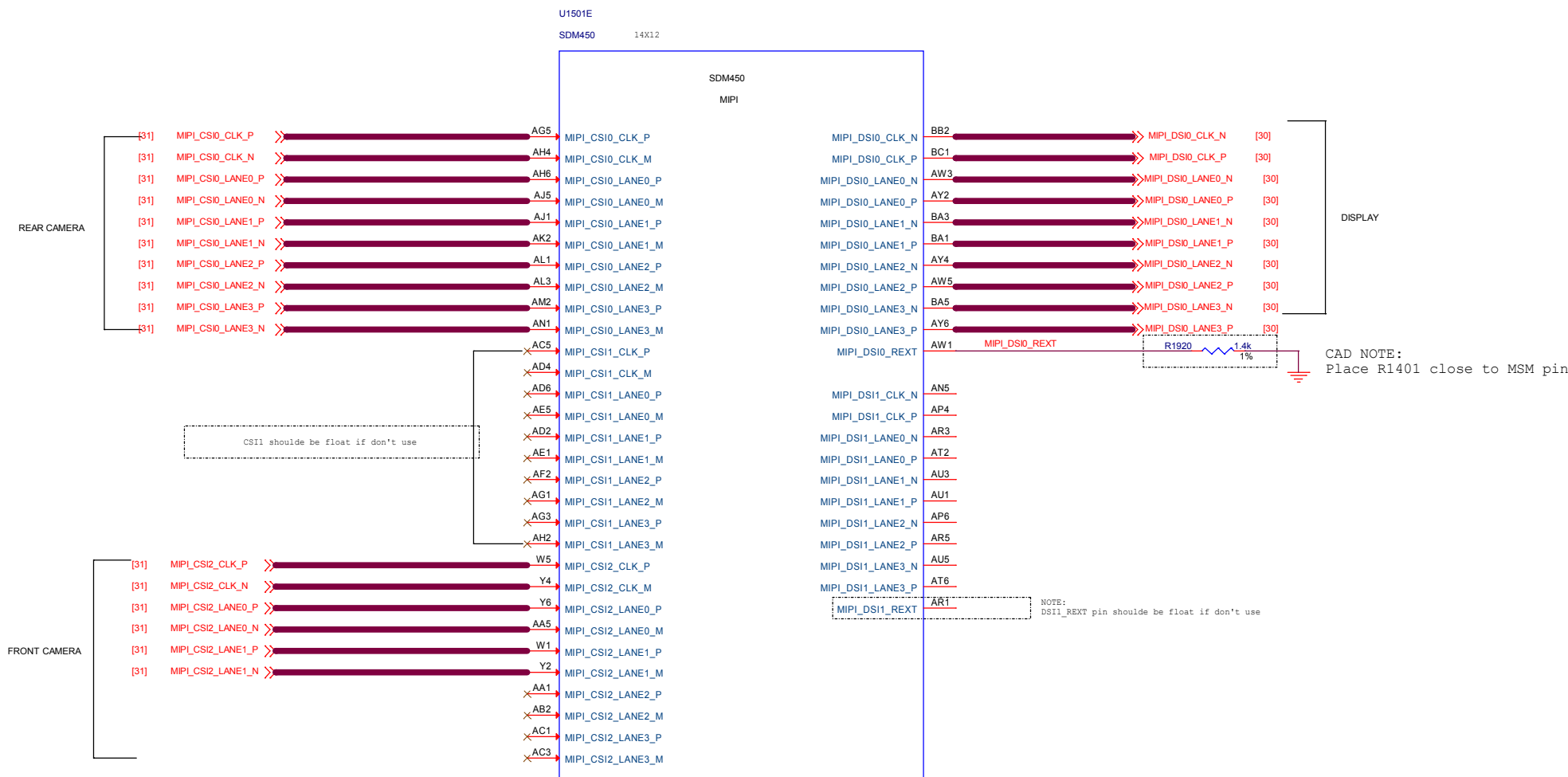
Default Boot Config (0b000) is SDC1 (eMMC)

GPIO_37	FORCED_USB_BOOT
GPIO_106	WDOG_DISABLE
GPIO_108	APPS_BOOT_FROM_ROM

VERSION_CONFIG[2:0]	VERSION_NUMBER
0b000	V1.0
0b001	V2.0
0b010	V3.0
0b011	V4.0

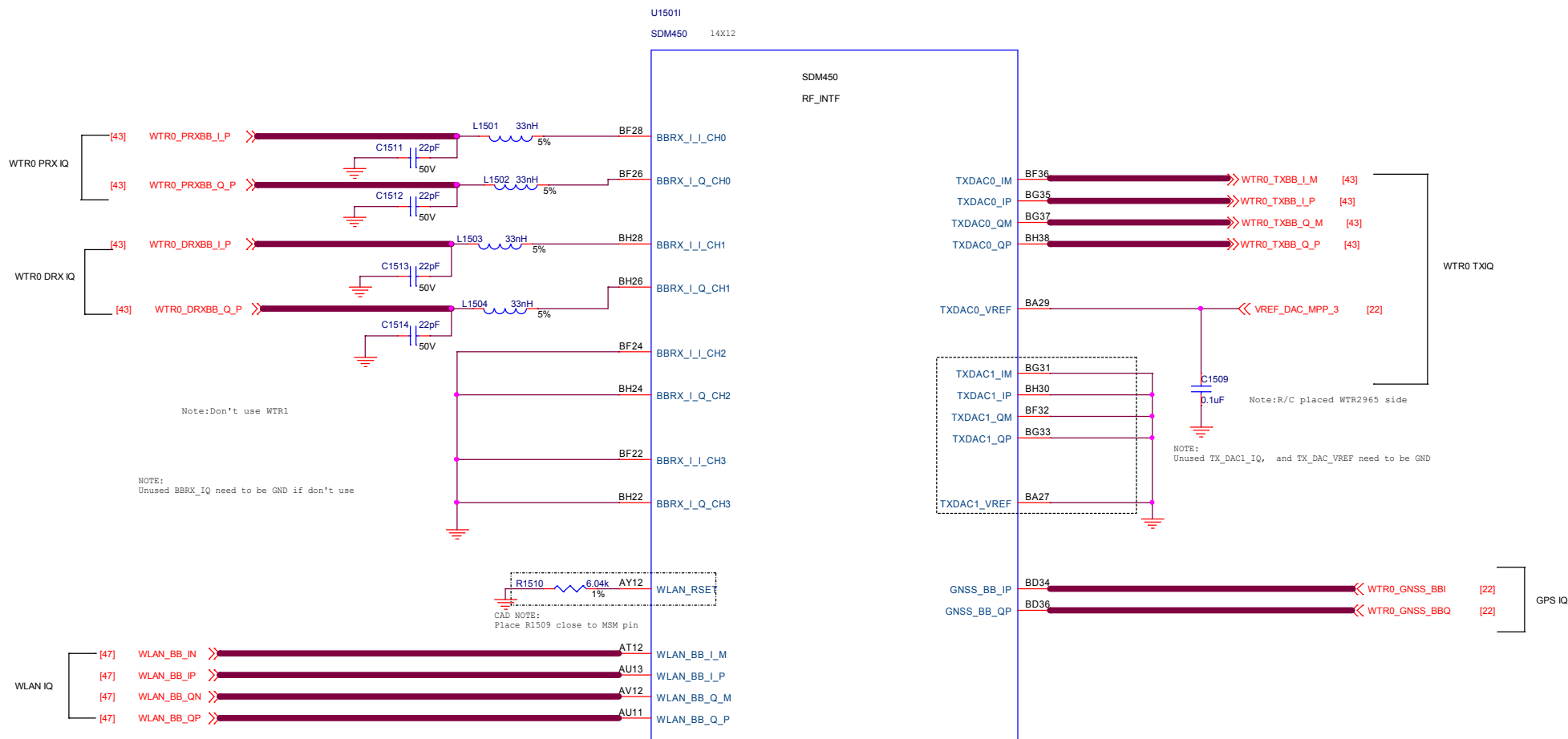
MSM8953 GPIO

Hytera Communications Co.Ltd.					
Model Name:	MSM8953 Broadband board		Page:	30 of 50	
Part Name:	MSM8953 GPIO		Date:	Friday, May 10, 2019	
File No.:	V1.0		Rev:	A	
Prepare:	gxw	Check:	xxx	Approve:	xxx



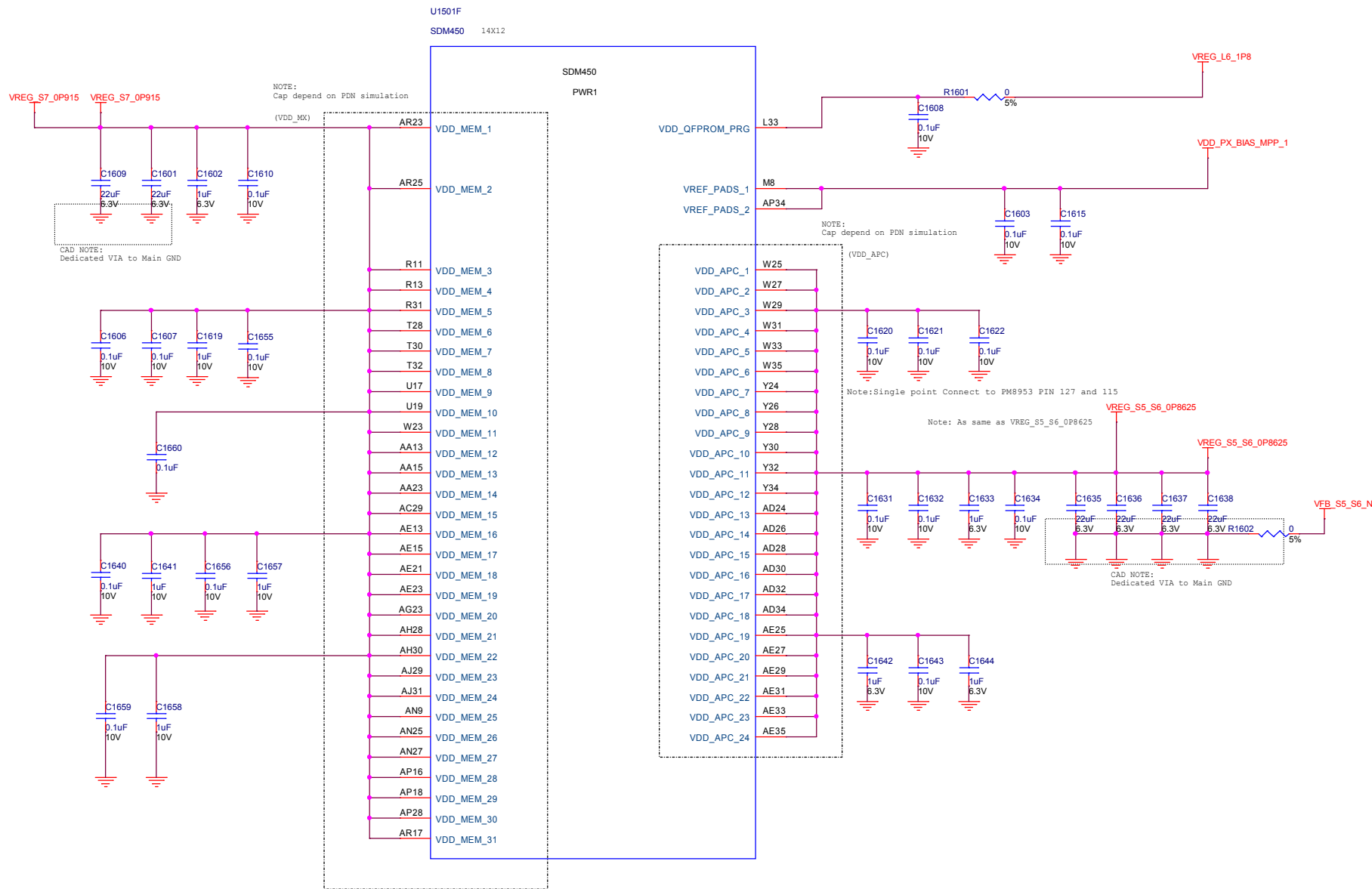
MSM8953 MIPI

Hytera		Hytera Communications Co.Ltd.			
Model Name:	MSM8953 Broadband board			Page:	31 of 50
Part Name:	MSM8953 MIPI			Date:	Friday, May 10, 2019
File No.:	V1.0			Rev:	A
Prepare:	GXW	Check:	XXX	Approve:	XXX



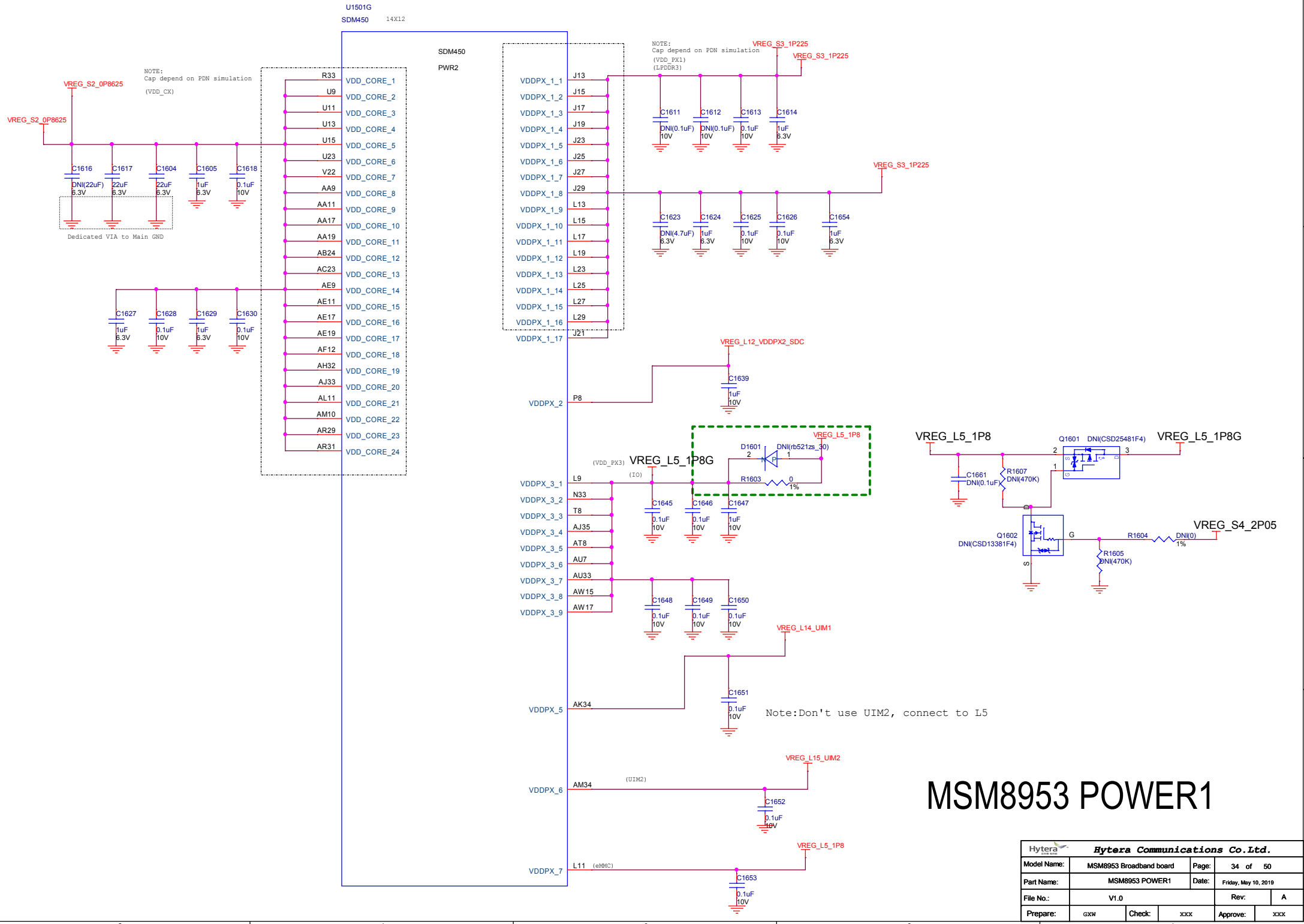
MSM8953 RF

Hytera		Hytera Communications Co.Ltd.			
Model Name:	MSM8953 Broadband board			Page:	32 of 50
Part Name:	MSM8953 RF			Date:	Friday, May 10, 2019
File No.:	V1.0			Rev:	A
Prepare:	GXW	Check:	XXX	Approve:	XXX



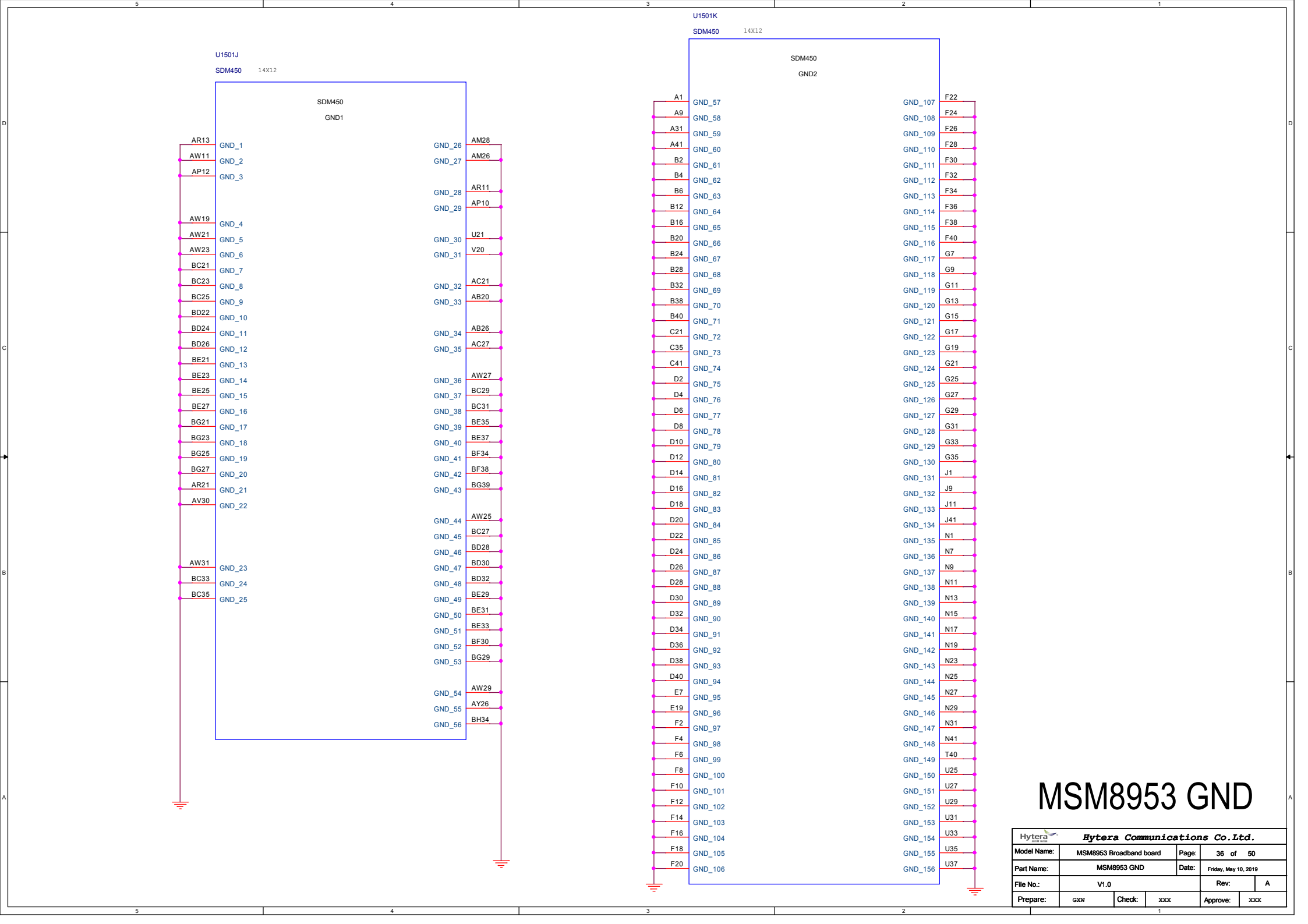
MSM8953 POWER1

Hytera		Hytera Communications Co.Ltd.	
Model Name:	MSM8953 Broadband board	Page:	33 of 50
Part Name:	MSM8953 POWER1	Date:	Friday, May 10, 2019
File No.:	V1.0	Rev:	A
Prepare:	GXW	Check:	xxx
Approve:	xxx		



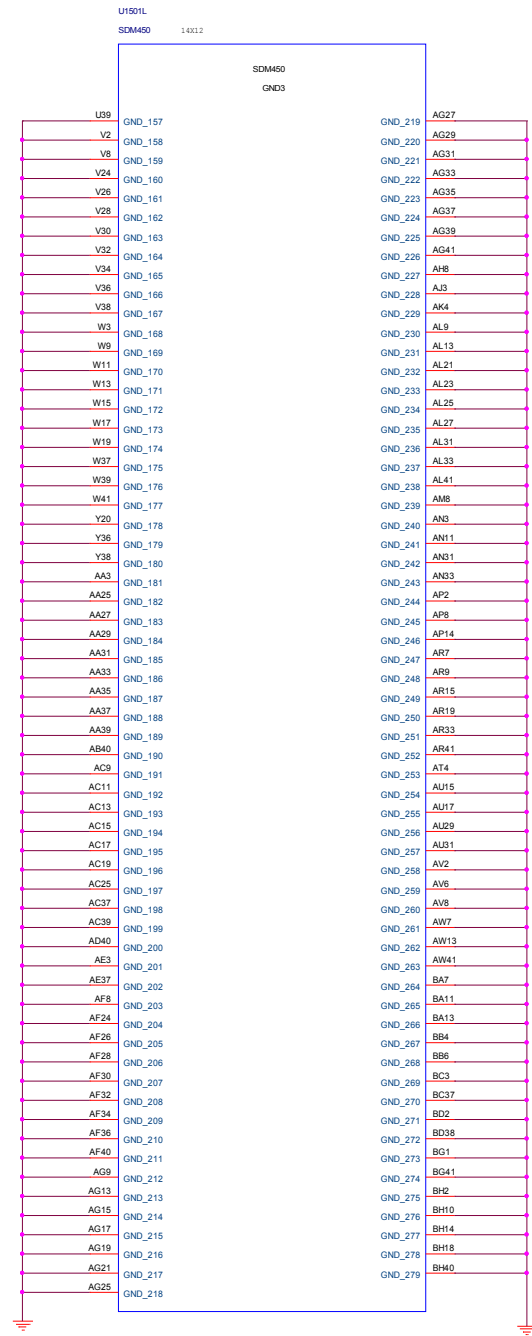
MSM8953 POWER1

Hytera		Hytera Communications Co.Ltd.	
Model Name:	MSM8953 Broadband board	Page:	34 of 50
Part Name:	MSM8953 POWER1	Date:	Friday, May 10, 2019
File No.:	V1.0	Rev:	A
Prepare:	gxw	Check:	xxxx
Approve:	xxxx		



MSM8953 GND

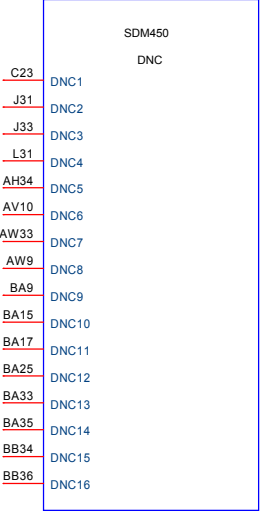
Hytera		Hytera Communications Co.Ltd.			
Model Name:	MSM8953 Broadband board			Page:	36 of 50
Part Name:	MSM8953 GND			Date:	Friday, May 10, 2019
File No.:	V1.0			Rev:	A
Prepare:	cxw	Check:	xxx	Approve:	xxx



MSM8953 GND

Hytera		Bytera Communications Co.,Ltd.	
Model Name:	MSM8953 Broadband board	Page:	37 of 50
Part Name:	MSM8953 GND	Date:	Friday, May 10, 2019
File No.:	V1.0	Rev:	A
Prepare:	GXX	Check:	XXX
Approve:			XXX

U1501A
SDM450 14X12



MSM8953 GND

Hytera		Hytera Communications Co.Ltd.			
Model Name:	MSM8953 Broadband board			Page:	38 of 50
Part Name:	MSM8953 GND			Date:	Friday, May 10, 2019
File No.:	V1.0			Rev:	A
Prepare:	gxw	Check:	xxx	Approve:	xxx

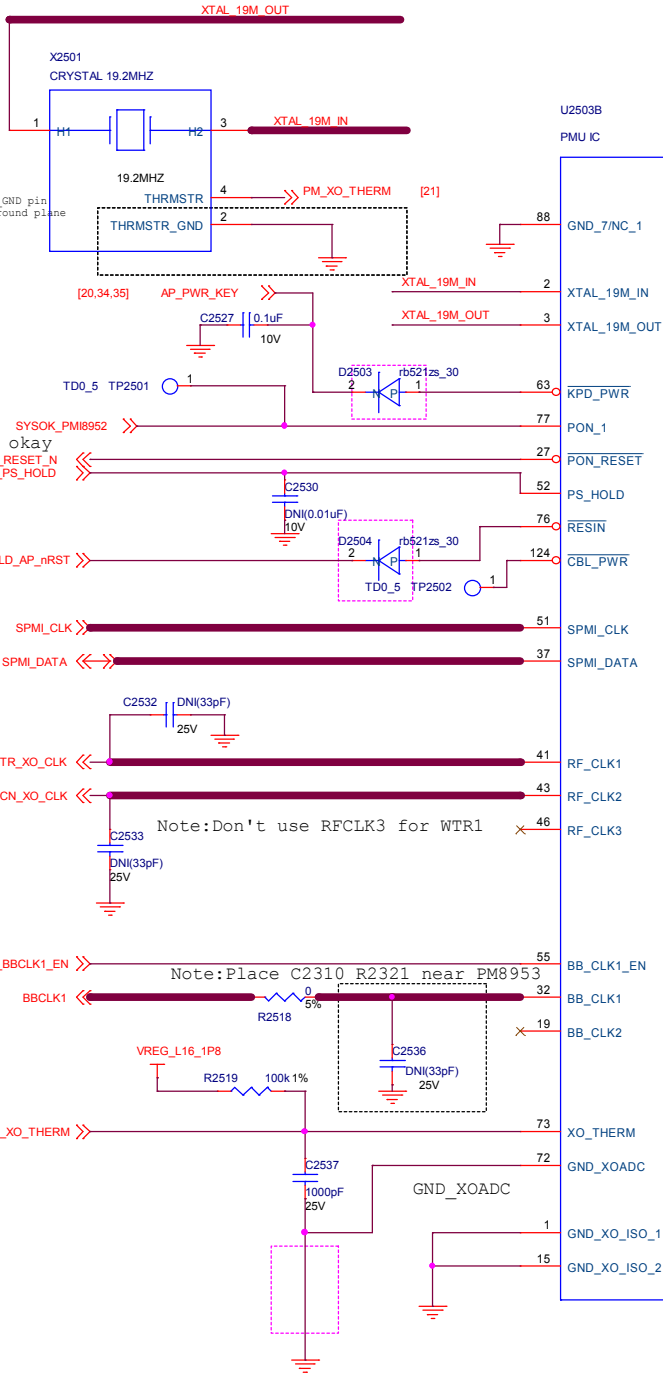
Note:Change XO package!

Note: XO_GND should connect to XOADC_GND pin using thin trace, then via to main ground plane under the XO_THERM cap ground

Note: Power on key inter pull up.

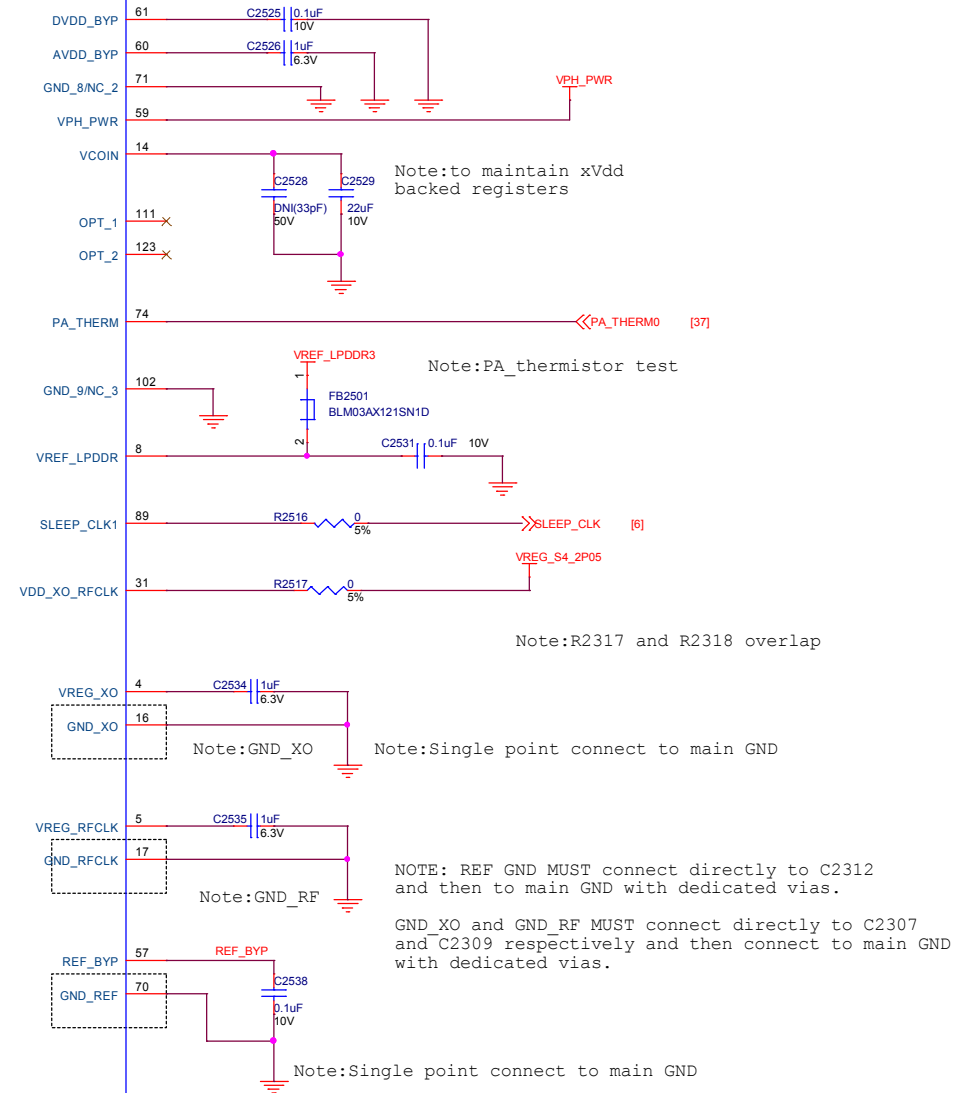
note: Power good/system okay

Note:Volume Down key



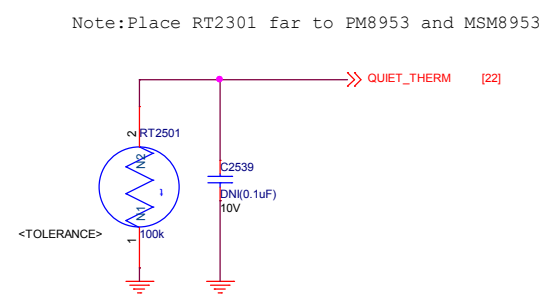
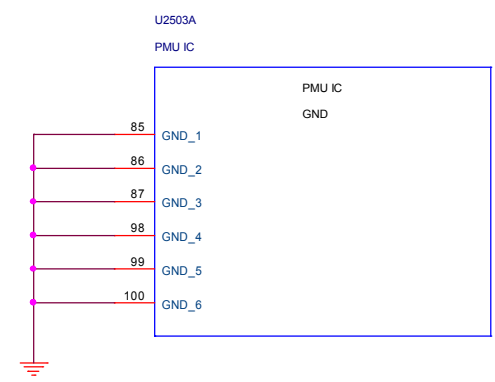
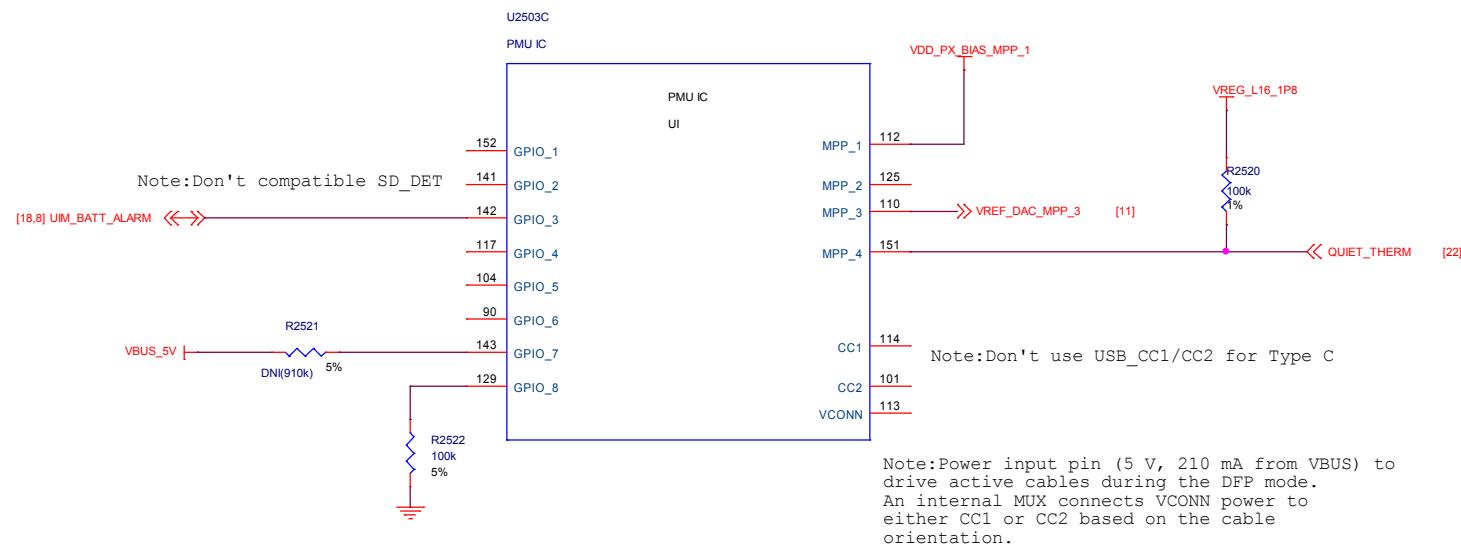
Note:use single via directly to main ground plane; do not share with any other ground pads

Note:use single via directly to main ground plane at either cap pad or PMIC pad (not both); do not share with any other ground pads



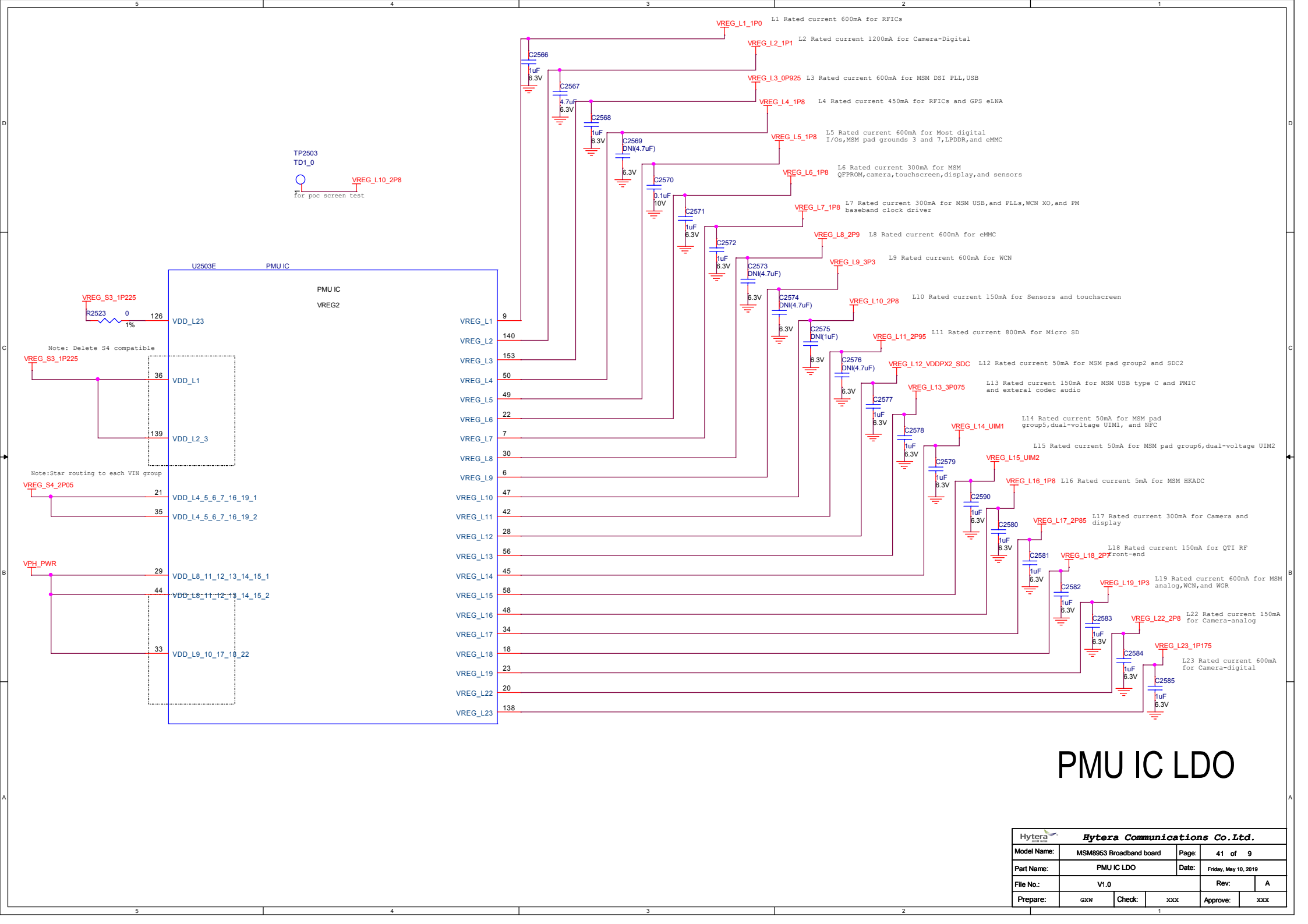
PMU IC Control/Interface

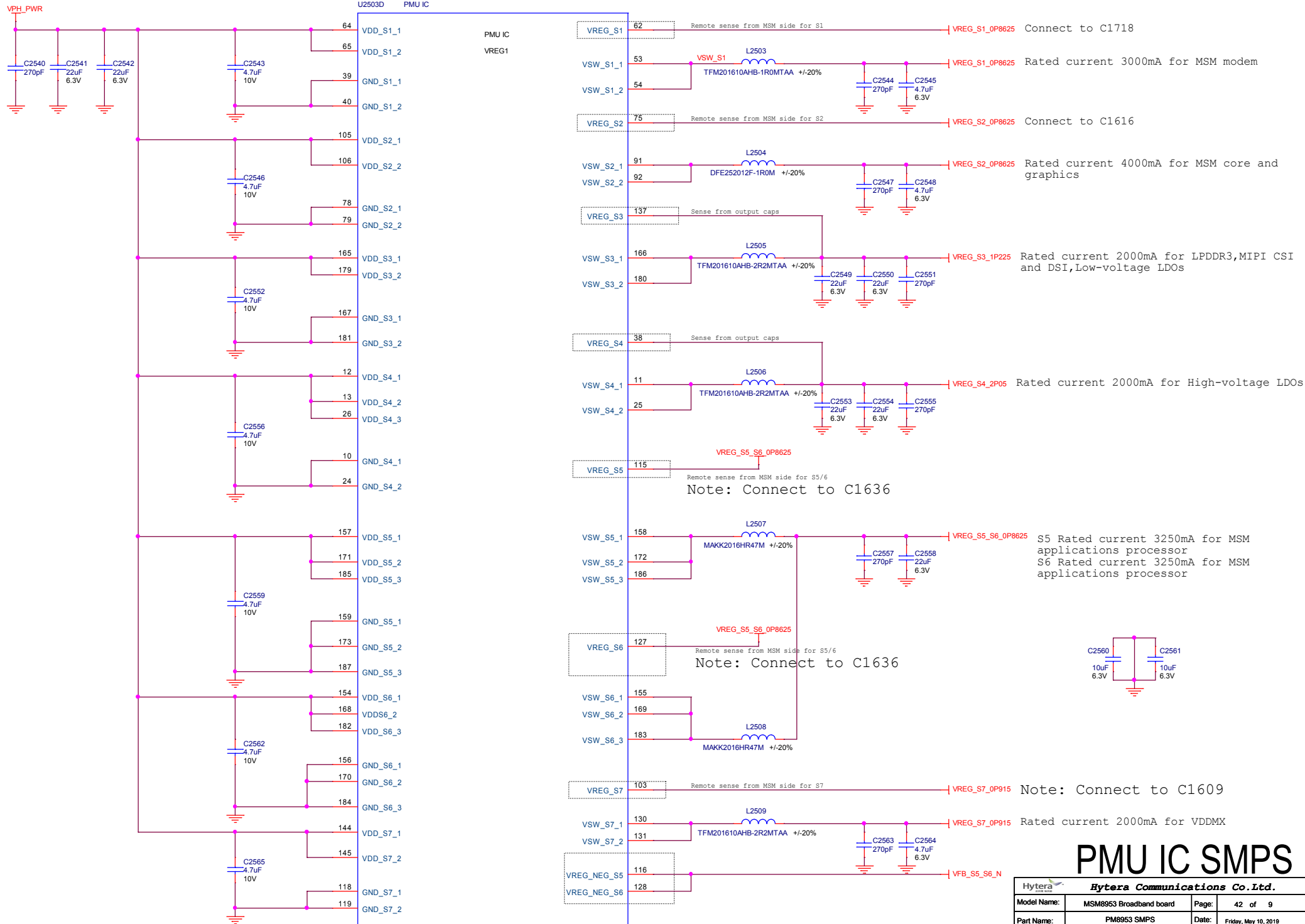
Hytera		Hytera Communications Co.Ltd.	
Model Name:	MSM8953 Broadband board	Page:	39 of 9
Part Name:	PM8953 Control/Interface	Date:	Friday, May 10, 2019
File No.:	V1.0	Rev:	A
Prepare:	gxw	Check:	xxx
Approve:	xxx		



PMU IC Control/Interface

Hytera		Hytera Communications Co.Ltd.	
Model Name:	MSM8953 Broadband board	Page:	40 of 9
Part Name:	PM8953 Control/Interface	Date:	Friday, May 10, 2019
File No.:	V1.0	Rev:	A
Prepare:	GXW	Check:	XXXX
Approve:		XXXX	

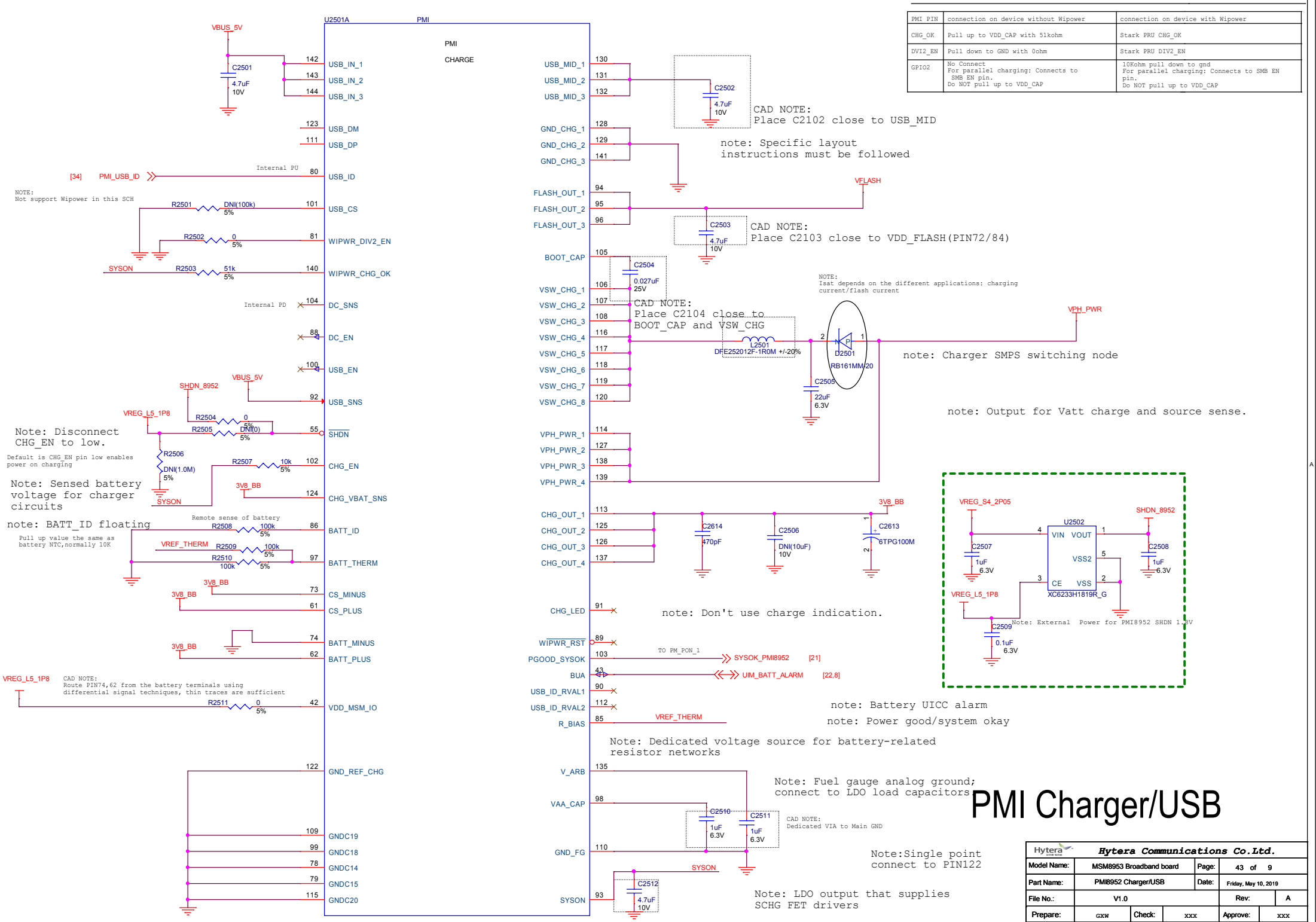




PMU IC SMPS

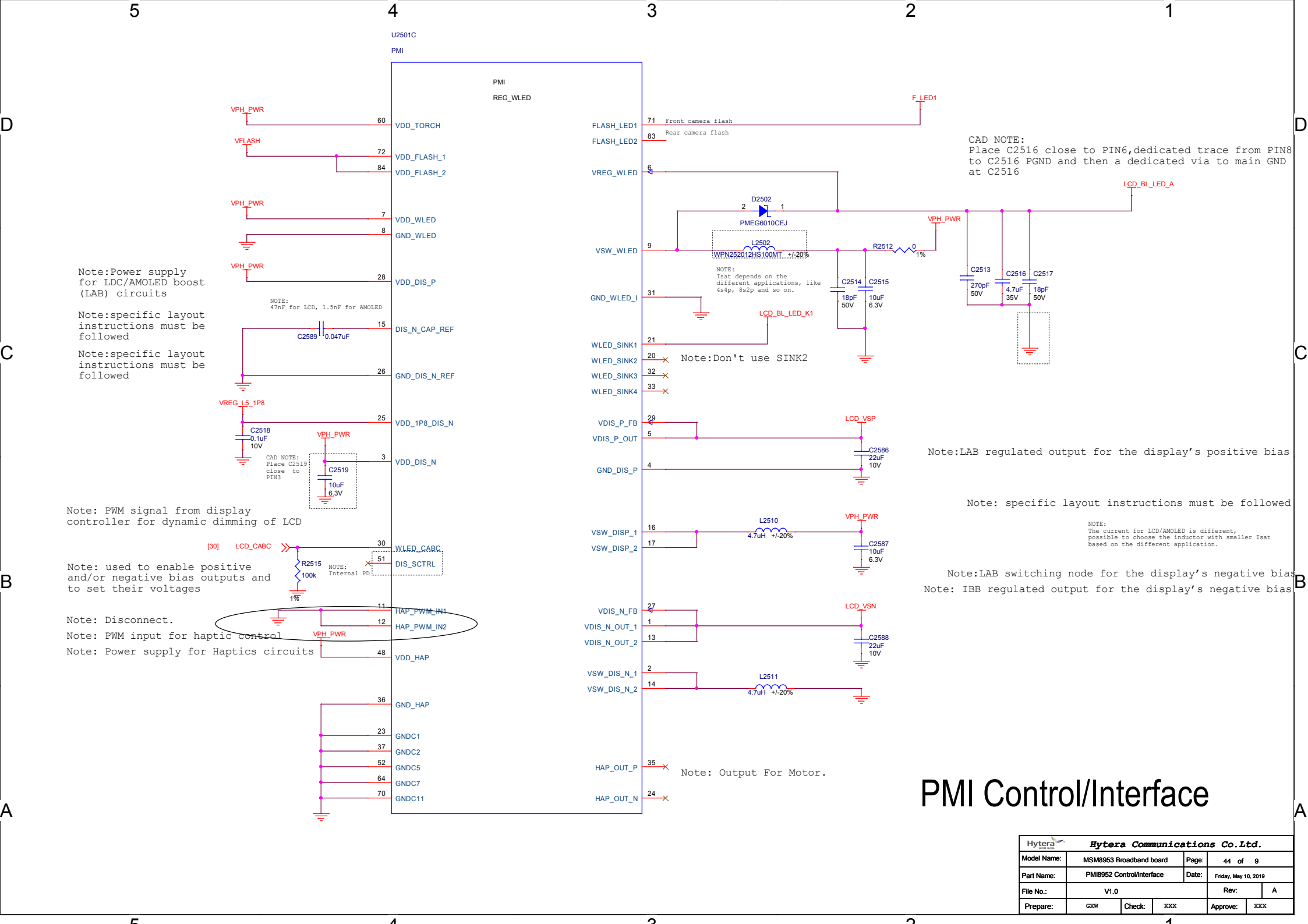
Hytera		Hytera Communications Co.Ltd.	
Model Name:	MSM8953 Broadband board	Page:	42 of 9
Part Name:	PM8953 SMPS	Date:	Friday, May 10, 2019
File No.:	V1.0	Rev:	A
Prepare:	GXW	Check:	xxx
Approve:	xxx		

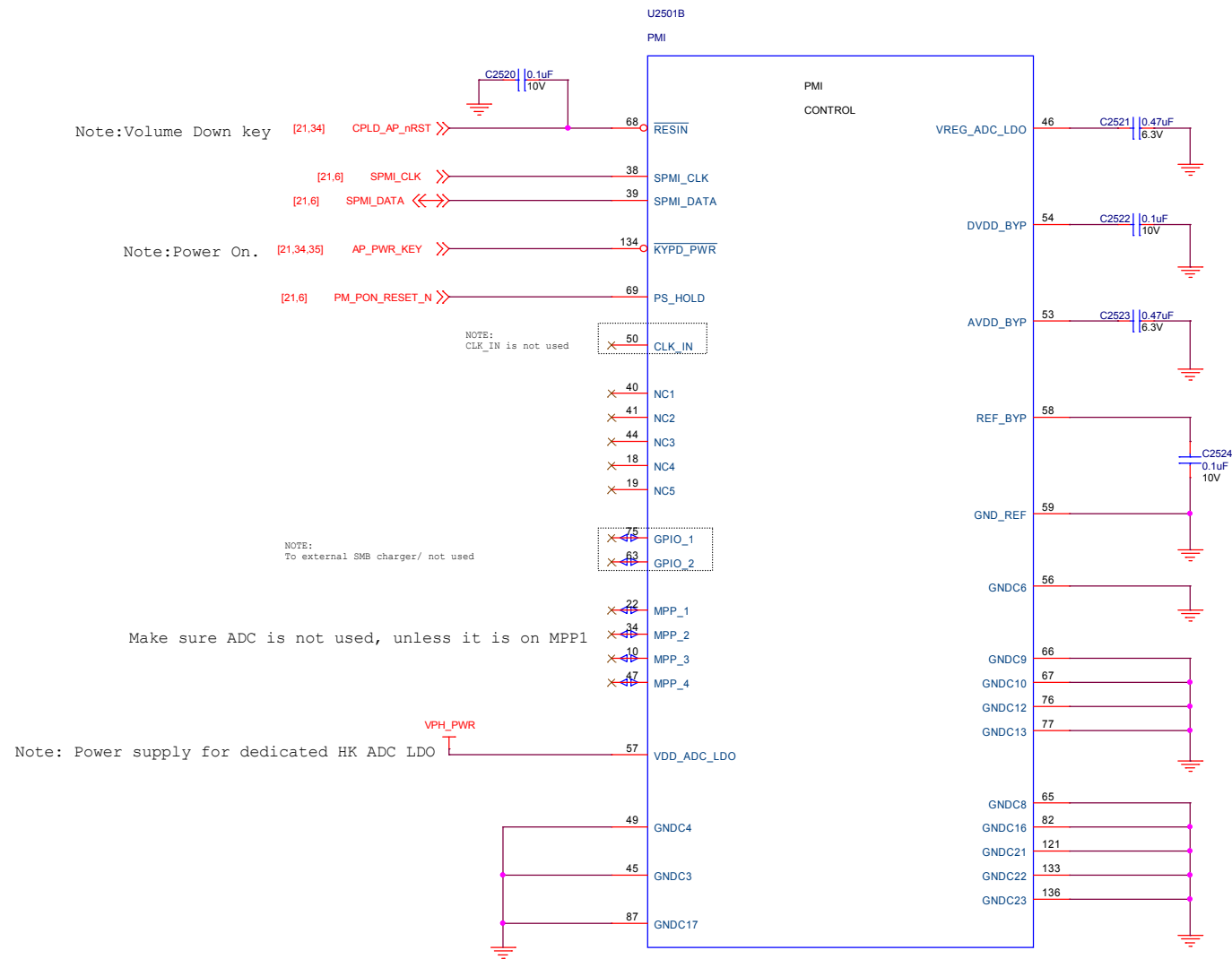
PMI PIN	connection on device without Wipower	connection on device with Wipower
CHG_OK	Pull up to VDD_CAP with 51kohm	Stark PRU CHG_OK
DIV2_EN	Pull down to GND with 0ohm	Stark PRU DIV2_EN
GPI02	No Connect For parallel charging: Connects to SMB EN pin. Do NOT pull up to VDD_CAP	10Kohm pull down to gnd For parallel charging: Connects to SMB EN pin. Do NOT pull up to VDD_CAP



PMI Charger/USB

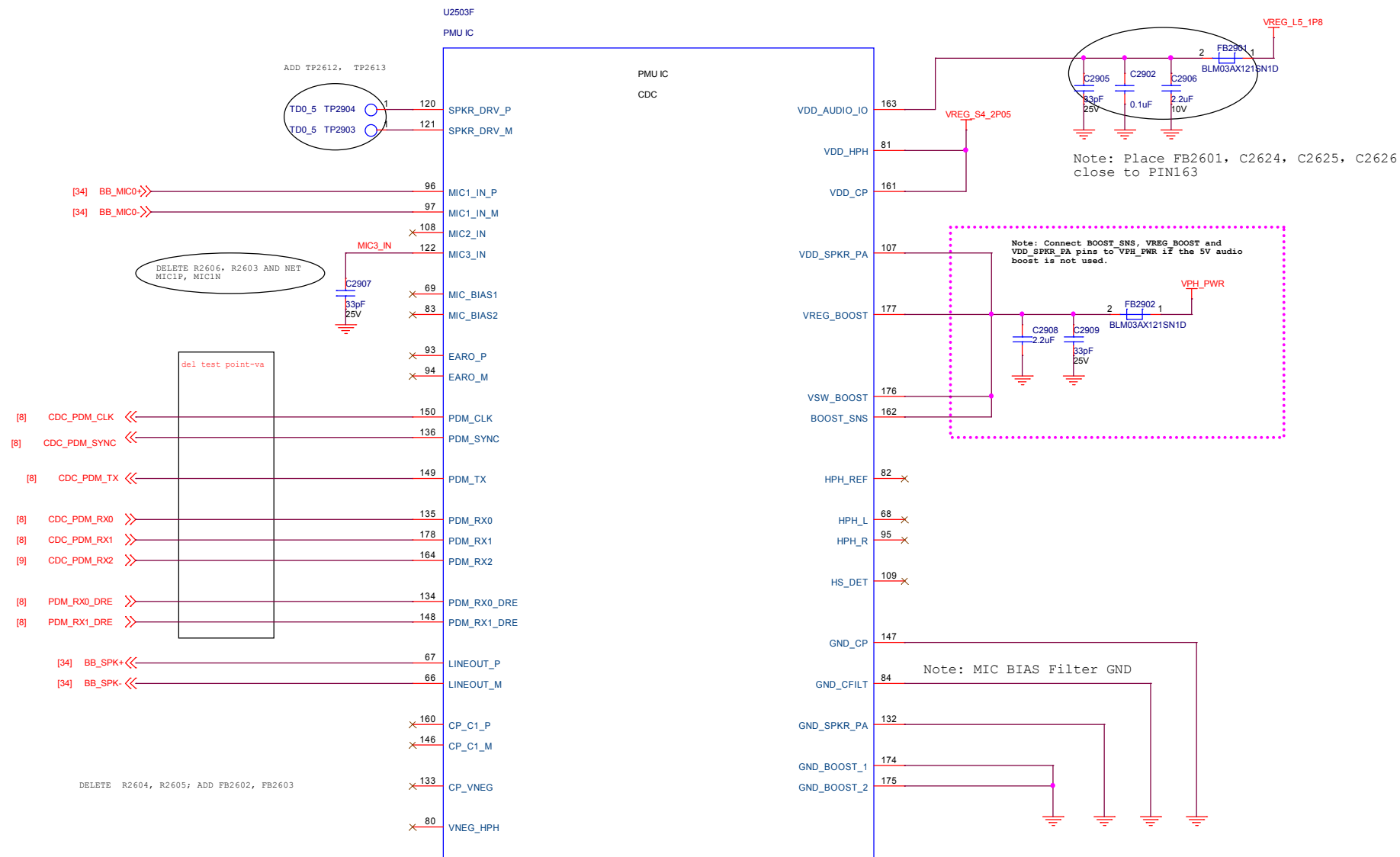
Hytera		Hytera Communications Co.Ltd.	
Model Name:	MSM8953 Broadband board	Page:	43 of 9
Part Name:	PMI8952 Charger/USB	Date:	Friday, May 10, 2019
File No.:	V1.0	Rev:	A
Prepare:	gxw	Check:	xxx
Approve:	xxx		





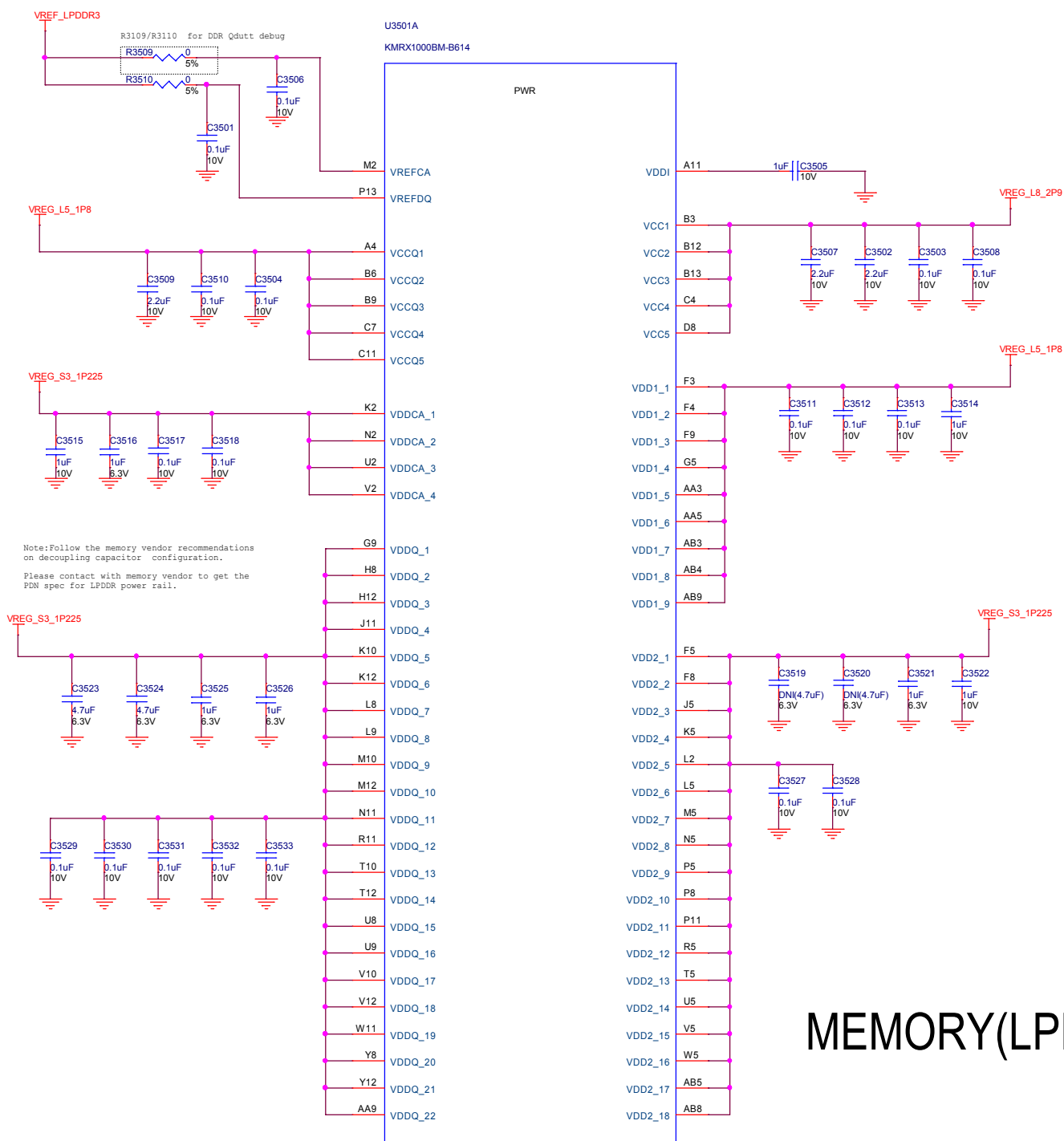
PMI Control/Interface

Hytera		Hytera Communications Co.Ltd.		
Model Name:	MSM8953 Broadband board		Page:	45 of 9
Part Name:	PMB952 Control/Interface		Date:	Friday, May 10, 2019
File No.:	V1.0		Rev:	A
Prepare:	GXW	Check:	XXX	Approve: XXX



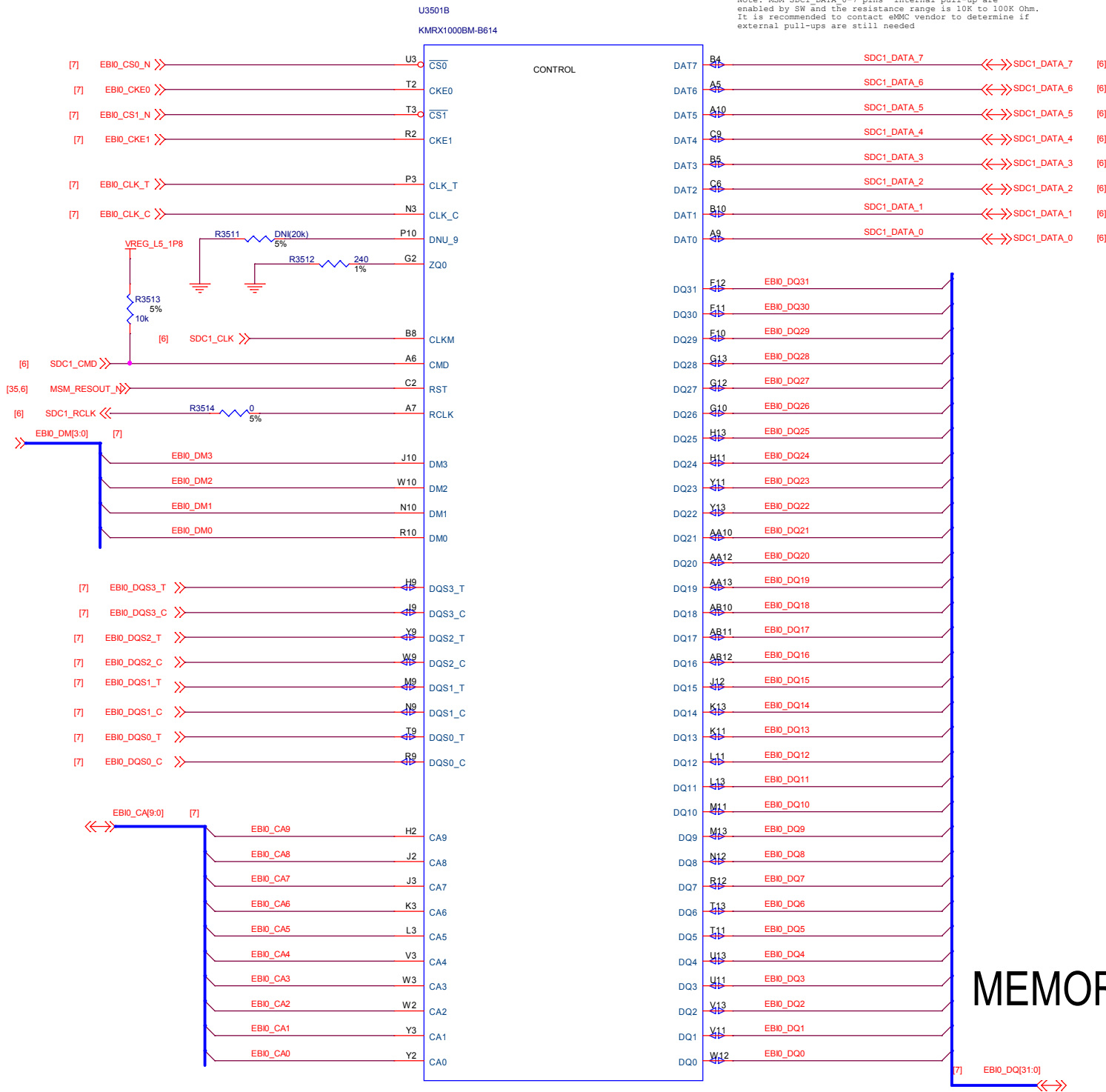
PMU IC AUDIO CODEC

Hytera		Hytera Communications Co.Ltd.		
Model Name:	MSM8953 Broadband board		Page:	47 of 9
Part Name:	PM8953 AUDIO CEDEC		Date:	Friday, May 10, 2019
File No.:	V1.0		Rev:	A
Prepare:	GXW	Check:	XXX	Approve: XXX

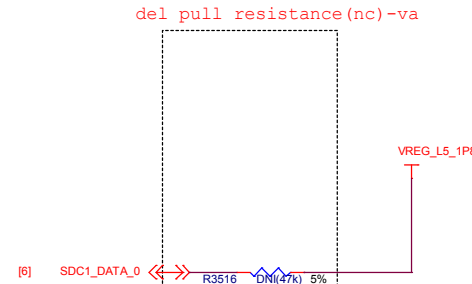


MEMORY(LPDDR3+EMMC V5.1)

Hytera		Hytera Communications Co.Ltd.			
Model Name:	MSM8953 Broadband board		Page:	48 of 50	
Part Name:	MEMORY(LPDDR3+EMMC V5.1		Date:	Friday, May 10, 2019	
File No.:	V1.0		Rev:	A	
Prepare:	GXW	Check:	xxx	Approve:	xxx

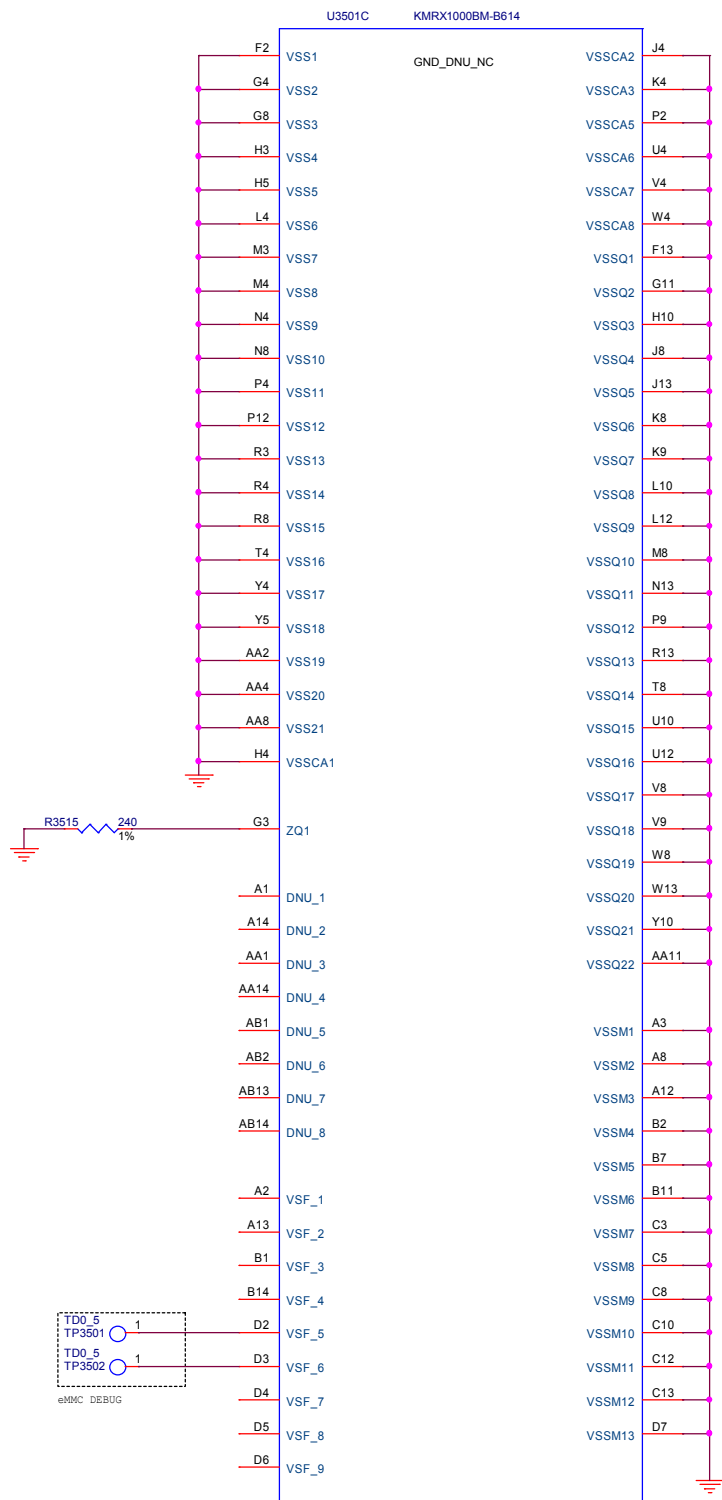


Note: MSM SDC1_DATA 0-7 pins' internal pull-up are enabled by SW and the resistance range is 10K to 100K Ohm. It is recommended to contact @MWC vendor to determine if external pull-ups are still needed



MEMORY(LPDDR3+EMMC V5.1)

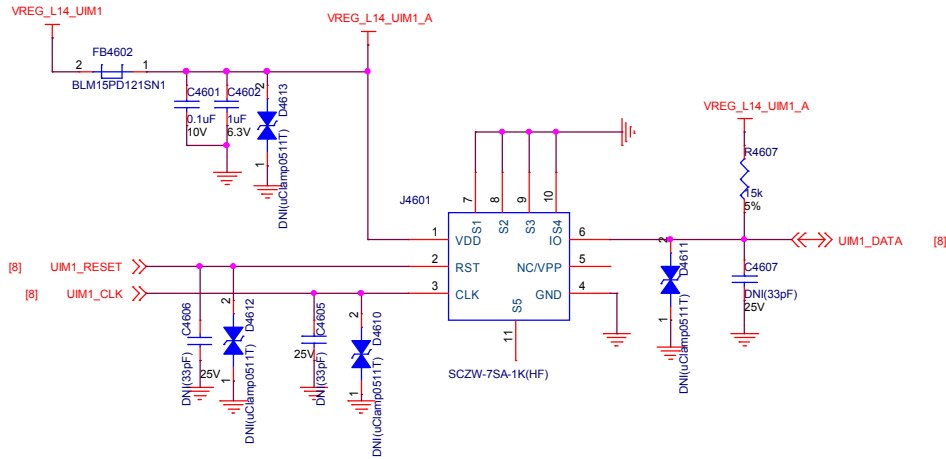
Hytera		Hytera Communications Co.Ltd.			
Model Name:	MSM8953 Broadband board		Page:	49 of 50	
Part Name:	MEMORY(LPDDR3+EMMC V5.1		Date:	Friday, May 10, 2019	
File No.:	V1.0		Rev:	A	
Prepare:	GXW	Check:	XXX	Approve:	XXX



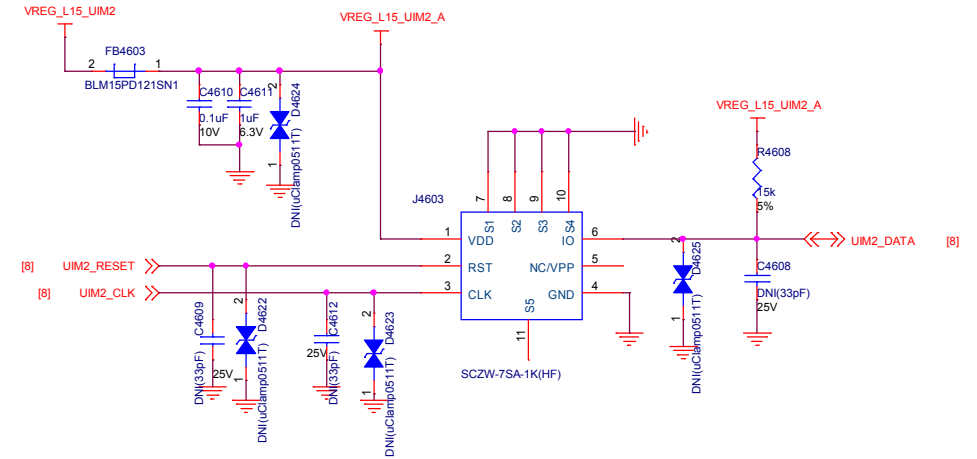
MEMORY(LPDDR3+EMMC V5.1)

Hytera		Hytera Communications Co.Ltd.			
Model Name:	MSM8953 Broadband board			Page:	50 of 50
Part Name:	MEMORY(LPDDR3+EMMC V5.1			Date:	Friday, May 10, 2019
File No.:	V1.0			Rev:	A
Prepare:	GXW	Check:	XXX	Approve:	XXX

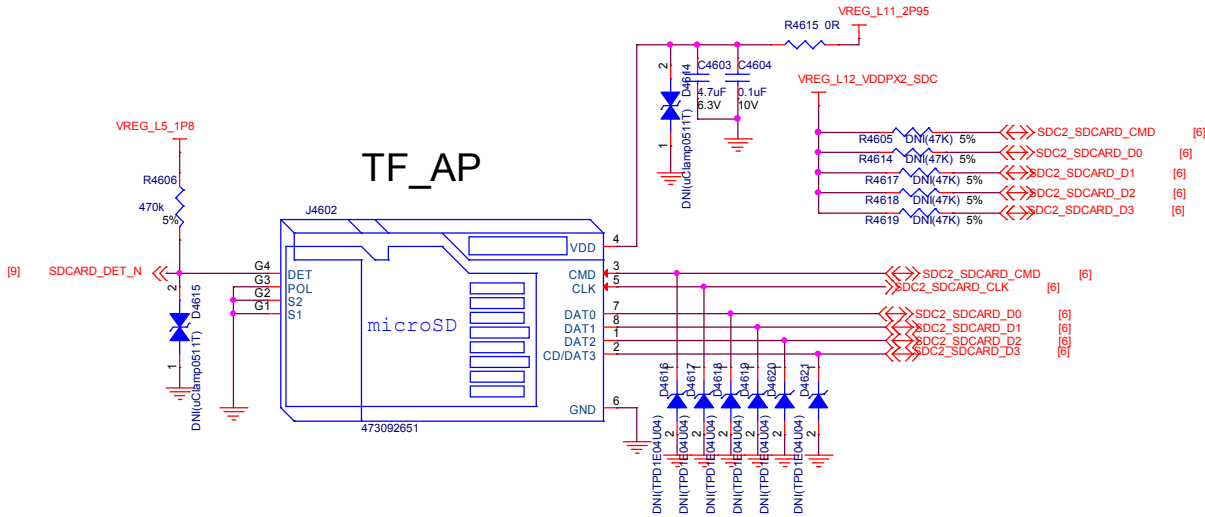
WB SIM1



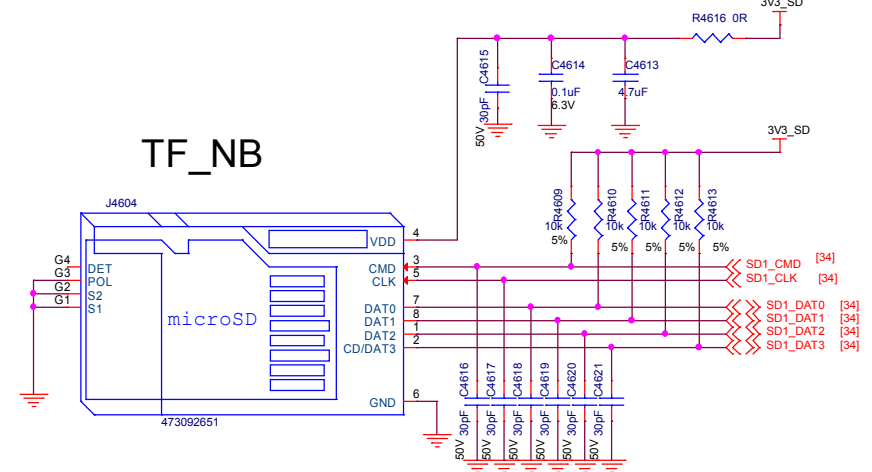
WB SIM2



WB TF card

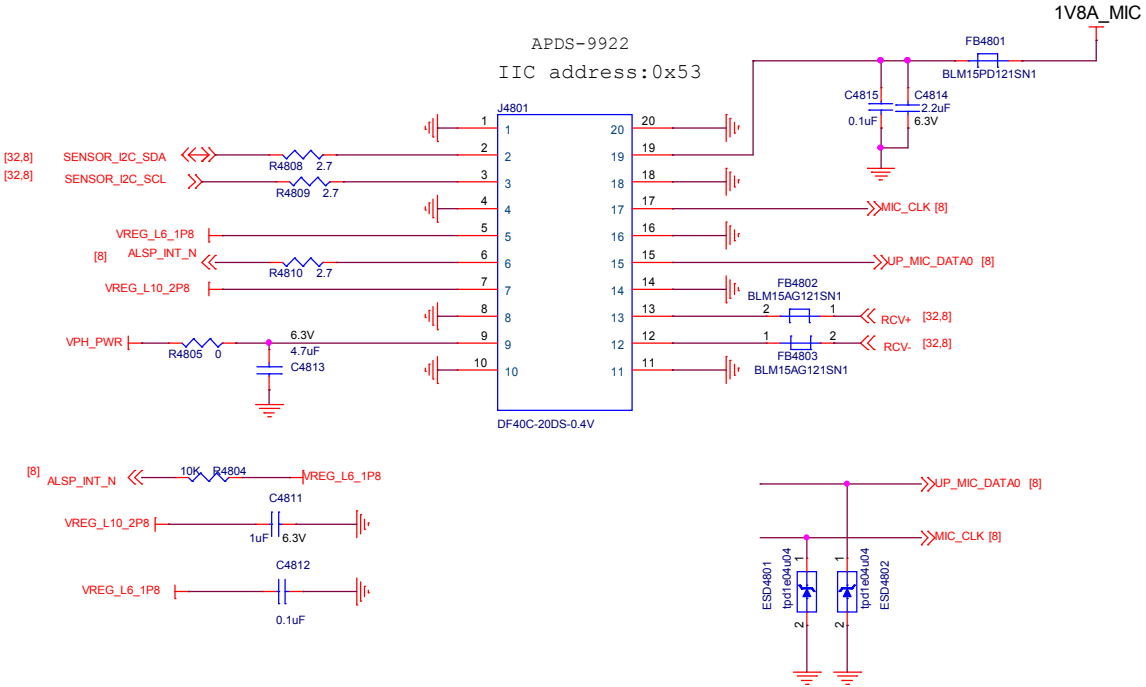


NB TF card



Hytera Communications Co.Ltd.					
Model Name:	MSM8953 Broadband board	Page:	52	of	50
Part Name:	SIM/TF card	Date:	Friday, May 10, 2019		
File No.:	V1.0	Rev:	A		
Prepare:	gxxw	Check:	xxx	Approve:	xxx

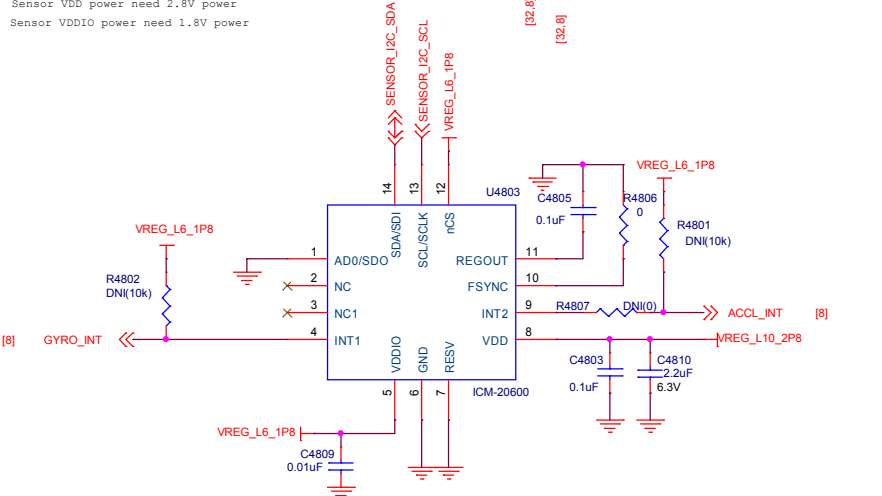
ALPS_SENSOR/receiver/MIC



MotionTracking (Gyro+Gsensor)

Note:
Sensor VDD power need 2.8V power
Sensor VDDIO power need 1.8V power

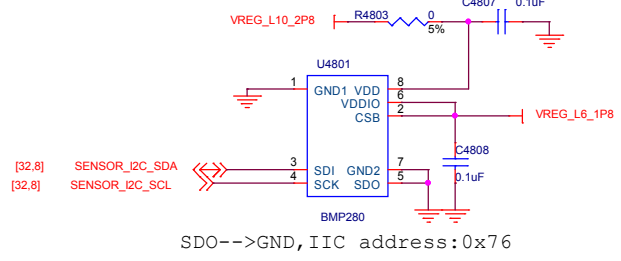
ICM-20600 is compatible with BMI160
If BMI160, C4405-NC, R4406-NC



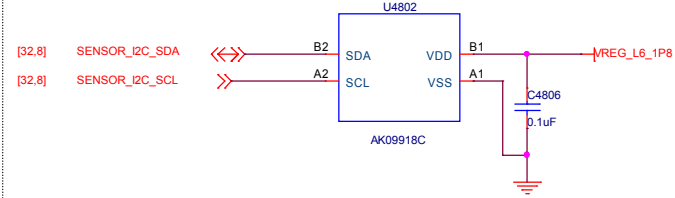
The I2C address of the ICM-20600 is 0x68 or 0x69
AD0-GND AD0-VDDIO

PRESSURE_SENSOR

Barometer



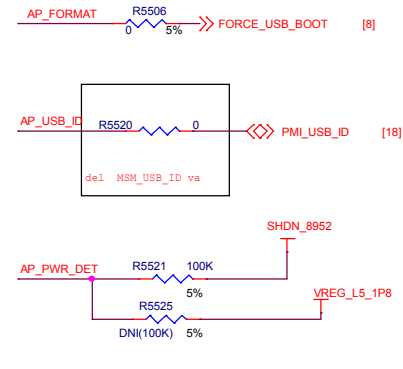
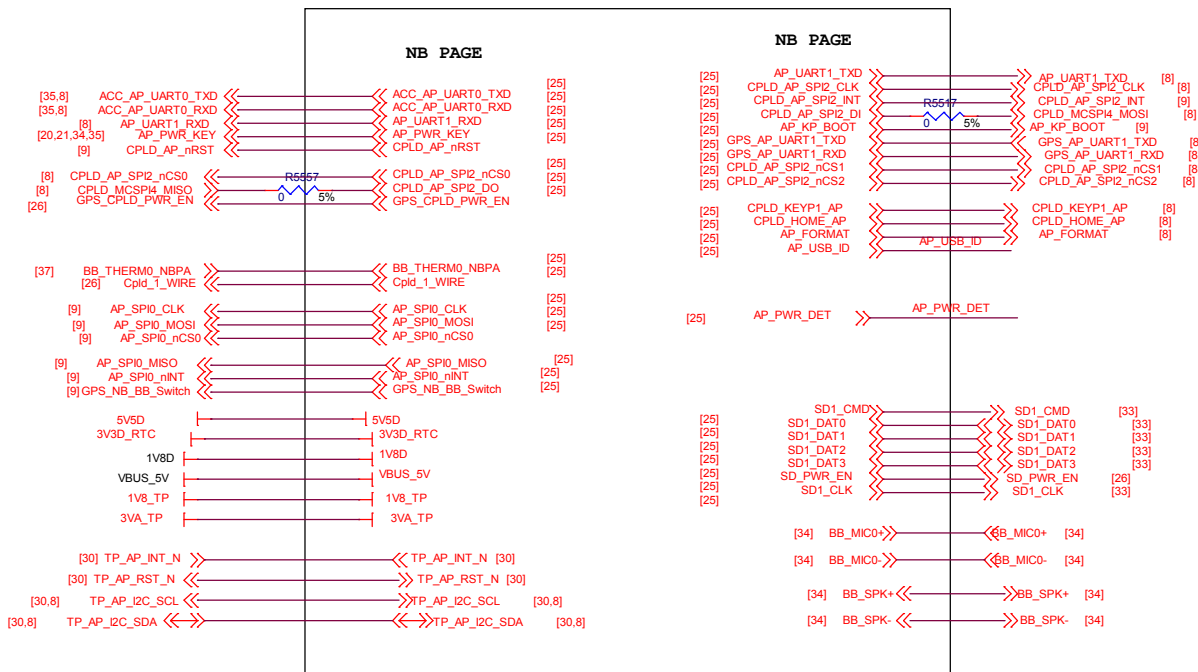
E-Compass



The I2C address of the AK09918C is 0Ch

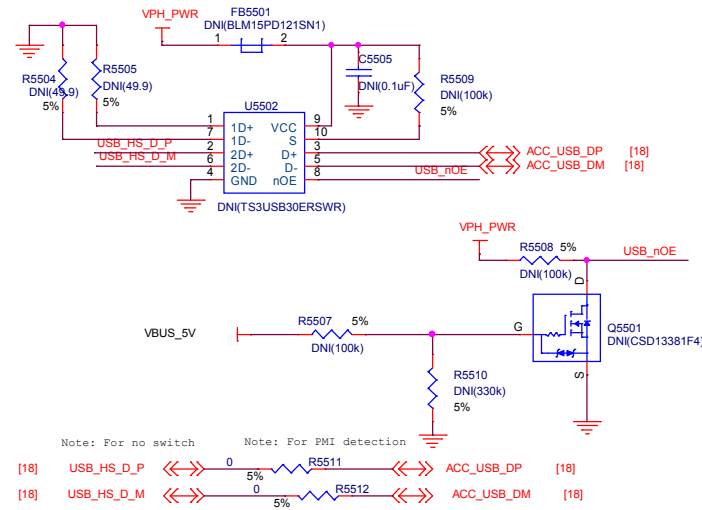
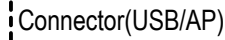
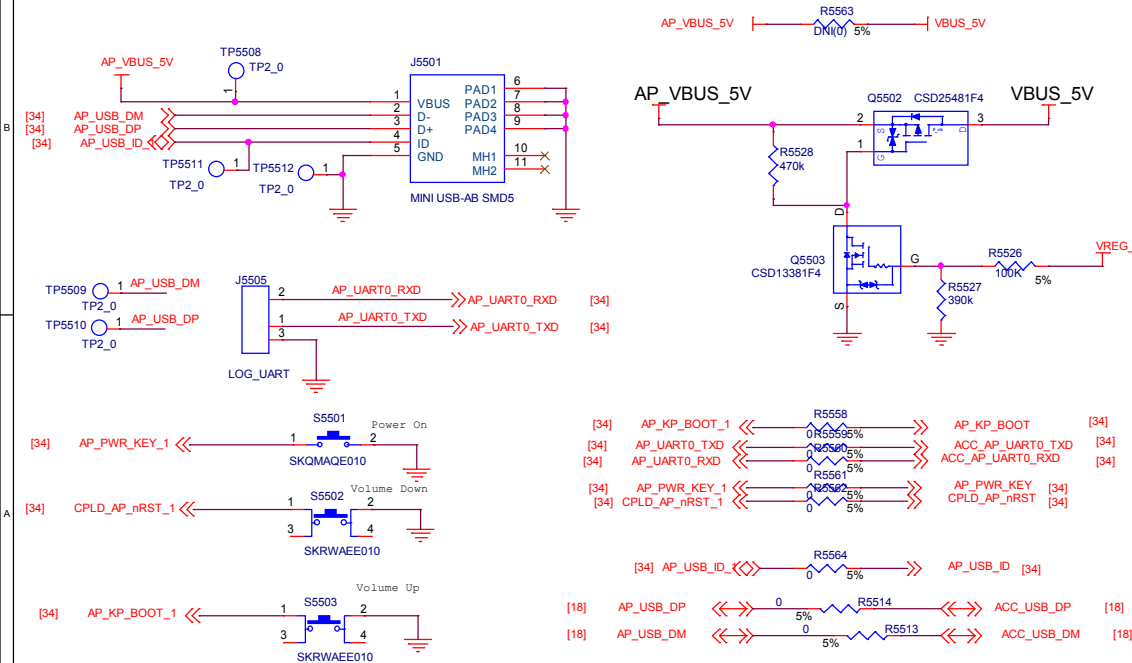
Sensor

Hytera Communications Co.Ltd.			
Model Name:	MSM8953 Broadband board	Page:	54 of 50
Part Name:	Sensor	Date:	Friday, May 10, 2019
File No.:	V1.0	Rev:	A
Prepare:	gxw	Check:	xxx
Approve:	xxx		



S	nOE	FUNCTION
X	H	Disconnect
L	L	D=1D
H	L	D=2D

Out of main board PCB Part
These will be placed out of main board PCB.



 Hytera Communications Co., Ltd.			
Model Name:	MSM8953 Broadband board	Page:	55 of 50
Part Name:	Connector(USB/AP-DSP/ANT)	Date:	Friday, May 10, 2019
File No.:	V1.0	Rev:	A
Prepare:	GXW	Check:	XXX
Approve:	XXX		

NPT Point

PCBA AUTOMATIC TEST point

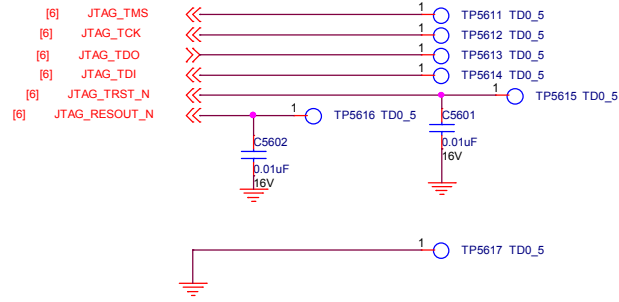
JTAG TEST POINT



Boot_config [0], WDOG_DISABLE delete this test point and replaced by R7008/GRPC6_SEL



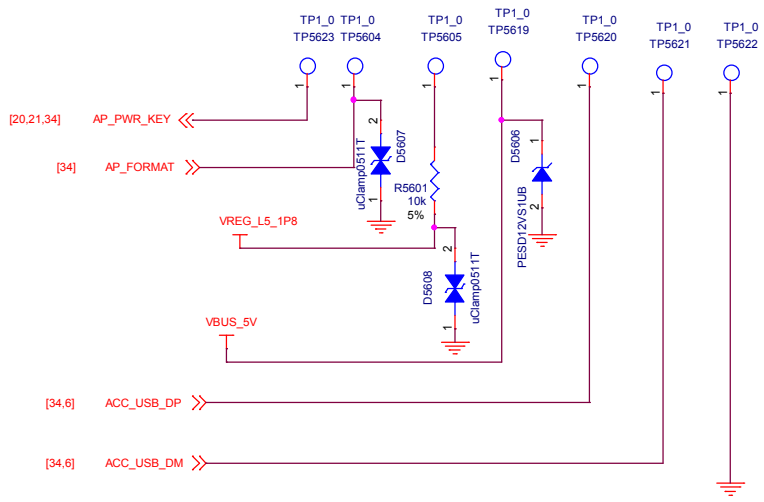
Note:LOG UART



Note:Debug point

Test Point

Note:TP5220/21 Place on the line of USB D+/-



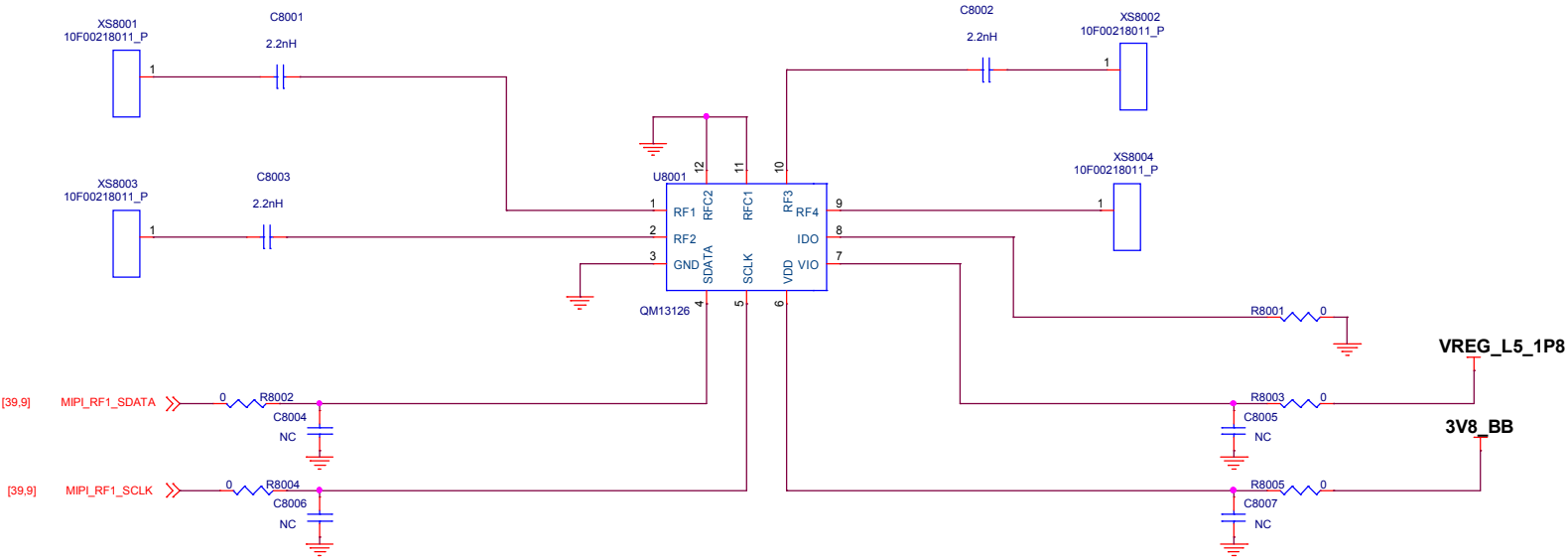
Note:Place ESD close to TP5220/21

Signal	Description
KPSNS0	Volume Up
PM RST N	Volume Down
KYPD PWR N	POWER ON
PM RST N + KYPD_PWR_N	Hardware Reset

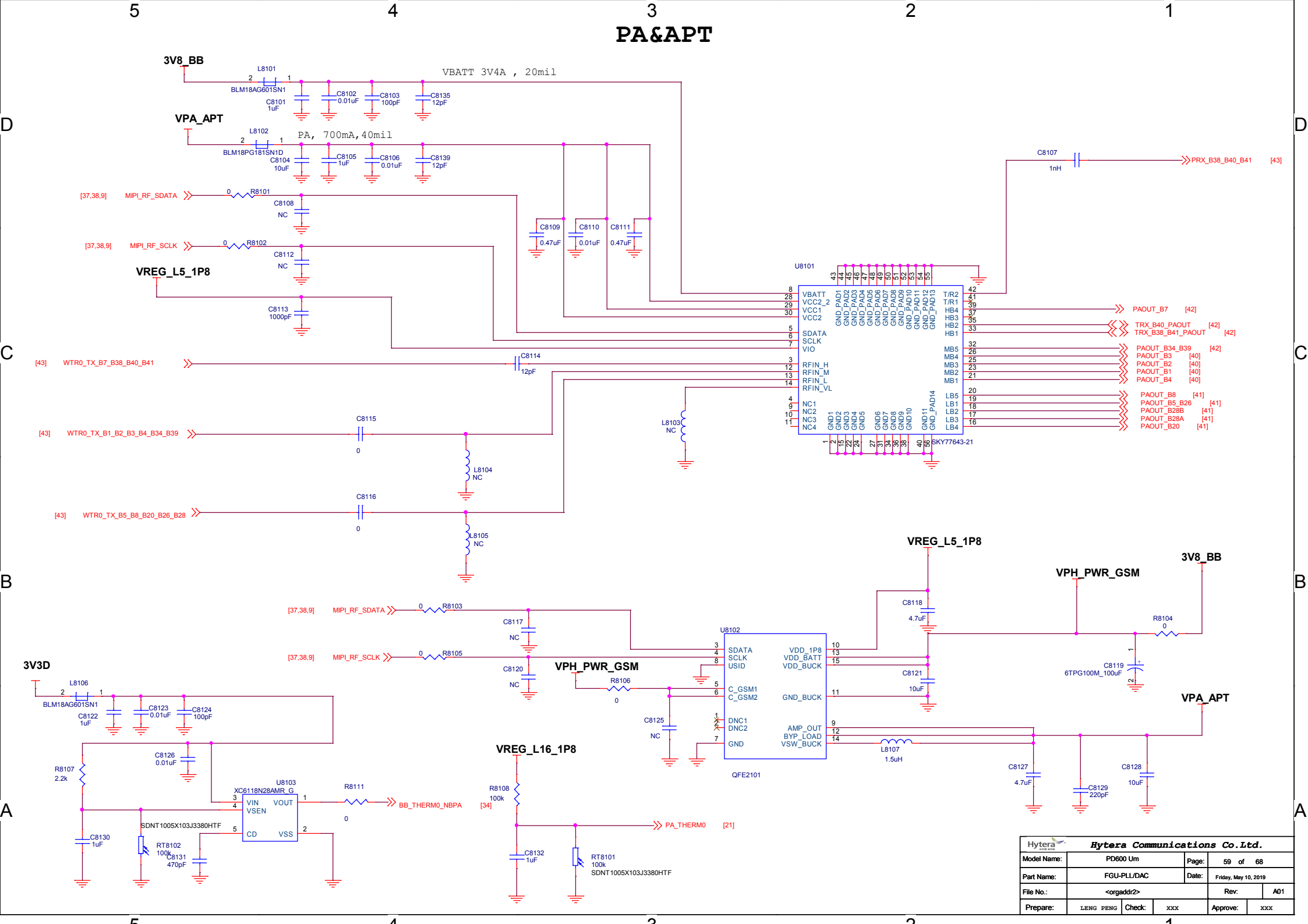
TP/GND/Shielding

Hytera Communications Co.Ltd.					
Model Name:	MSM8953 Broadband board		Page:	56 of 50	
Part Name:	TP/GND/Shielding		Date:	Friday, May 10, 2019	
File No.:	V1.0		Rev:	A	
Prepare:	GXW	Check:	XXX	Approve:	XXX

ANT Tuner

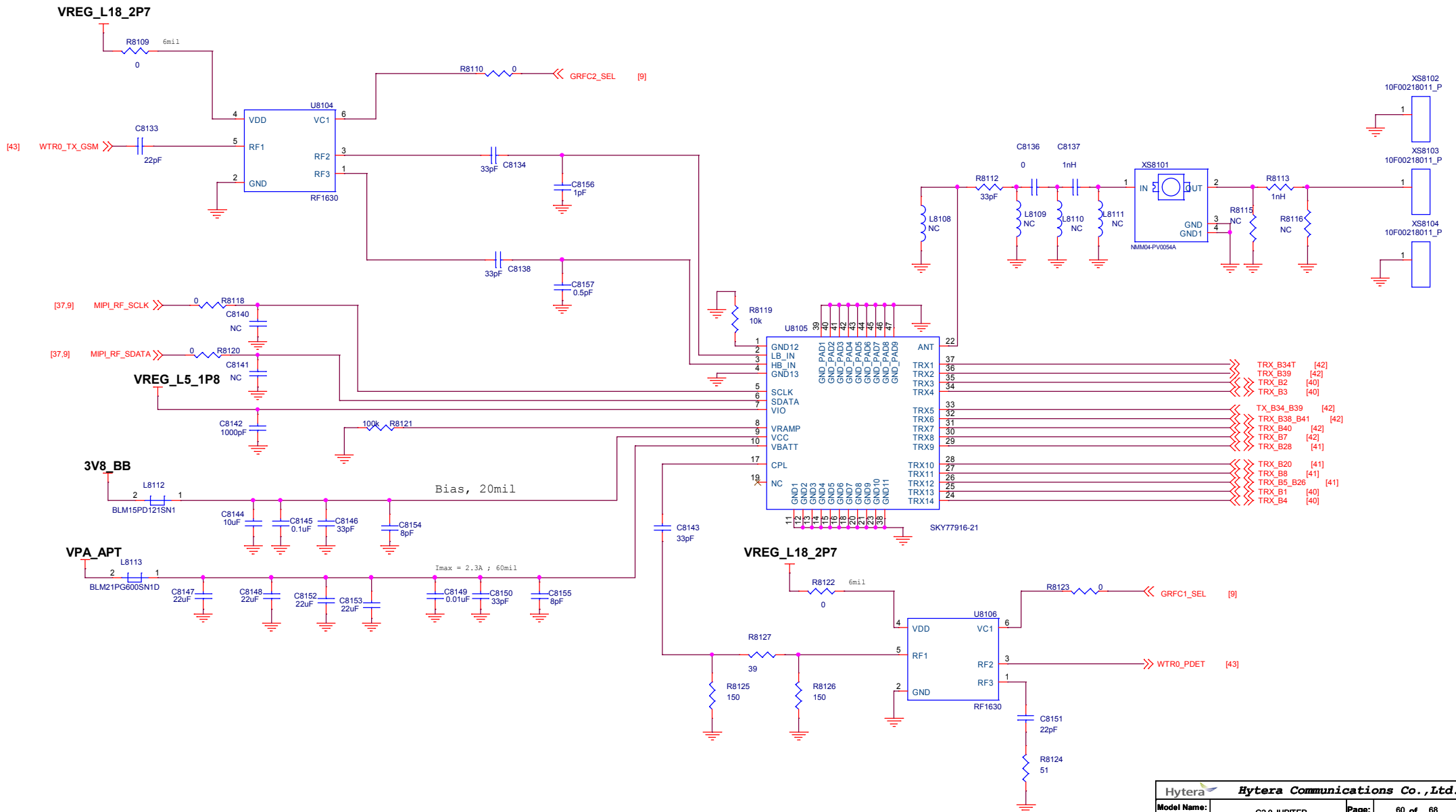


PA&APT



Hytera Communications Co., Ltd.				
Model Name:	PD600 Um	Page:	59 of 68	
Part Name:	FGU-PLL/DAC	Date:	Friday, May 10, 2019	
File No.:	<orgaddr2>		Rev:	A01
Prepare:	LENG PENG	Check:	xxx	Approve: xxx

ANT Switch



B1_B2_B3_B4

D

D

C

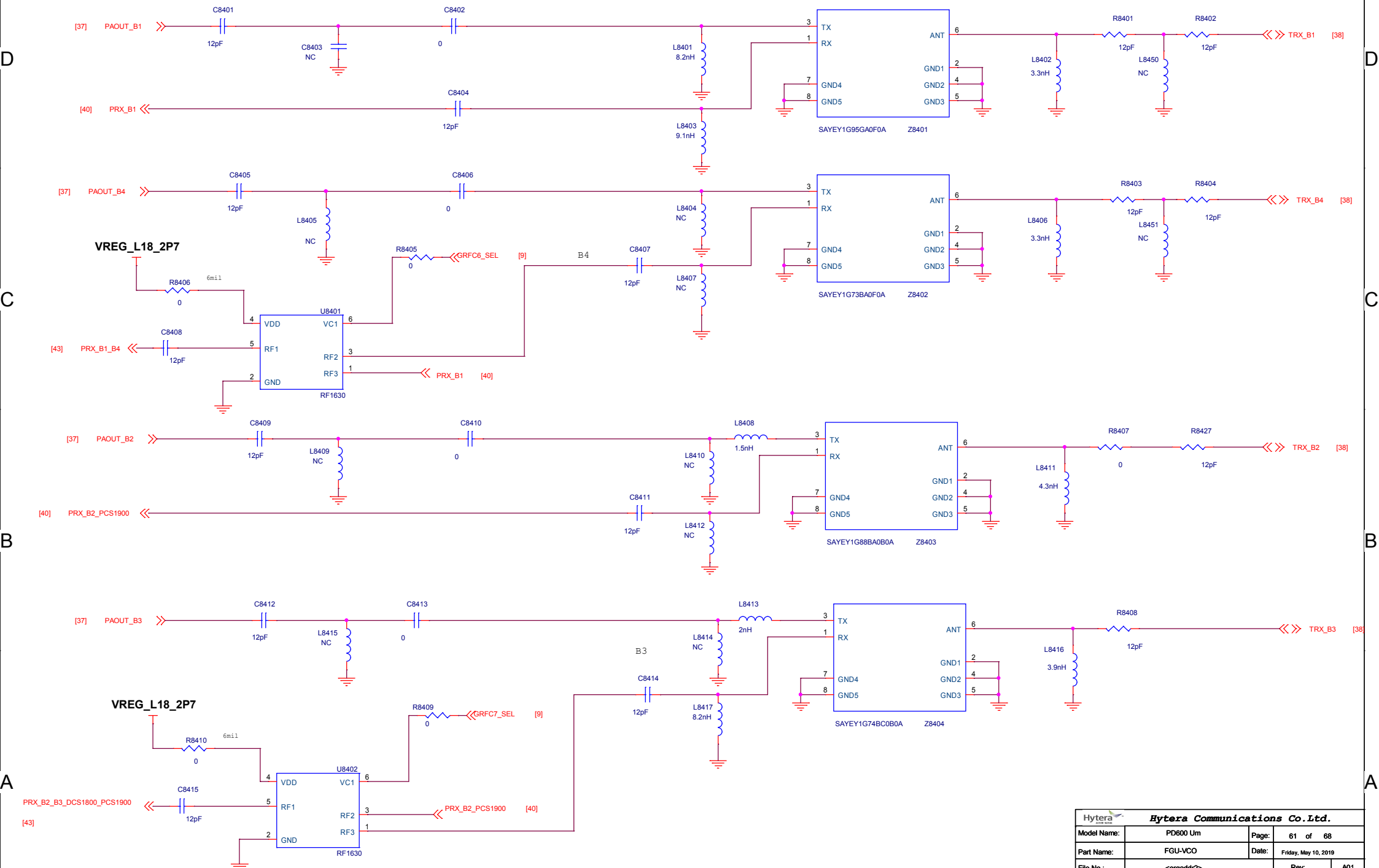
C

B

B

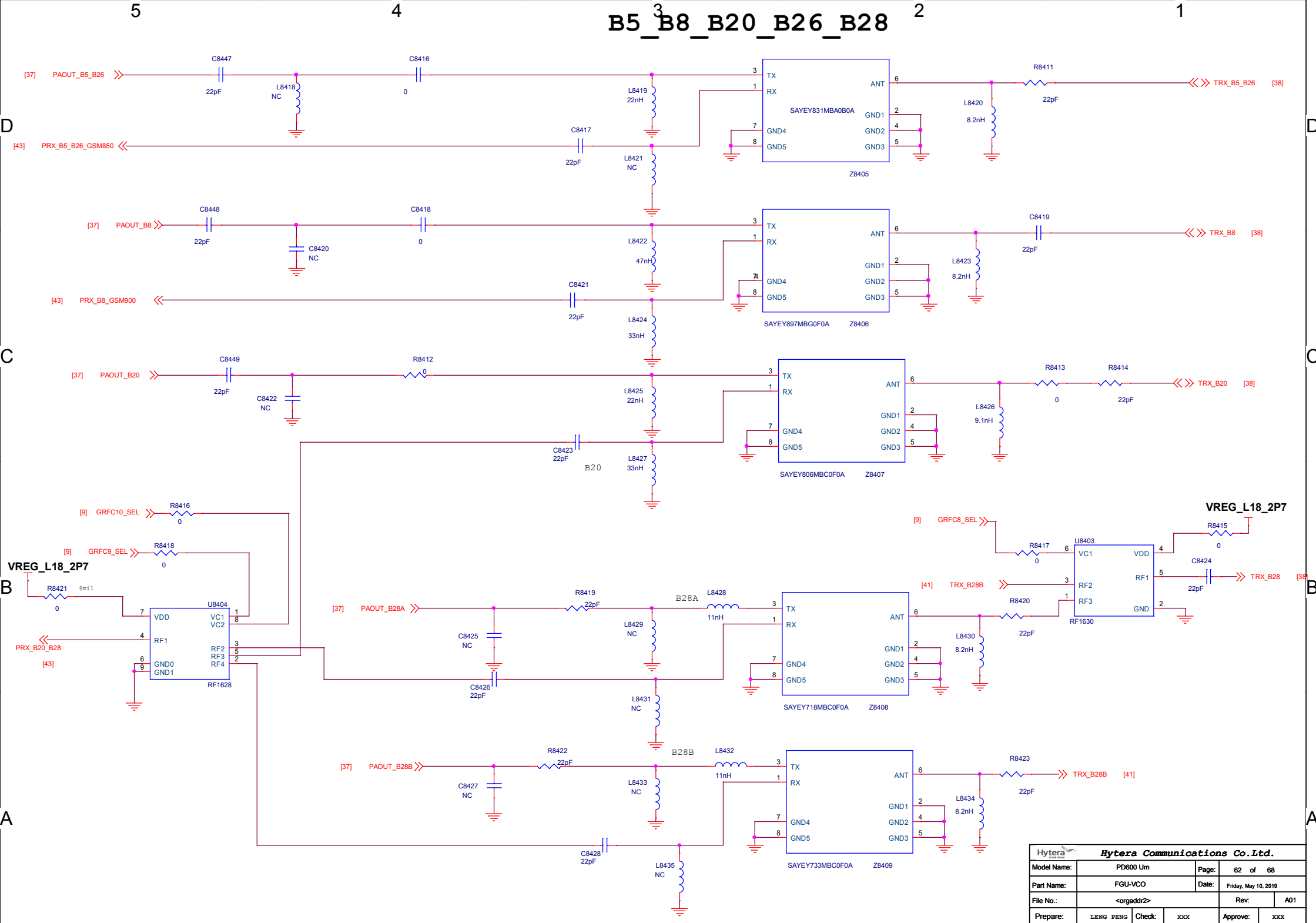
A

A

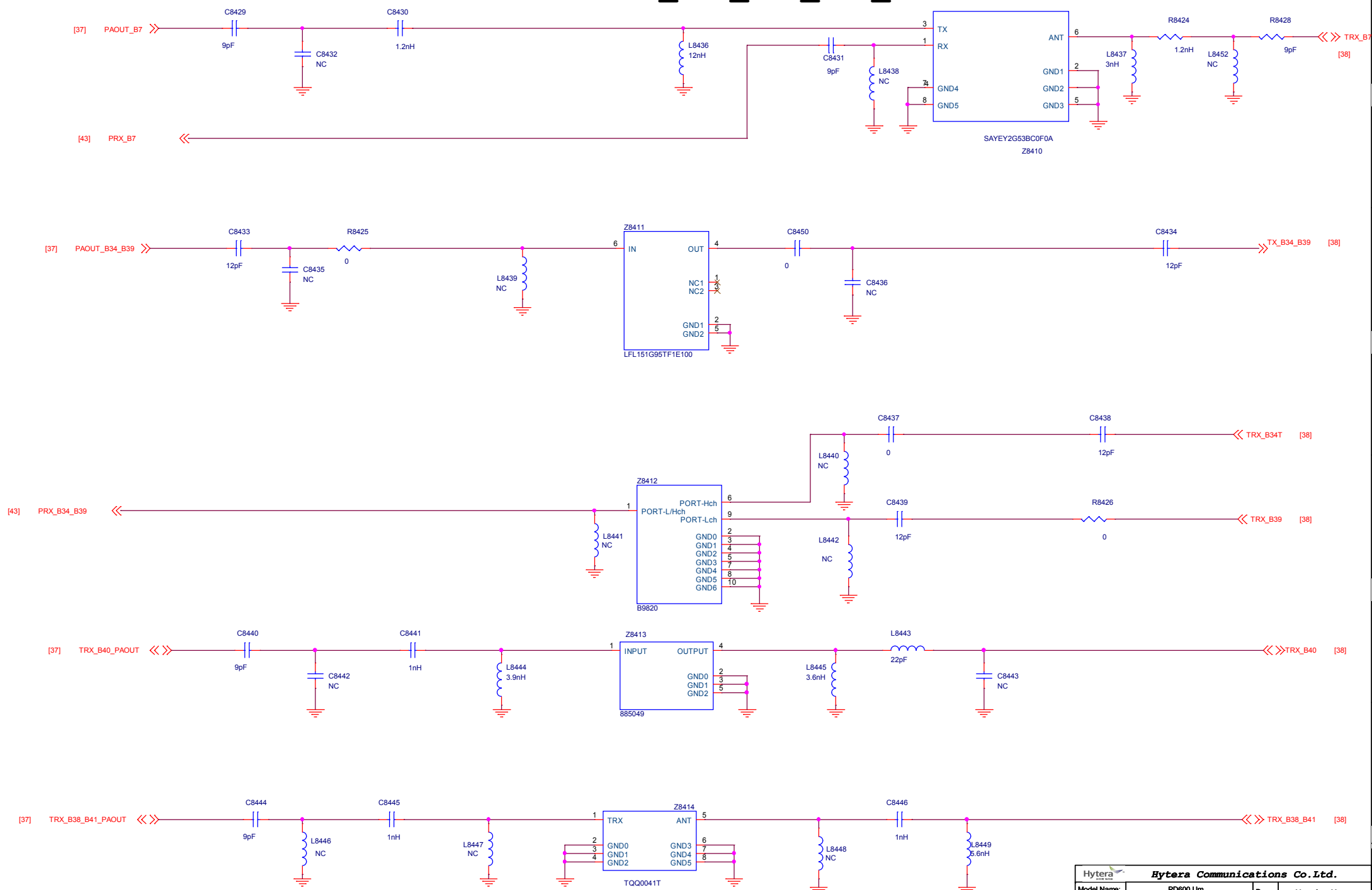


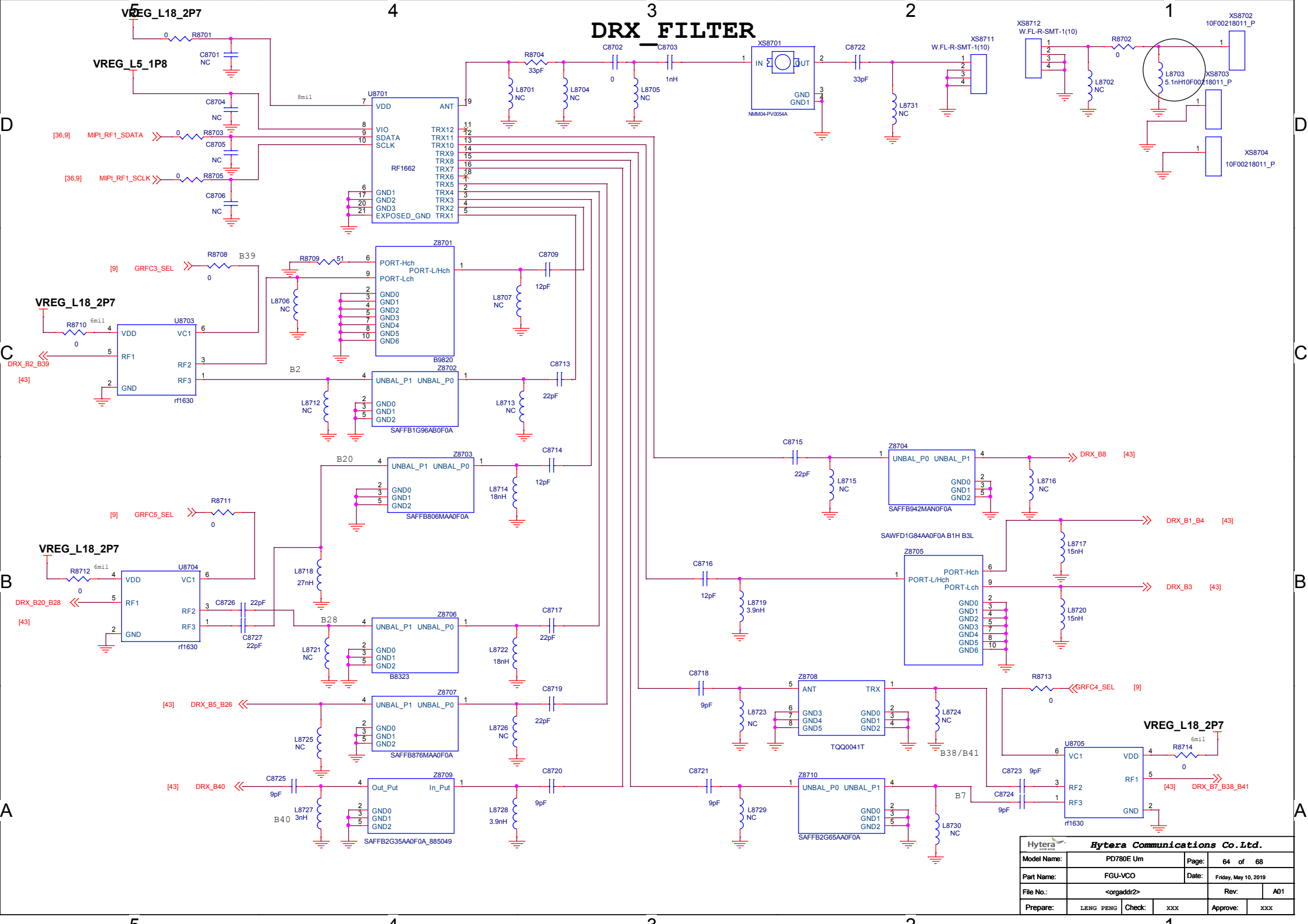
Note: only the GSM850/1900, CDMA BC0, LTE Band 2/4/5/7/26/38/40/41 can be used in USA market.

Hytera Communications Co., Ltd.			
Model Name:	PD600 Um	Page:	61 of 68
Part Name:	FGU-VCO	Date:	Friday, May 10, 2019
File No.:	<orgaddr2>		Rev: A01
Prepare:	LENG FENG	Check:	xxx
Approve:	xxx		

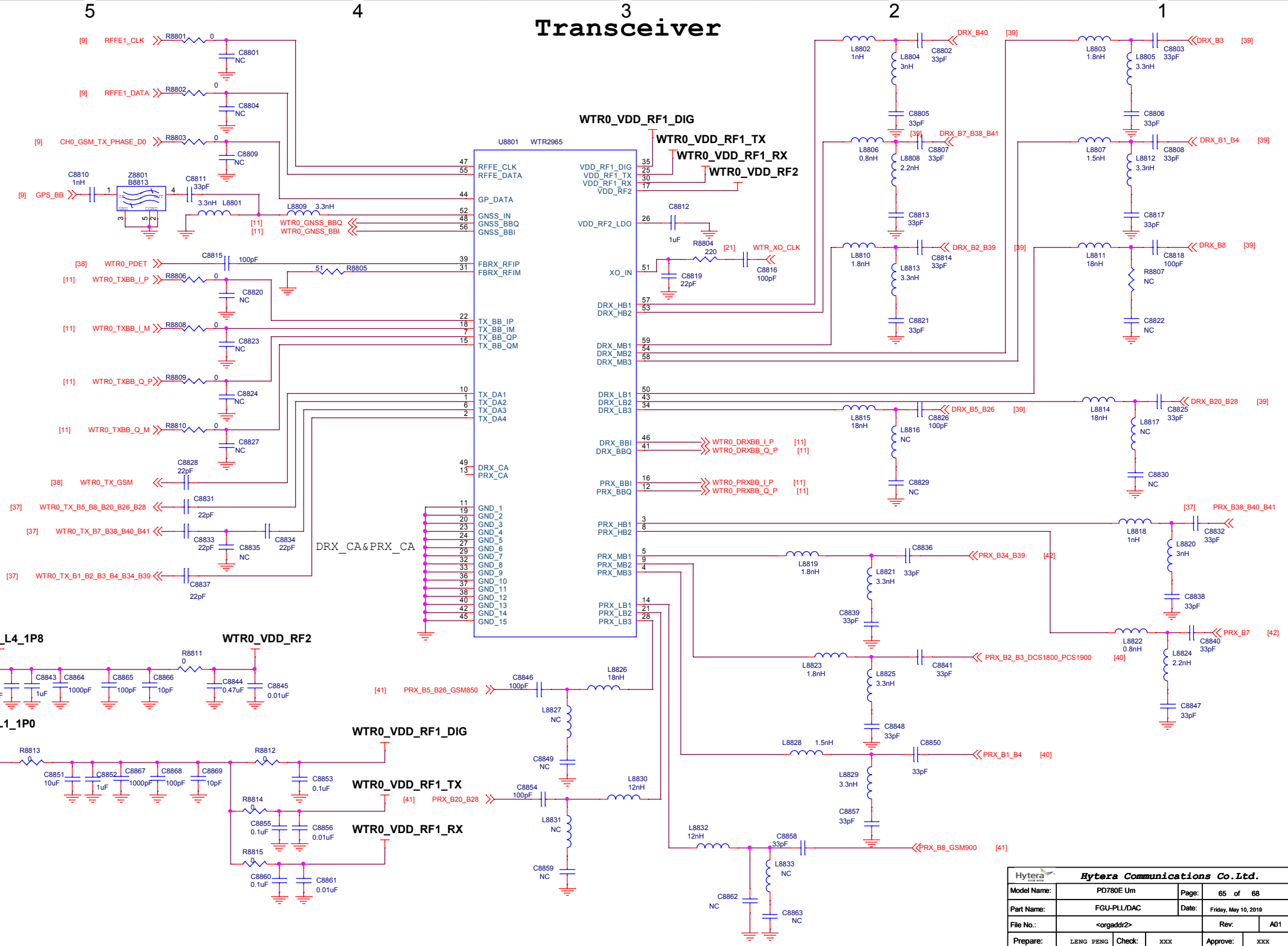


B7_B38_B39_B40_B41

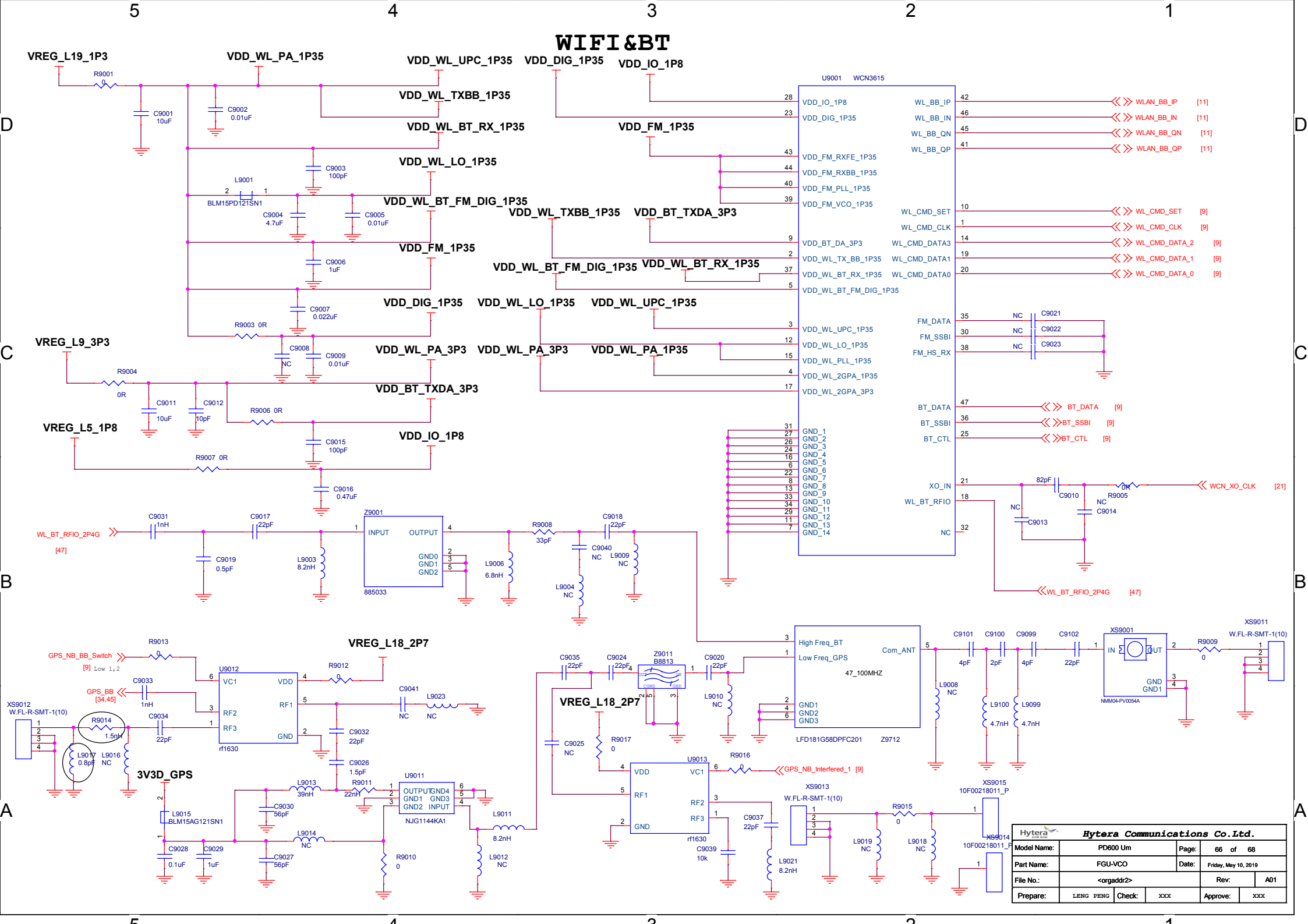




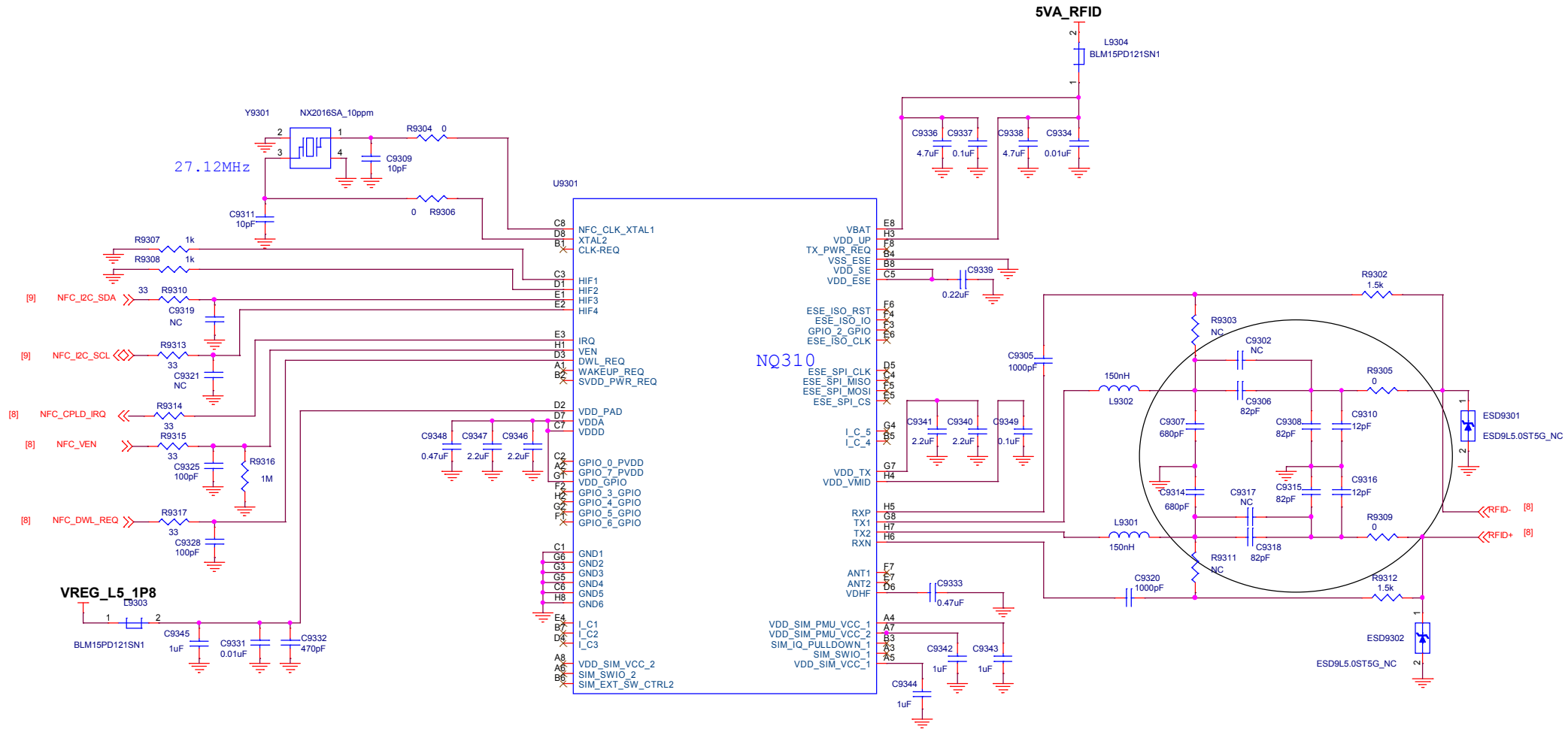
Transceiver

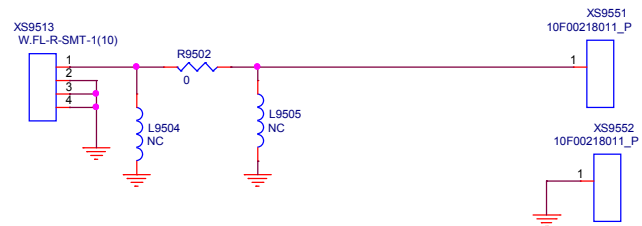


 Hytera Communications Co.Ltd.				
Model Name:	PD780E Um	Page:	65 of 68	
Part Name:	FGU-PLL/DAC	Date:	Friday, May 10, 2019	
File No.:	<orgaddr2>		Rev:	A01
Prepare:	LENG PENG	Check:	XXXX	Approve: XXXX



RFID





Hytera 		Hytera Communications Co., Ltd.	
Model Name:	PDC680 NB	Page:	68 of 68
Part Name:	BT_ANT_Pogopin	Date:	Friday, May 10, 2019
File No.:		Rev:	A
Prepare:		Check:	Approve: