V06

1, Del NFC PN7150, Add CON24, UART1 for GNSS or Debug, SPI2 to CON24, UART2 for BT
2, Move SMC_BOOT0 to Page 22 , TP6.
3, HKs Add Pull-up Resistor , And add Read state GPIO.
4, TYPE-C U27 LSX no connect.
5, Correct Y2, Y3 Connect.
6, Add Voltage Test Point , >40 point
7, Add SIM DET D6.
8, CAMERA Modify. Add LDO for DVDD 1.2 and 1.05.
9, TFT con Modify.
10, STM32 PA10 NC. UART add Pull-up R108, R135

V07

1, UART1 to LSX, UART2 to GNSS, UART4 to bt, SPI1 to CON24
2, U329 19PIN add Pull-up R229 .

V08

1, UART2 to LSX
2, HW state IO add resister. R48, R66, R145
3, 4G, WIFI ant CON add Debug L,C
4, Add shielding Case Hold.
5, DEL F12, Modified IO U329 for L9 layer to GND.
6, INT_M/A/G, NFC_EN, NFC_IRQ modified IO to E1 for L2 to GND
7, ADD R232

V09

1, AUX_P , AUX_N swapped.
2, Add R236.
3, Del R153
4, LED_G to 8M D3 pin. NFC_IRQ to 8M E1 pin, INT_M/A/G to 8M L4 pin.
5, R122,R58 to 27K, R123 to 47K.
6, 4G used SAI6. ADD u5

V091

1, U5 8pin to SAI1_TXD5, 9pin to SAI1_RXD5.
2, ADD U7 for CAM_AFVDD, 2.8V 120mA。
3, U2 modified USB2642

V092

1, BOOT Resistor Modified.
2, EMMC 32G.
3, U3 NC.
4, PWM IO modify. MOTO E6, PMIC_5V T7, LED_B K6.

V093

1, R830 NC, R811 10k.

V094

1, BAT CON Modified for 1000 times.
2, ADD L66 L67

V095

1, R115 Modified to 200.

V096

1, ADD R153 for TPS65983B Slave.
2, Modified LM36922 to I2C3, J10 to I2C4.

V097

0, CHG_STATUS_B connect Red LED.
1, Add N-mosfet Q8 on SD2_NCD.
2, TPS65982 LDO_1V8D Connected BUSPOWERZ.
3, VDD_3V3 add 4x22uf C231....
4, VSYS_3V4_4V3 add 7x22uf C281....
5, U27 TPS65982 F2 UART_RX 100k R223 connect GND.
6, Add NET BT_WAKE
7, AUDIO_POWER_KEY connect Q2 PIN1.
8, ADD U68 NTSX2102
9, BOOT_CFG PU to NVCC_SNVS_3V3
10, R176 PU to NVCC_SNVS_3V3
11, R104 10 value.
12, R82 0402 0.1%
13, R934 100K
14, U2 USB2642 27,28 connect GND, 26 connect VDD.
15, ADD Q9, Modified WIFI_REG_ON, BT_REG_ON.
16, ADD R238 UART2_RXD PU USB_PD_LDO3V3
17, ADD Q10, R239, R240,R241
18, Add TYPEC_HRESET,
19, R42 1M ,
20, U147 connect TPS65982
21, SW3,SW5,SW7 2-3PIN
22, J50 modified
23, J12 modifed

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Purism SPC

Purism		
Drawing Title: Librem 5		
Page Title: VER note		
Rev: Birch	Date:	Design by:
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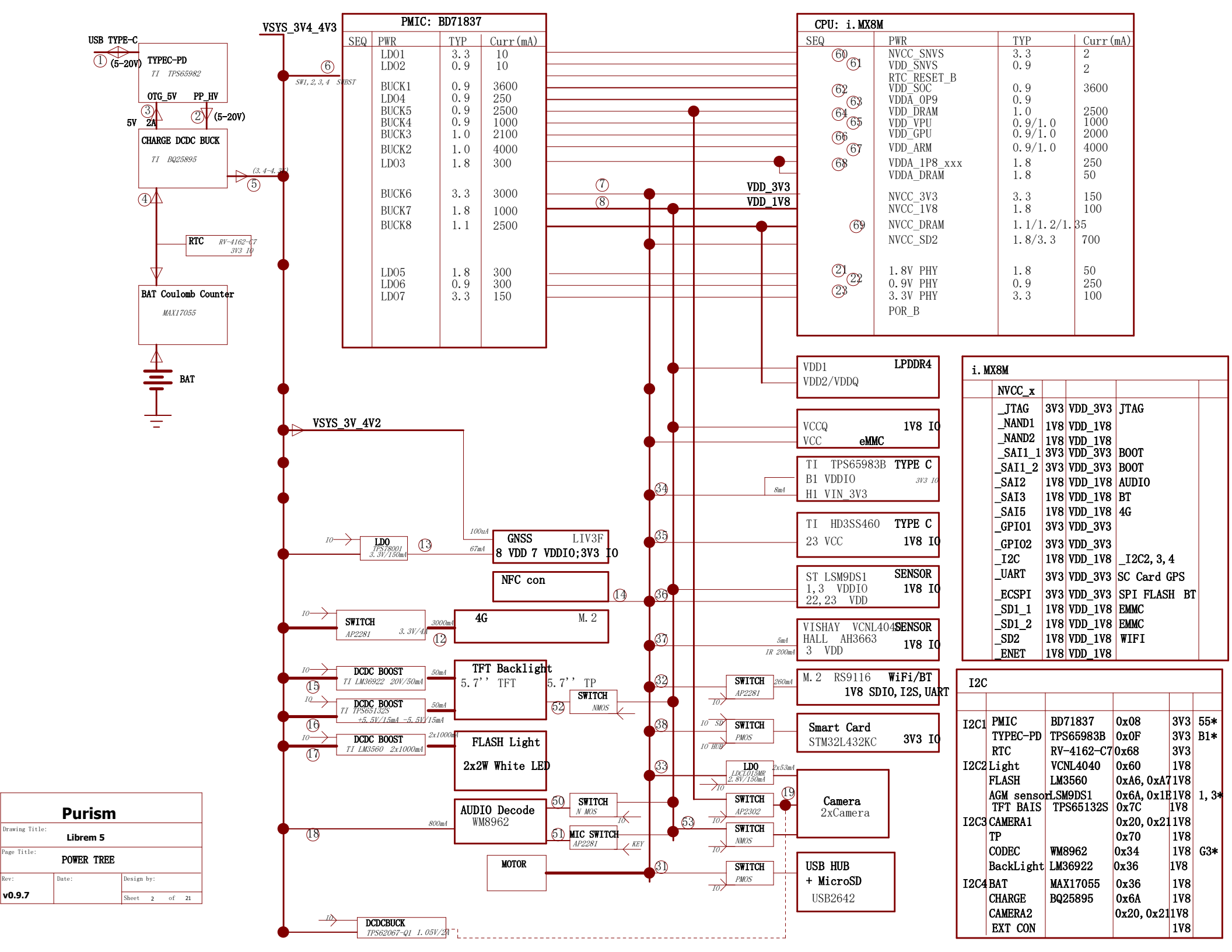

i.MX8M

	NVCC_x			
	_JTAG	3V3	VDD_3V3	JTAG
	_NAND1	1V8	VDD_1V8	
	_NAND2	1V8	VDD_1V8	
	_SAI1_1	3V3	VDD_3V3	BOOT
	_SAI1_2	3V3	VDD_3V3	BOOT
	_SAI2	1V8	VDD_1V8	AUDIO
	_SAI3	1V8	VDD_1V8	BT
	_SAI5	1V8	VDD_1V8	4G
	_GPIO1	3V3	VDD_3V3	
	_GPIO2	3V3	VDD_3V3	
	_I2C	1V8	VDD_1V8	_I2C2,3,4
	_UART	3V3	VDD_3V3	SC Card GPS
	_ECSPI	3V3	VDD_3V3	SPI FLASH BT
	_SD1_1	1V8	VDD_1V8	EMMC
	_SD1_2	1V8	VDD_1V8	EMMC
	_SD2	1V8	VDD_1V8	WIFI
	_ENET	1V8	VDD_1V8	

I2C

I2C1	PMIC	BD71837	0x08	3V3	55*
	TYPEC-PD	TPS65983B	0x0F	3V3	B1*
	RTC	RV-4162-C7	0x68	3V3	
I2C2	Light	VCNL4040	0x60	1V8	
	FLASH	LM3560	0xA6,0xA7	1V8	
	AGM sensor	LSM9DS1	0x6A,0x1E	1V8	1,3*
	TFT BAIS	TPS65132S	0x7C	1V8	
I2C3	CAMERA1		0x20,0x21	1V8	
	TP		0x70	1V8	
	CODEC	WM8962	0x34	1V8	G3*
	BackLight	LM36922	0x36	1V8	
I2C4	BAT	MAX17055	0x36	1V8	
	CHARGE	BQ25895	0x6A	1V8	
	CAMERA2		0x20,0x21	1V8	
	EXT CON			1V8	

Purism

Drawing Title: Librem 5

Page Title: POWER TREE

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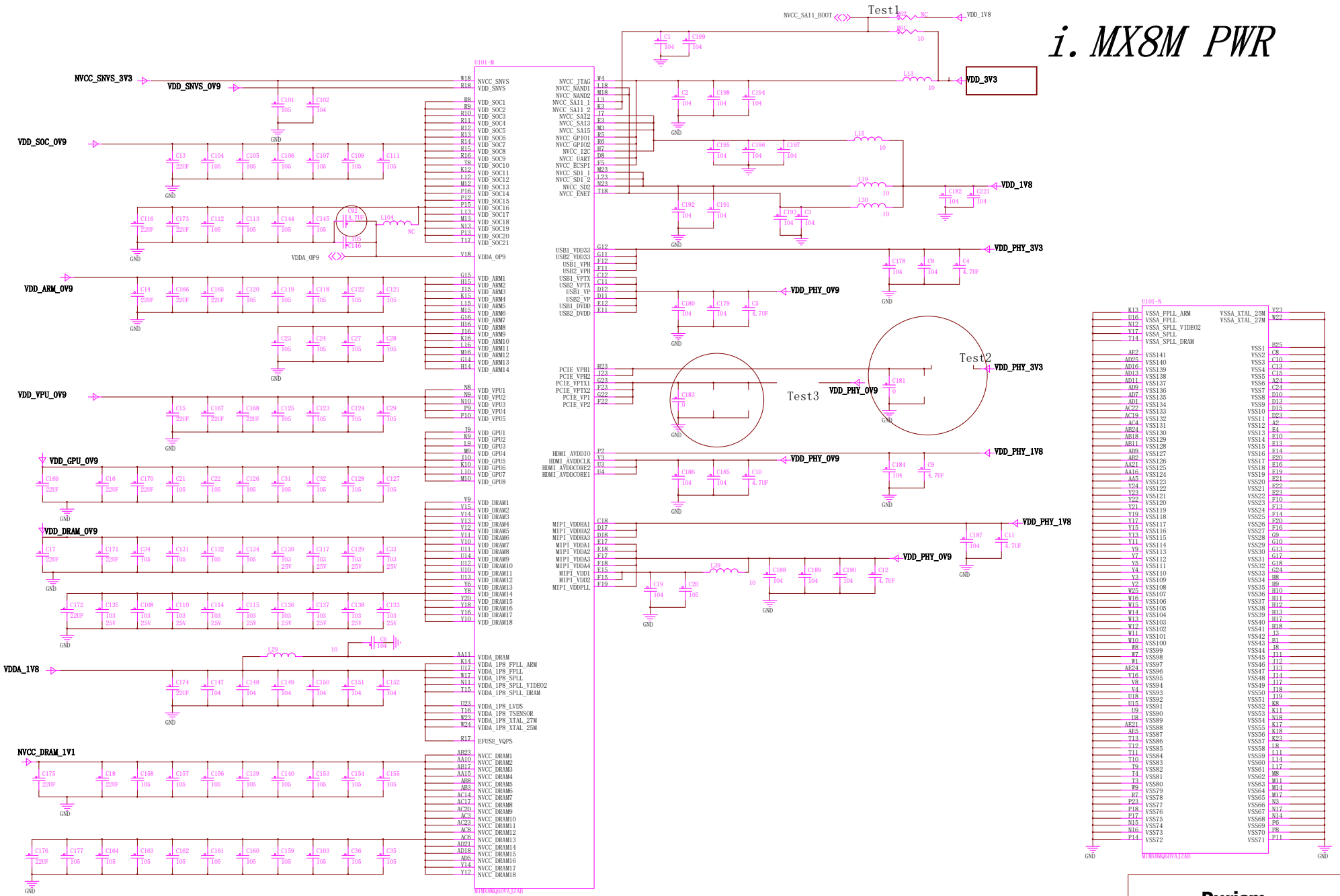
i.MX8M PWR



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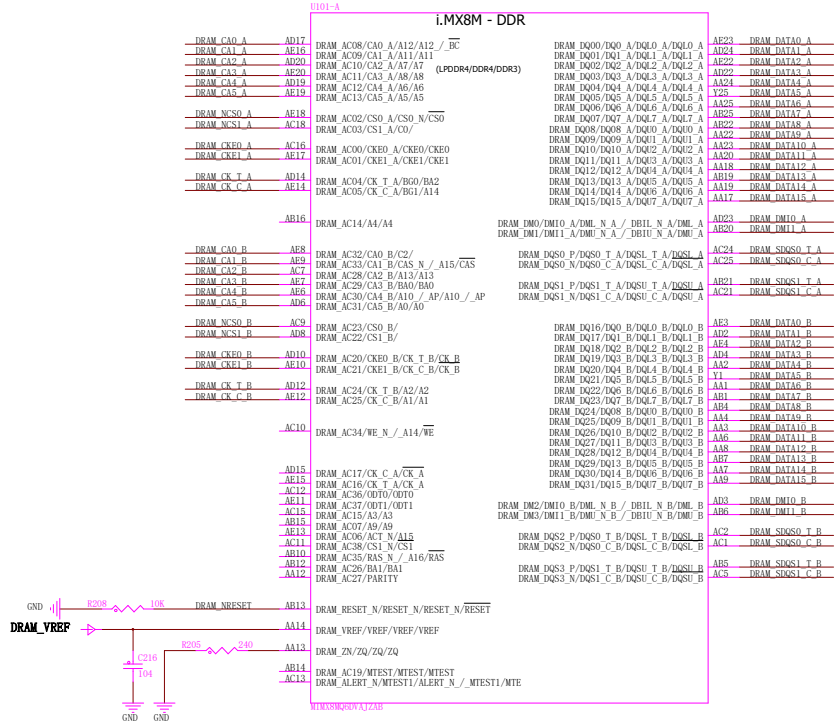
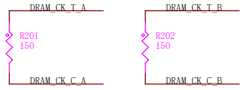
Rev:	v0.9.7
Date:	
Design by:	Purism
Sheet	3 of 21

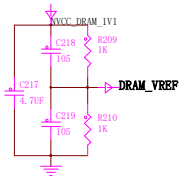
LPDDR4

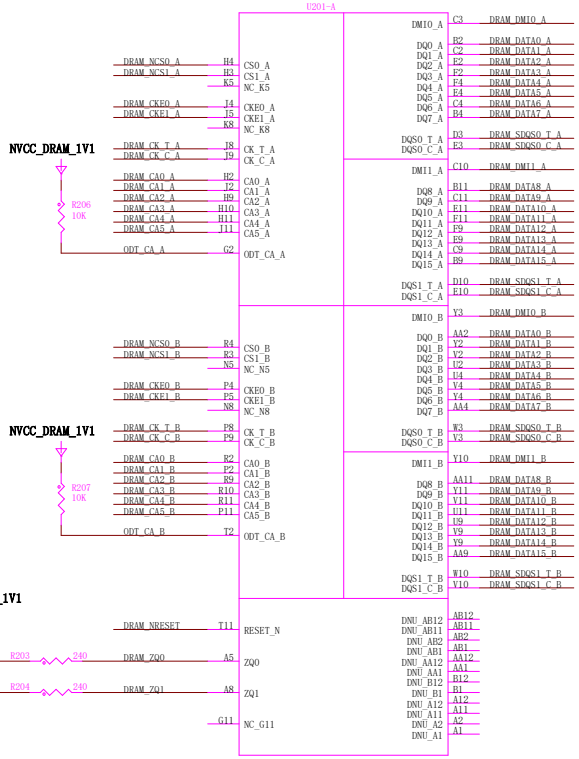


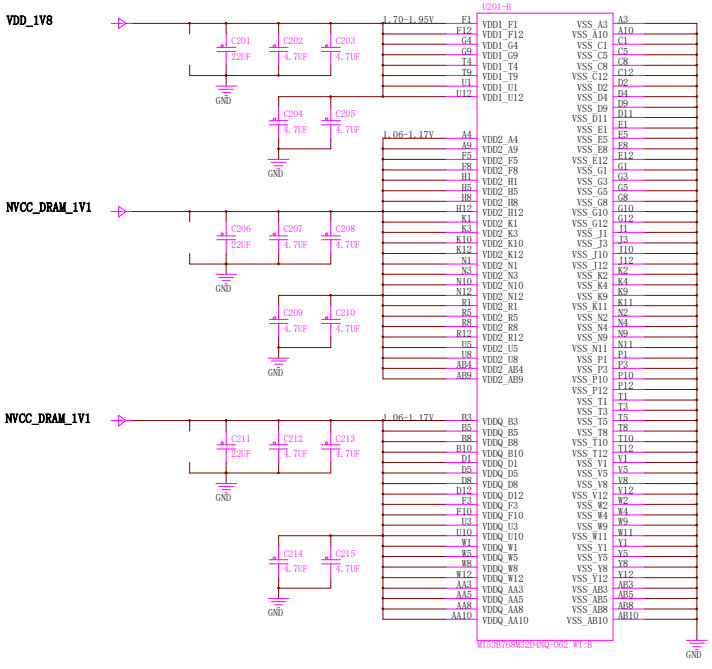
LPDDR4 Power supply voltage ramp:

RESET_n is held LOW.
VDD1 >= VDD2
VDD2 >= VDDQ









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Page Title:	LPDDR4
Rev: V0.9.7	Date:
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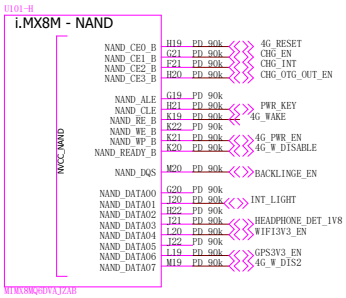
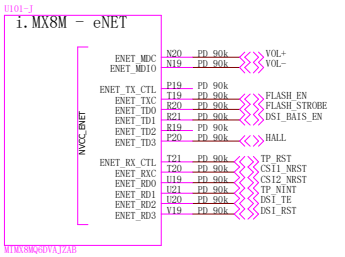
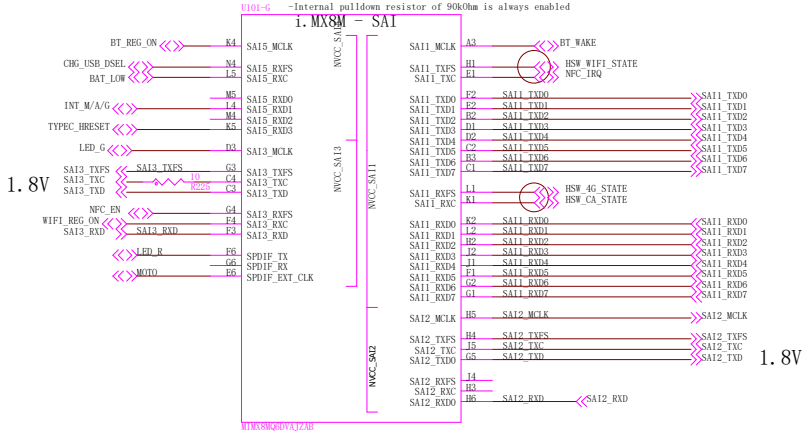
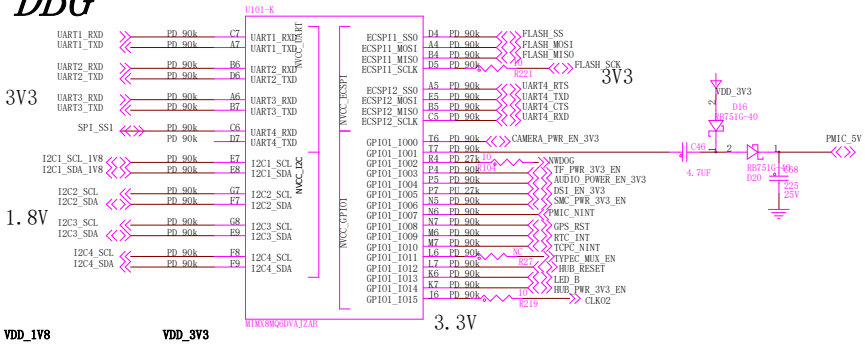
MIMX8MQ6DVAJZAA

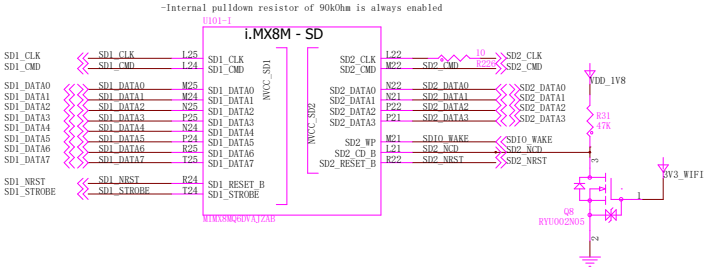


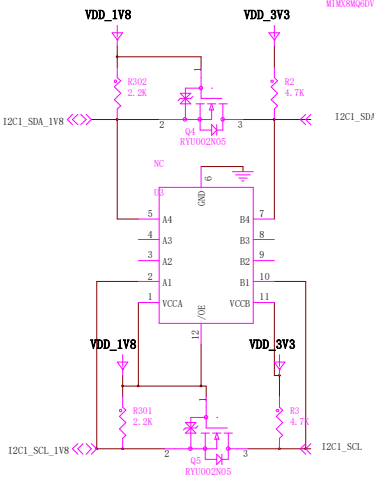


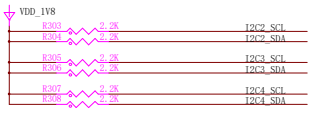


UART DBG









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Page Title: CPU IO		
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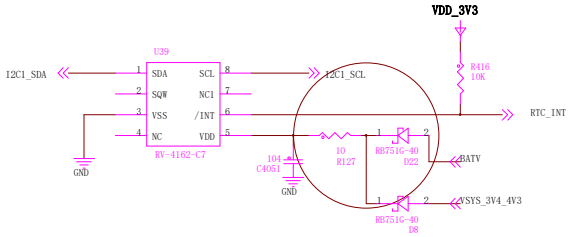
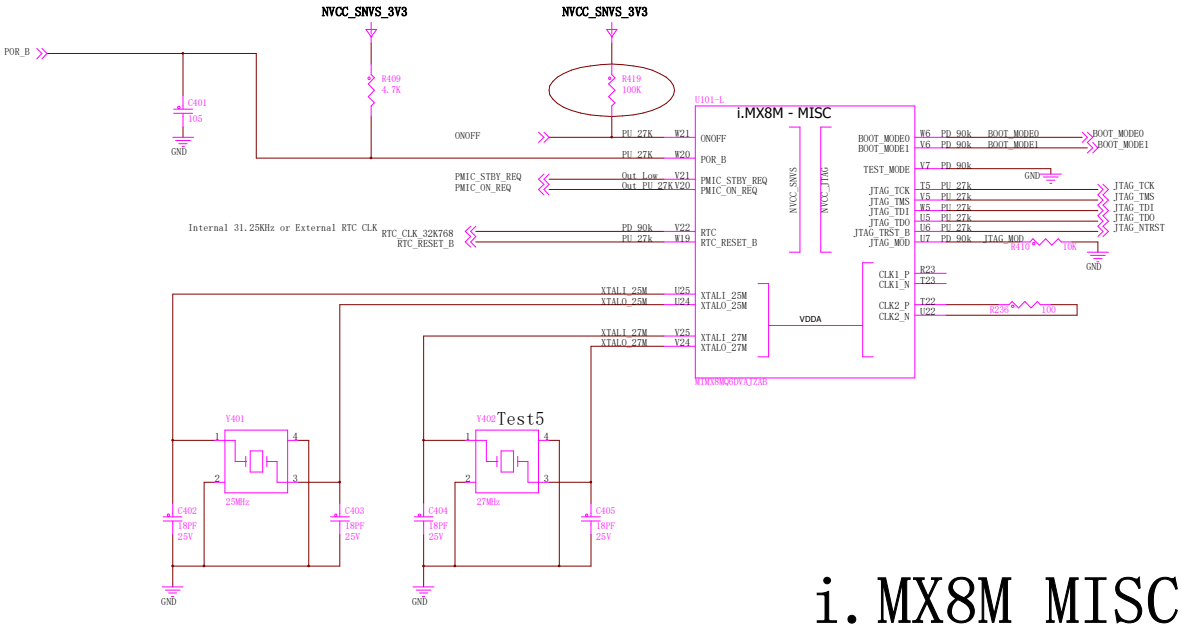
RTC



JTAG Debug



i.MX8M MISC

Purism		
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Rev: **v0.9.7**	Date:	Design by:
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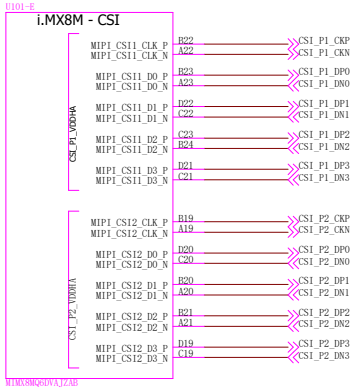
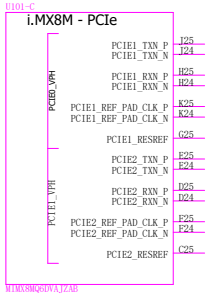
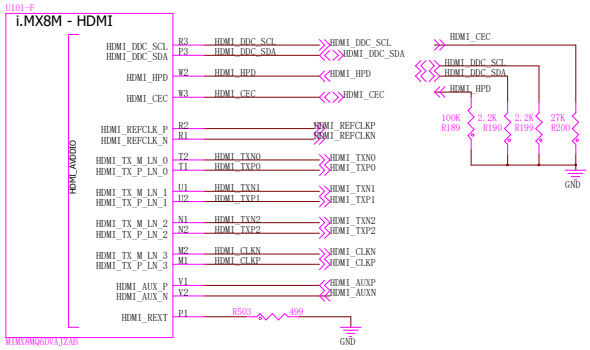
i.MX8M PHY

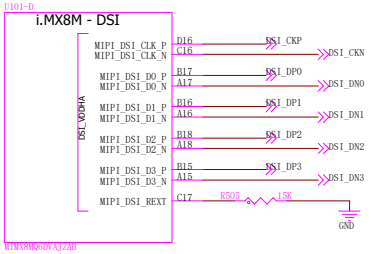
USB_RESREF: Attach a 200-Ω 1% 100-ppm/C precision resistor-to-ground on the board.
MIPIDSI_REXT: 15K-Ω
PCIE: 200-Ω ±1% ± 100 ppm/° C precision resistor to-ground on the board.
HDMI:a 499Ω (±1% tolerance) resistor to-ground on the board

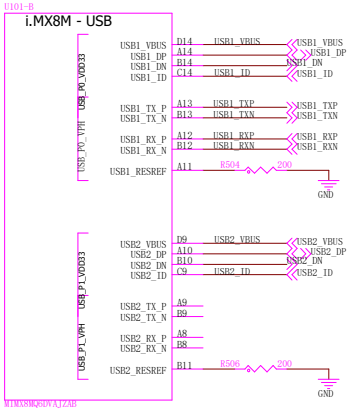


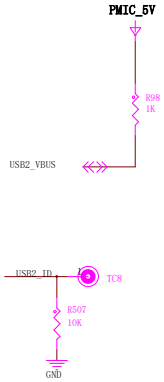


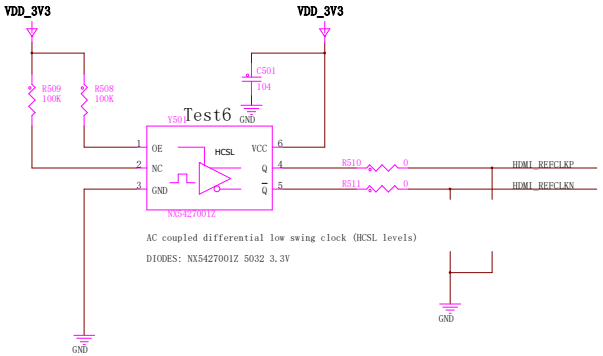


AC coupled differential low swing clock (HCSL levels)









AC coupled differential low swing clock (HCSL levels)

DIODES: NX5427001Z 5032 3.3V

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Page Title: CPU PHY		
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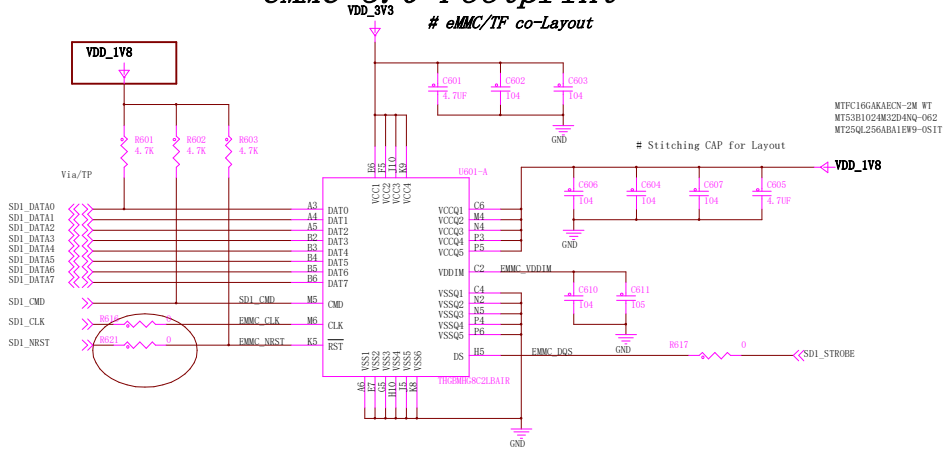
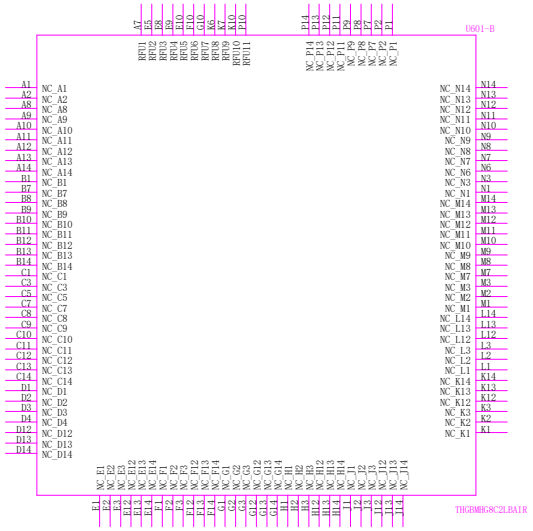
eMMC 5.0 Footprint





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Page Title:	EMMC
Rev: **v0.9.7**	Date:
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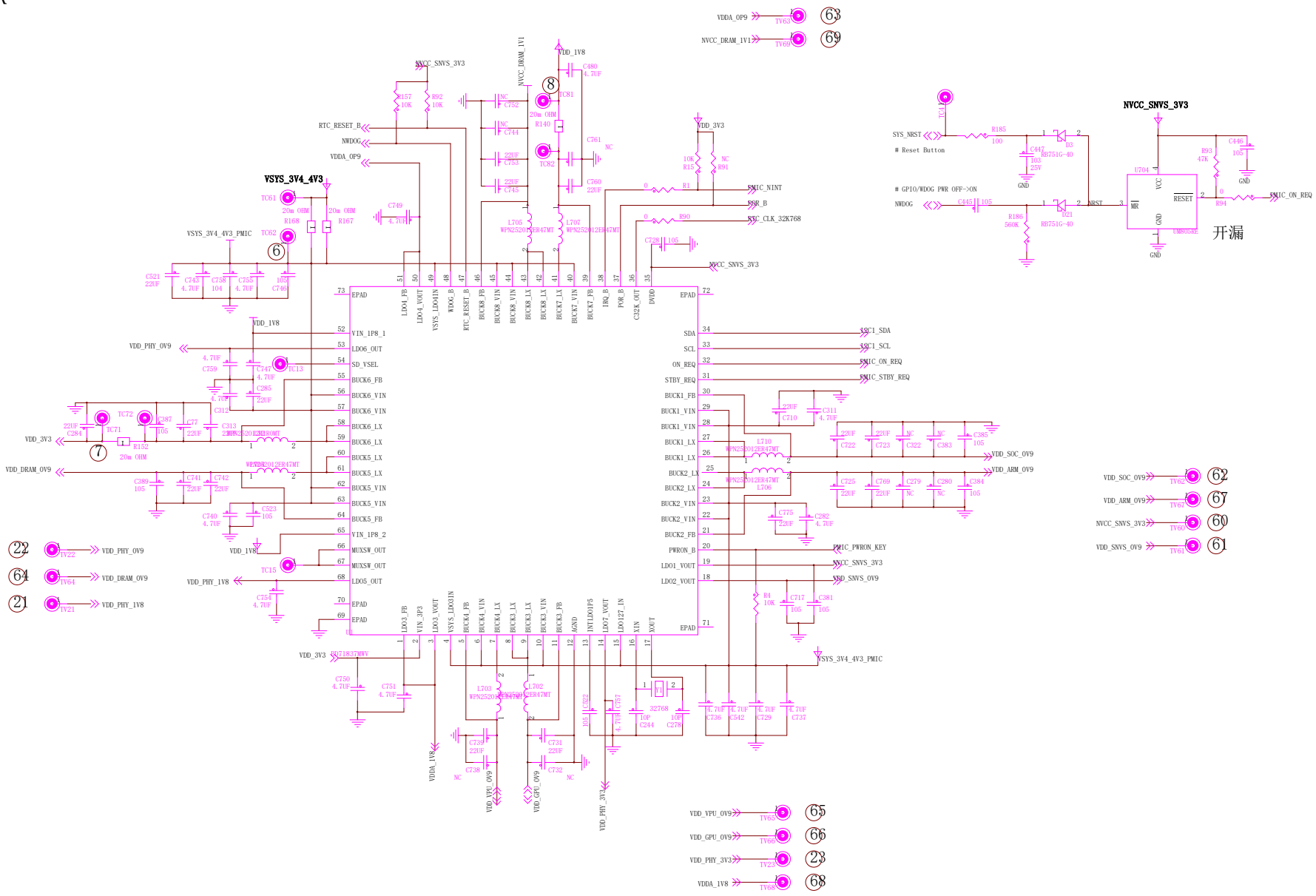
SYS PMIC/PWR



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Rev: **v0.9.7**	Date:
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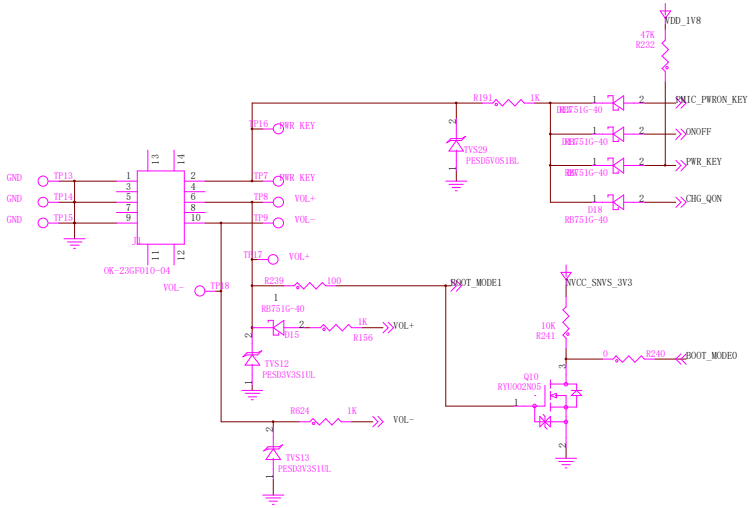

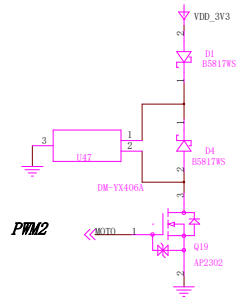

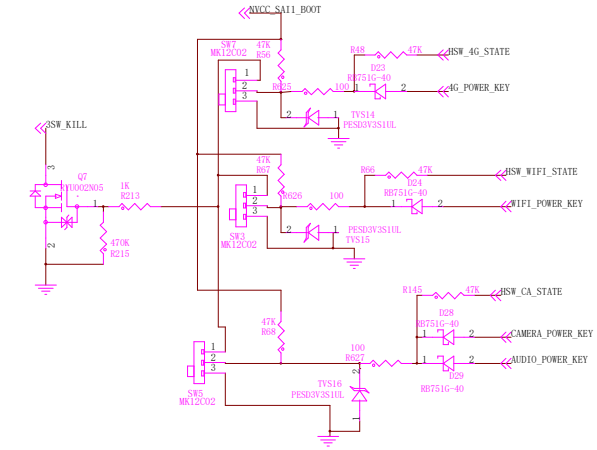

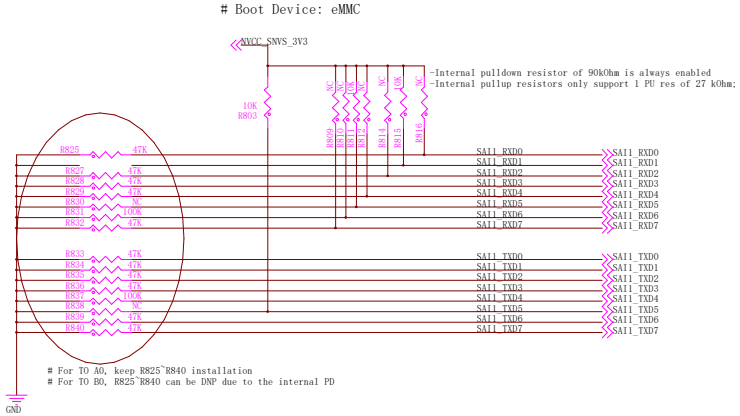

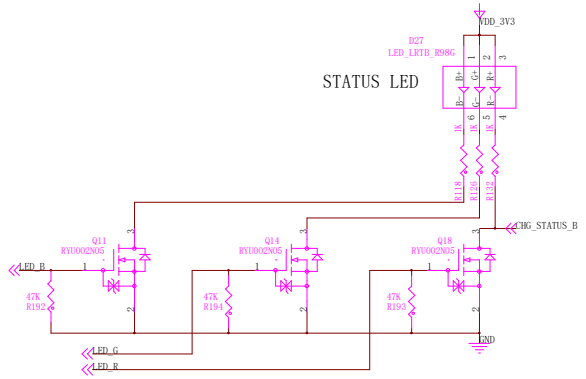

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Drawing Title: **Librem 5**		
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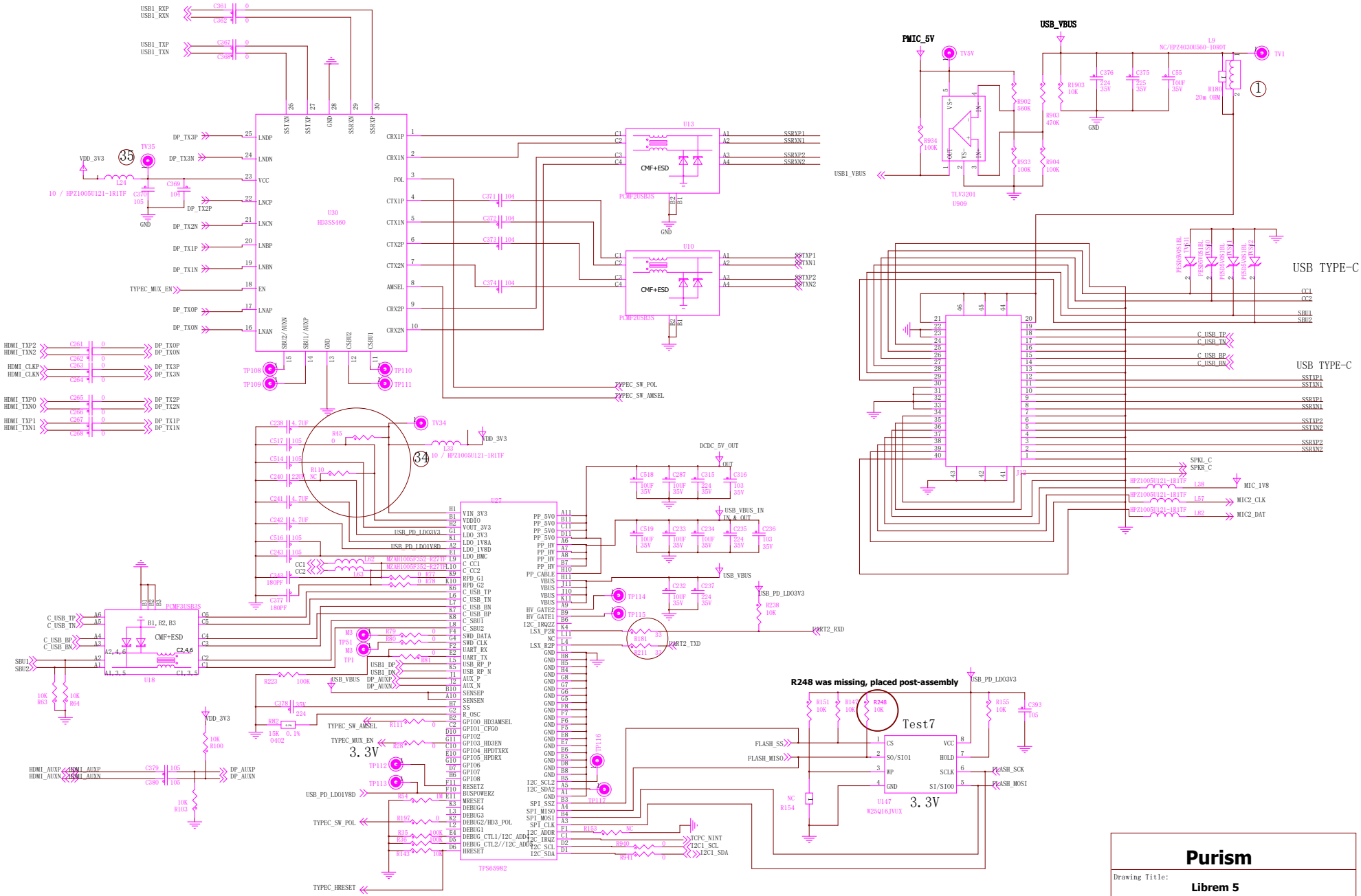
Rev: **v0.9.7**	Date:	Design by:
		Sheet 10 of 21

USB3.0/2.0 TYPE-C/HOST



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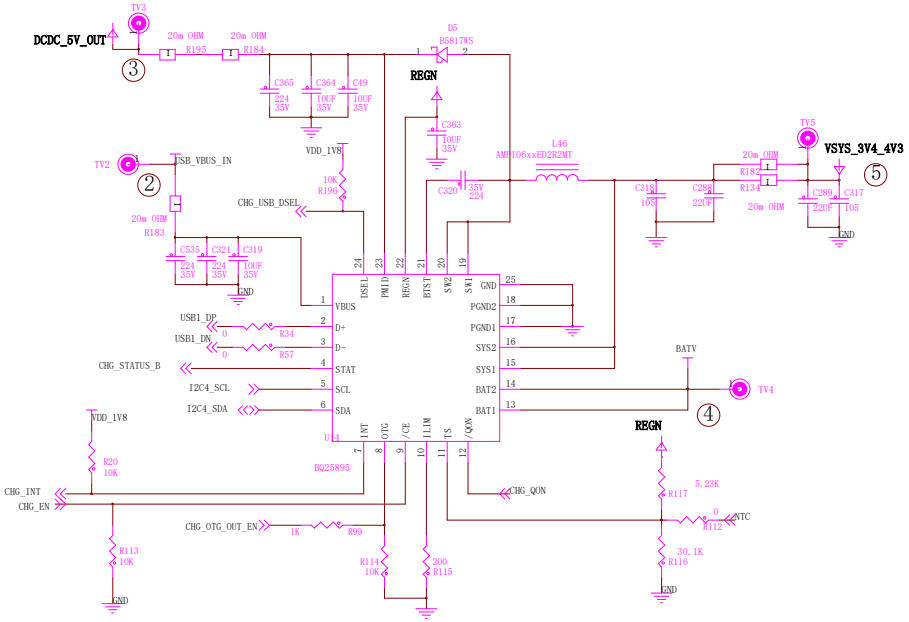
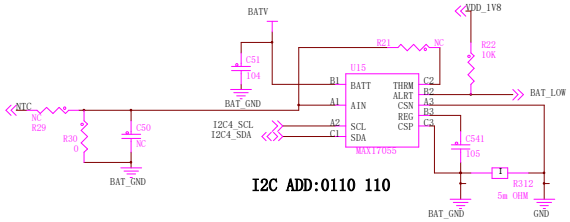
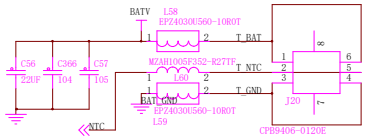
		Sheet 11 of 21







电池插座

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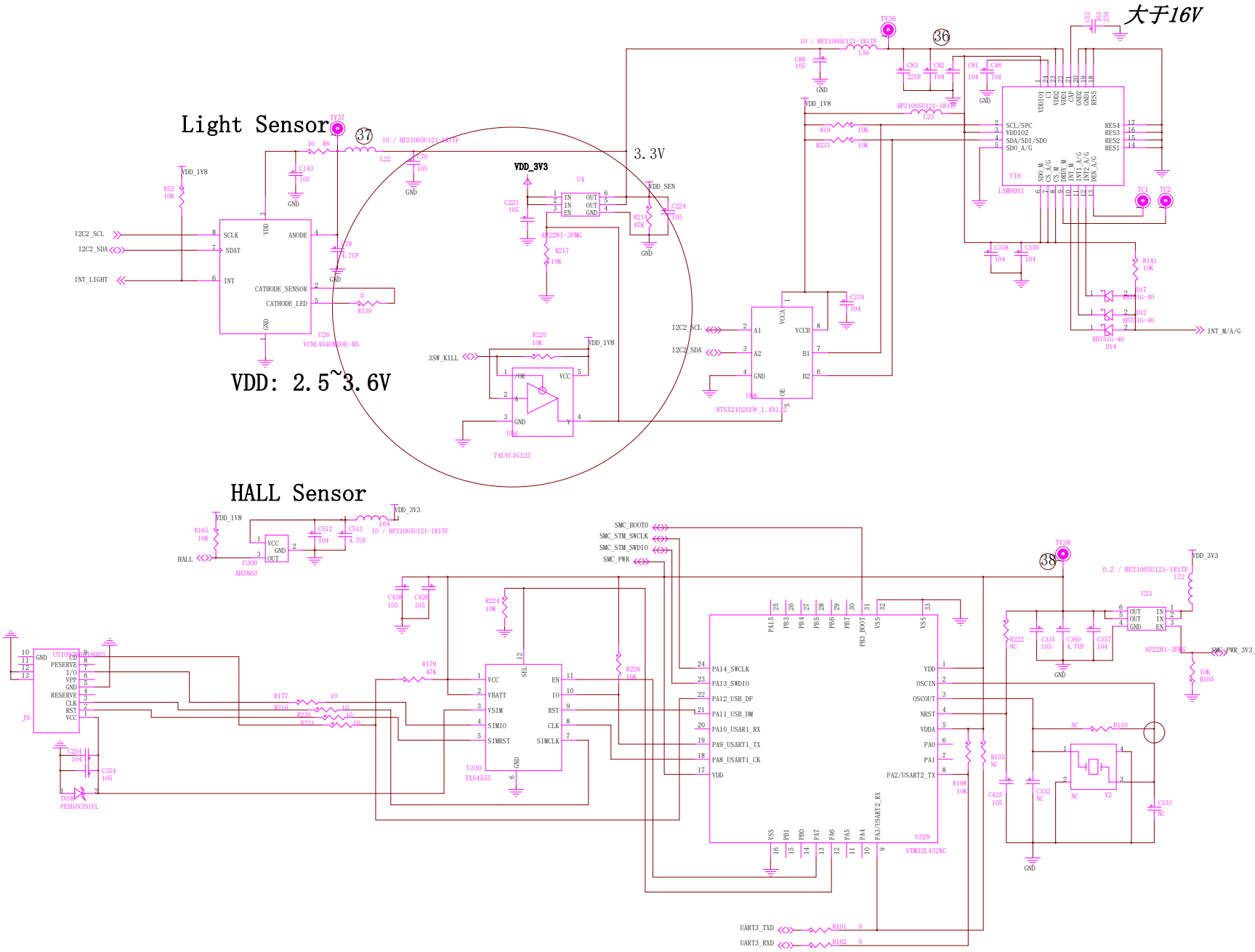
Page Title: CHARGE, BAT, LED		
Rev: **v0.9.7**	Date:	Design by:
		Sheet 12 of 21

Sensor


Light Sensor
HALL Sensor
VDD: 2.5~3.6V
3.3V
大于16V
VDD_1V8
VDD_3V3
VDD_SEN
I2C2_SCL
I2C2_SDA
INT_LIGHT
3SW_KILL
INT_M/A/G
SMC_BOOT0
SMC_STM_SWCLK
SMC_STM_SWDIO
SMC_PWR
SMC_PWR_3V3_EN
UART3_TXD
UART3_RXD
LSM9DS1
AP2281-3FMG
74LVC1G125
NTSX2102GU8_1.4X1.5
STM32L432KC
TXS4555
AH3663
PESD3V3S1UL
Purism
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Page Title: SENSOR, SMART CARD
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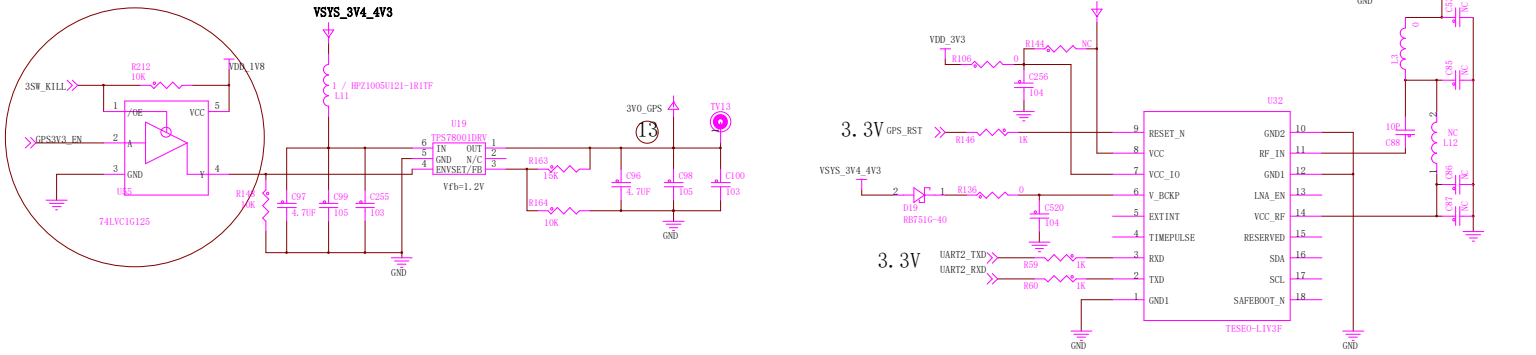
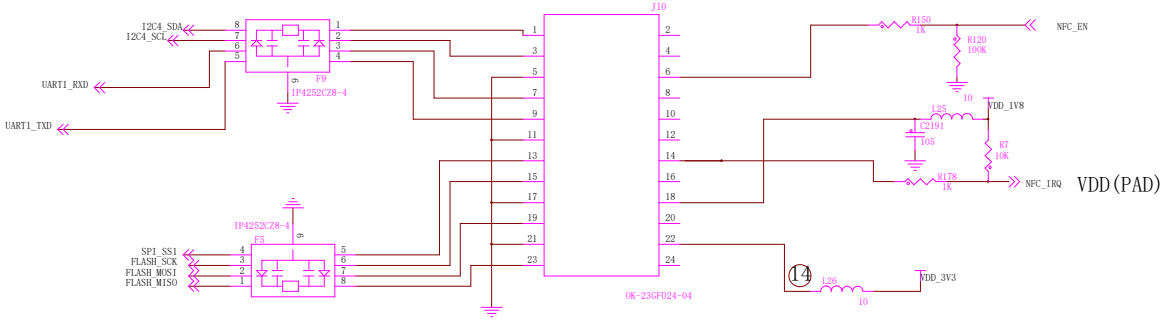
GNSS



EXT CON



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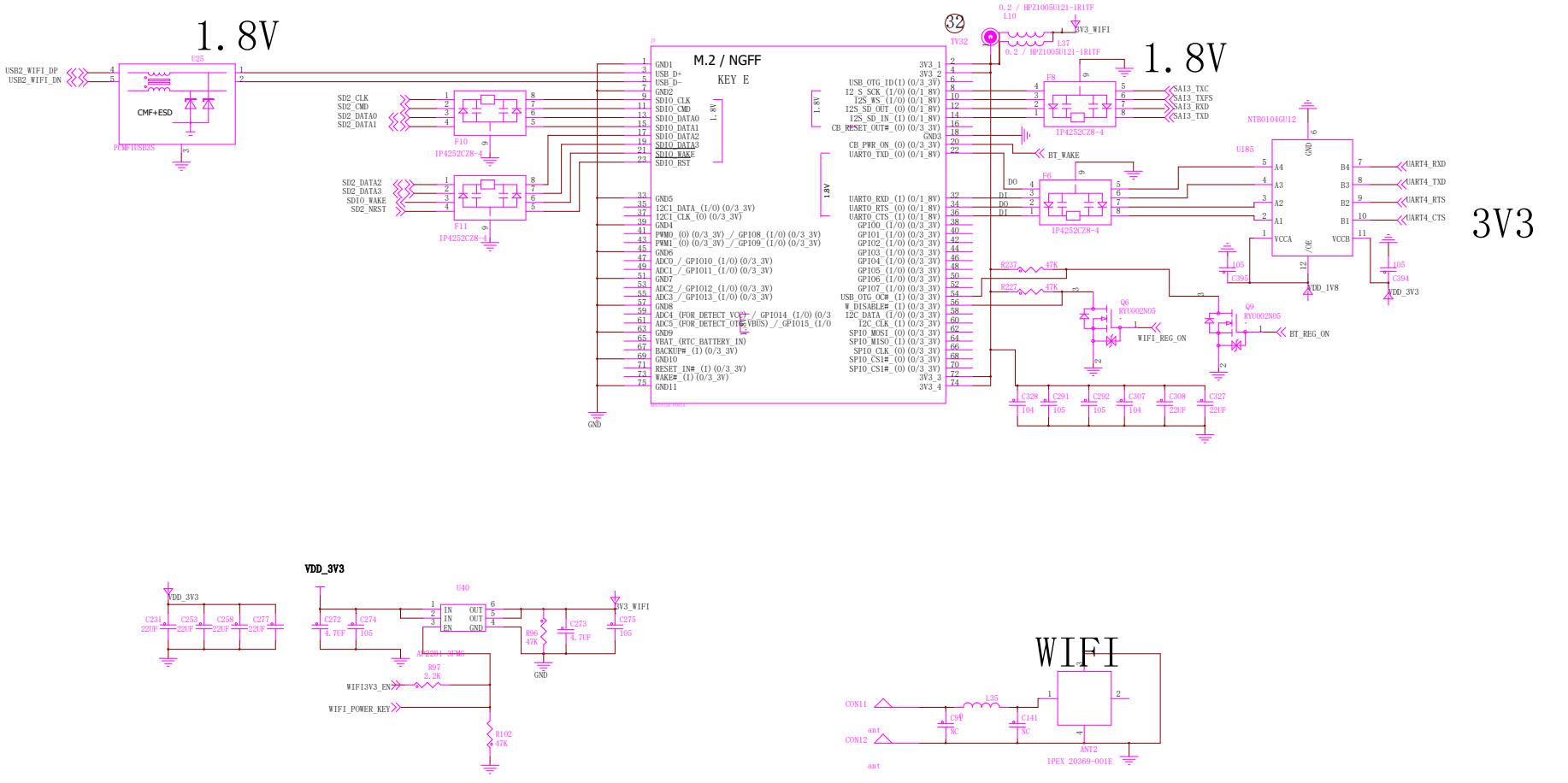
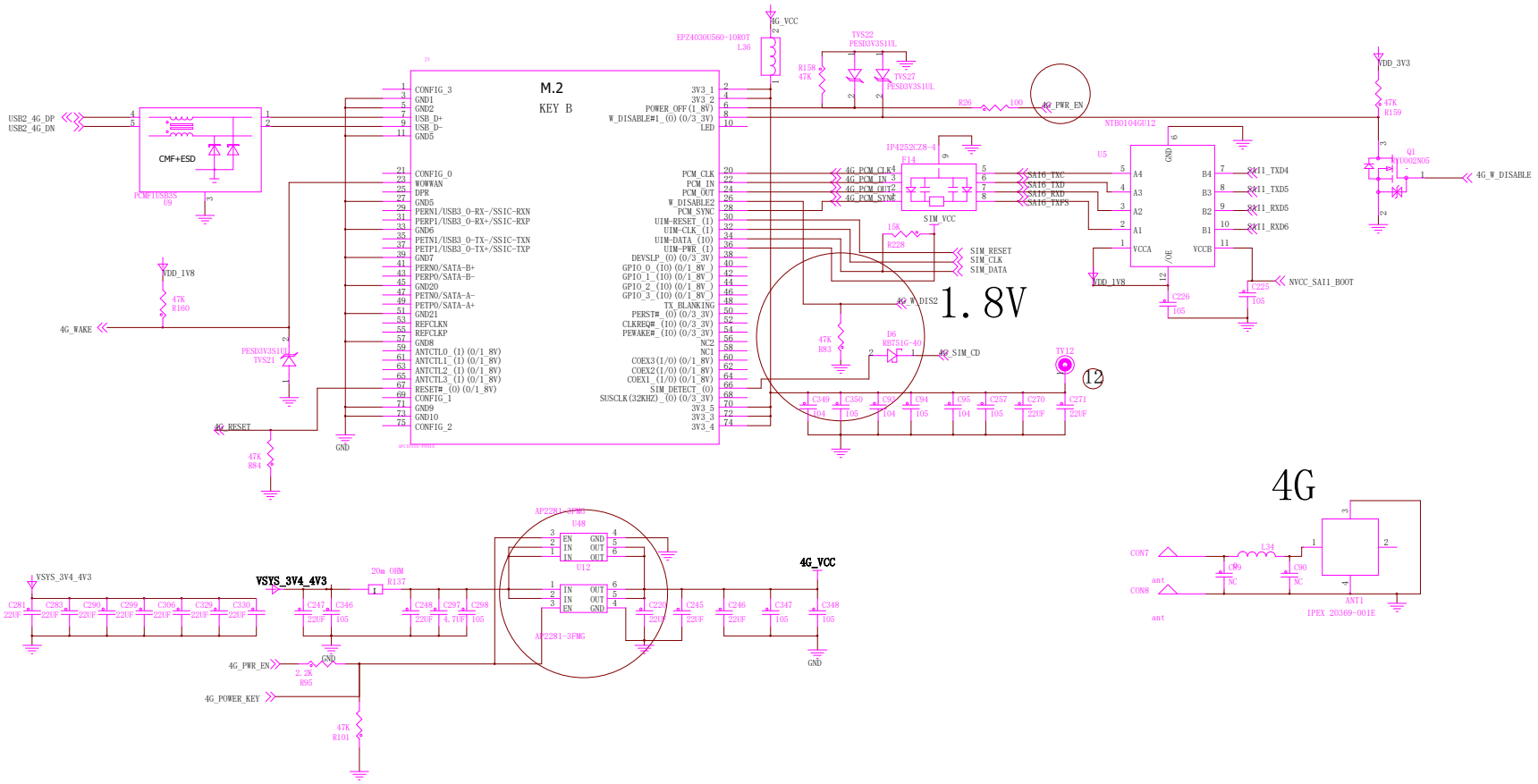
WiFi/BT 802.11a/b/g/n/ac + Bluetooth 4.1/ EDR





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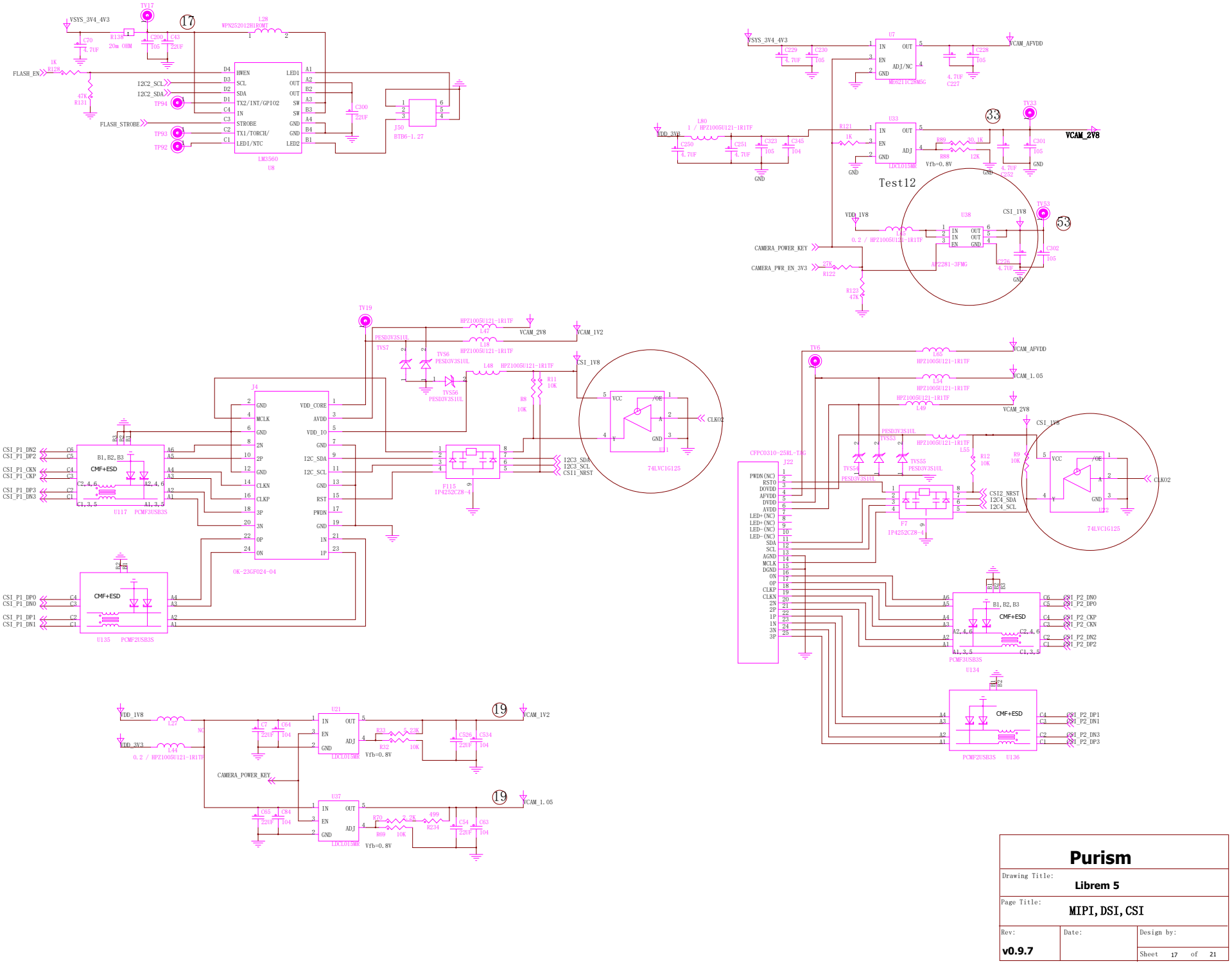

Purism

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Page Title: **MIPI, DSI, CSI**		
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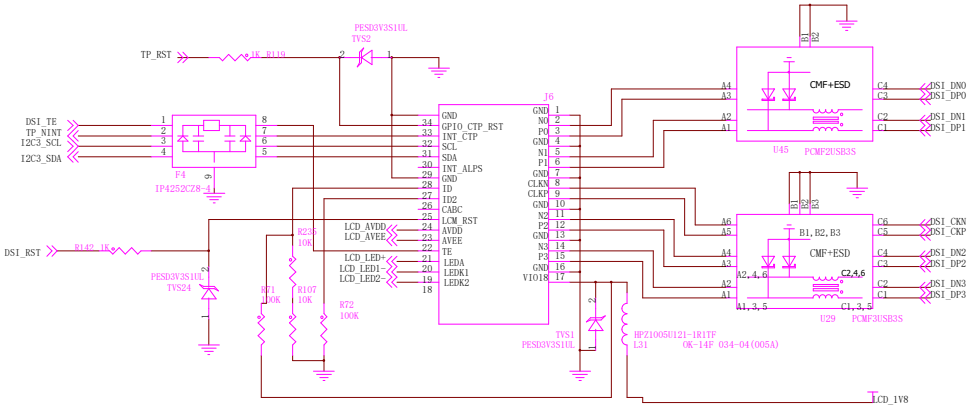
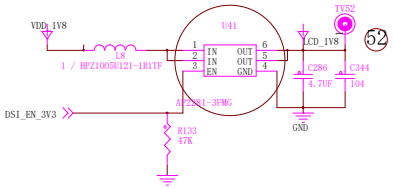
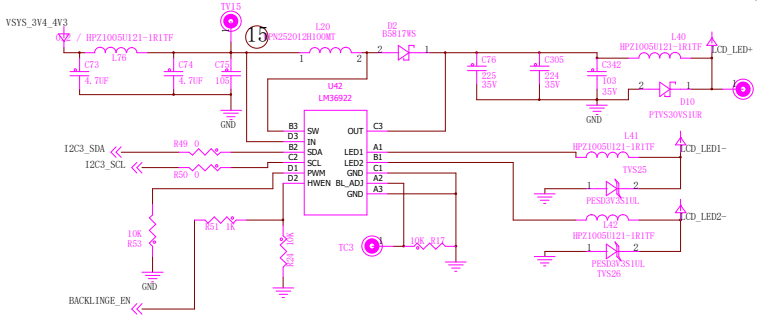
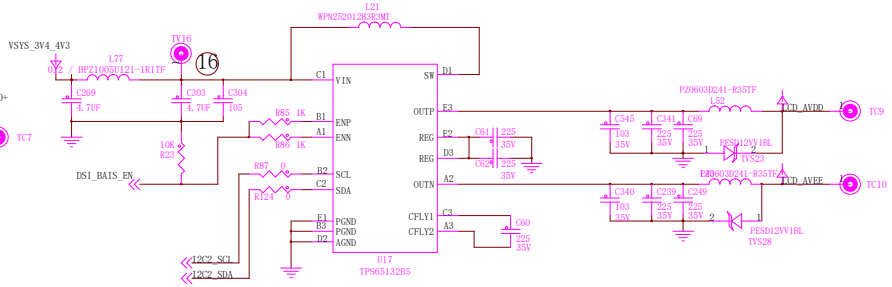
DSI LCD IF









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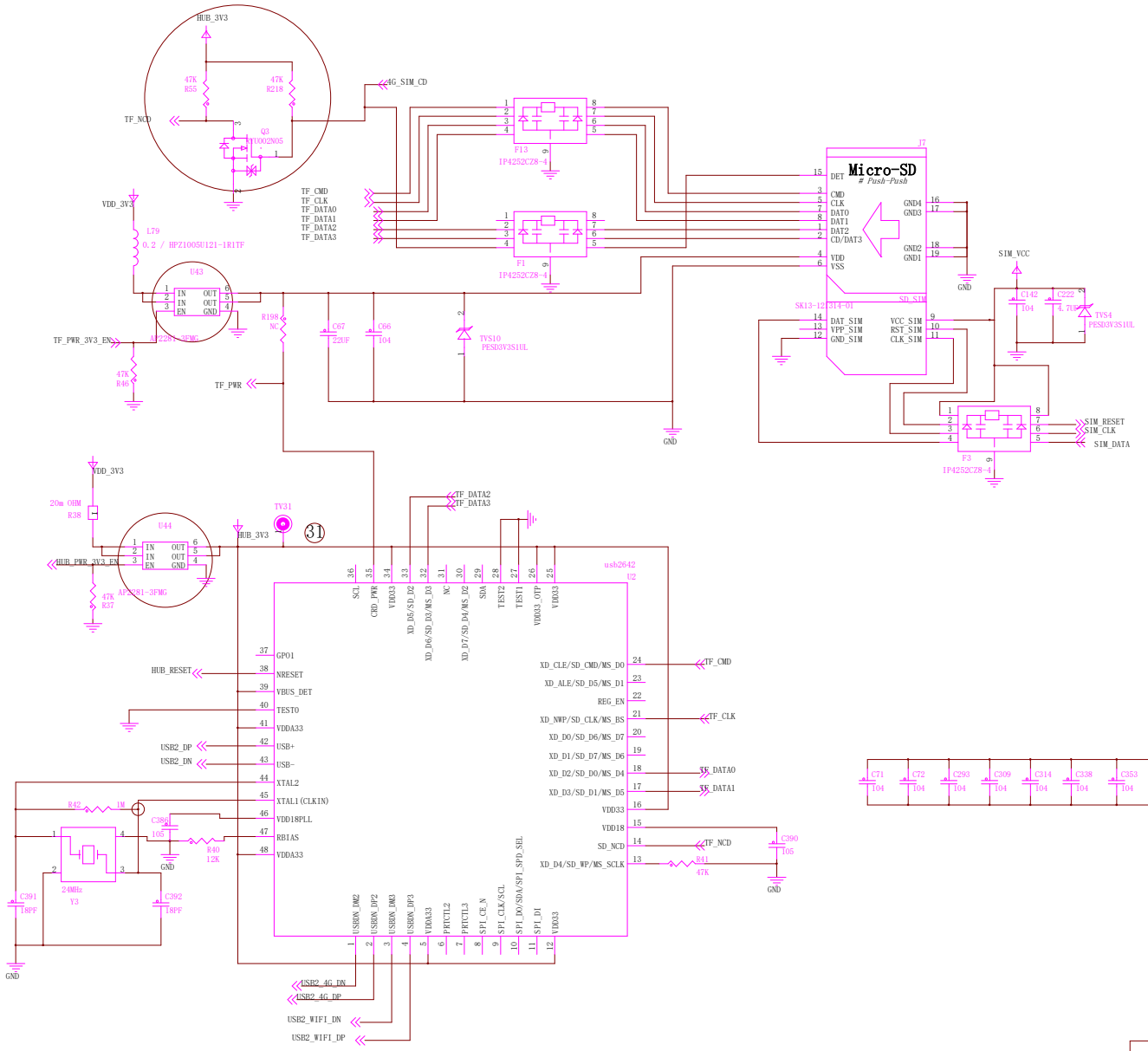
USB HUB + SDIO BRIDGE



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Page Title: USB HUB		
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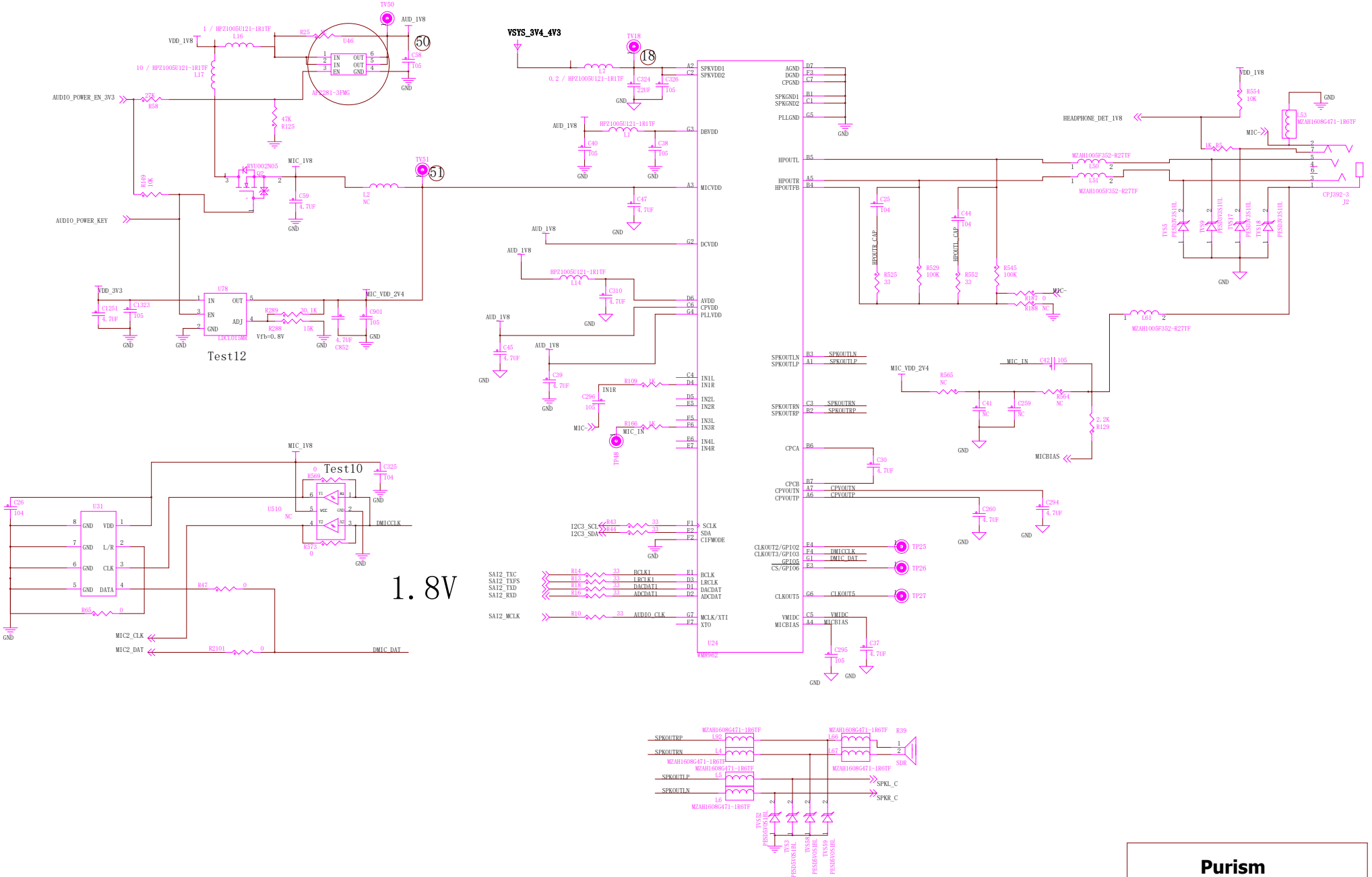

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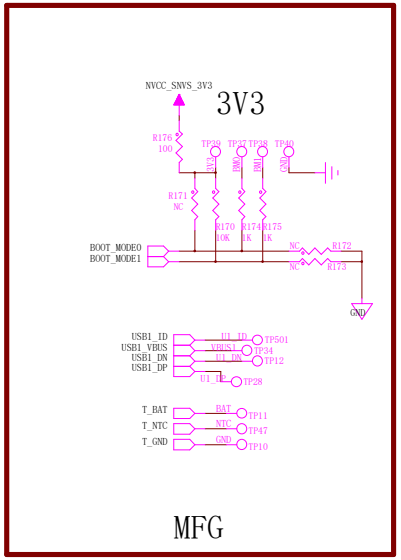
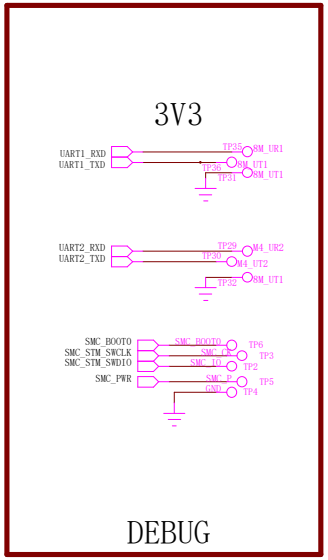
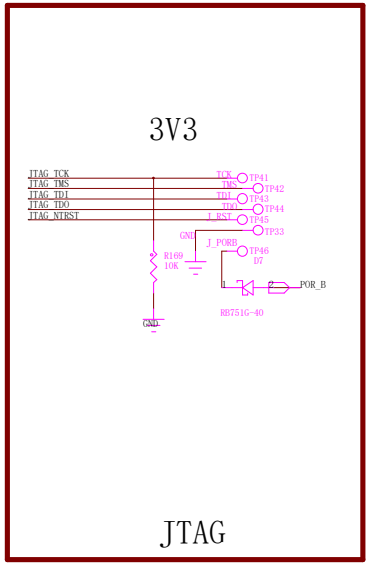
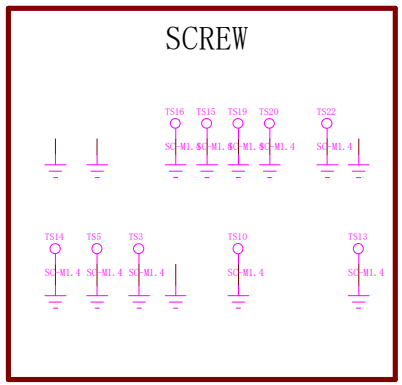




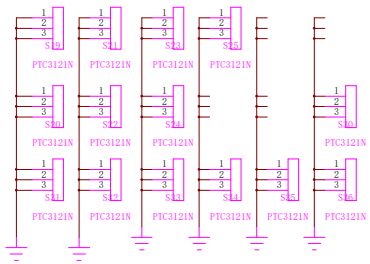


M2 module SCREW

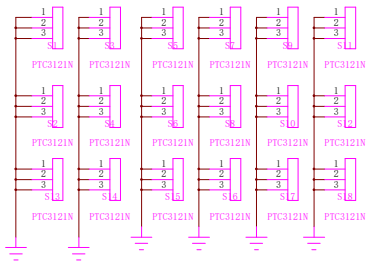
BMODE[1:0]	BOOT TYPE
00	Boot From Fuses
01	Serial Downloader
10	Internal Boot (Development)
11	Reserved

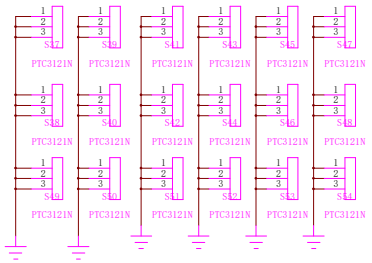


Shielding Case



Shielding Case Hold





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