

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, PM1C_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_IV8D 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_SNV3_3V3
- 10, R176 PU to NVCC_SNV3_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 modified

V098

- 1, 0 ohm jumpers SPI.
- 2, C181 NC
- 3, main board usb 2.0 connector
- 4, PFET pull up UART2_RX
- 5, red LED powered by VSYS
- 6, TPS65982 I2C2 10K pull-ups
- 7, TPS65982 remove_usb 2.0
- 8, TP34 connect USB_VBUS for test
- 9, SPI MISO ADD pull-up 10K
- 10, ADD u50, U51, C335, C336
- 11, R41 modified to 0

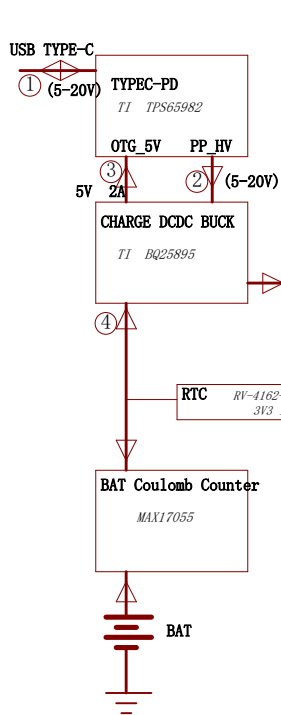
GNU GPLv3+
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Purism SPC

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Drawing Title:
Librem 5

Page Title:
VER note

Rev:	Date:	Design by:
Chestnut		
	Sheet	1 of 21



PMIC: BD71837

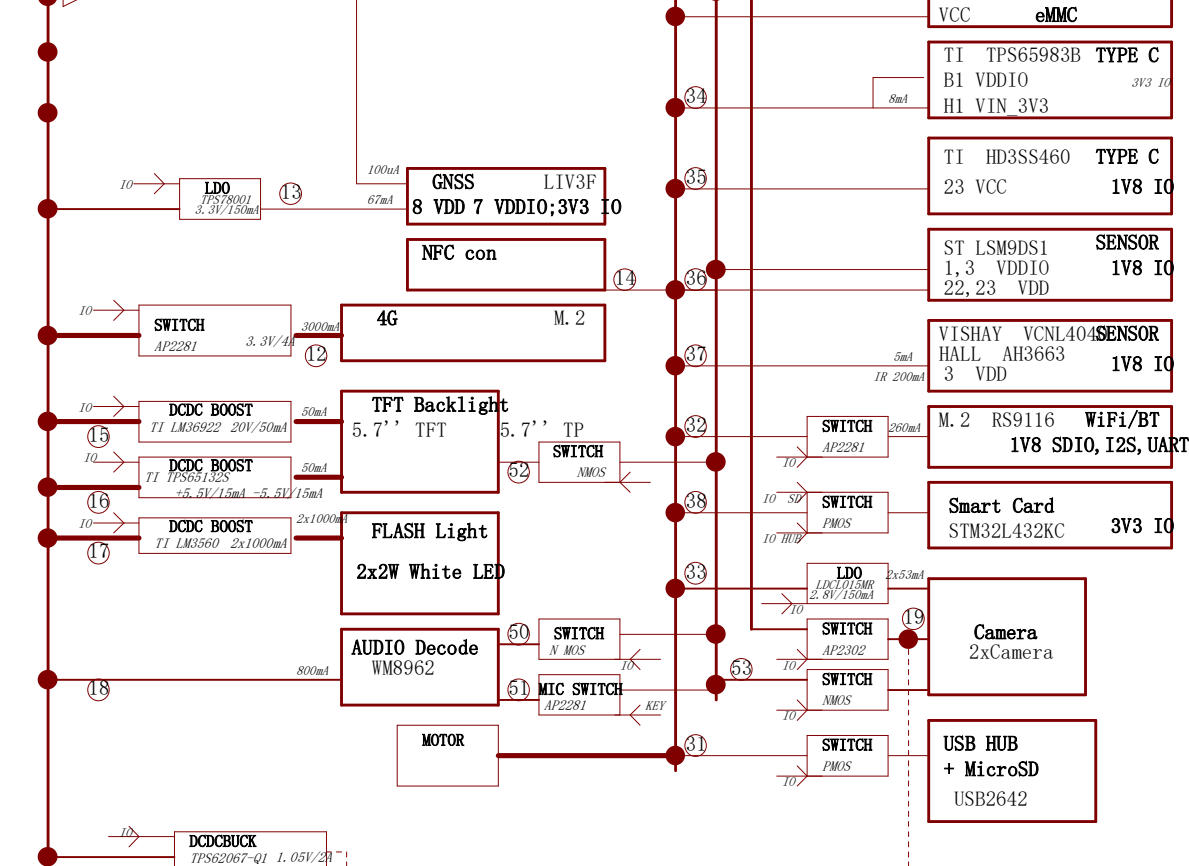
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LD01	3.3	10	
LD02	0.9	10	
BUCK1	0.9	3600	
LD04	0.9	250	
BUCK5	0.9	2500	
BUCK4	0.9	1000	
BUCK3	1.0	2100	
BUCK2	1.0	4000	
LD03	1.8	300	
BUCK6	3.3	3000	
BUCK7	1.8	1000	
BUCK8	1.1	2500	
LD05	1.8	300	
LD06	0.9	300	
LD07	3.3	150	

CPU: i.MX8M

SEQ	PWR	TYP	Curr (mA)
60	NVCC_SNVS	3.3	2
61	VDD_SNVS	0.9	2
62	RTC_RESET_B		
63	VDD_SOC	0.9	3600
64	VDDA_OP9	0.9	
65	VDD_DRAM	1.0	2500
66	VDD_VPU	0.9/1.0	1000
67	VDD_GPU	0.9/1.0	2000
68	VDD_ARM	0.9/1.0	4000
68	VDDA_IP8_XXX	1.8	250
68	VDDA_DRAM	1.8	50
69	NVCC_3V3	3.3	150
69	NVCC_1V8	1.8	100
69	NVCC_DRAM	1.1/1.2/1.35	35
69	NVCC_SD2	1.8/3.3	700
21	1.8V PHY	1.8	50
22	0.9V PHY	0.9	250
23	3.3V PHY	3.3	100
	POR_B		

VSYS_3V4_4V3

VSYS_3V_4V2



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

I2C#	Component	Part Number	Address	Voltage	Notes
I2C1	PMIC	BD71837	0x08	3V3	55*
I2C1	TYPE-C-PD	TPS65983B	0x0F	3V3	B1*
I2C1	RTC	RV-4162-C7	0x68	3V3	
I2C2	Light	VCNL4040	0x60	1V8	
I2C2	FLASH	LM3560	0xA6, 0xA7	1V8	
I2C2	AGM sensor	LSM9DS1	0x6A, 0x1E	1V8	1, 3*
I2C2	TFT BAIS	TPS65132S	0x7C	1V8	
I2C3	CAMERA1		0x20, 0x21	1V8	
I2C3	TP		0x70	1V8	
I2C3	CODEC	WM8962	0x34	1V8	G3*
I2C3	BackLight	LM36922	0x36	1V8	
I2C4	BAT	MAX17055	0x36	1V8	
I2C4	CHARGE	BQ25895	0x6A	1V8	
I2C4	CAMERA2		0x20, 0x21	1V8	
I2C4	EXT CON			1V8	

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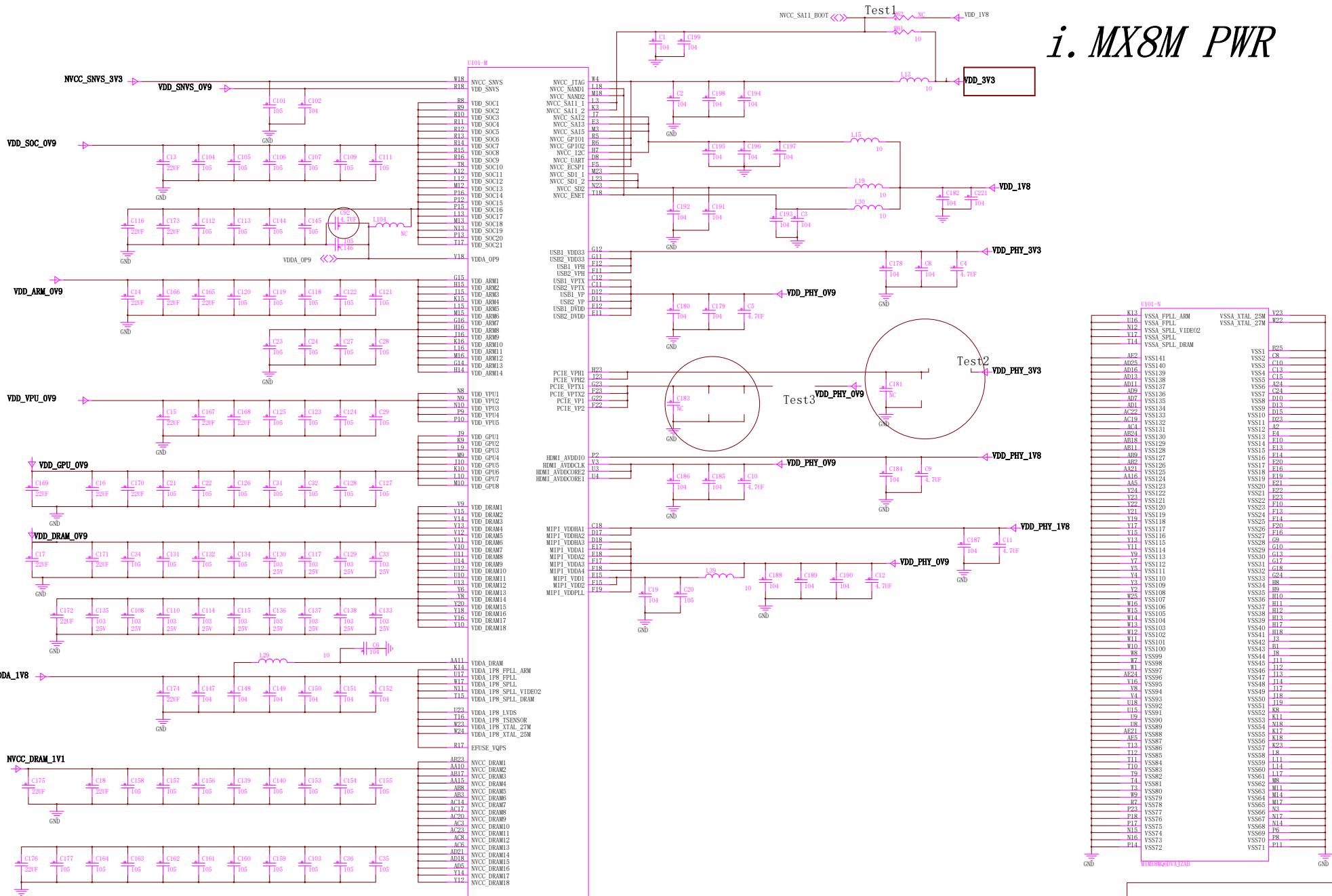
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Page Title: **POWER TREE**

Rev: **v0.9.8** Date: Design by:

Sheet 2 of 21

i.MX8M PWR

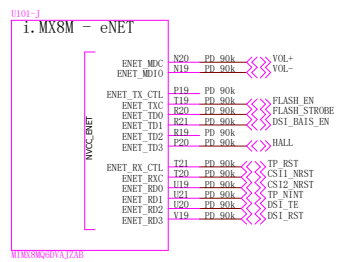
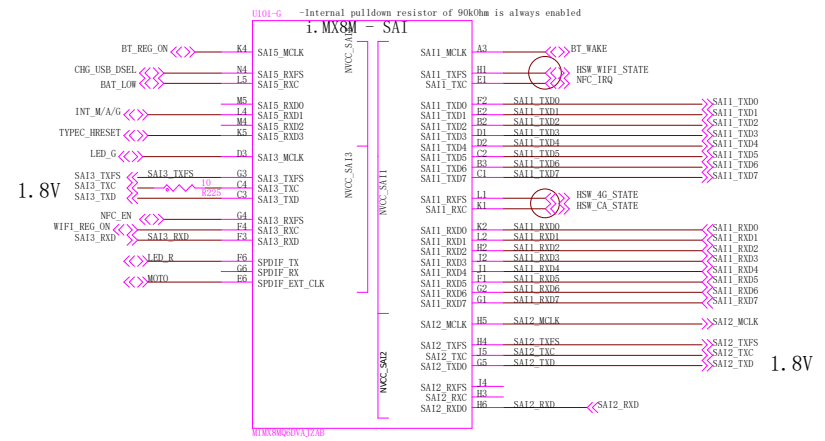
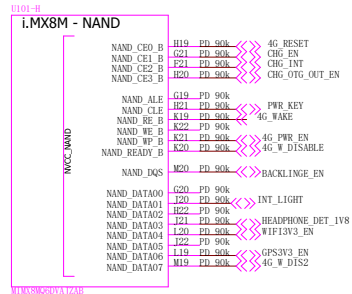


I101-N		I22	
K13	VSSA_FPLL_ARM	VSSA_XTAL_25M	V22
I16	VSSA_FPLL	VSSA_XTAL_27M	V22
M2	VSSA_SPLL_VIDEO2		
V17	VSSA_SPLL		
T14	VSSA_SPLL_DRAM		
		VSS1	R25
A22	VSS141	VSS2	C8
AD25	VSS140	VSS3	C10
AD16	VSS139	VSS4	C13
AD13	VSS138	VSS5	C16
AD11	VSS137	VSS6	C24
AD9	VSS136	VSS7	C24
AD7	VSS135	VSS8	D10
AD1	VSS134	VSS9	D13
AC22	VSS133	VSS10	D15
AC19	VSS132	VSS11	D23
AG4	VSS131	VSS12	D2
AB24	VSS130	VSS13	E4
AB18	VSS129	VSS14	E10
AB11	VSS128	VSS15	E13
AB9	VSS127	VSS16	E14
AB2	VSS126	VSS17	E20
AG1	VSS125	VSS18	E16
AA16	VSS124	VSS19	E19
AA5	VSS123	VSS20	E24
Y24	VSS122	VSS21	E22
Y23	VSS121	VSS22	E23
Y22	VSS120	VSS23	E10
Y21	VSS119	VSS24	E13
Y19	VSS118	VSS25	E14
Y17	VSS117	VSS26	E20
Y15	VSS116	VSS27	E10
D18	VSS115	VSS28	E9
D17	VSS114	VSS29	G10
D12	VSS113	VSS30	G17
D11	VSS112	VSS31	G17
D10	VSS111	VSS32	G13
D9	VSS110	VSS33	G18
D8	VSS109	VSS34	H8
D7	VSS108	VSS35	H10
D6	VSS107	VSS36	H8
D5	VSS106	VSS37	H11
D4	VSS105	VSS38	H12
D3	VSS104	VSS39	H17
D2	VSS103	VSS40	H17
D1	VSS102	VSS41	H18
D0	VSS101	VSS42	J3
C18	VSS100	VSS43	J8
C17	VSS99	VSS44	J8
C16	VSS98	VSS45	J11
C15	VSS97	VSS46	J12
C14	VSS96	VSS47	J13
C13	VSS95	VSS48	J14
C12	VSS94	VSS49	J17
C11	VSS93	VSS50	J18
C10	VSS92	VSS51	J19
C9	VSS91	VSS52	J8
C8	VSS90	VSS53	K11
C7	VSS89	VSS54	K18
C6	VSS88	VSS55	K18
C5	VSS87	VSS56	K18
C4	VSS86	VSS57	K23
C3	VSS85	VSS58	L8
C2	VSS84	VSS59	L11
C1	VSS83	VSS60	L14
	VSS82	VSS61	L17
	VSS81	VSS62	M8
	VSS80	VSS63	M11
	VSS79	VSS64	M14
	VSS78	VSS65	M17
	VSS77	VSS66	N3
	VSS76	VSS67	N17
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	VSS73	VSS70	N8
	VSS72	VSS71	P11

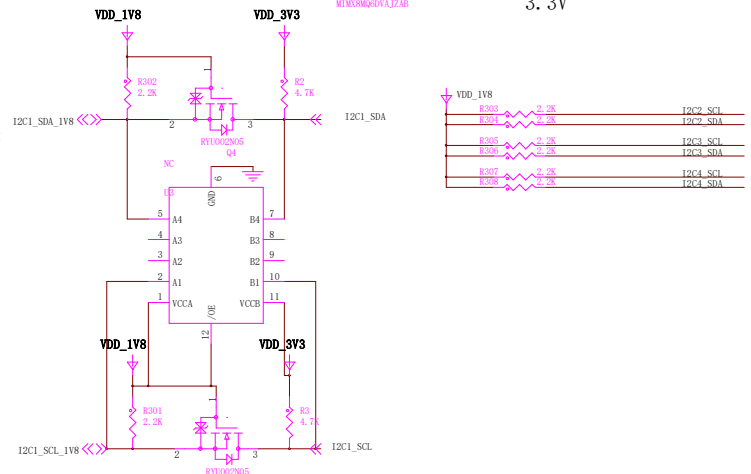
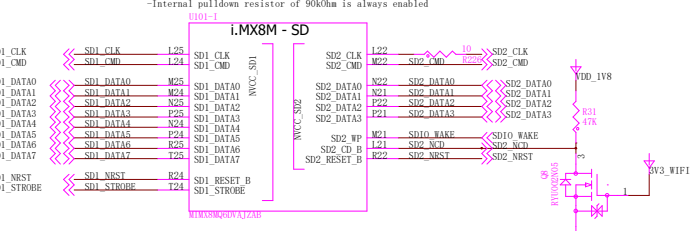
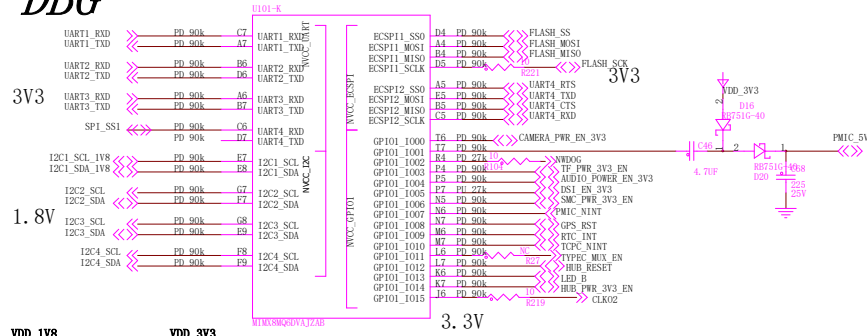
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Page Title: CPU POWER		
Rev: v0.9.8	Date:	Design by:
Sheet 3 of 21		

MIMX8MQ6DVAJZAA



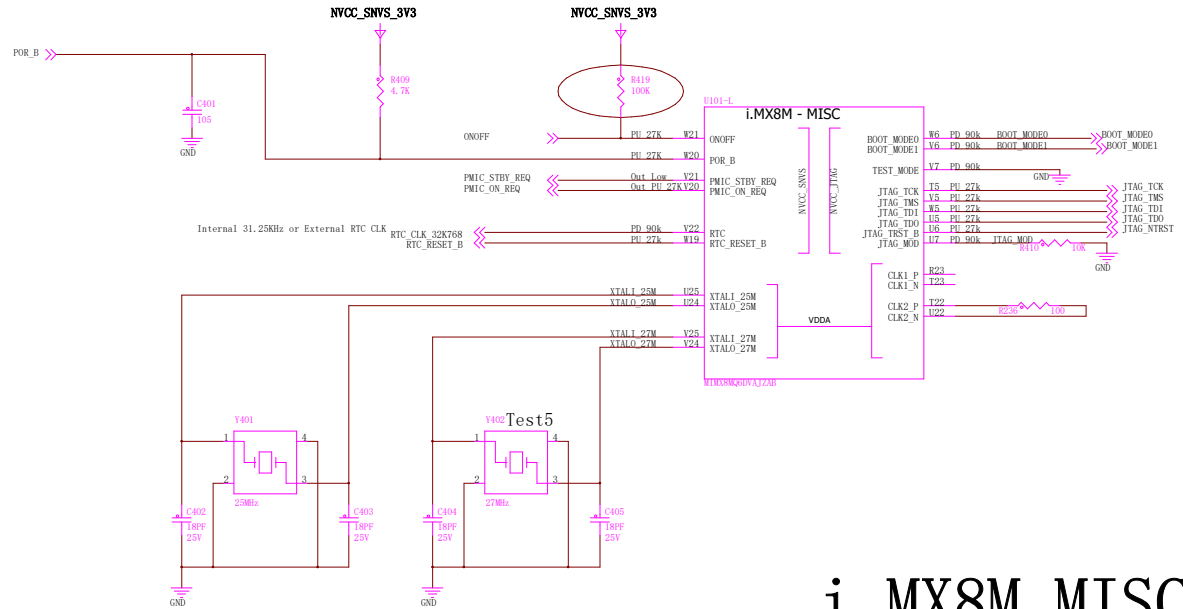
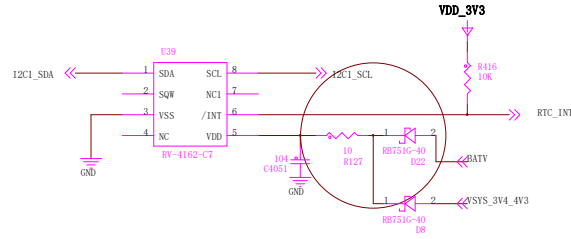
UART DBG



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		Sheet 5 of 21

RTC

JTAG Debug

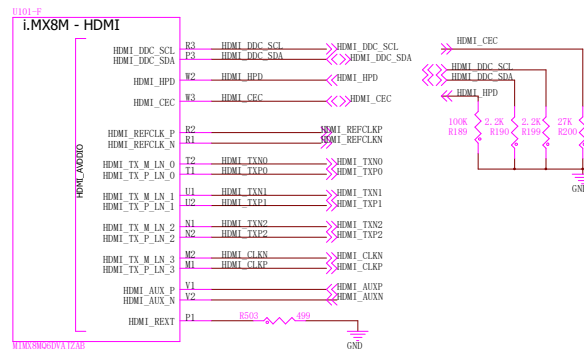
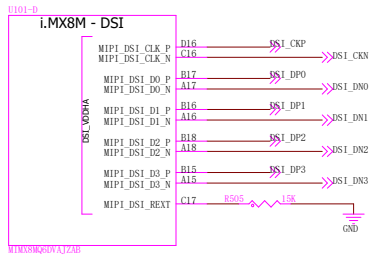
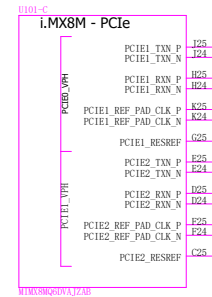
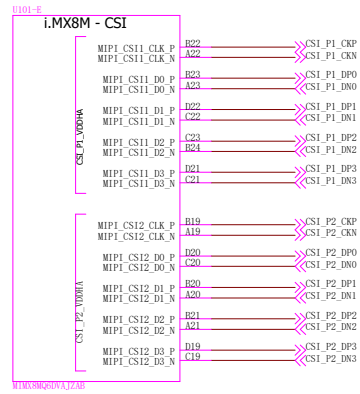


i.MX8M MISC

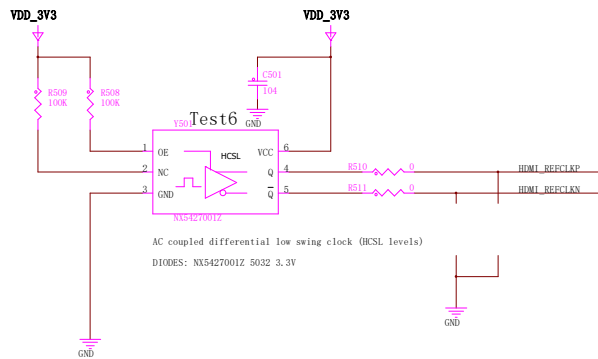
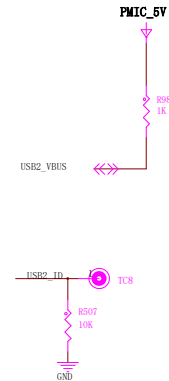
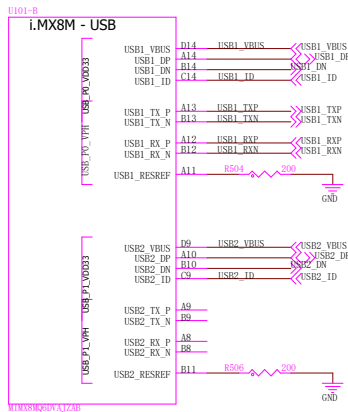
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Page Title: CPU MISC, RTC		
Rev: v0.9.8	Date:	Design by:
		Sheet 6 of 21

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



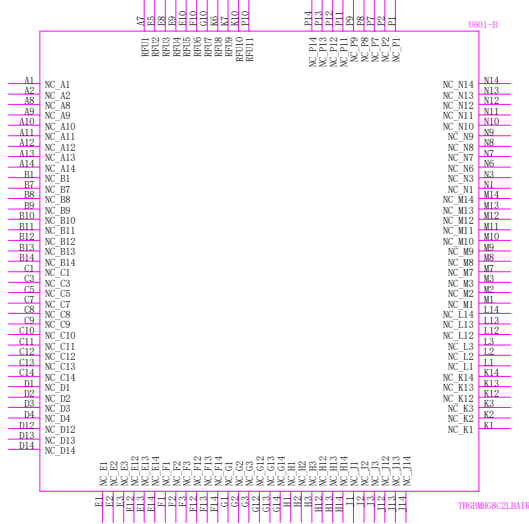
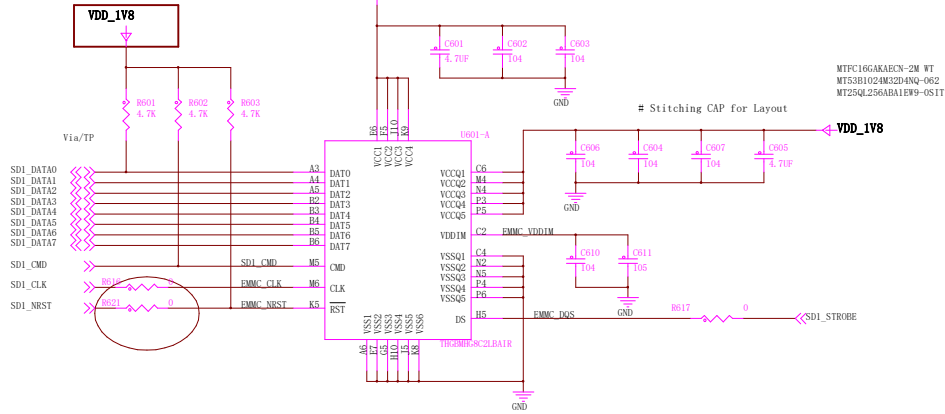
AC coupled differential low swing clock (HCSL levels)



Purism		
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Rev: v0.9.8	Date:	Design by:
Sheet 7		of 21

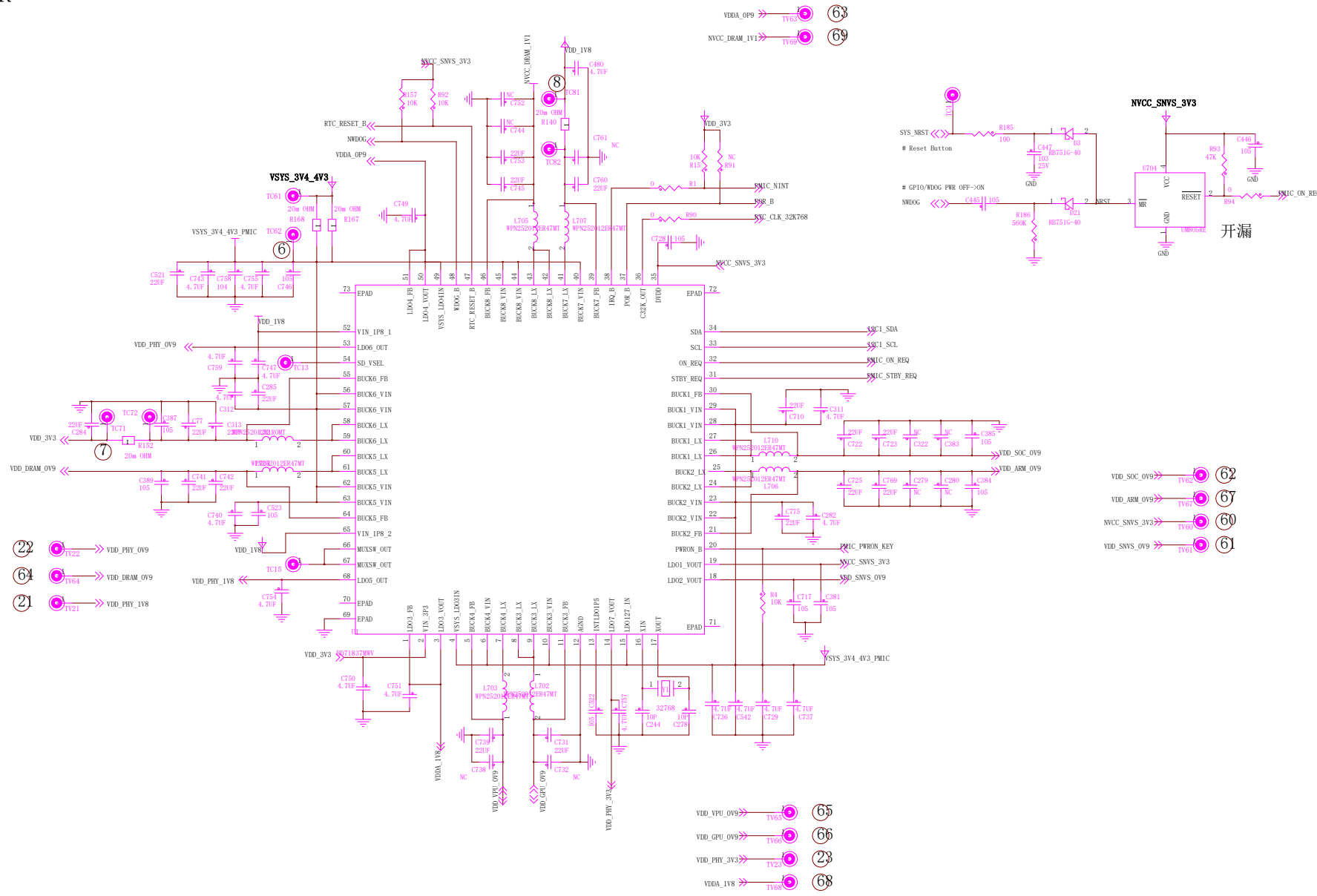
eMMC 5.0 Footprint

VDD_3V3
eMMC/TF co-Layout

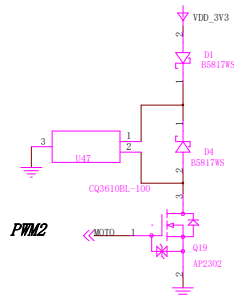
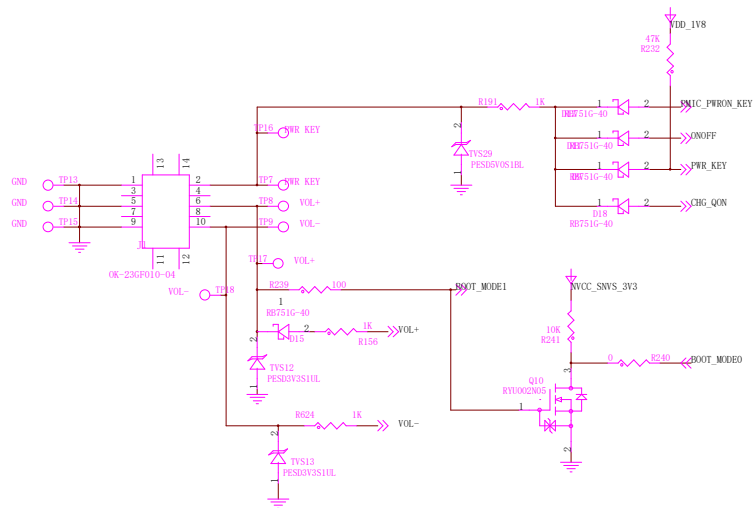


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		Sheet g of 21

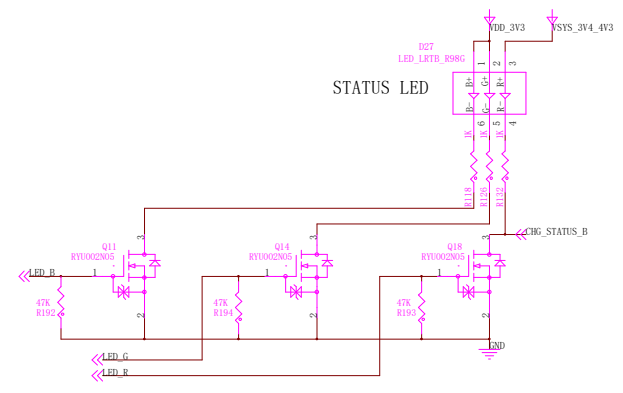
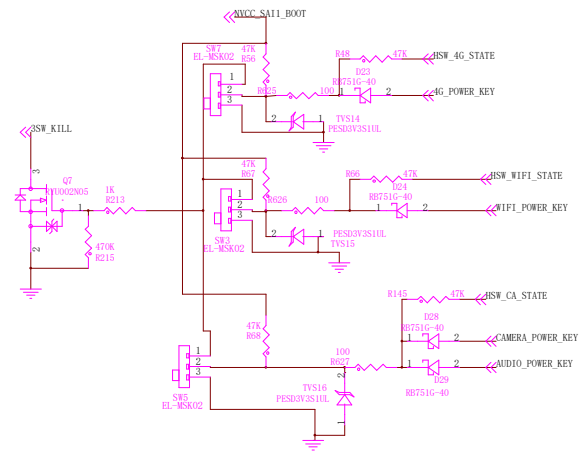
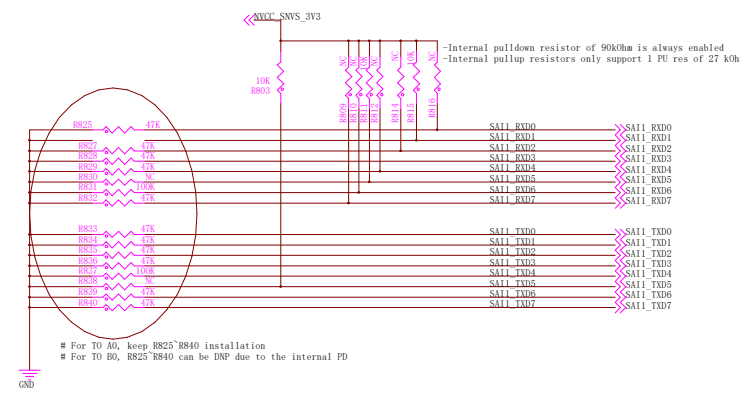
SYS PMIC/PWR



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Rev: v0.9.8	Date:	Design by:
		Sheet 9 of 21

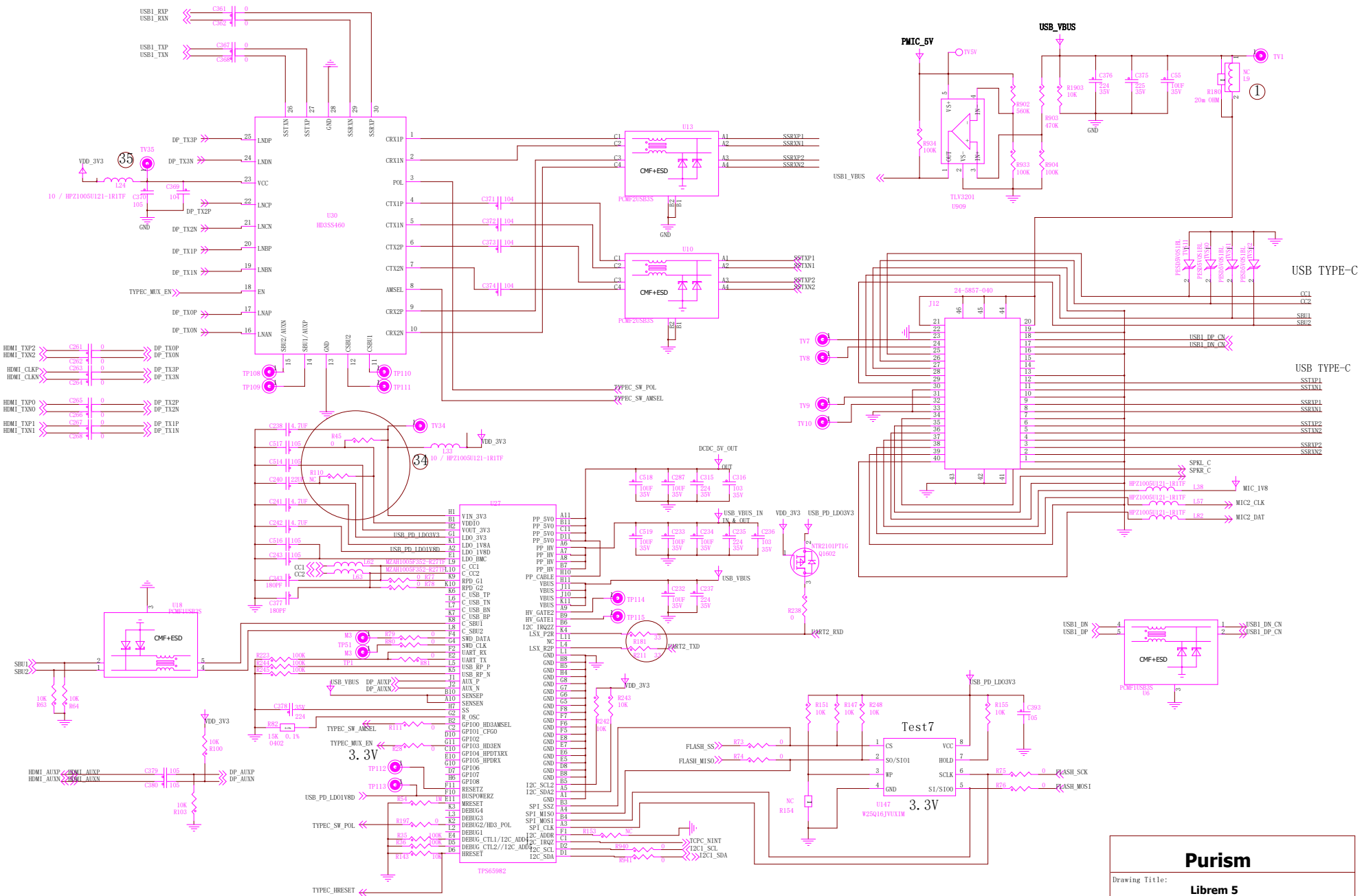


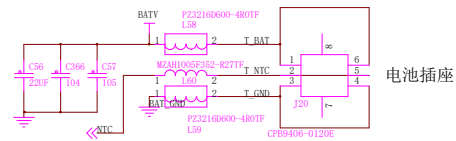
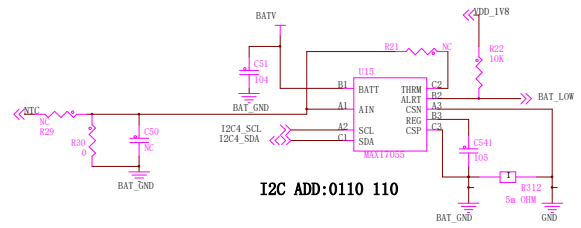
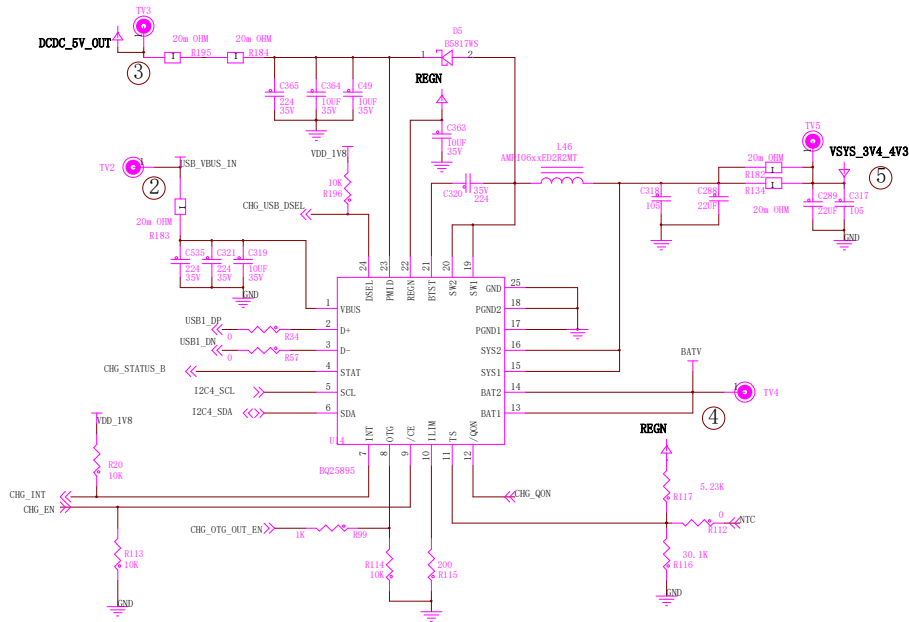
Boot Device: eMMC



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		Sheet 10 of 21

USB3.0/2.0 TYPE-C/HOST

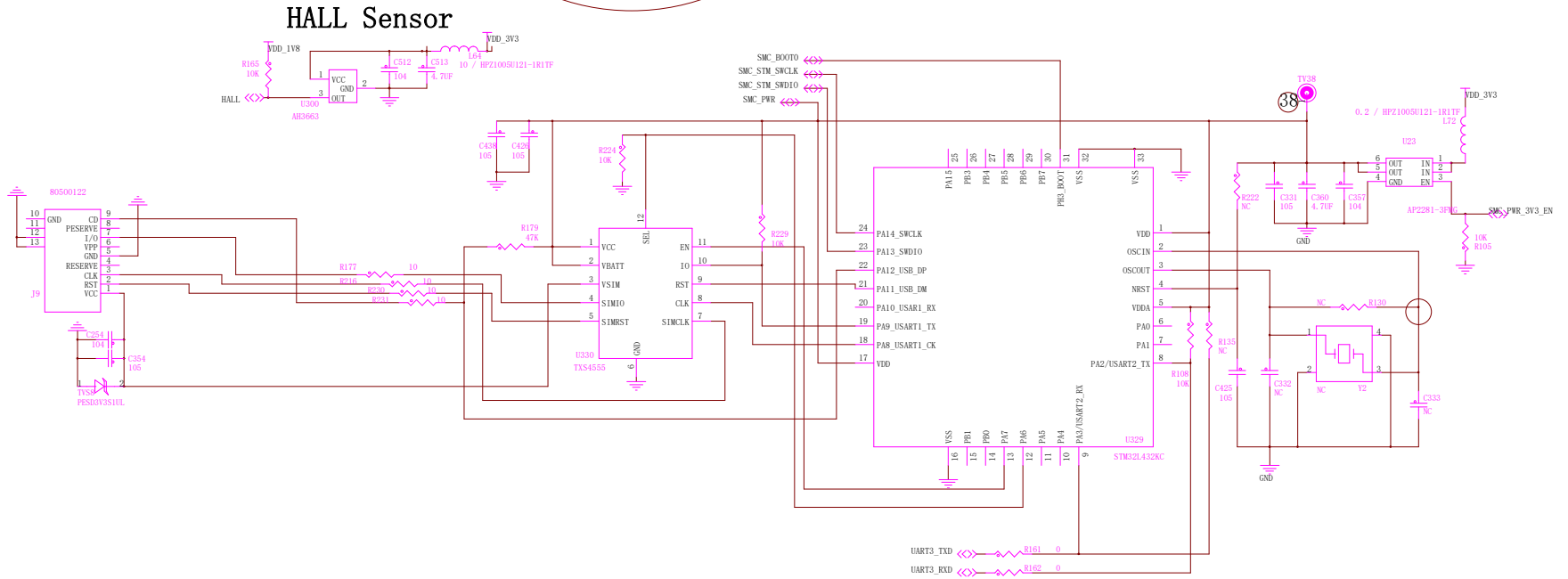
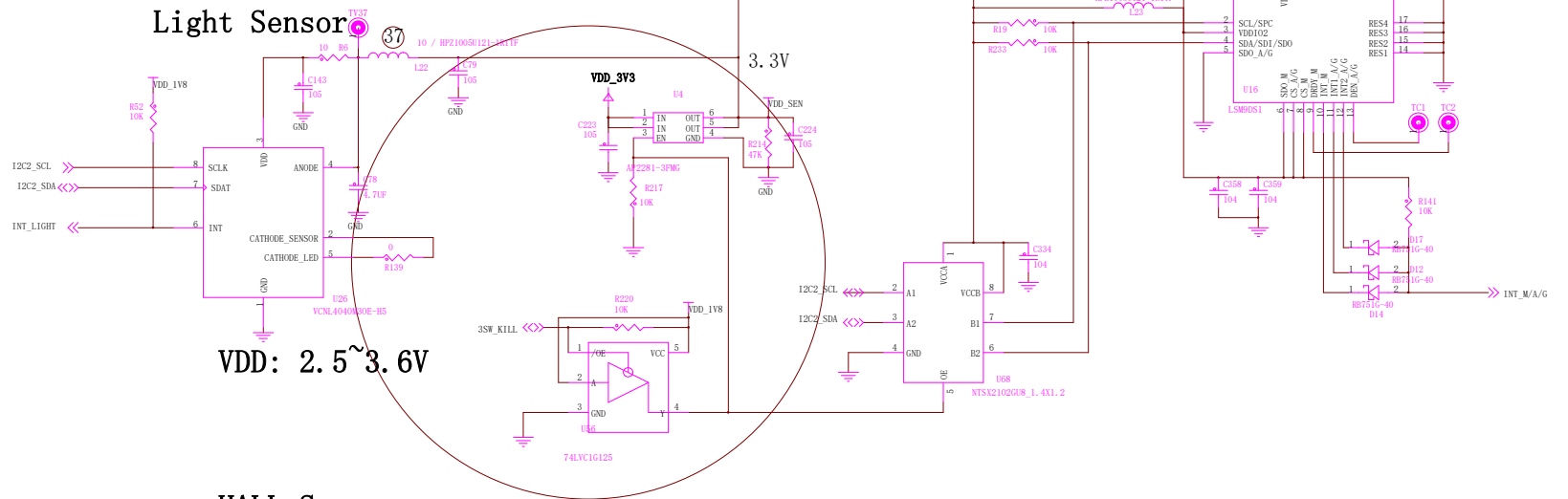




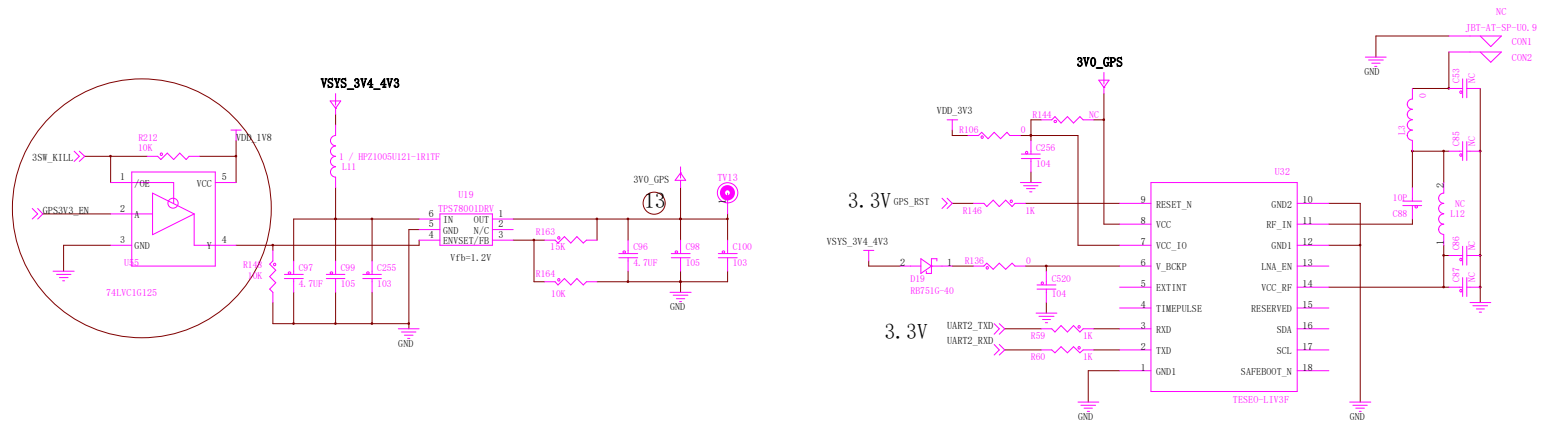
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Rev: v0.9.8	Date:	Design by:
		Sheet 12 of 21

Sensor

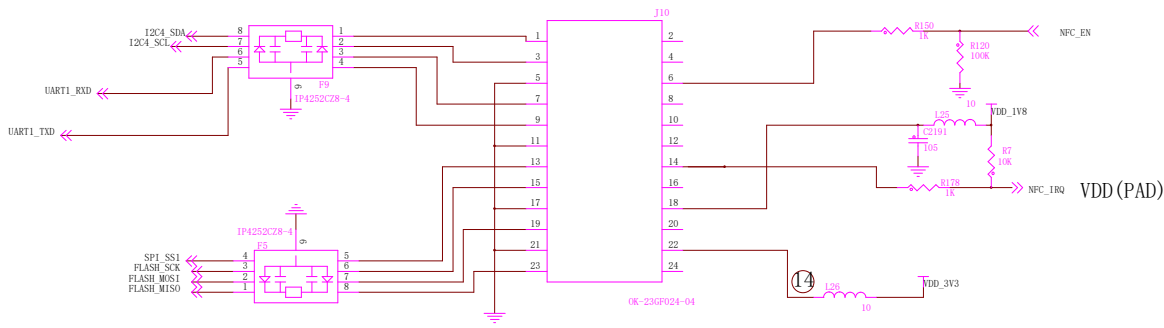
大于16V



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Rev: v0.9.8	Date:	Design by:
		Sheet 13 of 21

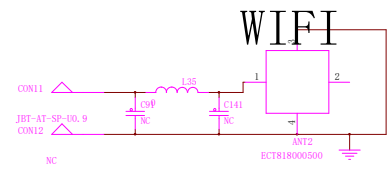
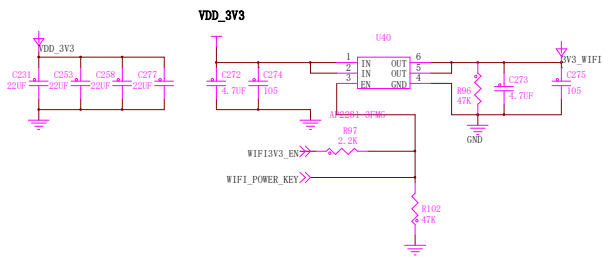
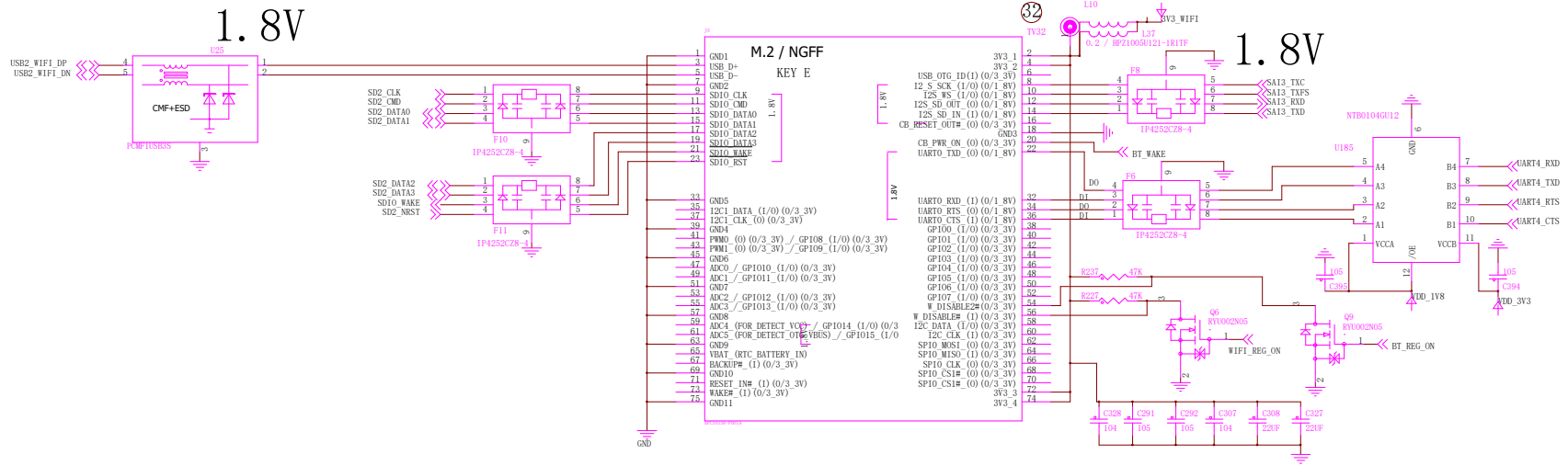


EXT CON

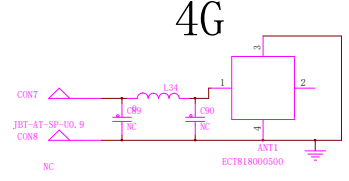
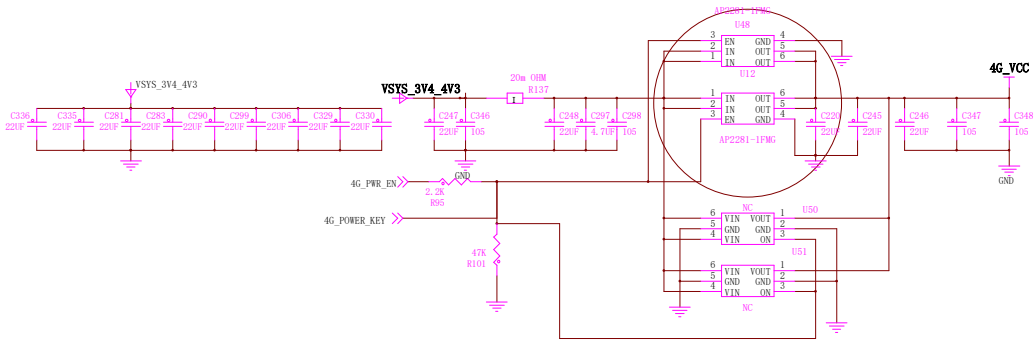
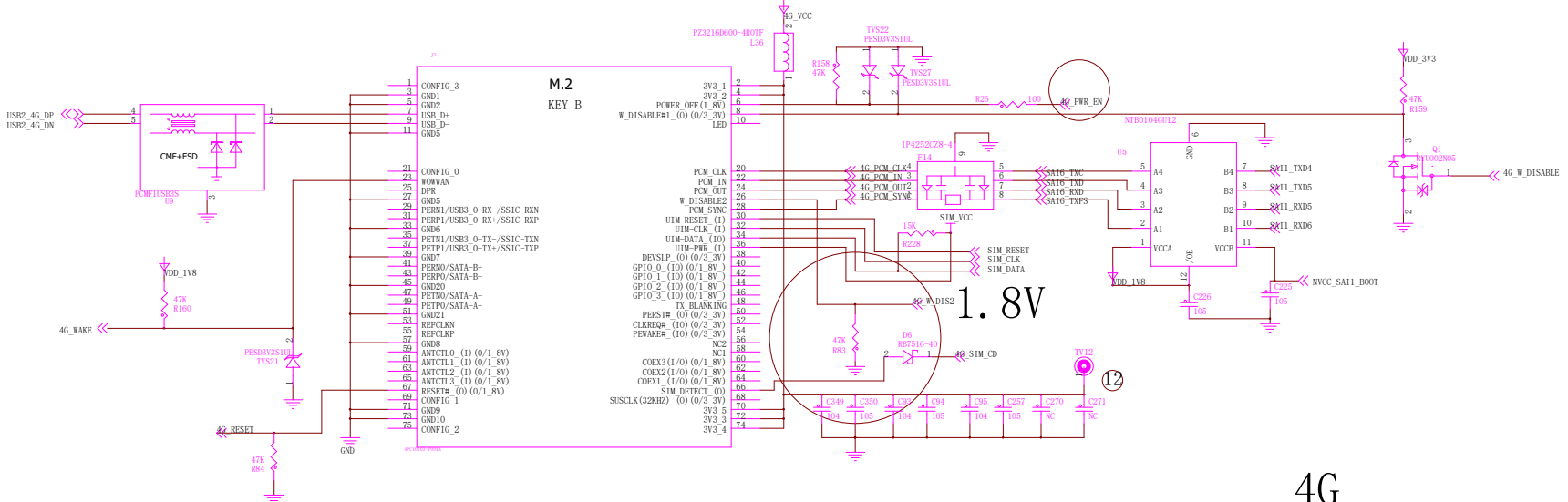


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Rev: v0.9.8	Date:	Design by:
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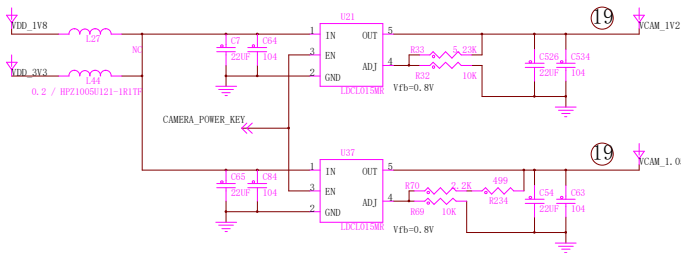
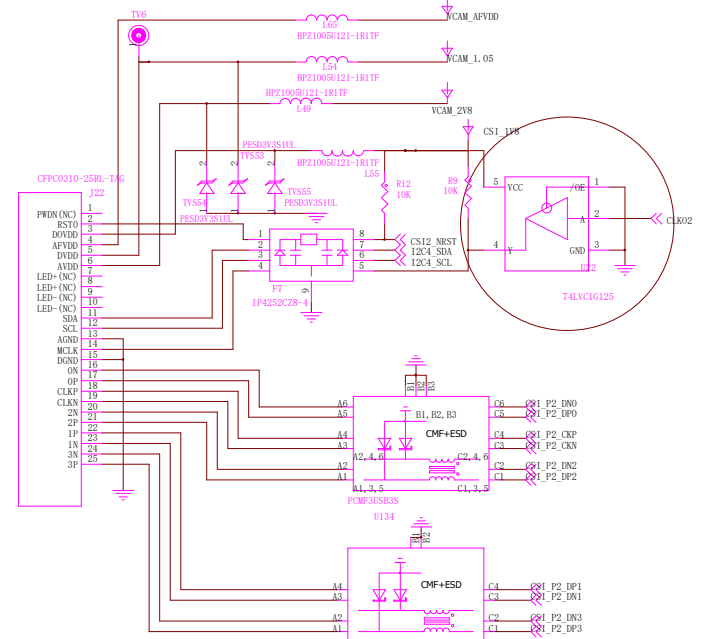
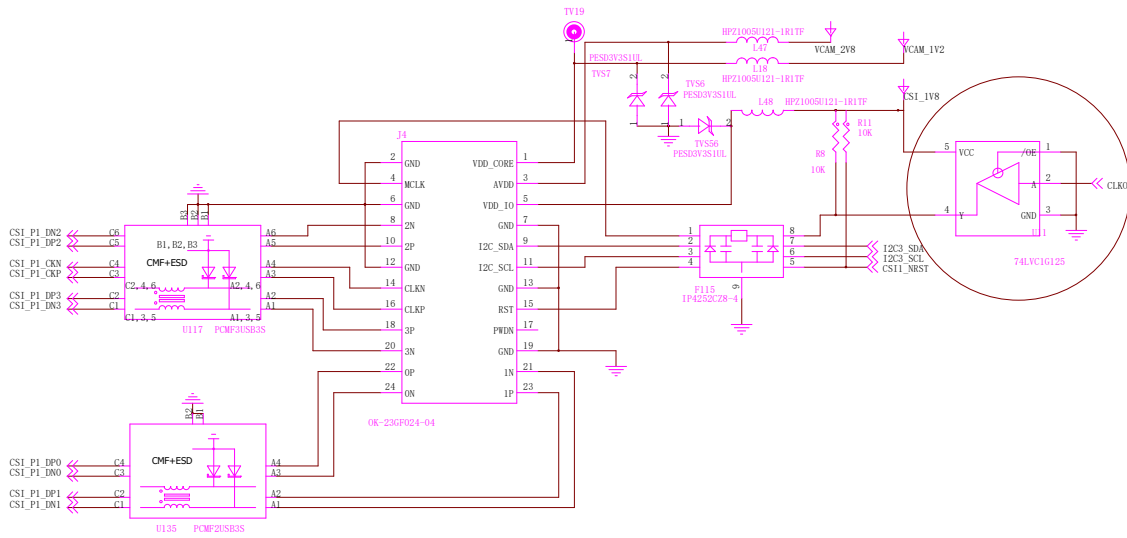
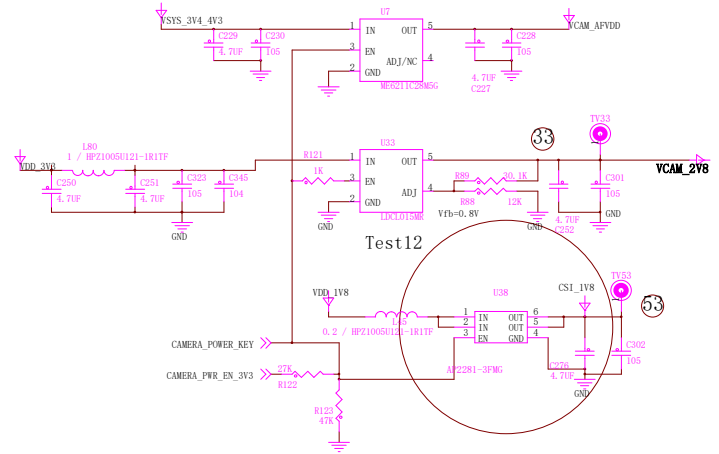
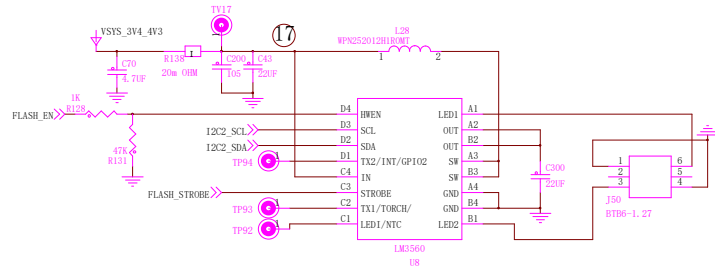
WiFi/BT 802.11a/b/g/n/ac + Bluetooth 4.1/ EDR



Purism		
Drawing Title: Librem 5		
Page Title: WiFi, BT		
Rev: v0.9.8	Date:	Design by:
		Sheet 15 of 21



Purism		
Drawing Title: Librem 5		
Page Title: 4G		
Rev: v0.9.8	Date:	Design by:
		Sheet 16 of 21



Purism

Drawing Title:

Librem 5

Page Title:

MIPI, DSI, CSI

Rev:

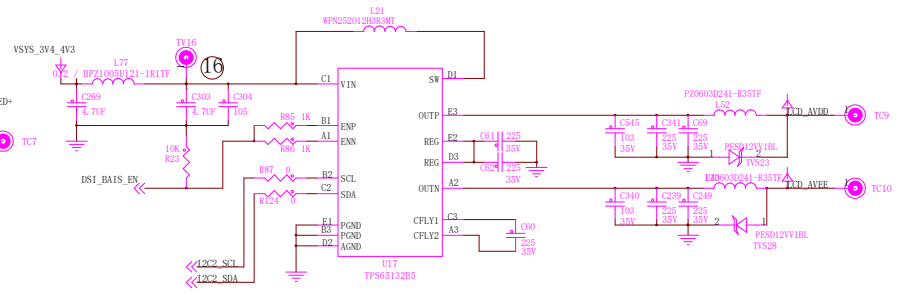
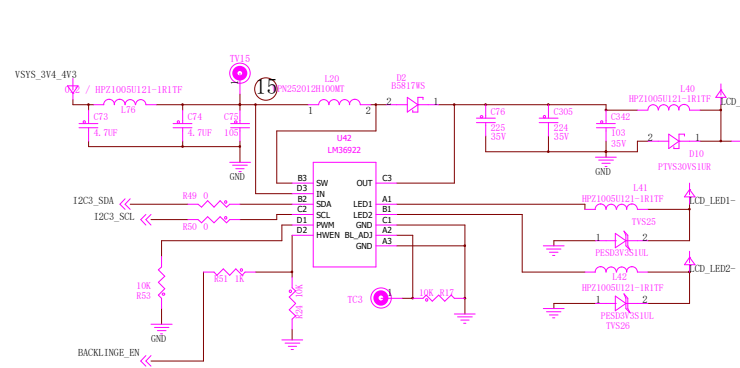
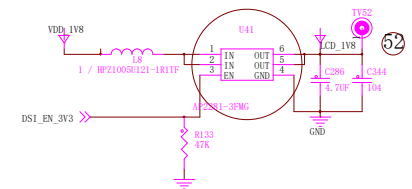
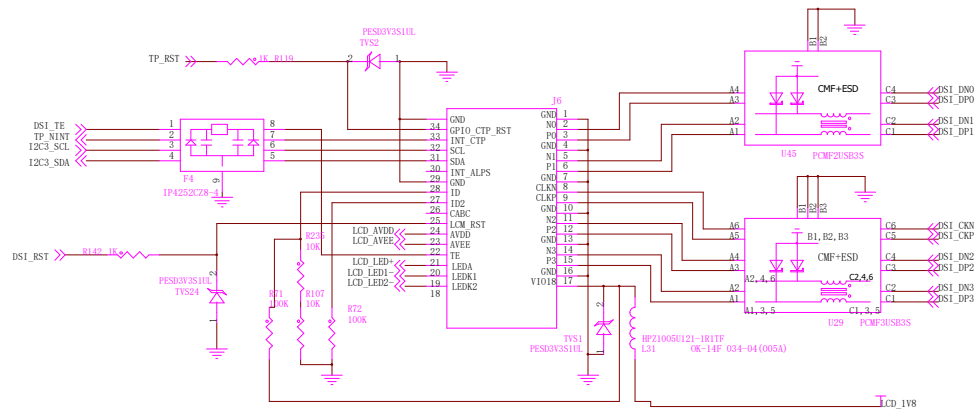
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v0.9.8

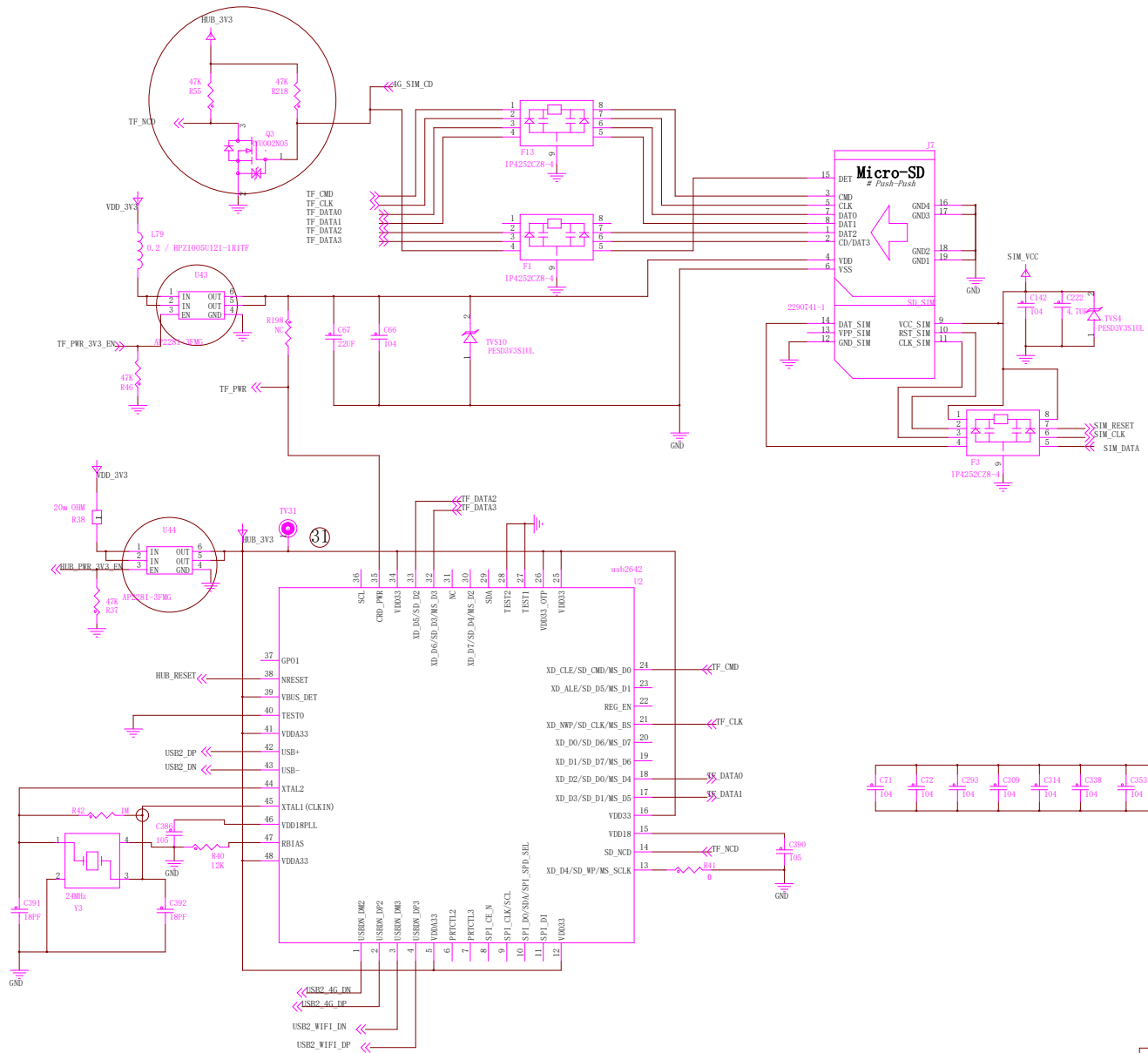
Sheet 17 of 21

DSI LCD IF



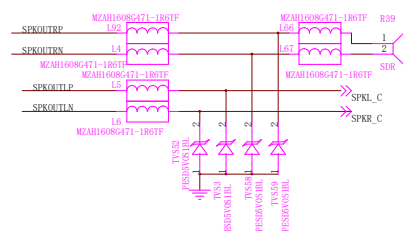
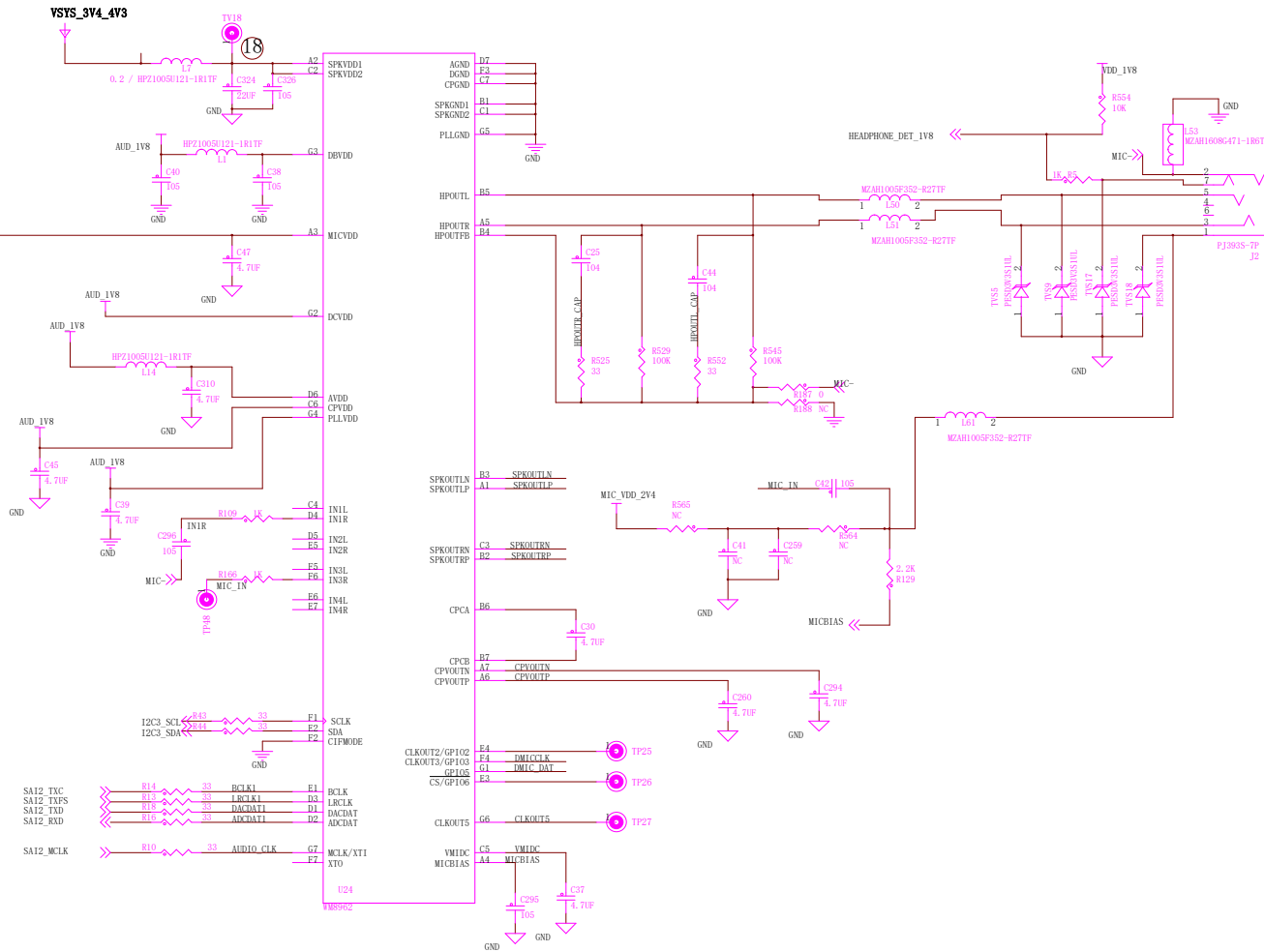
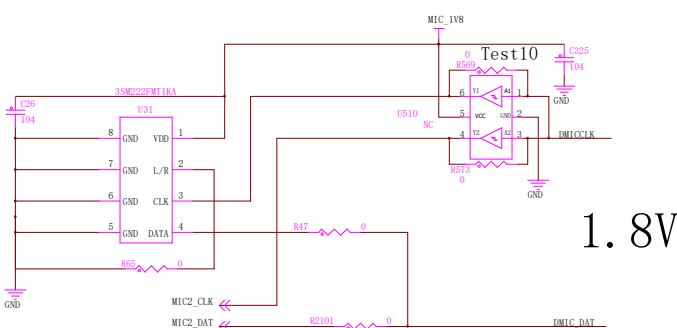
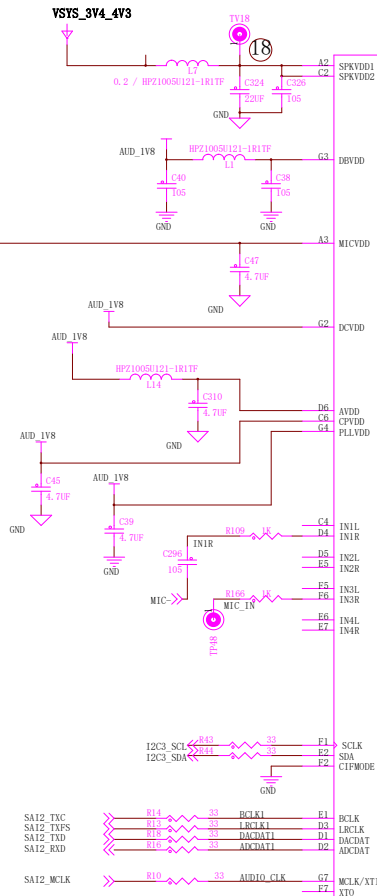
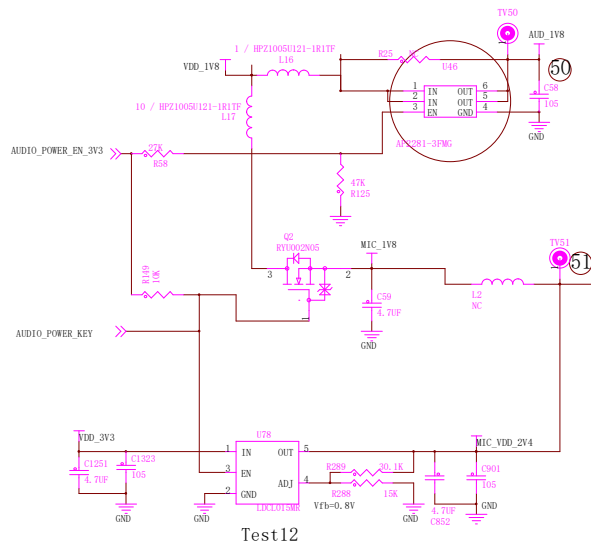
Purism		
Drawing Title: Librem 5		
Page Title: MICROSD, MOTO		
Rev: v0.9.8	Date:	Design by:
Sheet 18 of 21		

USB HUB + SDIO BRIDGE

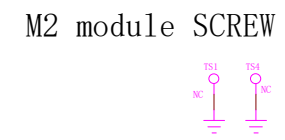
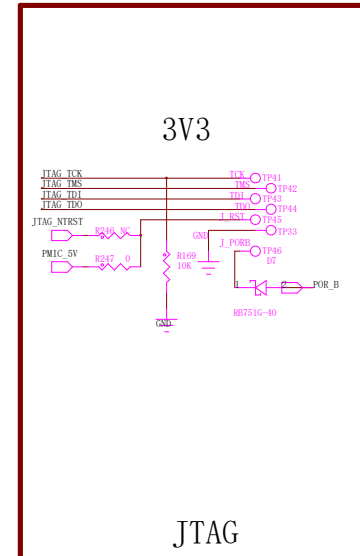
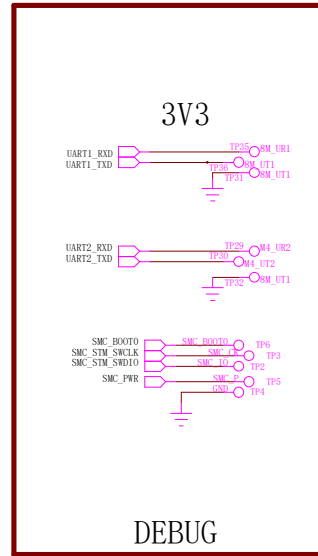
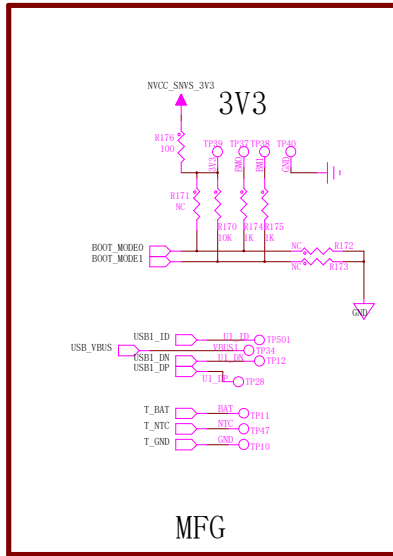


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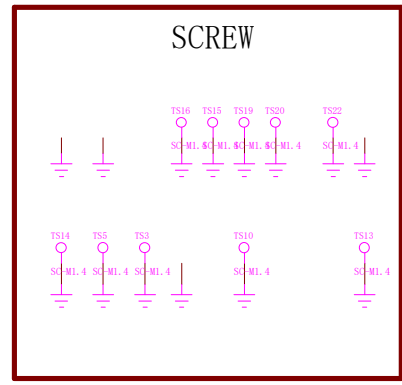
Drawing Title: Librem 5		
Page Title: USB HUB		
Rev: v0.9.8	Date:	Design by:
Sheet 19		of 21



Purism		
Drawing Title: Librem 5		
Page Title: AUDIO		
Rev: v0.9.8	Date:	Design by:
		Sheet 20 of 21

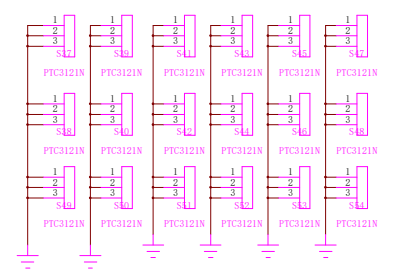
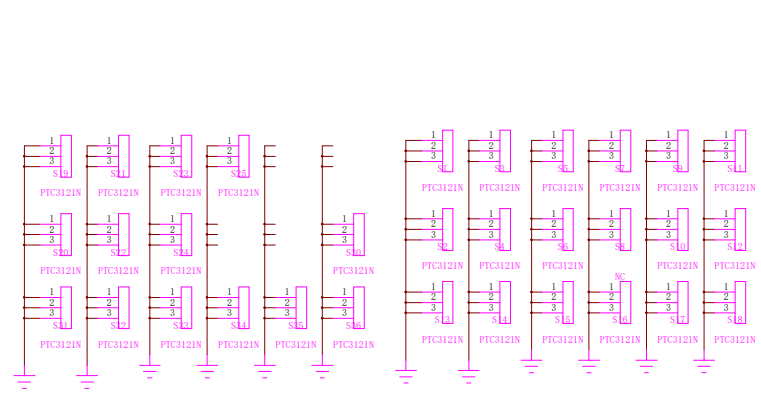


BMODE[1:0]	BOOT TYPE
00	Boot From Fuses
01	Serial Downloader
10	Internal Boot (Development)
11	Reserved



Shielding Case

Shielding Case Hold



Purism		
Drawing Title: Librem 5		
Page Title: DEBUG		
Rev: v0.9.8	Date:	Design by:
		Sheet 21 of 21