

A

- 1. CATLOGUE
- 2. POWER TREE
- 3. Block Diagramm
- 4. POWER
- 5. SOC PWR1
- 6. SOC PWR2
- 7. SOC PWR3
- 8. SOC HS INTERFACE
- 9. SOC IO INTERFACE
- 10. SOC RF INTERFACE
- 11. SOC GND
- 12. Hi6421 LDO
- 13. Hi6421 BUCK AND Hi6423
- 14. Hi6421 DIGITAL INTERFACE
- 15. HI6422V300
- 16. UFS/LPDDR4X
- 17. USB SWITCH/USB HUB
- 18. USB TYPEC
- 19. USB TYPEA
- 20. HDMI
- 21. IO CONN
- 22. WIFI/BT
- 23. GPS
- 24. KEY
- 25. SD CARD&JTAG
- 26. PCIE SWITCH 1
- 27. PCIE SWITCH 2
- 28. PCIE M.2
- 29. PCIE MINI
- 30. ETHERNET/CLK DRIVER
- 31. DEBUG USB/LEVEL SHIFT
- 32. CAN
- 33. USER LED

B

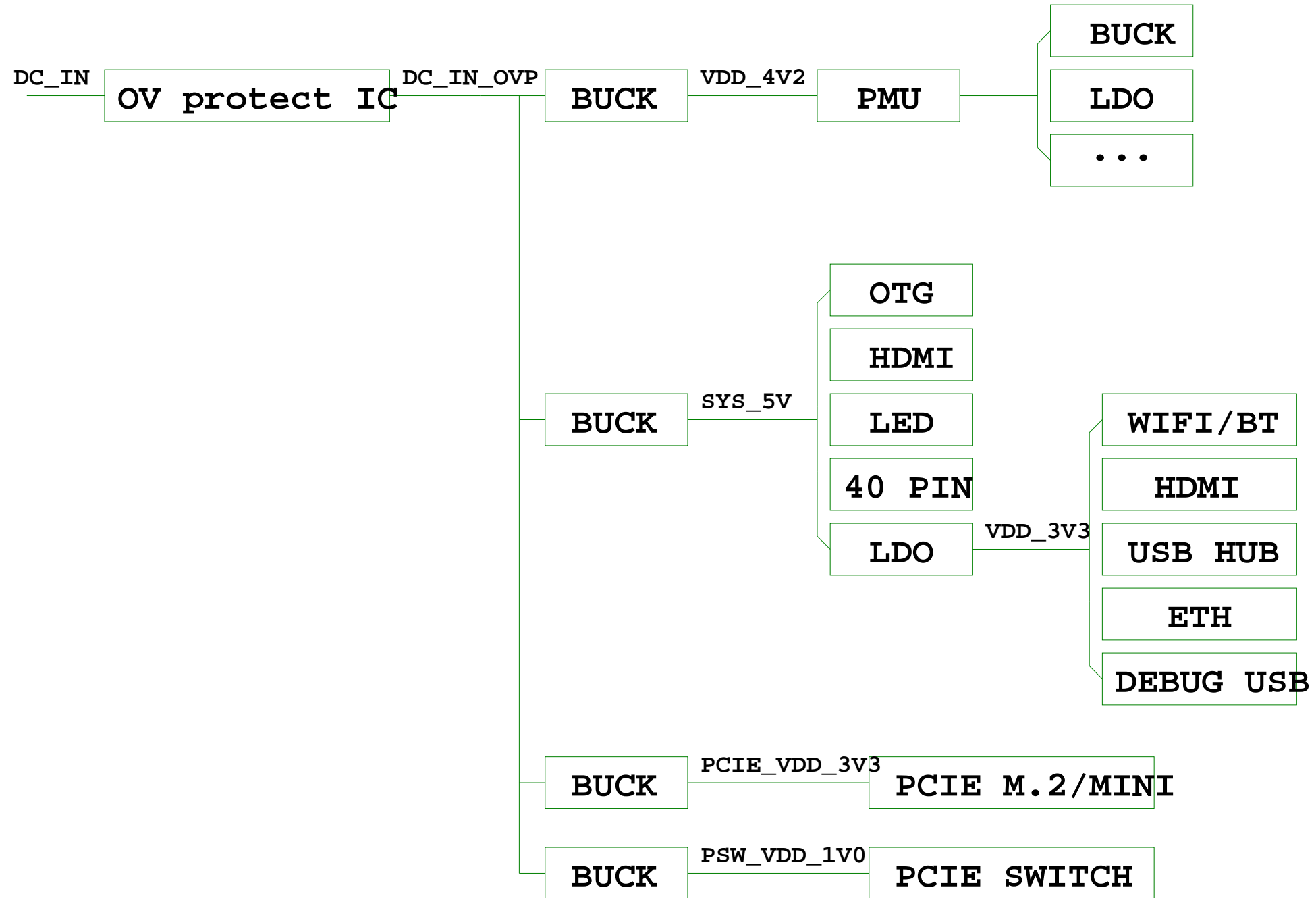
C

D

The type and specification of the components refer to the BOM

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				HUAWEI TECH CO.,LTD.	

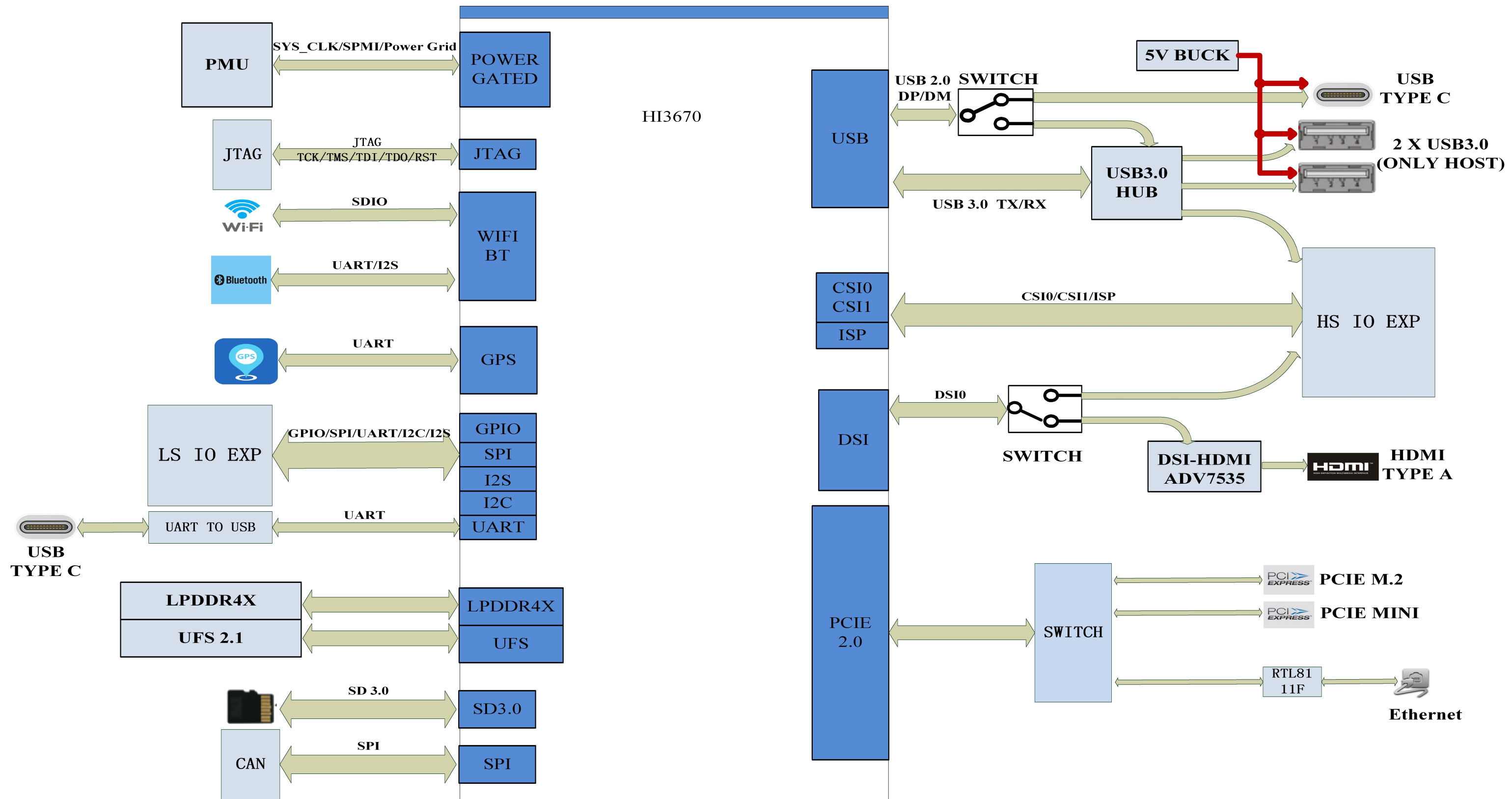
2. Power Tree



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3. Block Diagramm

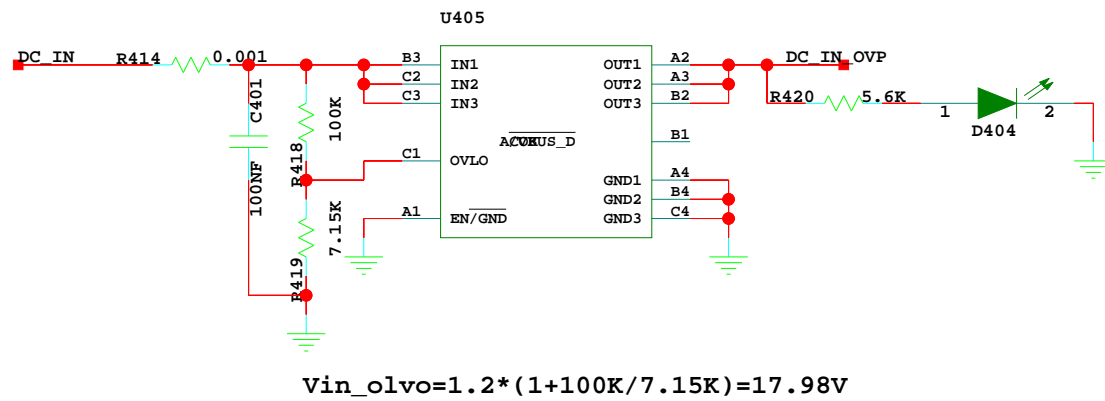
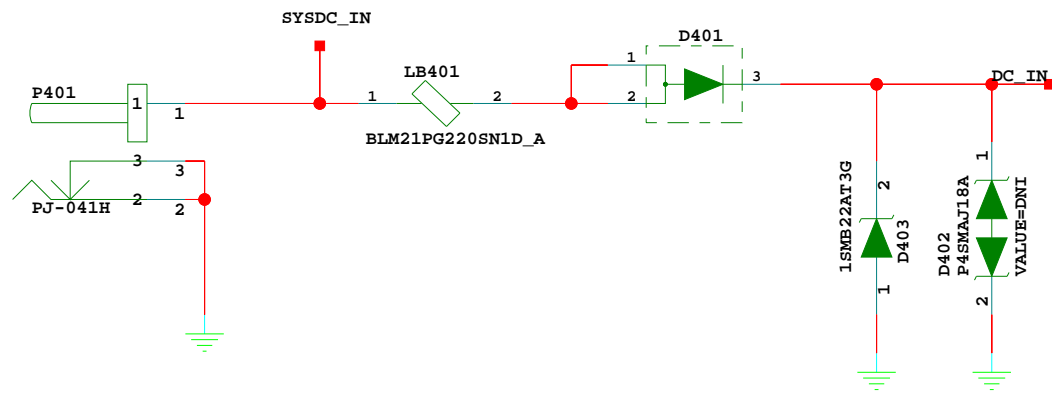


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		VER	PART_NUMBER	SHEET 3 OF 33	
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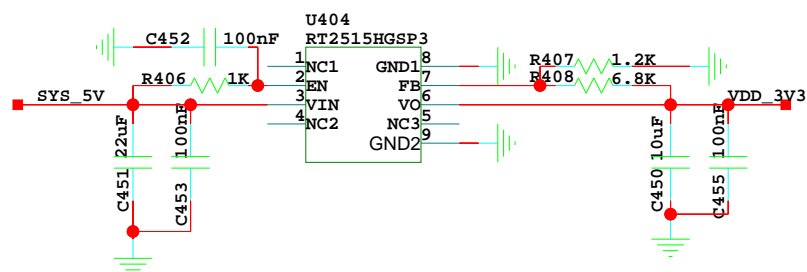
4. 12V DC_IN

DC 8-18V Input

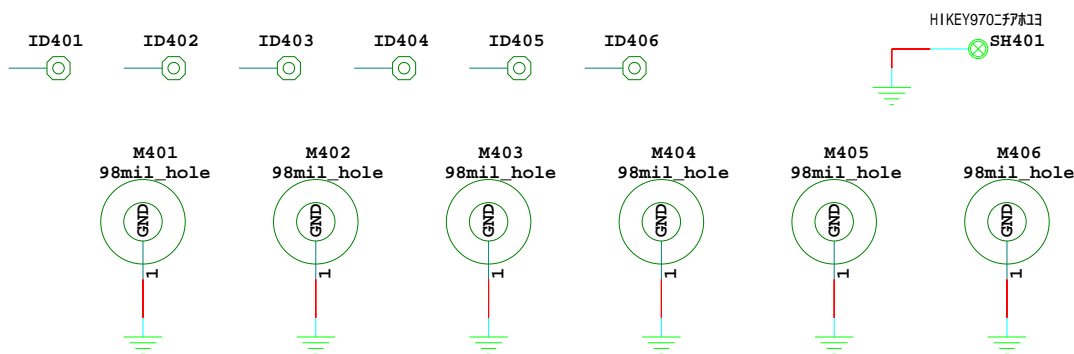


$$V_{in_olvo} = 1.2 * (1 + 100K / 7.15K) = 17.98V$$

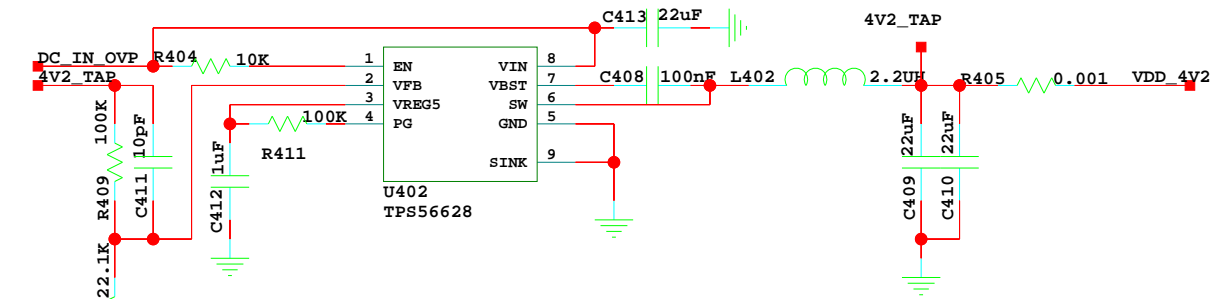
5VDC to 3V3DC



$$V_{out} = 0.5 * (1 + 6.8K / 1.2K) = 3.33V$$

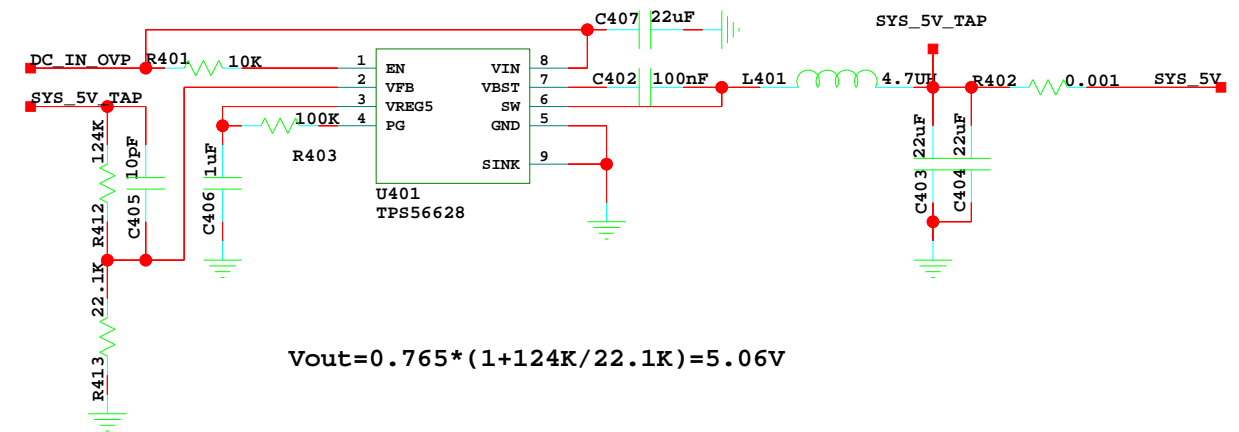


DC_IN 12V0 To 4.2V 5A



$$V_{out} = 0.765 * (1 + 100K / 22.1K) = 4.23V$$

DC_IN 12V0 To 5V 4A

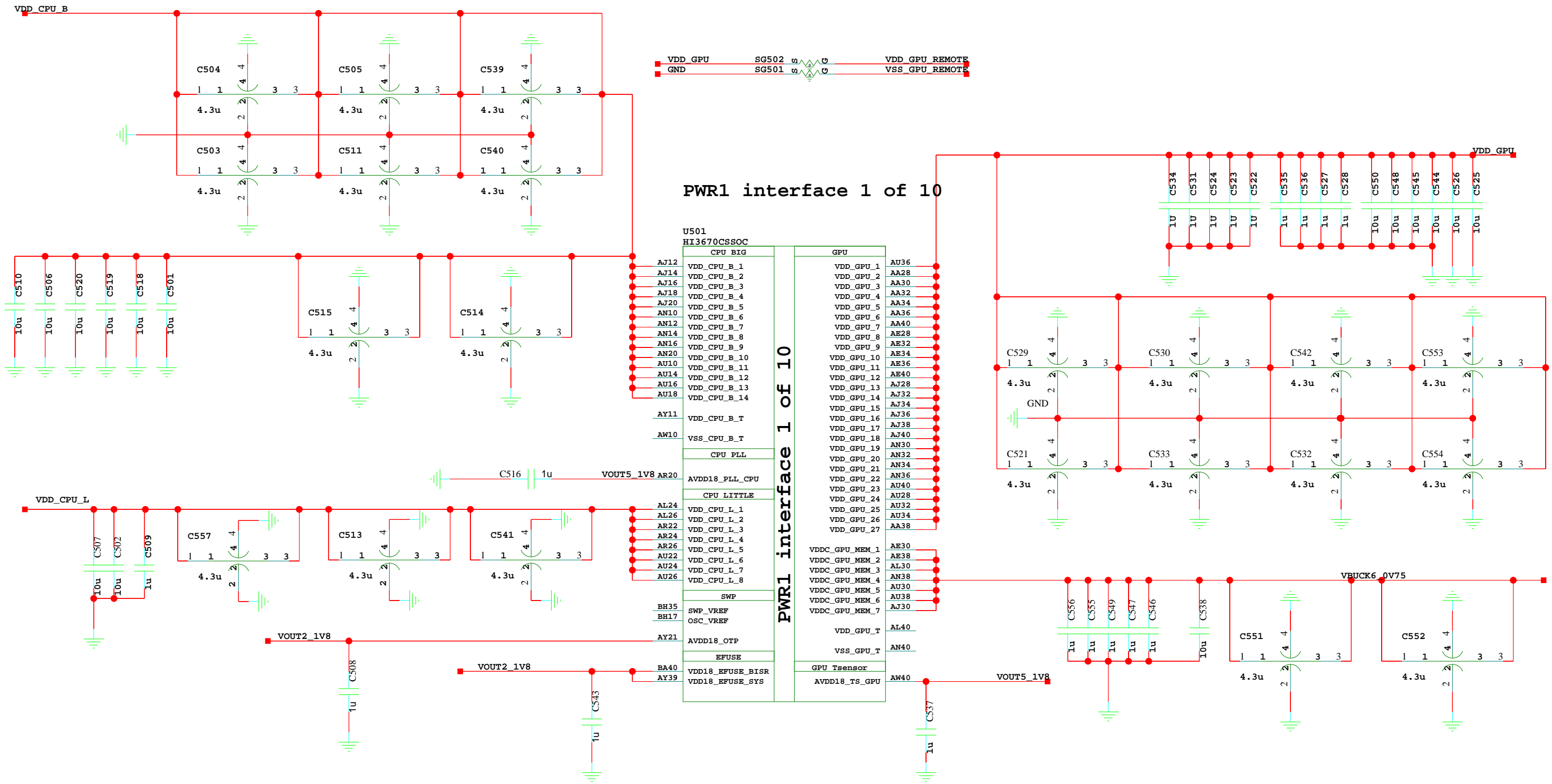
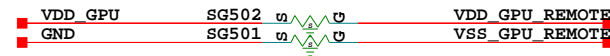
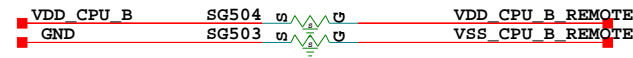


$$V_{out} = 0.765 * (1 + 124K / 22.1K) = 5.06V$$

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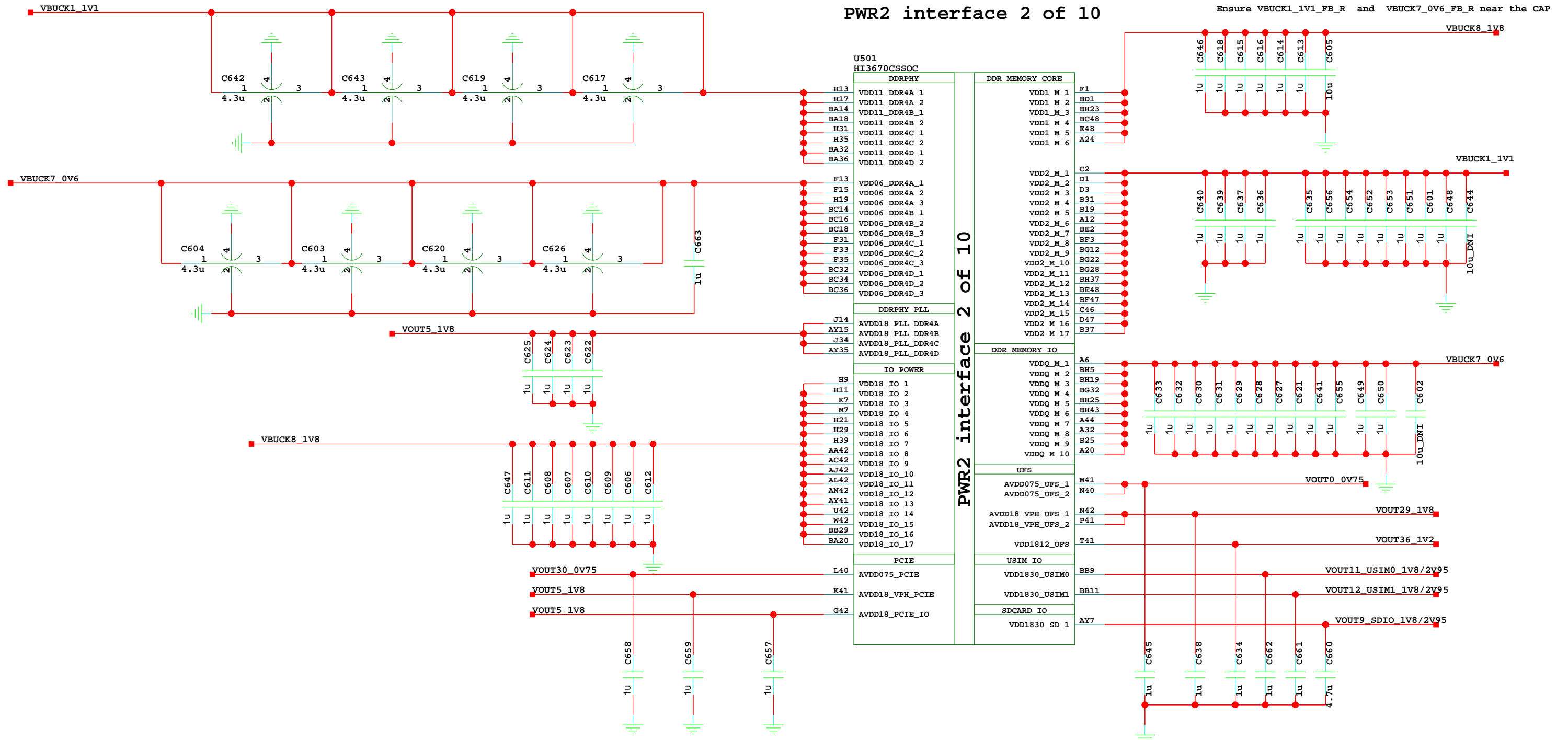
5.SOC PWR1



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Hikey970					
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6.SOC PWR2

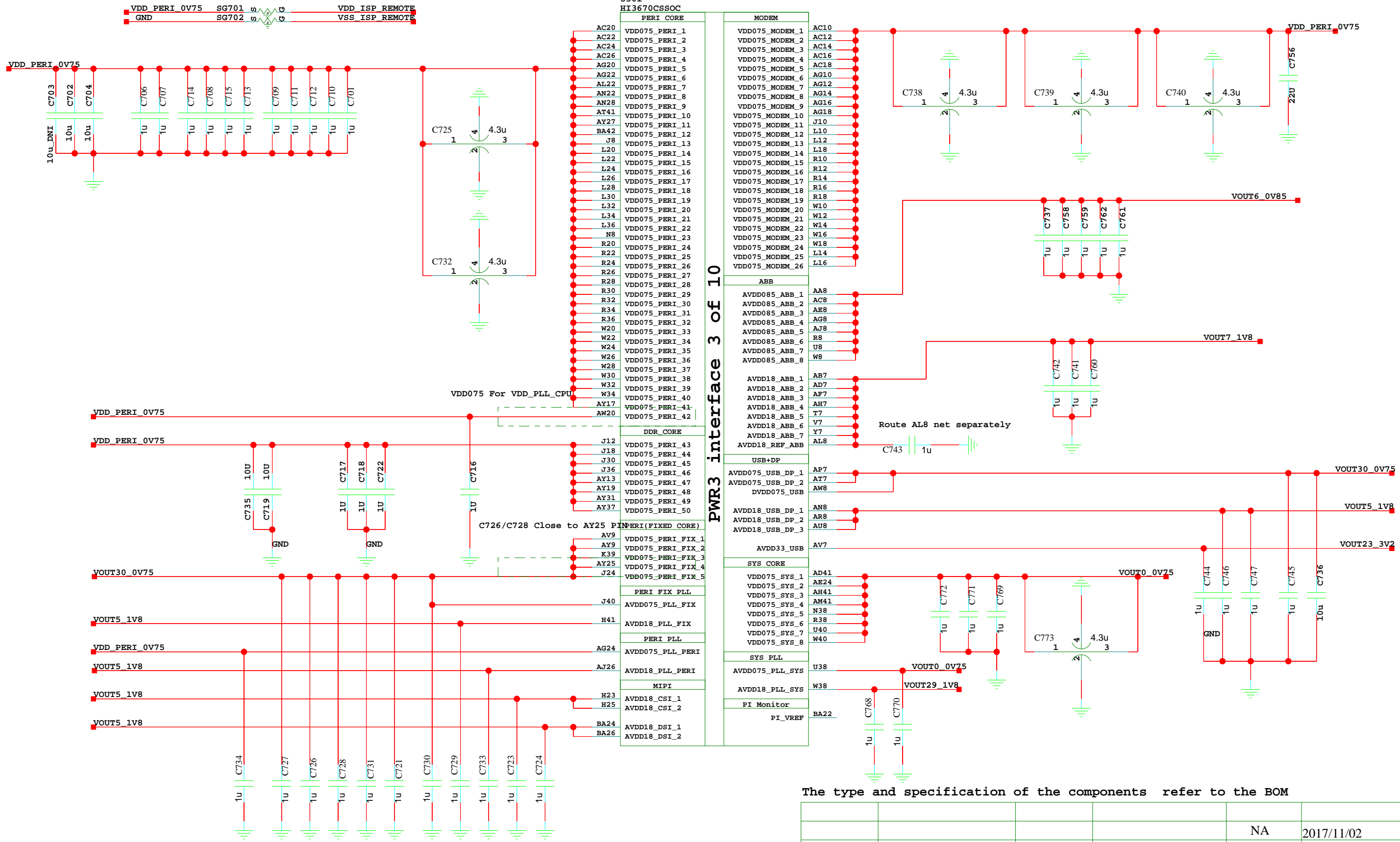


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		VER	PART_NUMBER	SHEET 6	OF 33
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7.SOC PWR3

PWR3 interface 3 of 10

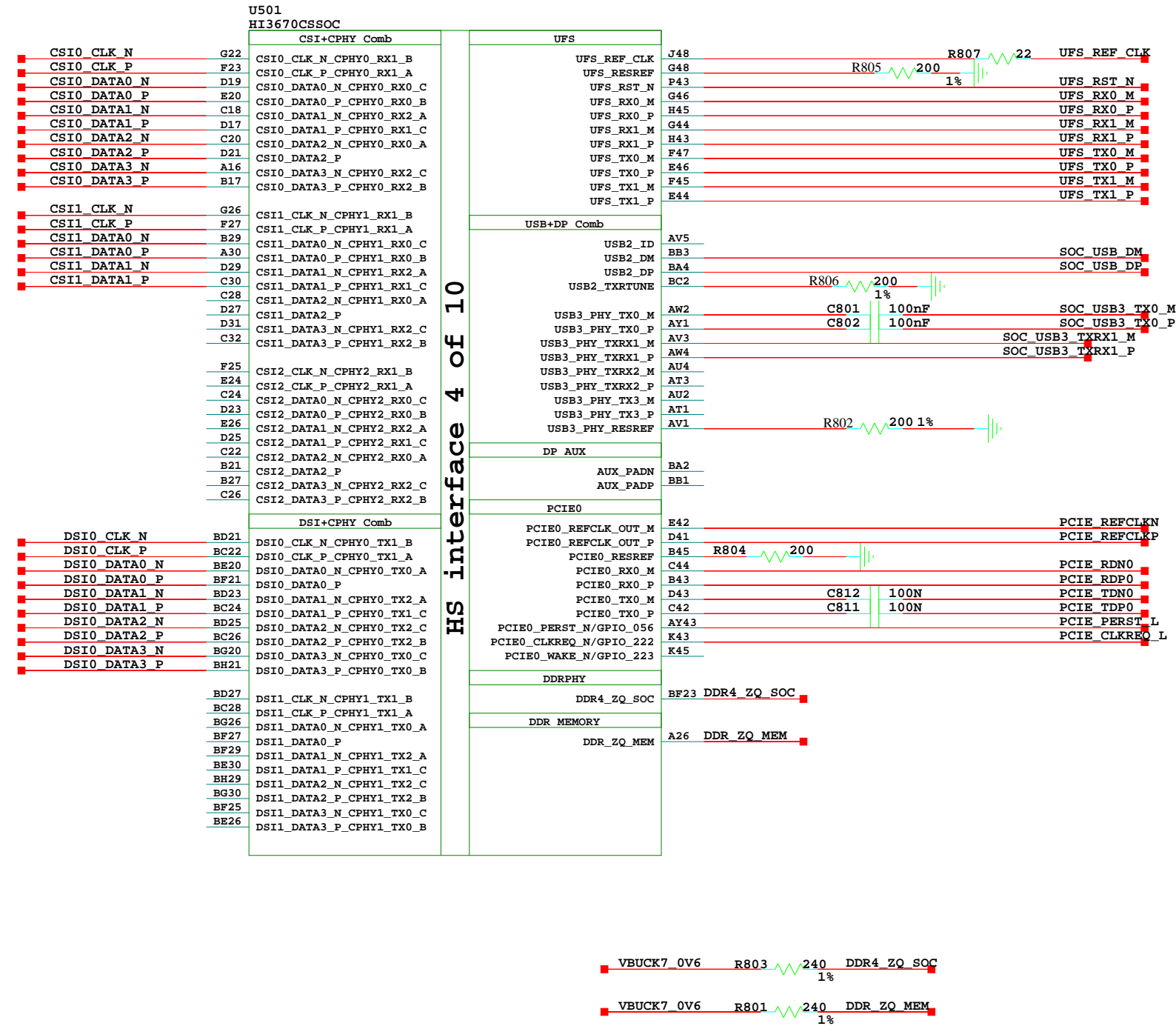


PWR3 interface 3 of 10

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8.SOC HS INTERFACE



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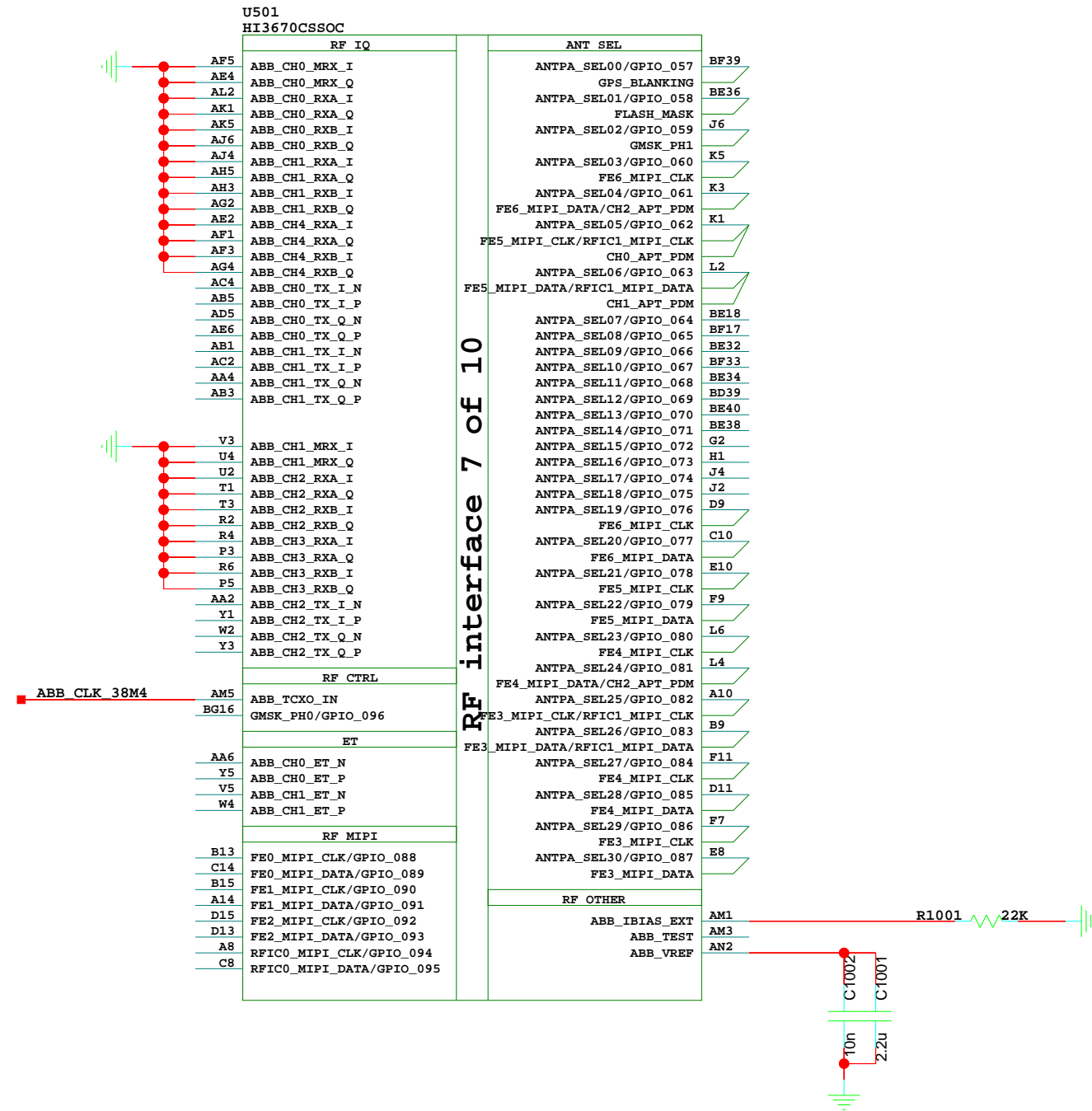
9.SOC IO INTERFACE



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REVIEWED					
		VER	PART_NUMBER	SHEET 9	OF 33
HUAWEI TECH CO.,LTD.					

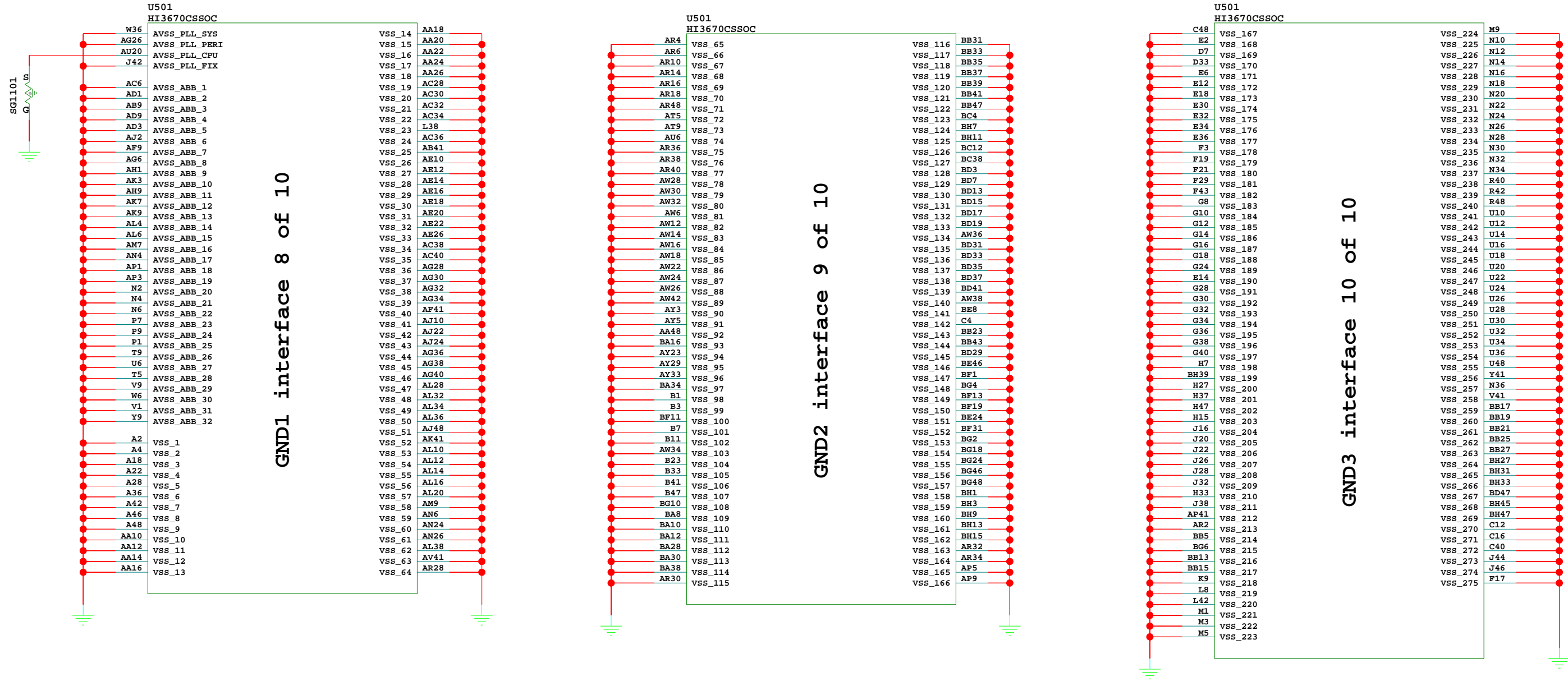
10.SOC RF INTERFACE



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		VER	PART_NUMBER	SHEET 10	OF 33
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11.SOC GND

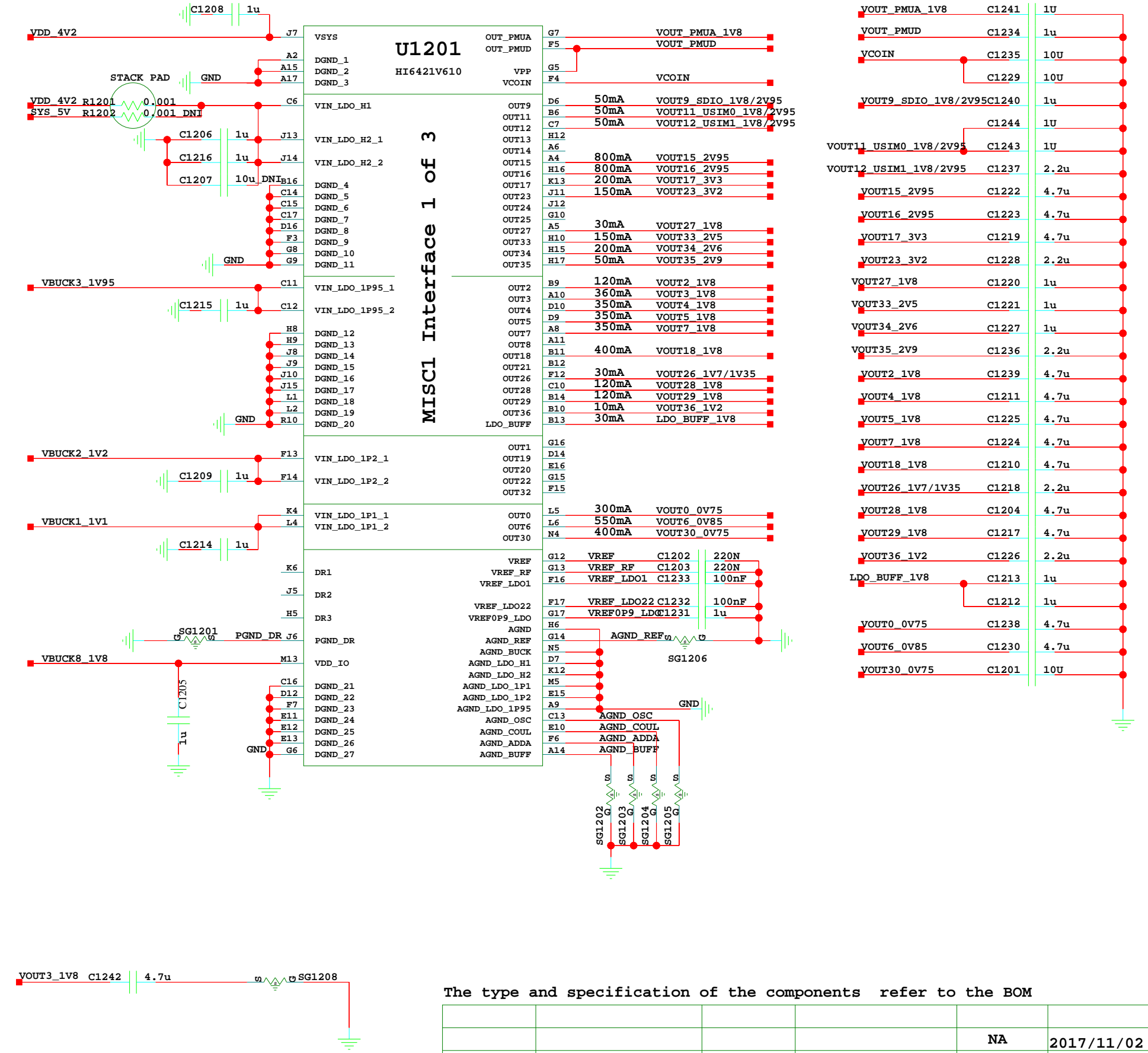


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		VER	PART_NUMBER	SHEET 11 OF 33	
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12. Hi6421 LDO

NUM	Vol	Current	Function
LDO0	0.75	300	SOC:UFS,SYS,PLL_SYS
LDO1	1.09	350	
LDO2	1.8	120	SOC_EFUSE&HISEE
LDO3	1.8	360	HDMI
LDO4	1.85	350	40pin CONNECTOR
LDO5	1.8	350	SOC 1.8V AVDD
LDO6	0.85	550	SOC:AVDD085_ABB
LDO7	1.8	350	SOC:AVDD18_ABB
LDO8	1.8	250	
LDO9	1.8	50	SOC SDIO 1.8V
LDO11	1.8/2.95	50	
LDO12	1.8/2.95	50	
LDO13	2.8	150	
LDO14	2.85	50	
LDO15	2.95	800	UFS_VCC
LDO16	2.95	800	SDCARD VDD
LDO17	3.3	200	USB HUB
LDO18	1.8	400	PERI IO
LDO19	1.2	400	
LDO20	1.1	400	
LDO21	1.8	180	
LDO22	1.09	350	
LDO23	3.2	150	USB 2.0 PHY
LDO24	2.8	200	
LDO25	2.85	150	
LDO26	1.7	30	38.4MHZ XO CORE
LDO27	1.8	30	HKADC,XOADC
LDO28	1.8	120	CLK DRIVER
LDO29	1.8	120	VPH_UFS,PLL_SYS
LDO30	0.75	400	FIX 0.75 For SOC
LDO32	1.1	400	
LDO33	2.5	150	PCIE SWITCH VDD25
LDO34	2.6	200	GPS
LDO35	2.9	50	
LDO36	1.2	10	UFS refclk/rst IO

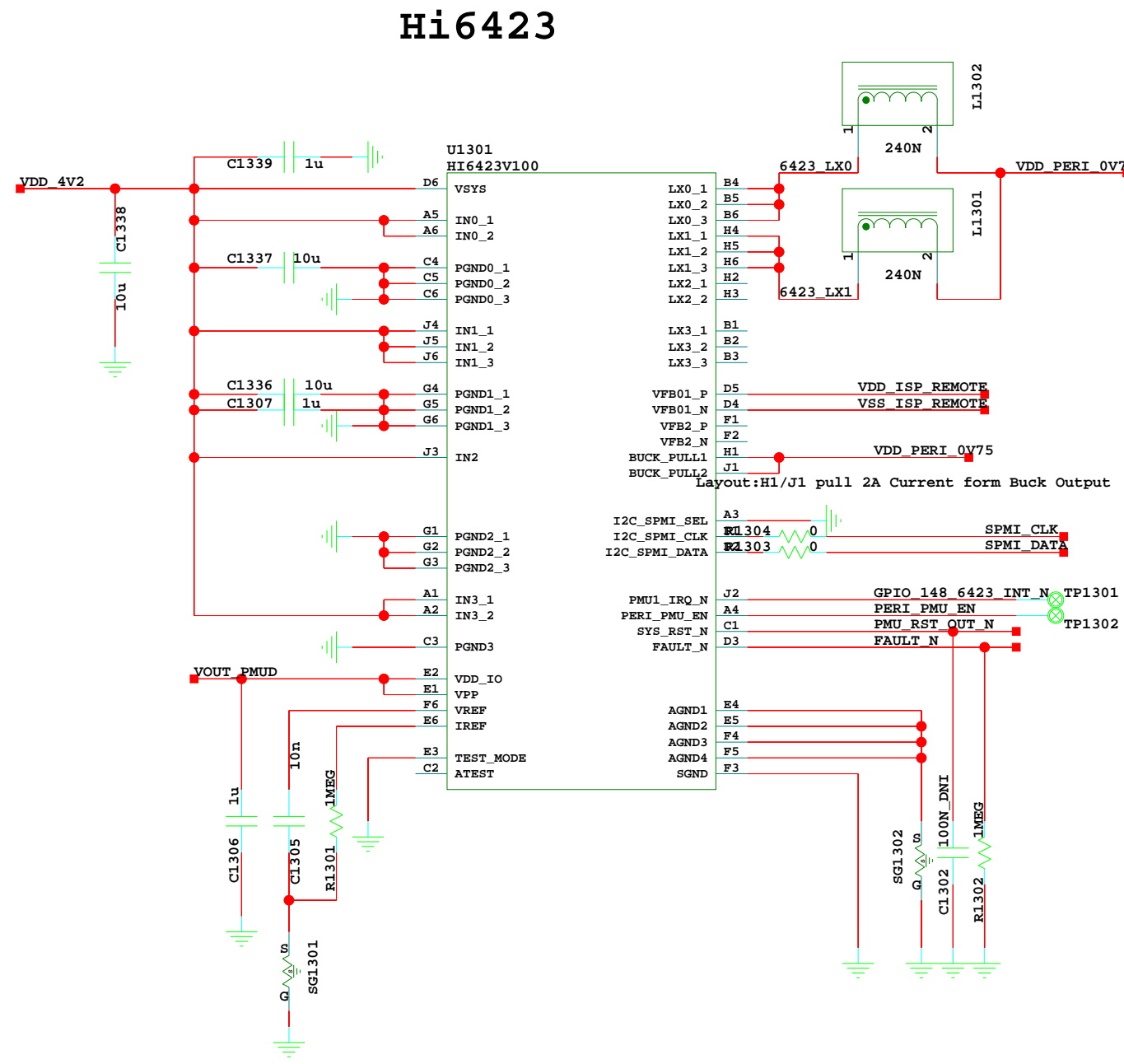
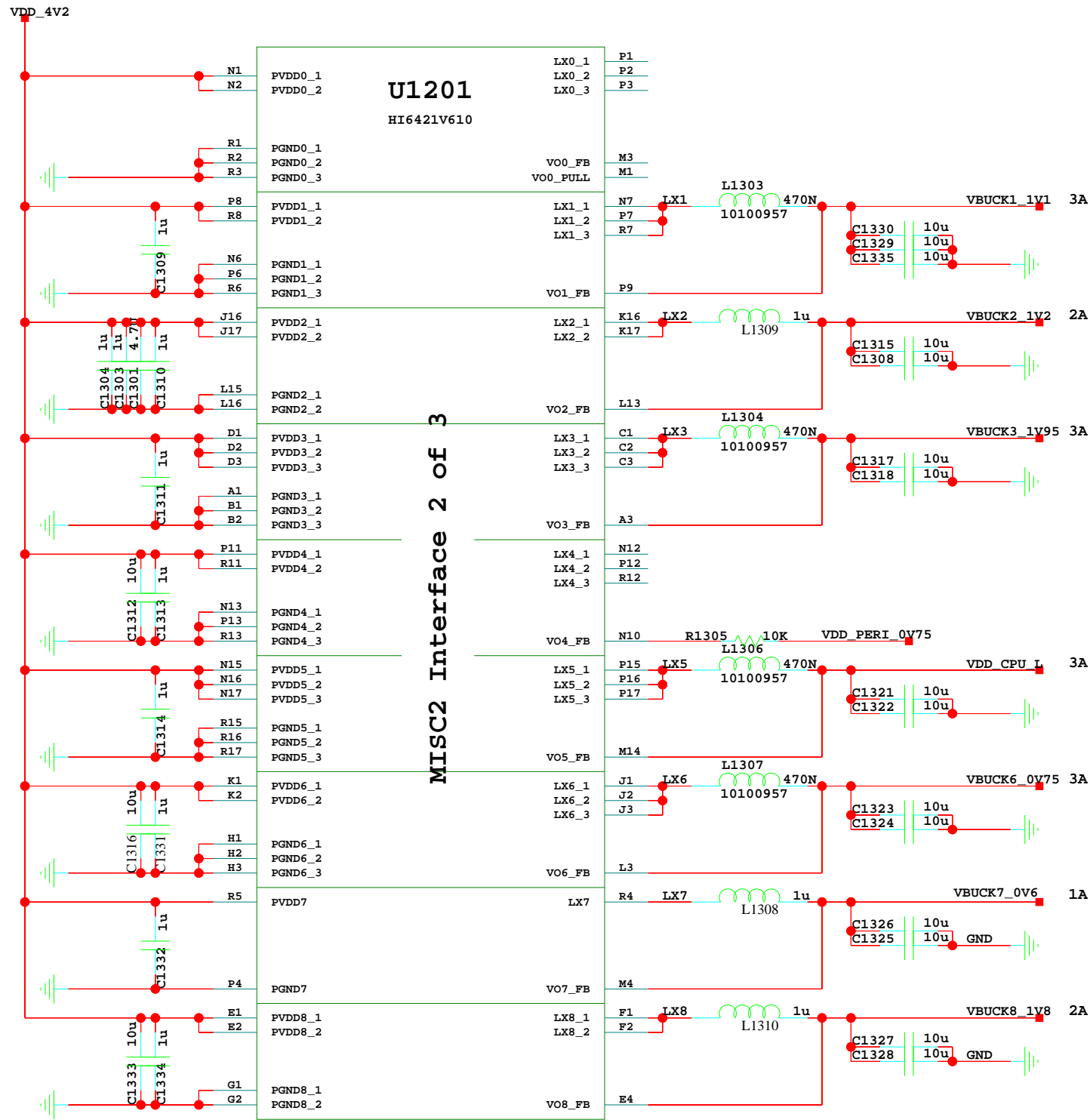


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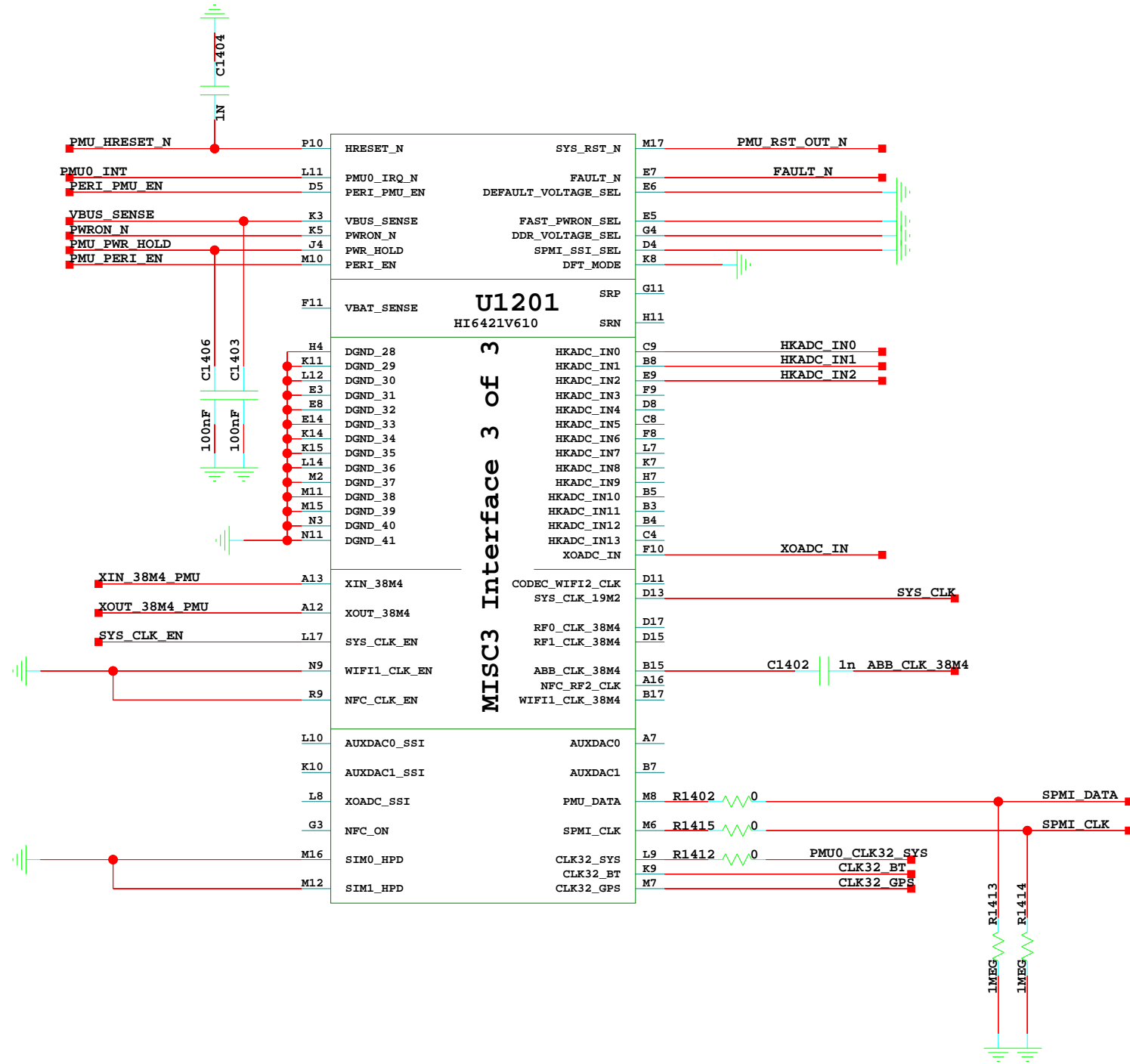
13.Hi6421 BUCK AND Hi6423



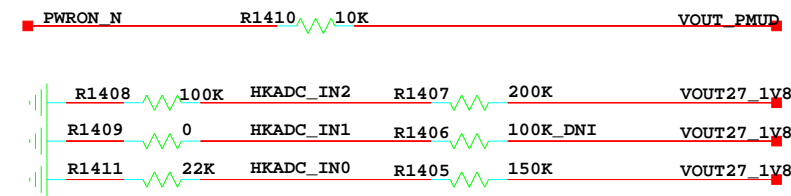
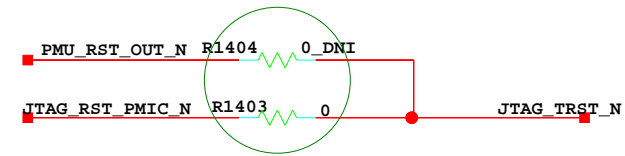
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		VER	PART_NUMBER	SHEET 13	OF 33
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14.Hi6421 DIGITAL INTERFACE

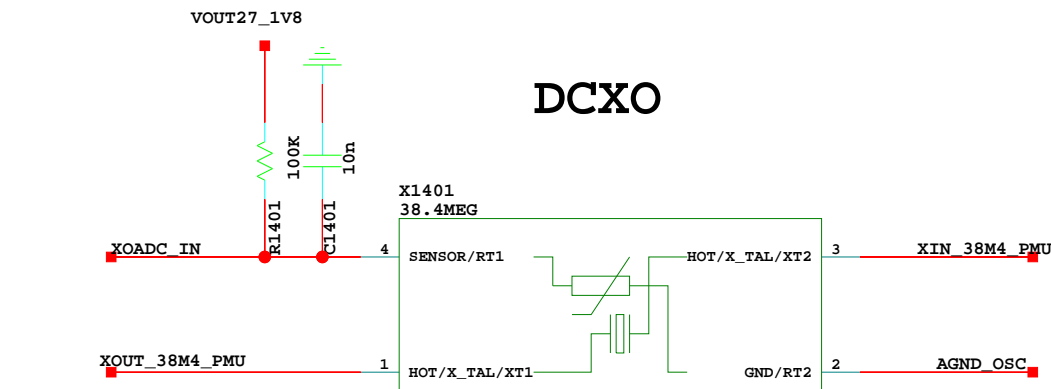


FAST_PWRON_SEL	
0	1
NORMAL	FAST
DDR_VOLTAGE_SEL	
0	1
LPDDR4x	LPDDR3
SPMI_SSI_SEL	
0	1
SPMI	SSI



BOARD ID

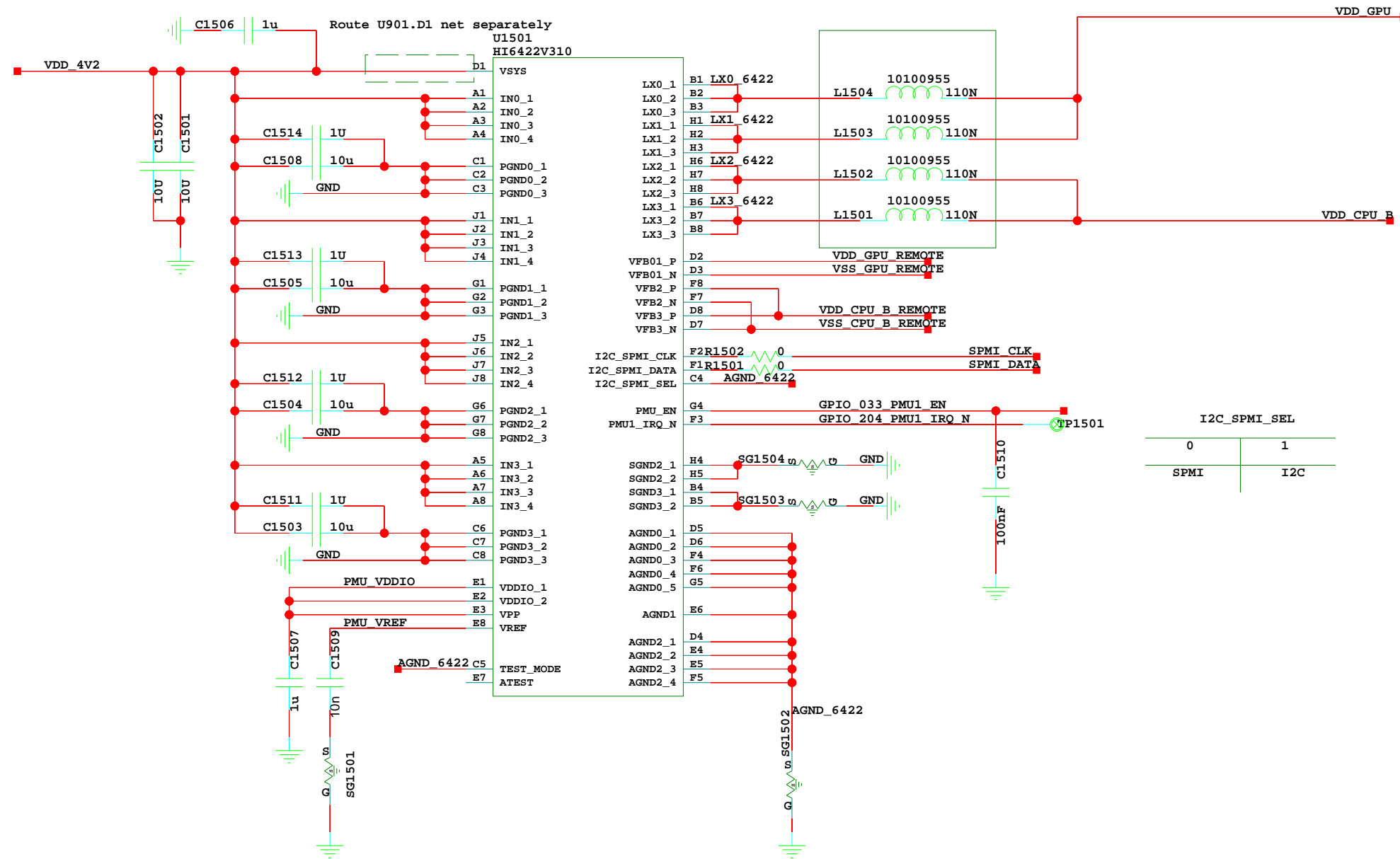
Board ID	HKADC2	HKADC1	HKADC0
hikey970	3	0	1



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		VER	PART_NUMBER	SHEET 14 OF 33	
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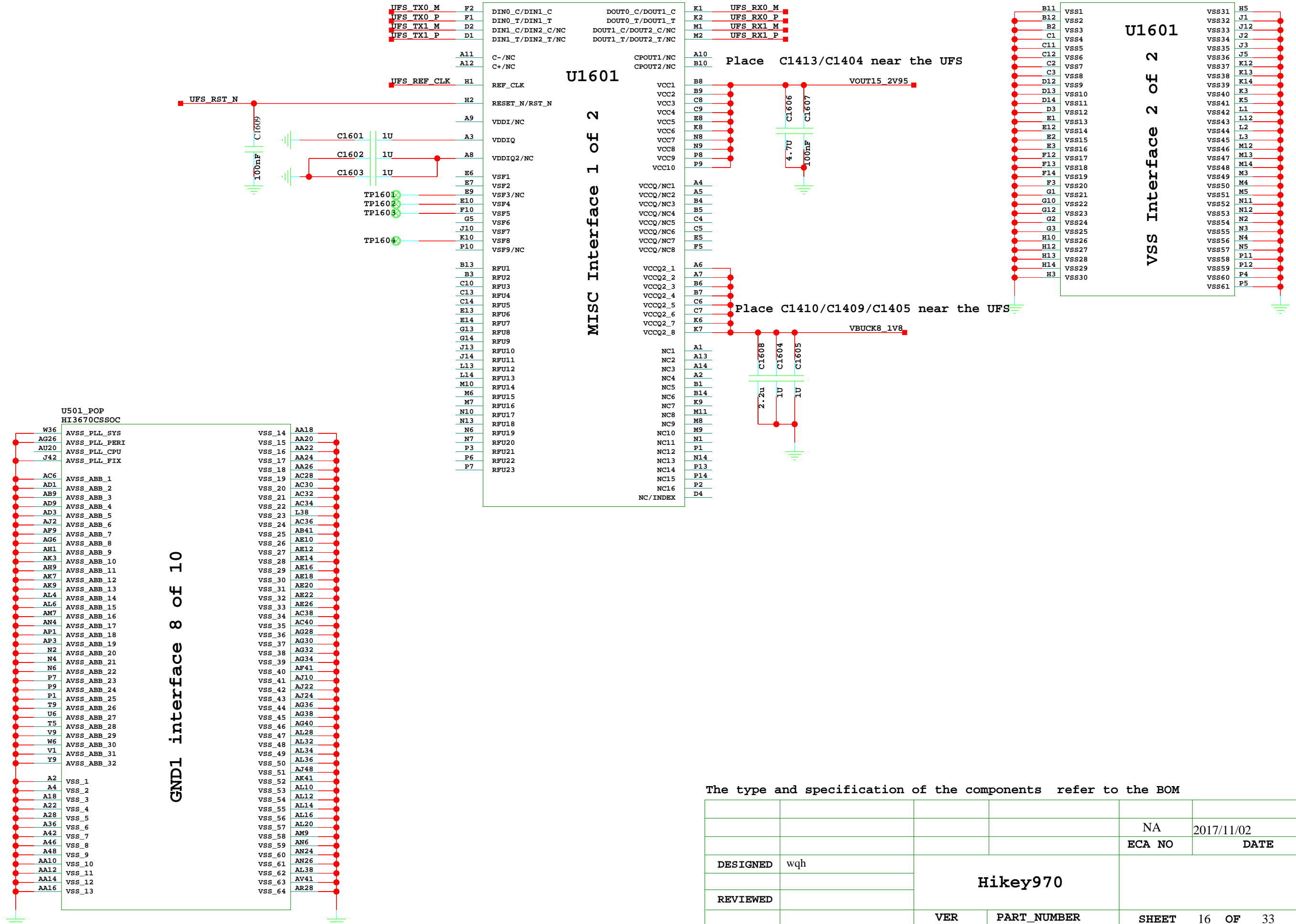
15.Hi6422V300



The type and specification of the components refer to the BOM

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		VER	PART_NUMBER	HUAWEI TECH CO.,LTD.	

16.UFS and LPDDR4X



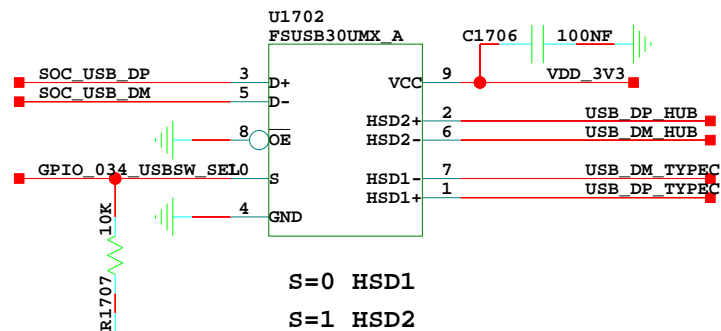
GND1 interface 8 of 10

The type and specification of the components refer to the BOM

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REVIEWED				
		Hikey970		
		NA		2017/11/02
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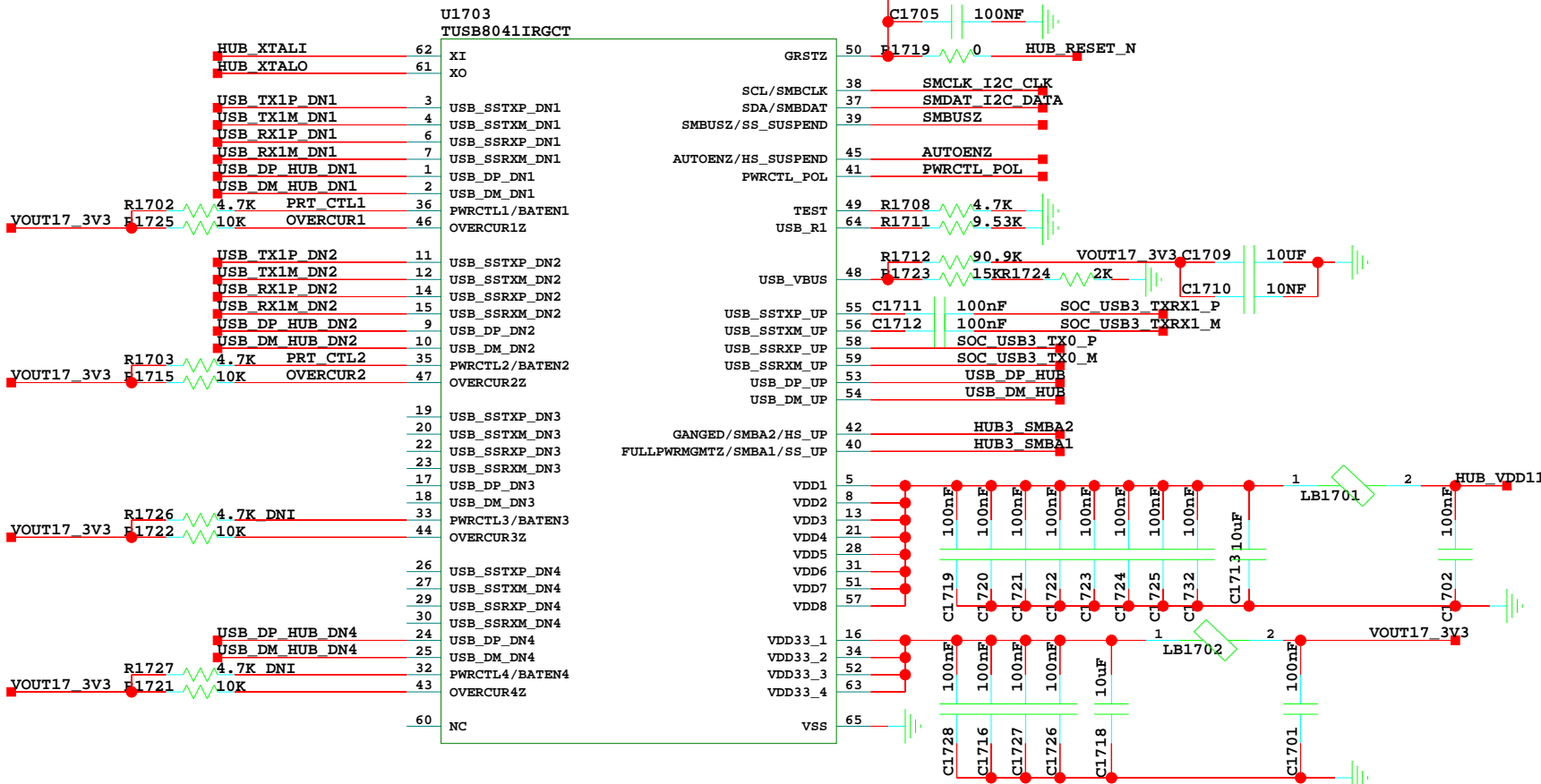
17 USB SWITCH/USB HUB

USB SWITCH

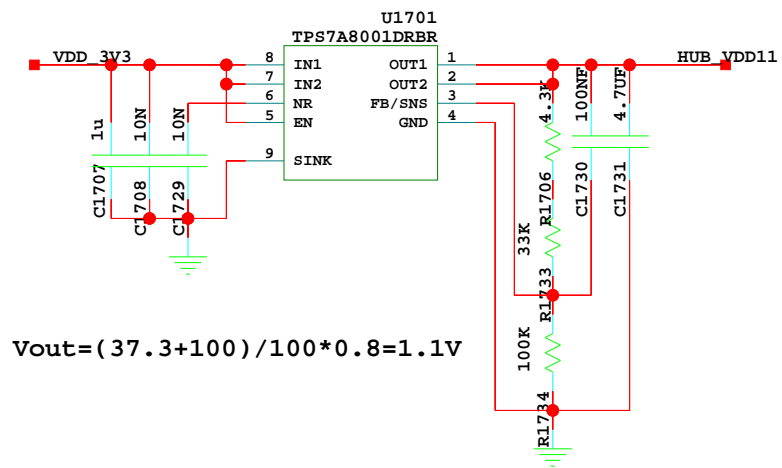


S=0 HSD1
S=1 HSD2

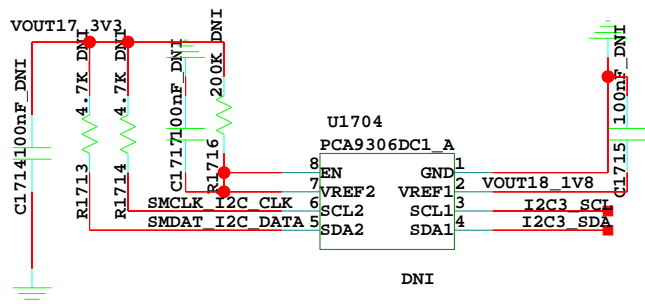
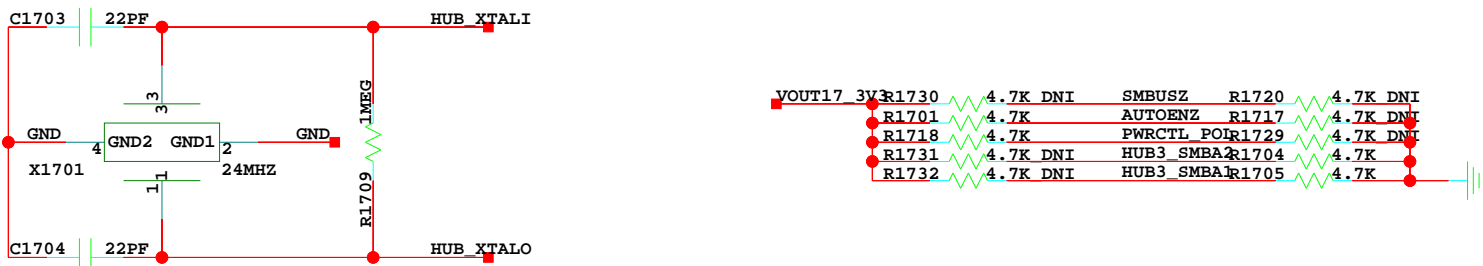
USB HUB



SMBUS_ADDR:10001001(read)/10001000(write)



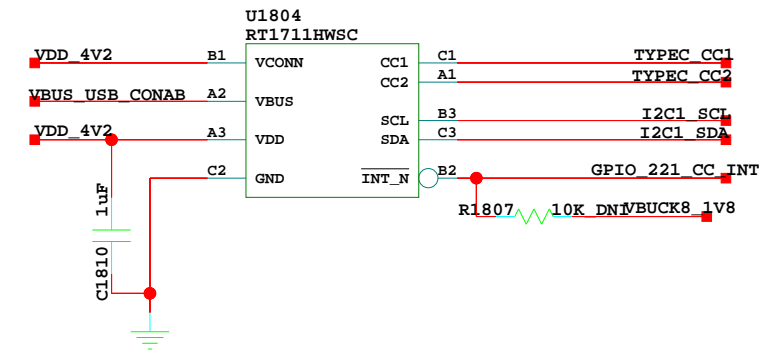
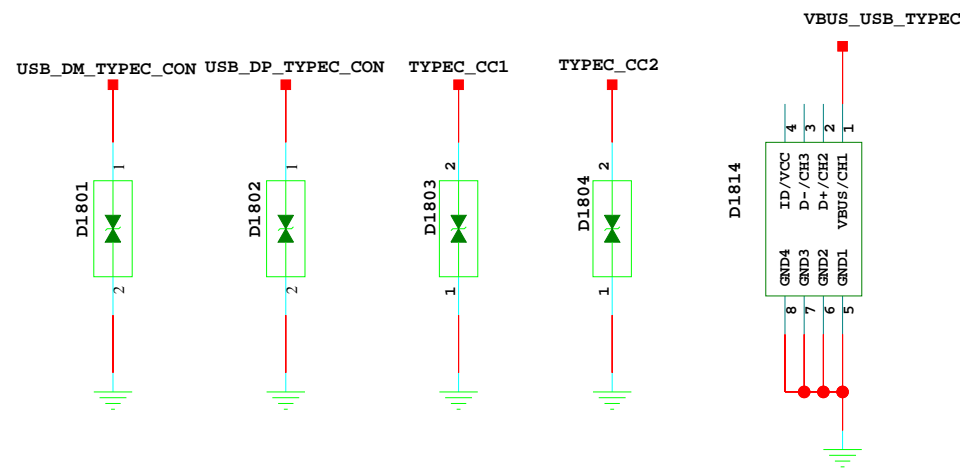
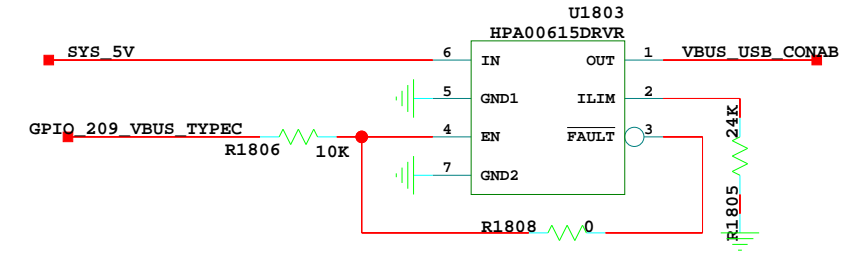
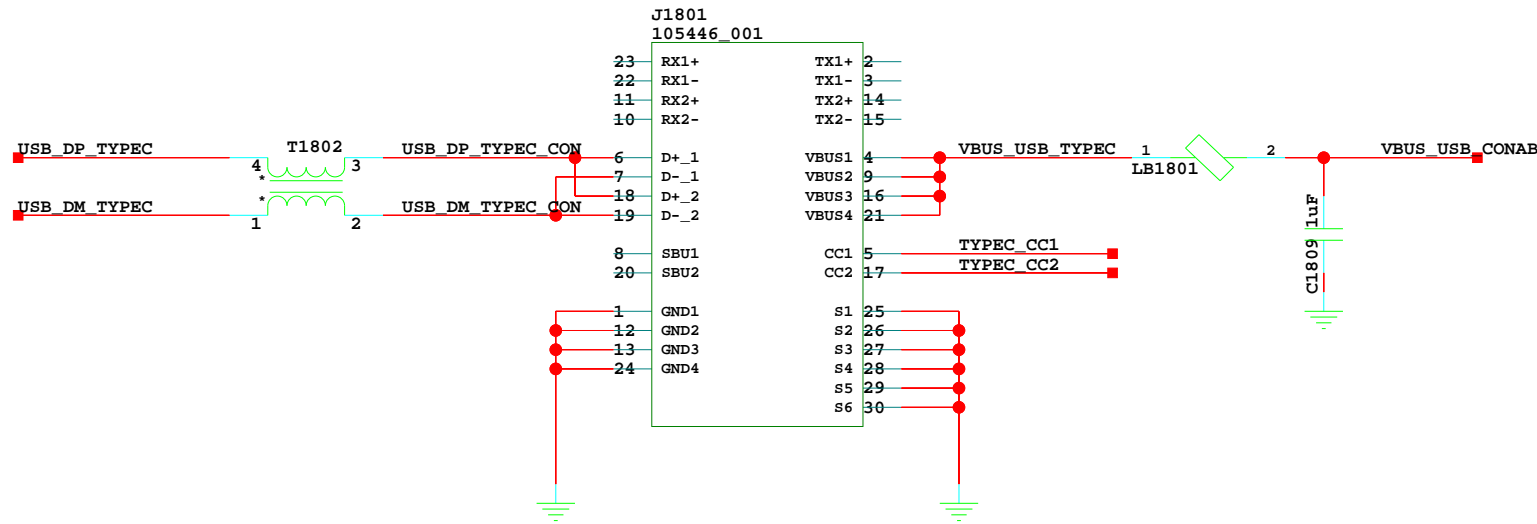
$$V_{out} = (37.3 + 100) / 100 * 0.8 = 1.1V$$



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18. USB TYPEC



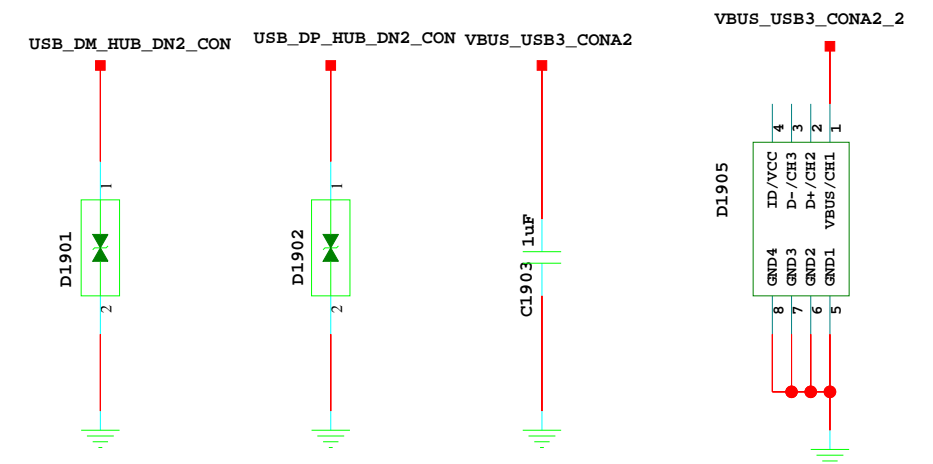
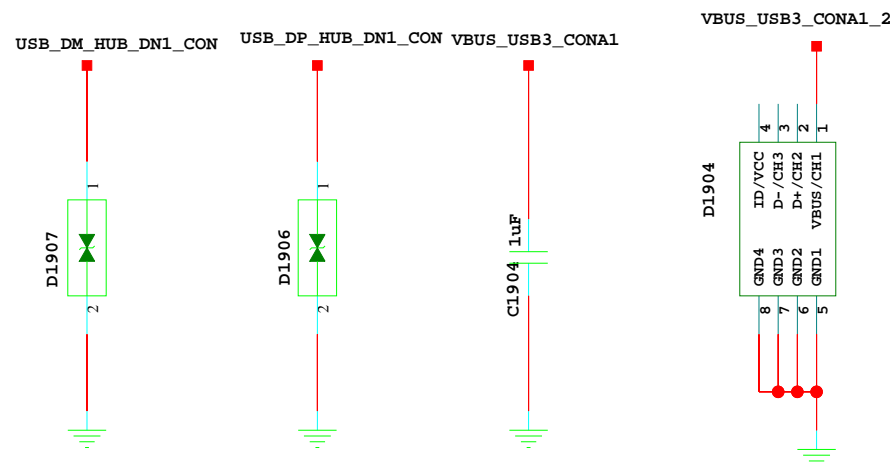
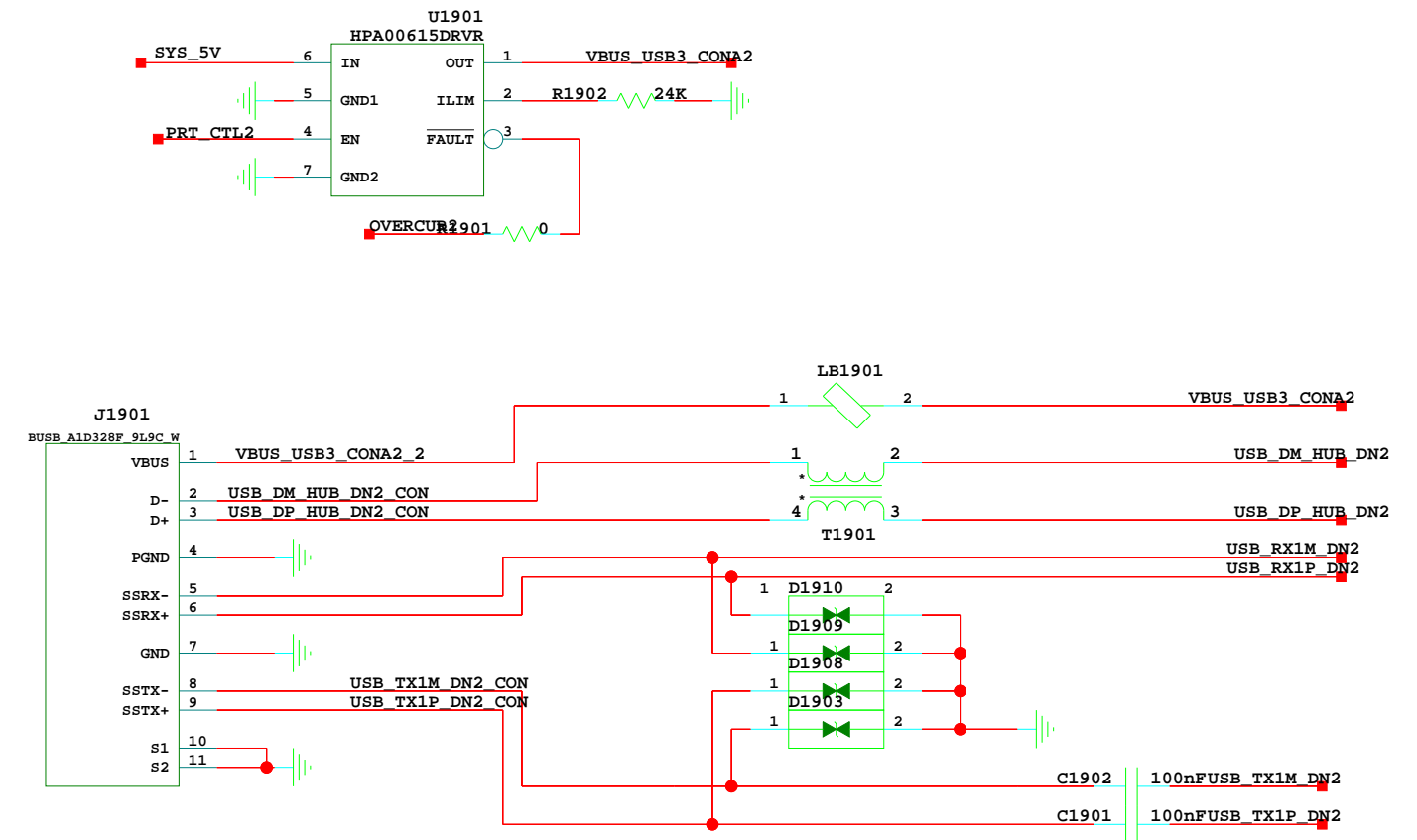
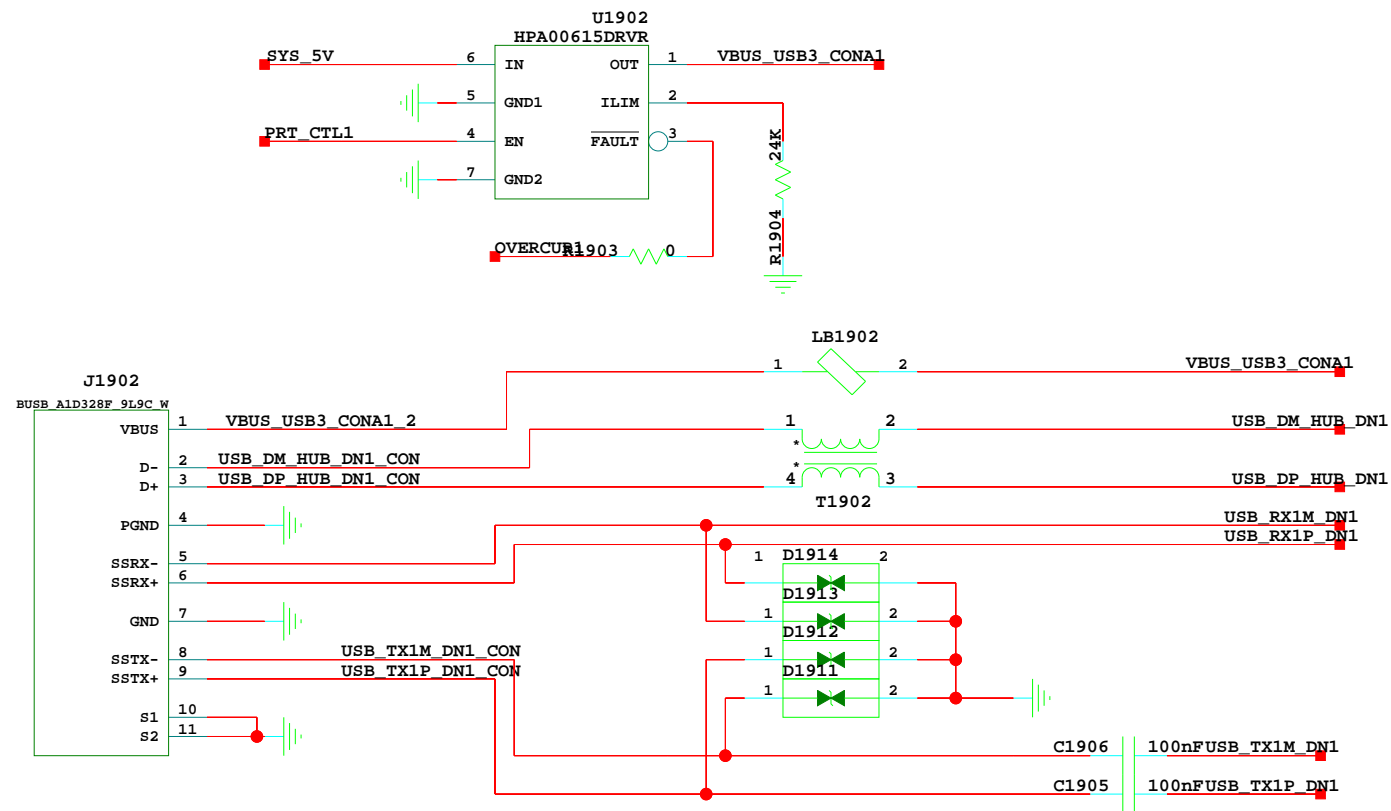
The type and specification of the components refer to the BOM

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		VER	PART_NUMBER	SHEET 18 OF 33	
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19 USB TYPEA

USB3.0 Connector 1

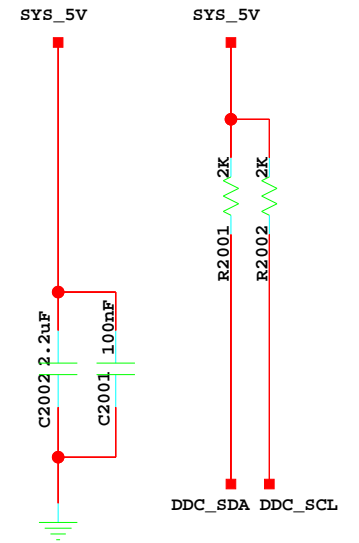
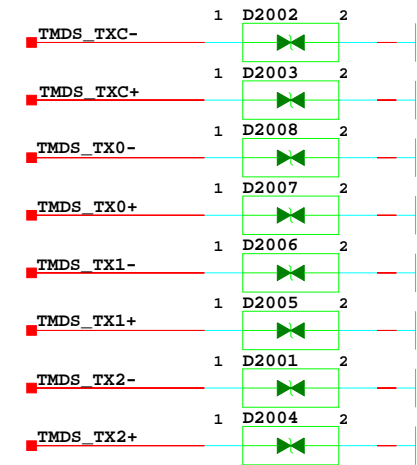
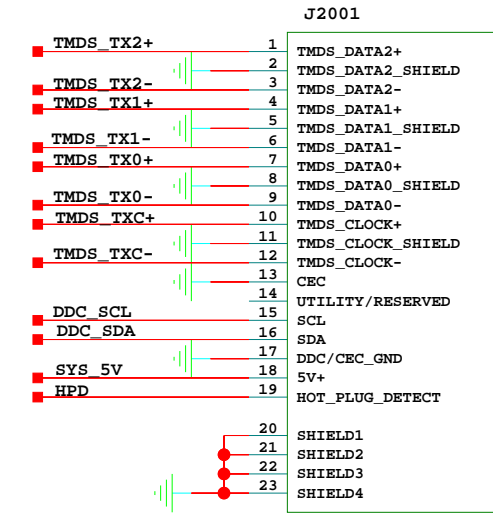
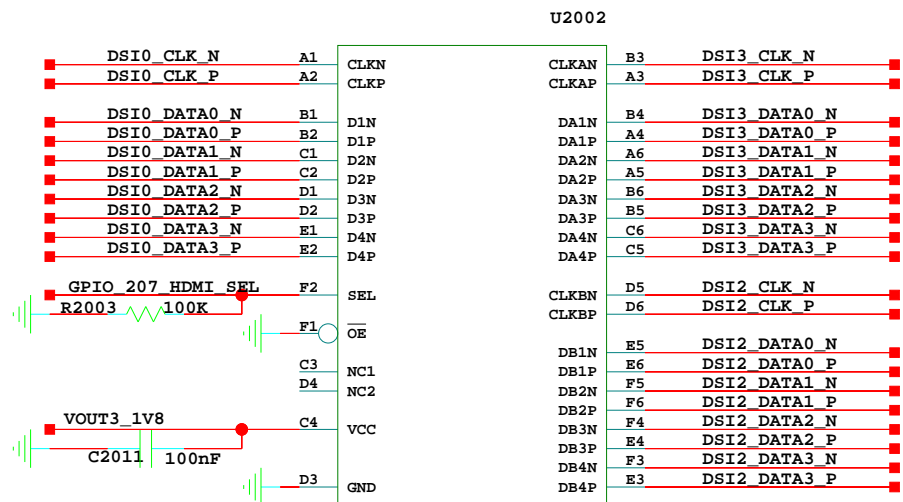
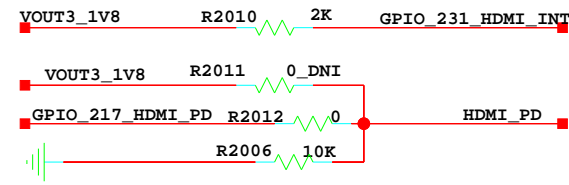
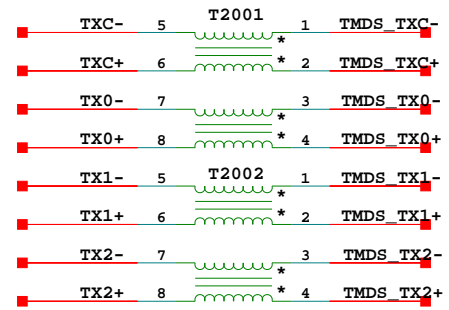
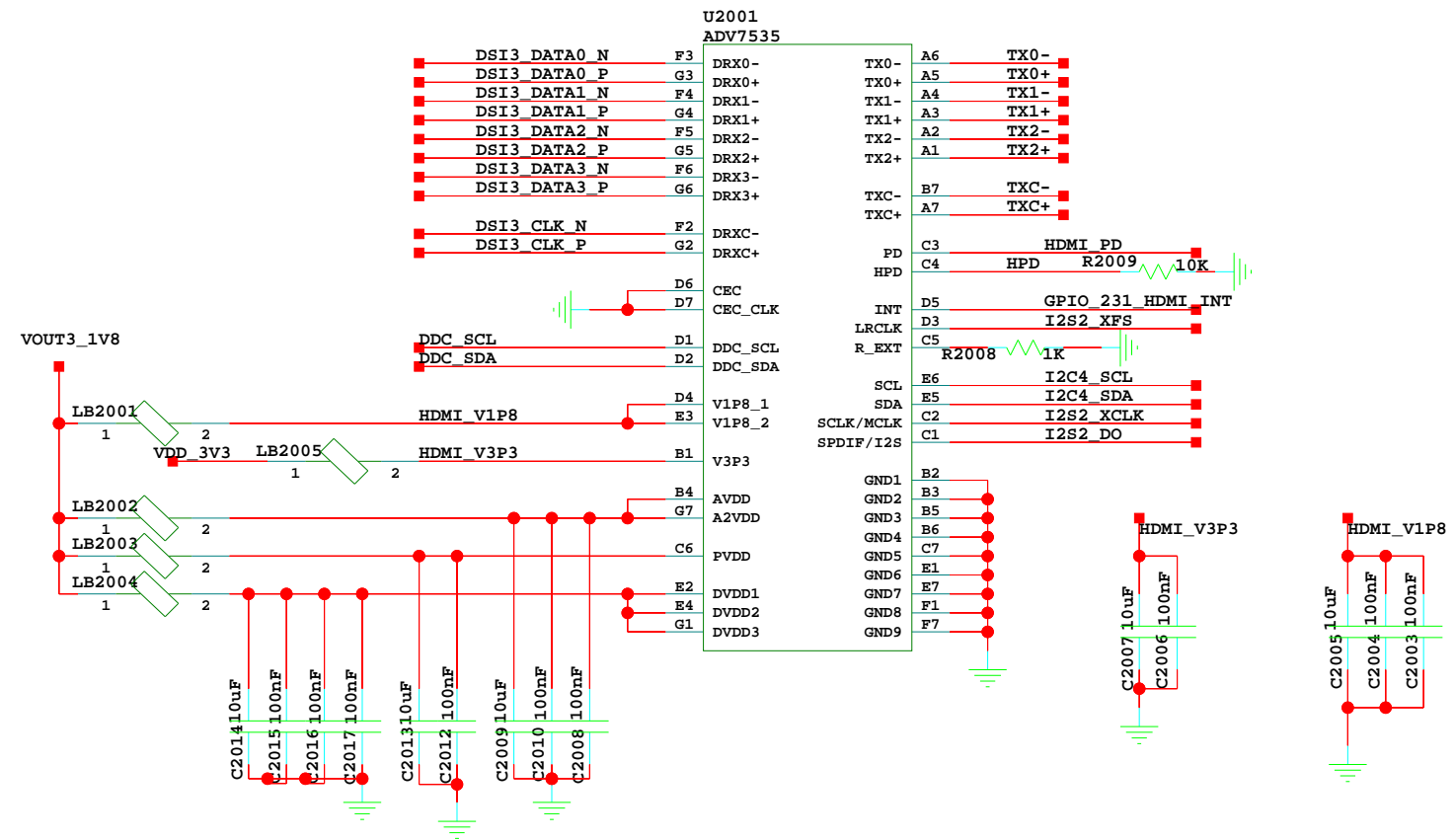
USB3.0 Connector 2



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		VER	PART_NUMBER	SHEET 19 OF 33	
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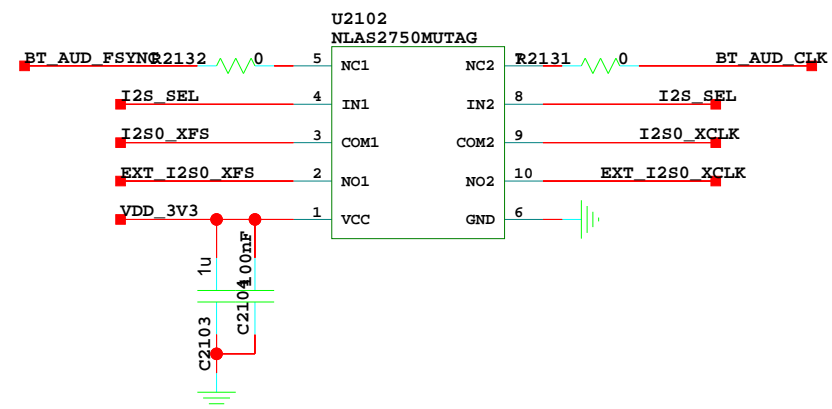
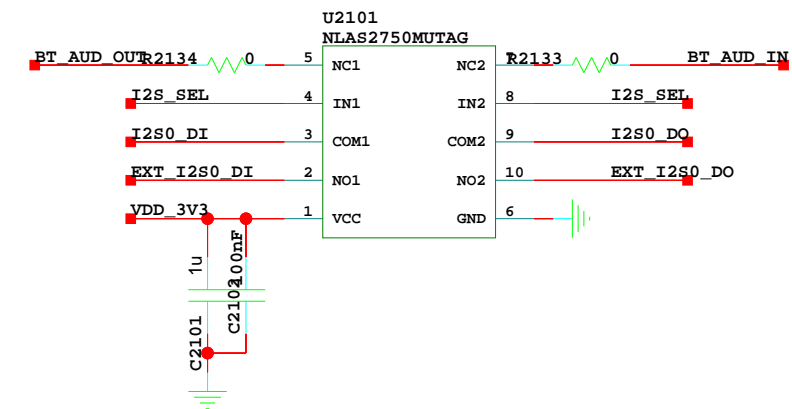
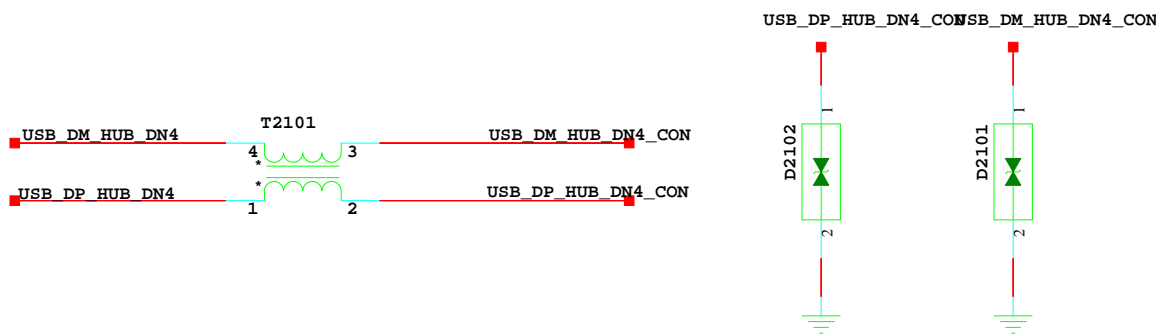
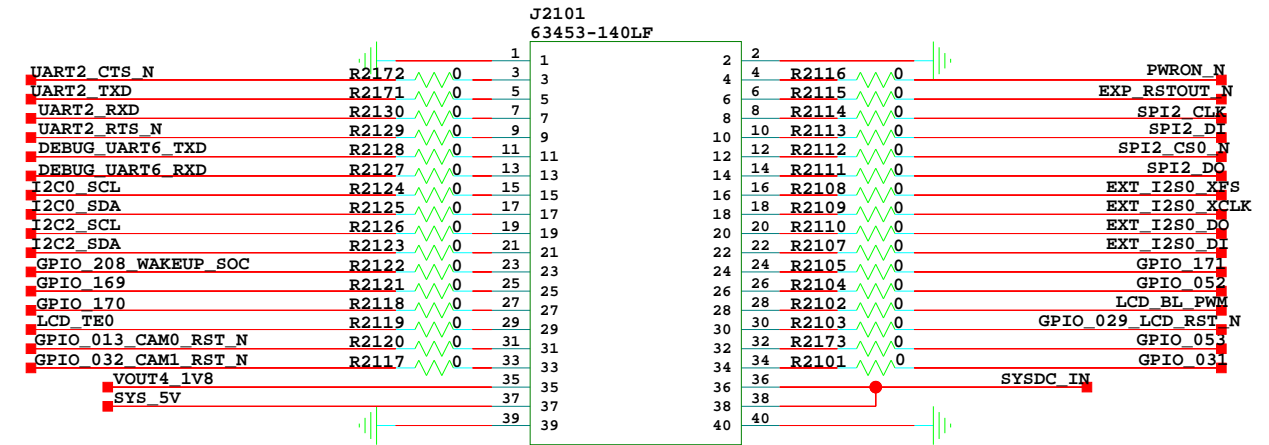
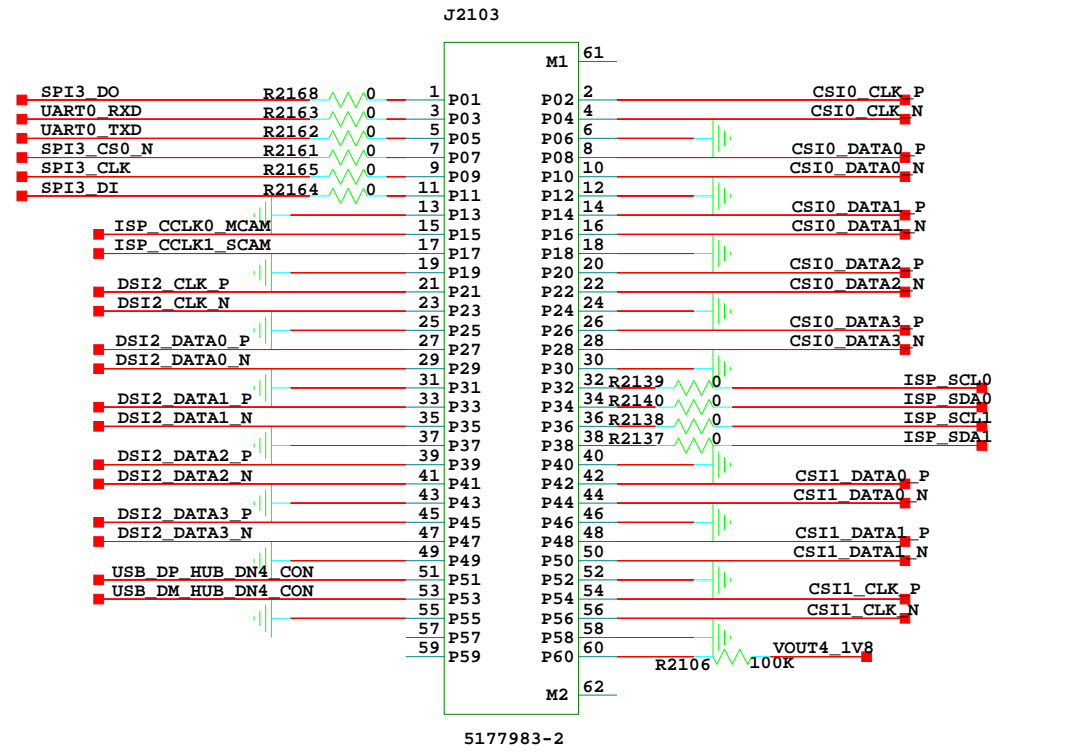
20 HDMI



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				01-03-2018_11:07
				2017/11/02
			ECA NO	DATE
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		VER	PART_NUMBER	SHEET 20 OF 33
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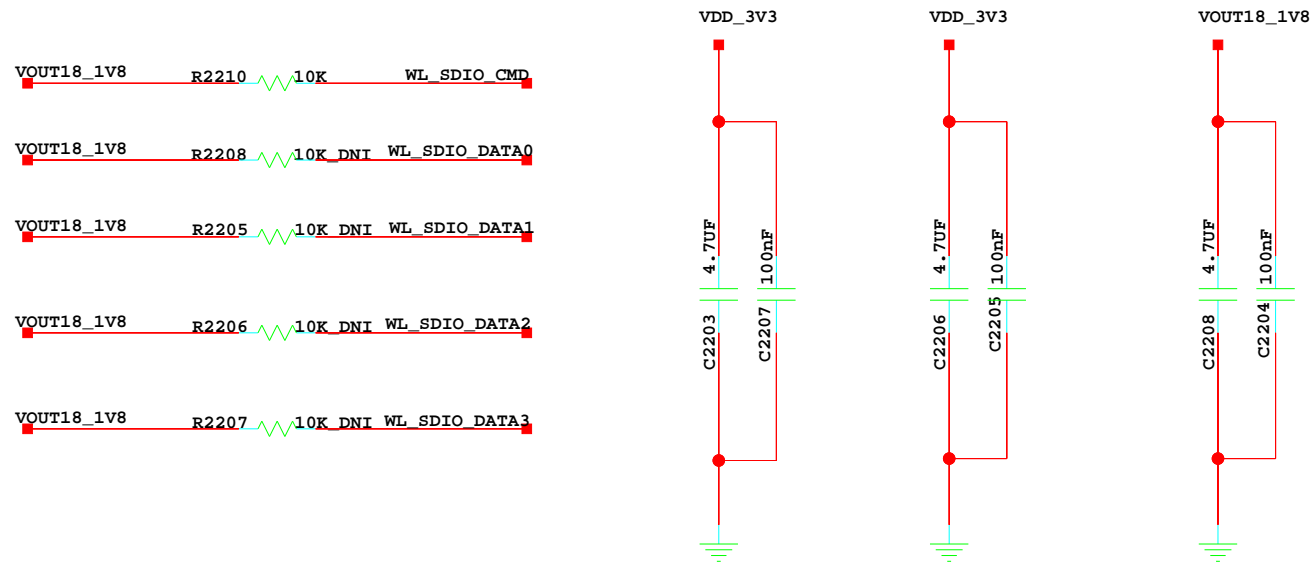
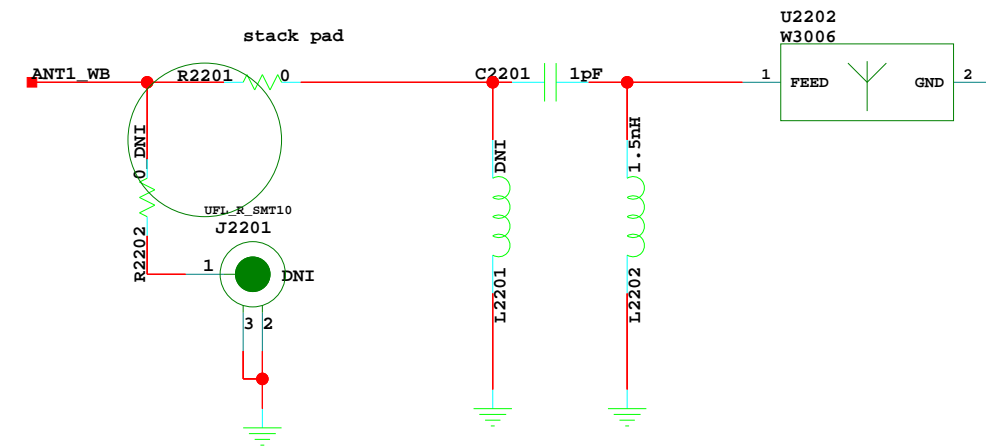
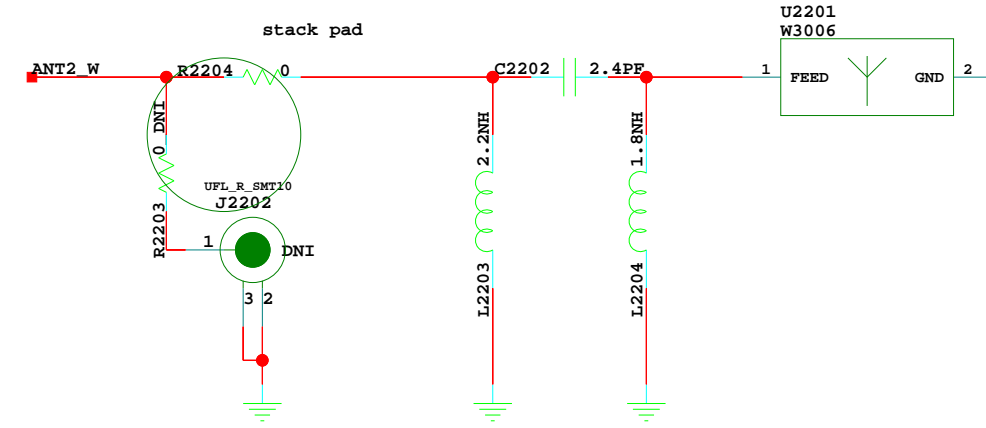
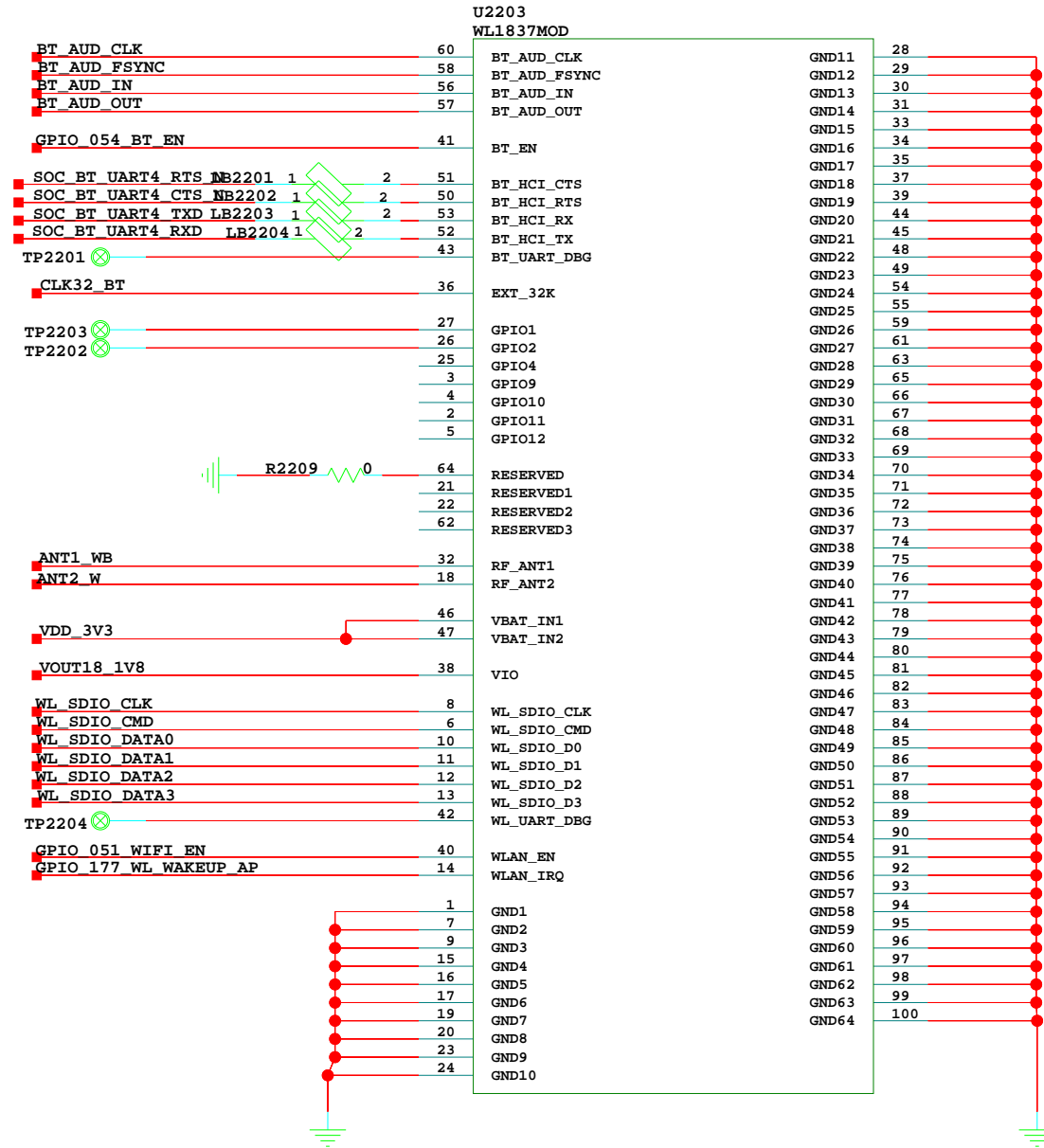
21 IO CONN



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		VER	PART_NUMBER	HUAWEI TECH CO.,LTD.	

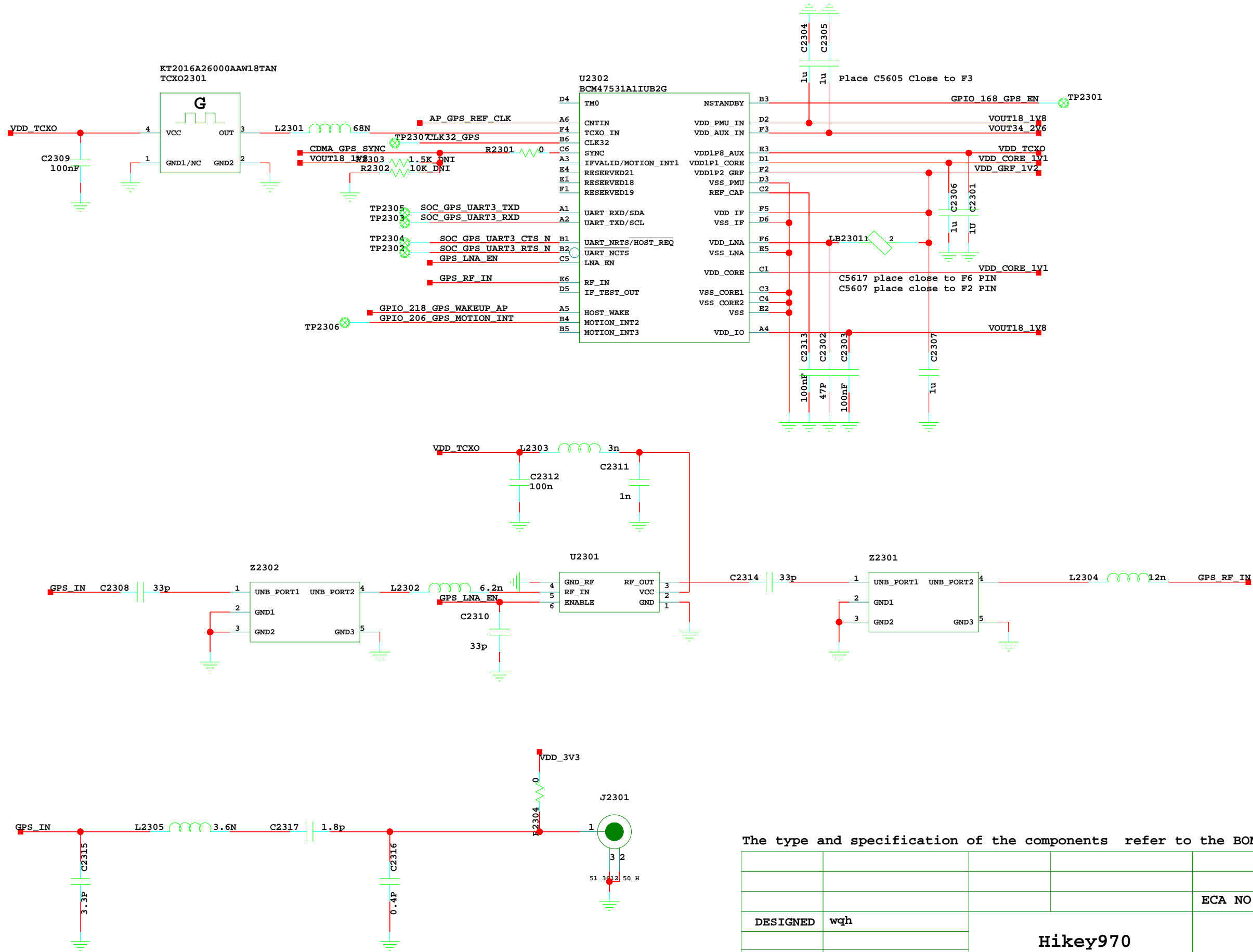
22 WIFI/BT



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REVIEWED				ECA NO	DATE
Hikey970					
				SHEET 22 OF 33	
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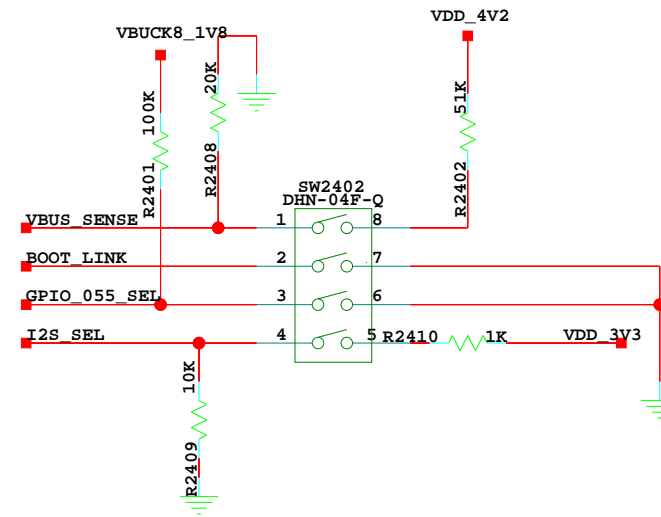
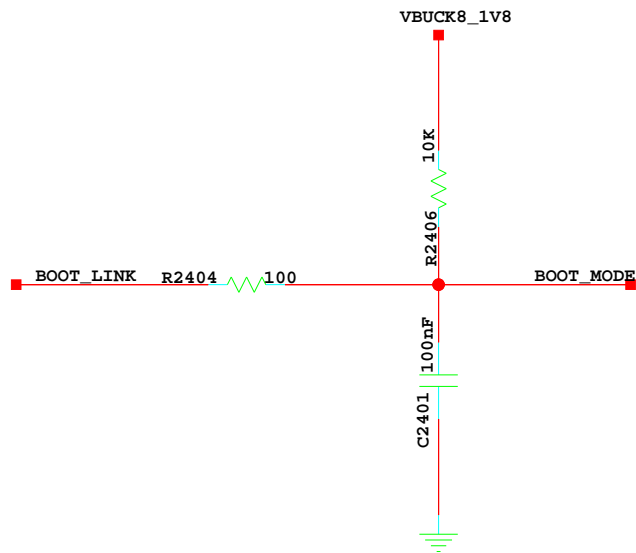
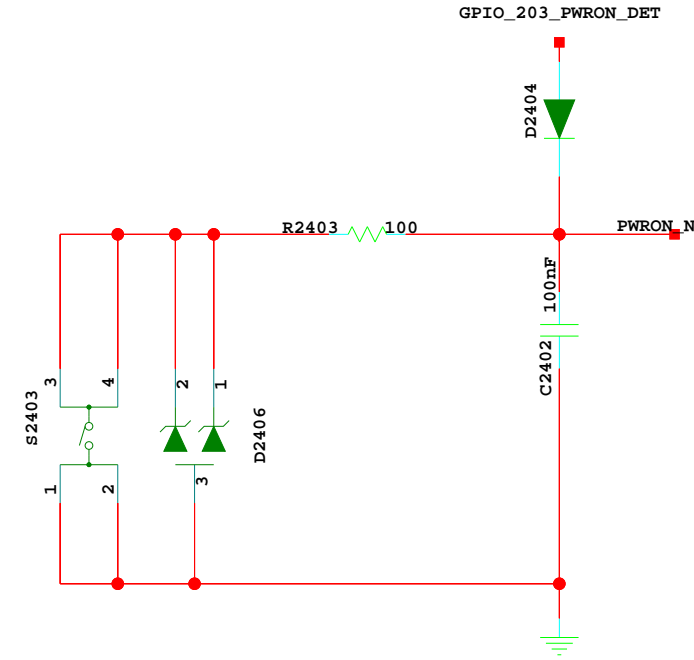
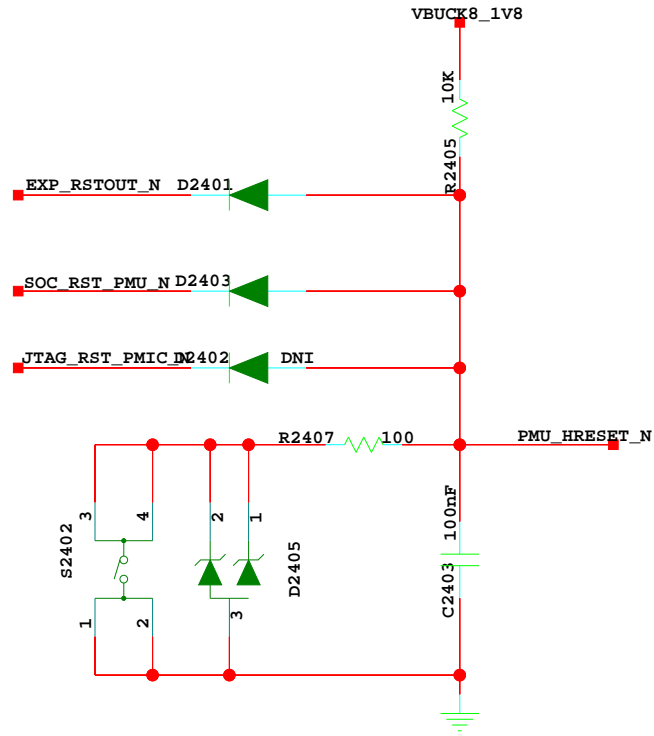
23.GPS



The type and specification of the components refer to the BOM

					2017/11/02
				ECA NO	DATE
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REVIEWED					
		VER	PART_NUMBER	SHEET 23 OF 33	
				HUAWEI TECH CO.,LTD.	

24 KEY

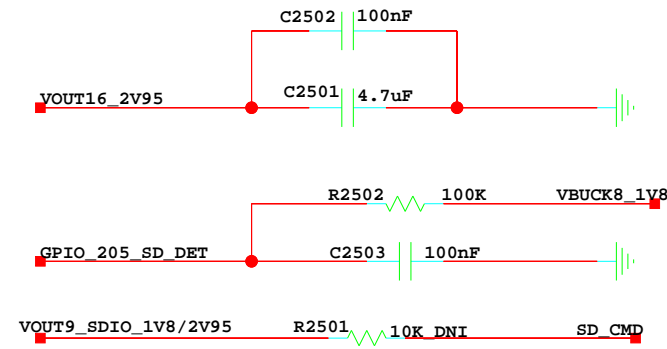
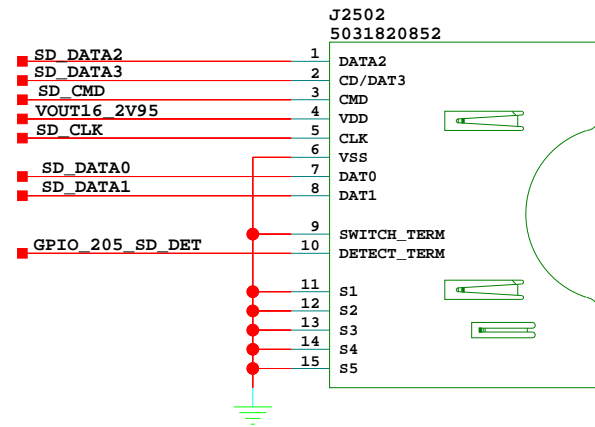


The type and specification of the components refer to the BOM

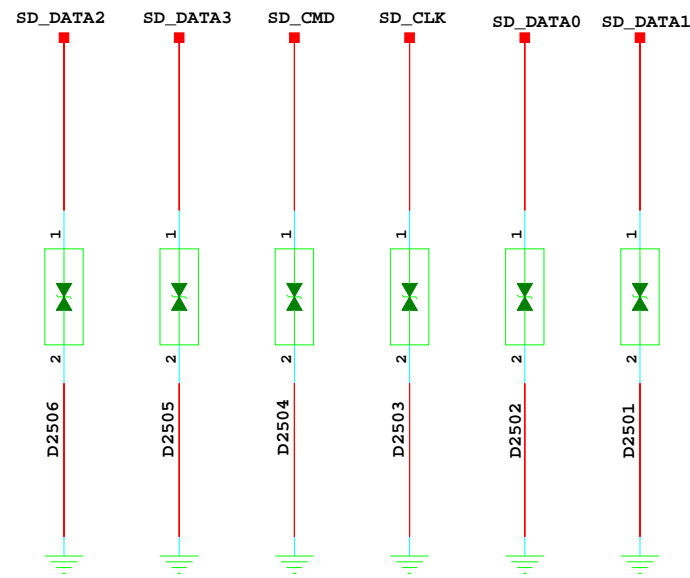
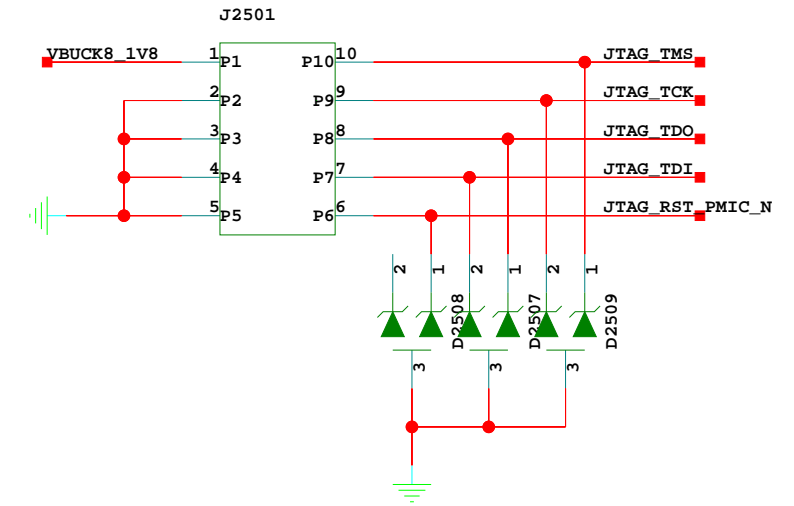
				NA	2017/11/02
				ECA NO	DATE
DESIGNED	wqh	Hikey970		SHEET 24 OF 33	
REVIEWED					
		VER	PART_NUMBER	HUAWEI TECH CO.,LTD.	

25.SD Card/jtag

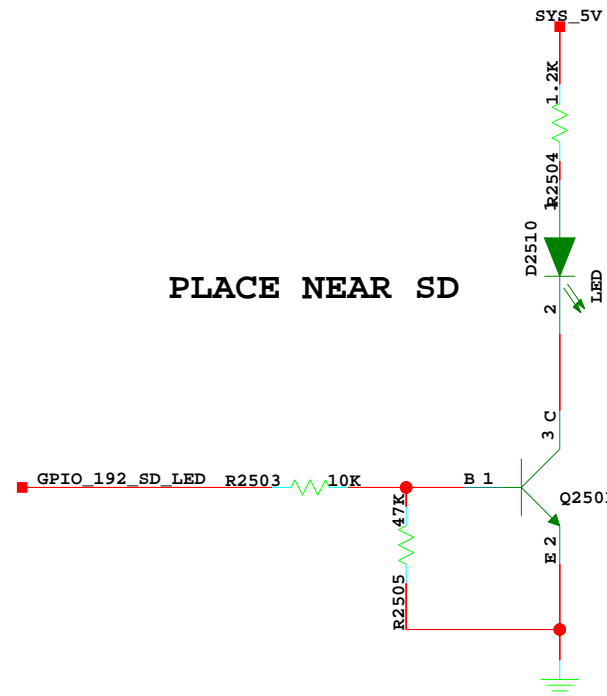
SD



JTAG



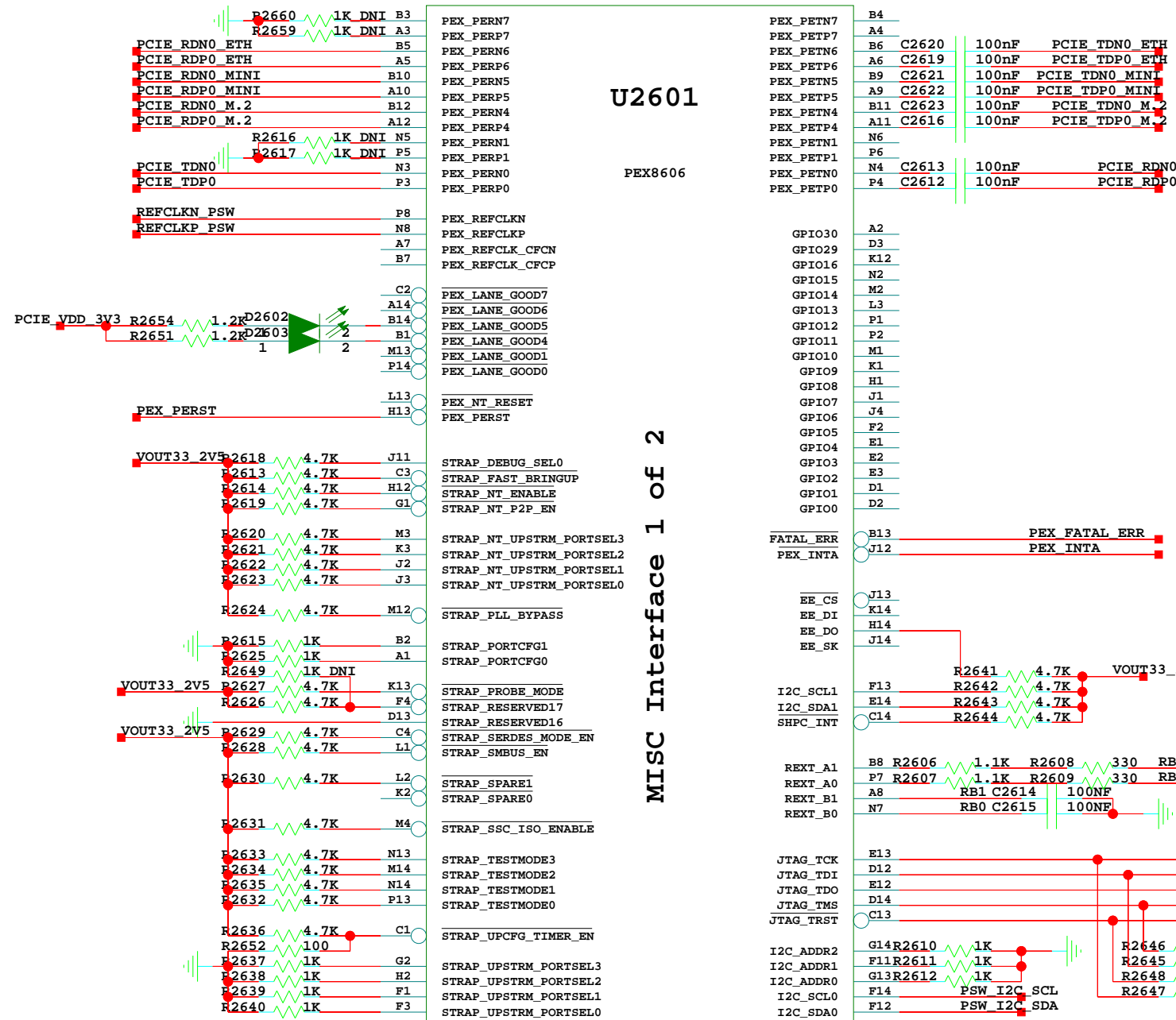
PLACE NEAR SD



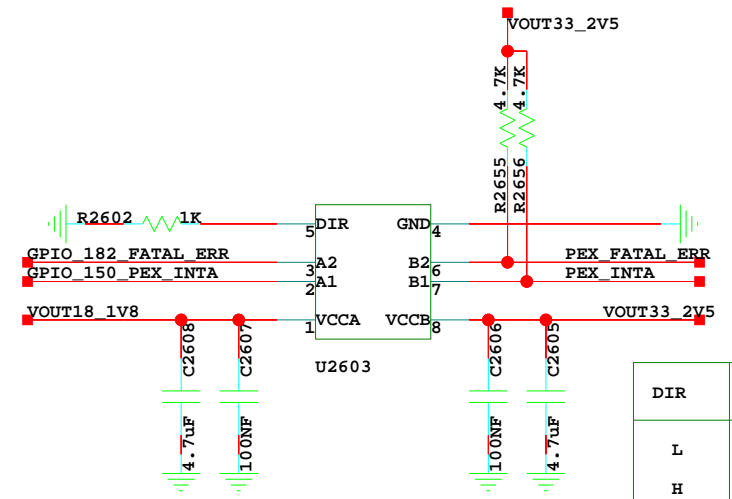
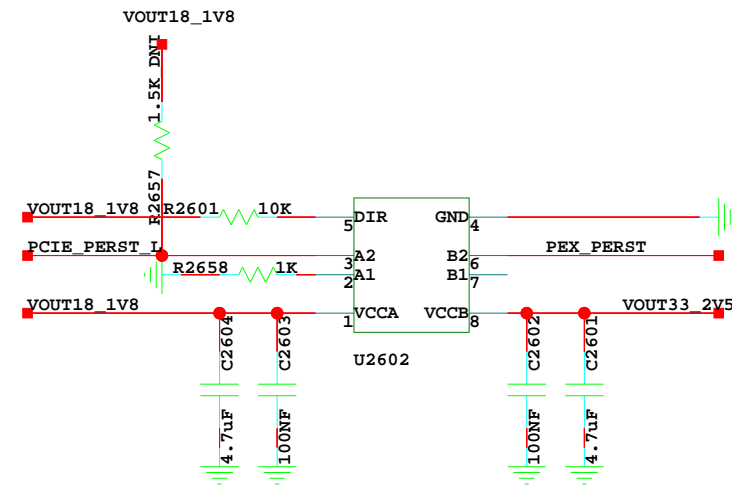
The type and specification of the components refer to the BOM

				NA	2017/11/02
				ECA NO	DATE
DESIGNED	wqh	Hikey970			
REVIEWED					
		VER	PART_NUMBER	SHEET 25 OF 33	
				HUAWEI TECH CO.,LTD.	

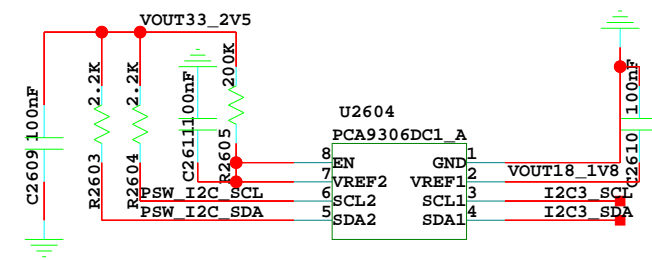
26 PCIE SWITCH 1



I2C ADDR 0x38(wirte)/0x39(read)



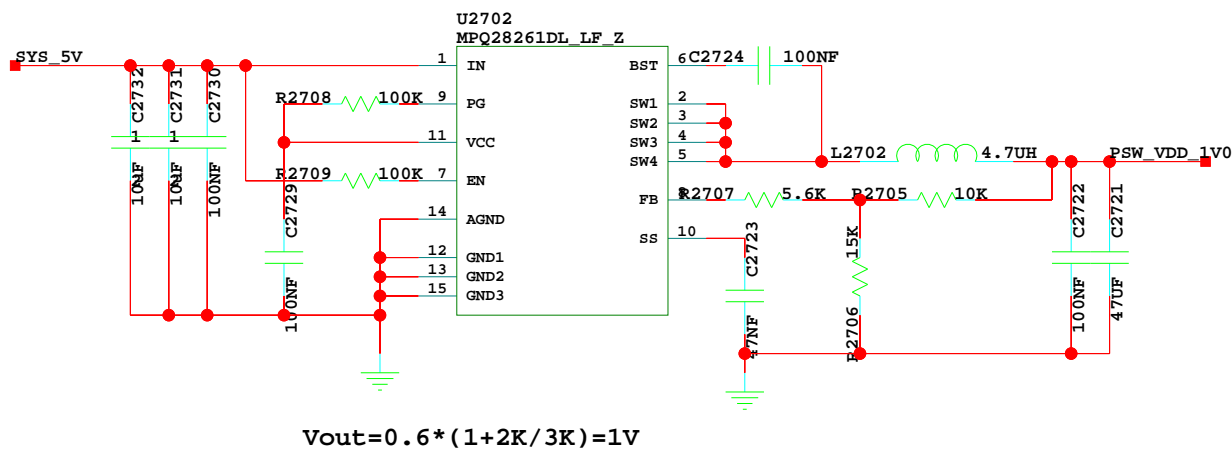
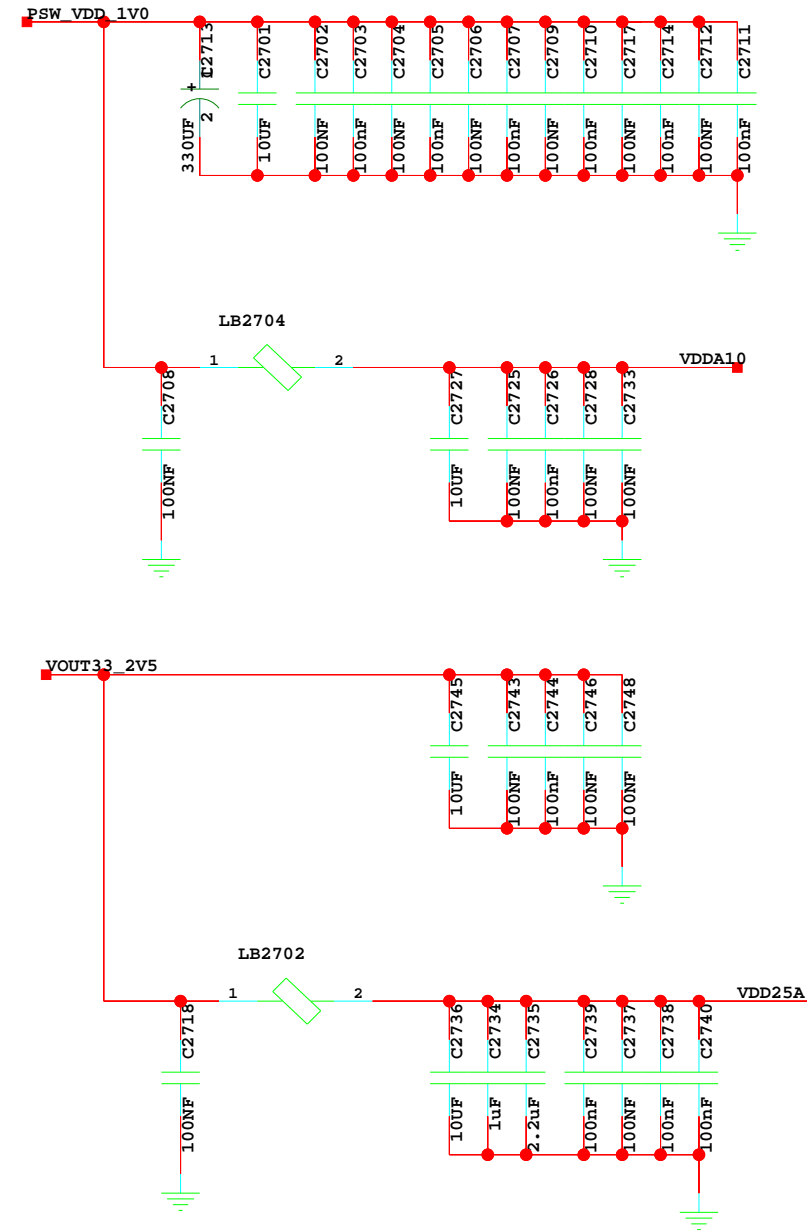
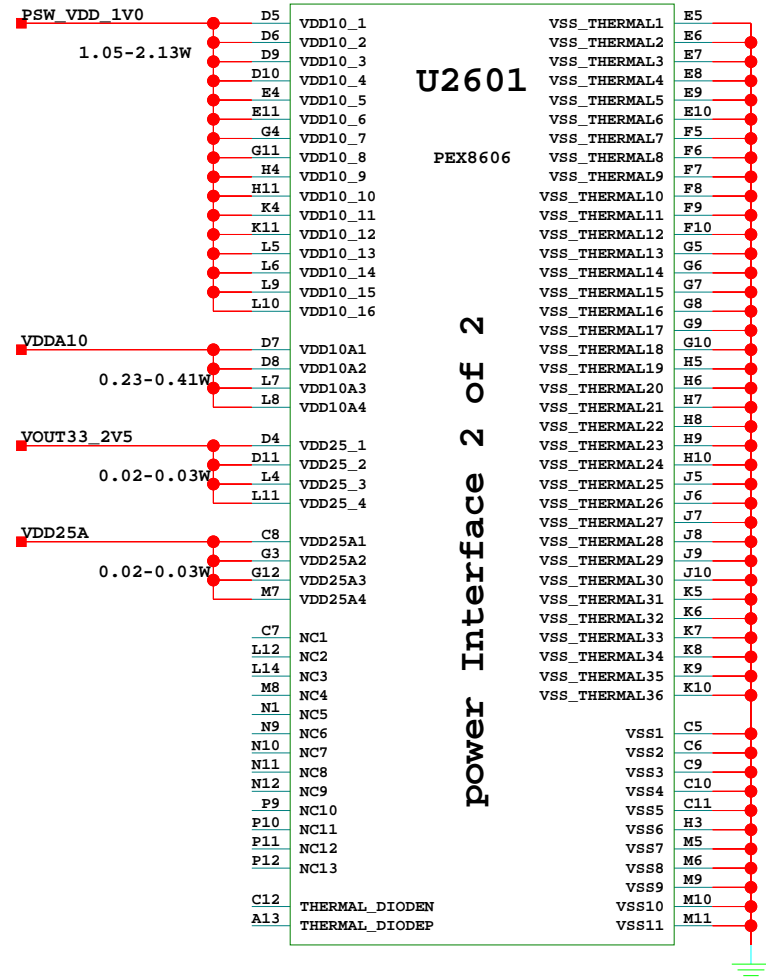
DIR	Operation
L	B DATA TO A BUS
H	A DATA TO B BUS



The type and specification of the components refer to the BOM

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Hikey970					
		VER	PART_NUMBER	SHEET 26 OF 33	
HUAWEI TECH CO.,LTD.					

27. PCIE SWITCH 2

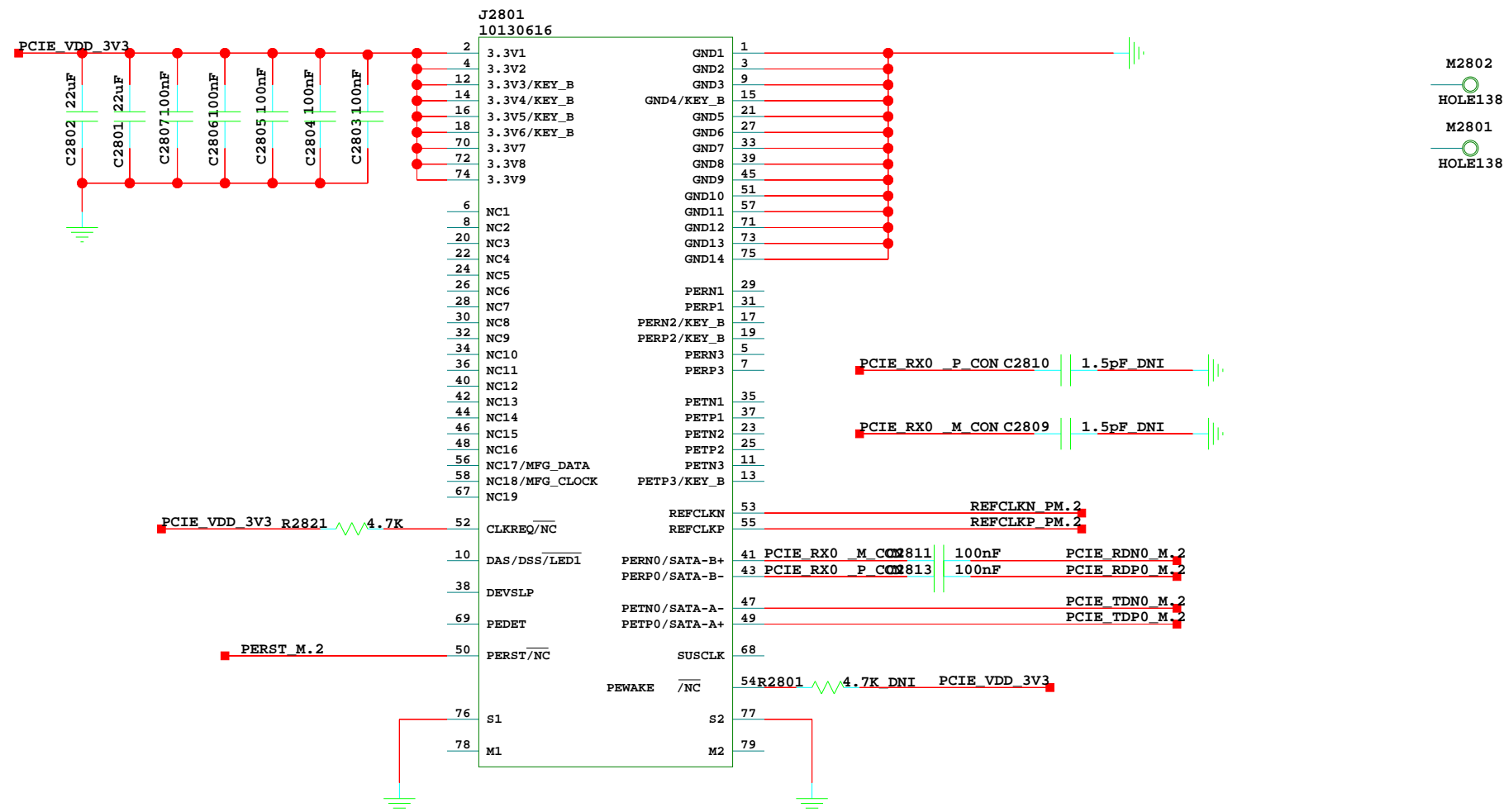


The type and specification of the components refer to the BOM

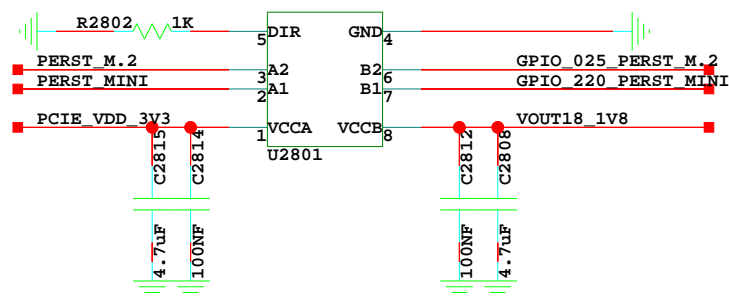
					2017/11/02
				ECA NO	DATE
DESIGNED	wqh	Hikey970			
REVIEWED					
		VER	PART_NUMBER	SHEET 27 OF 33	
				HUAWEI TECH CO.,LTD.	

28 PCIE M.2

M.2 CONNECTOR



PCIE PERST LEVEL SHIFT



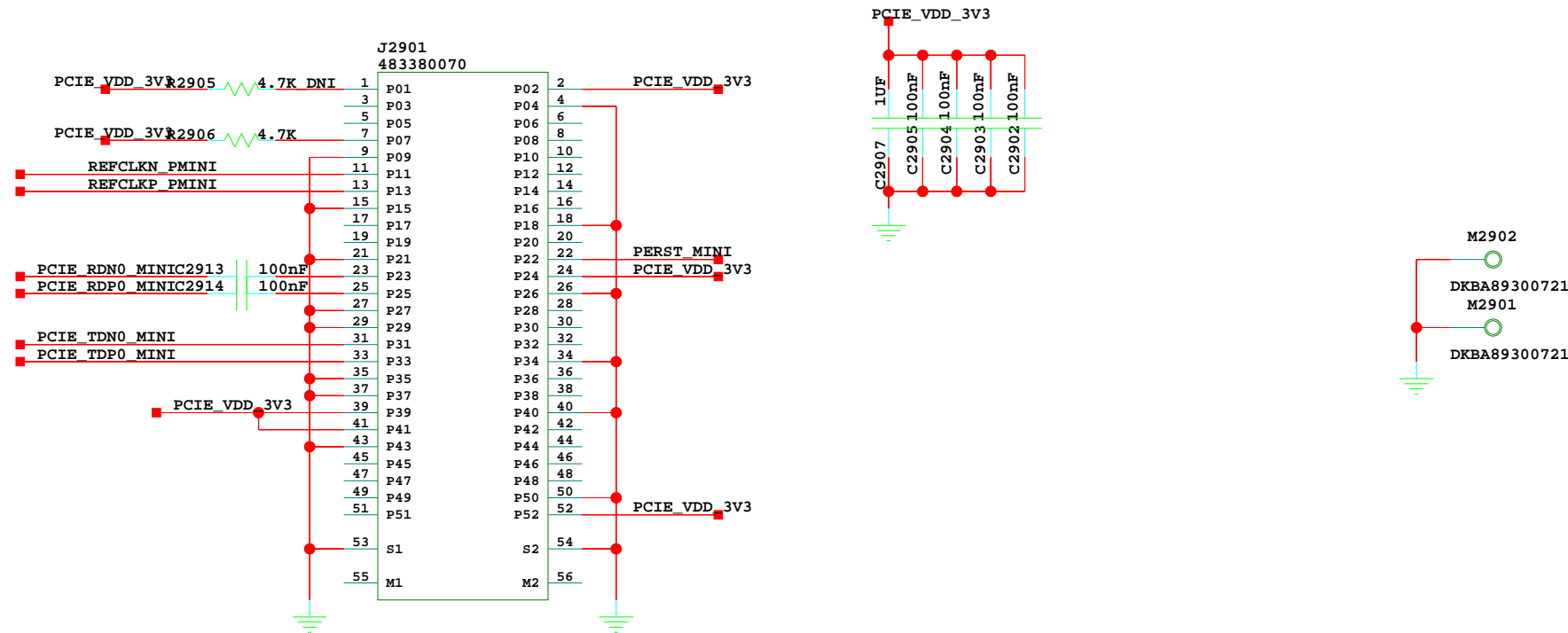
DIR	Operation
L	B DATA TO A BUS
H	A DATA TO B BUS

The type and specification of the components refer to the BOM

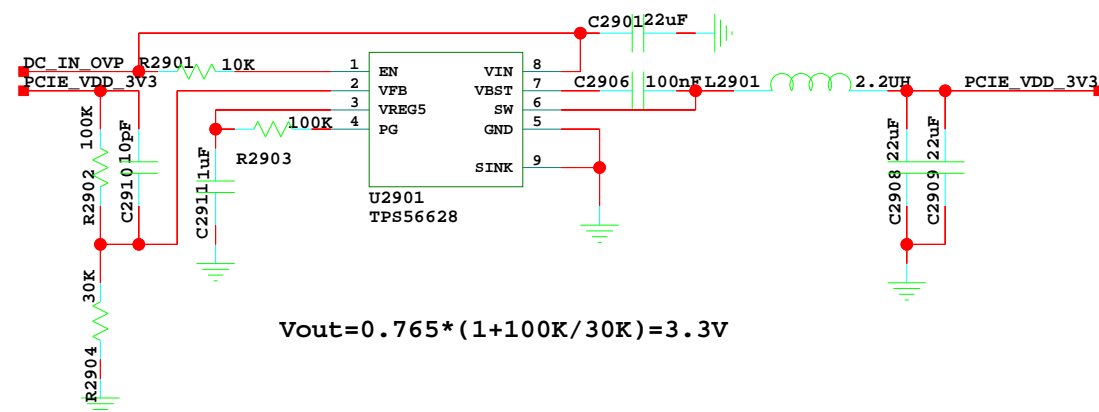
					2017/11/02
				ECA NO	DATE
DESIGNED	wqh	Hikey970			
REVIEWED					
		VER	PART_NUMBER	SHEET 28 OF 33	
				HUAWAI TECH CO.,LTD.	

29. PCIE MINI

MINI CONNECTOR



3V3 FOR PCIE CARD

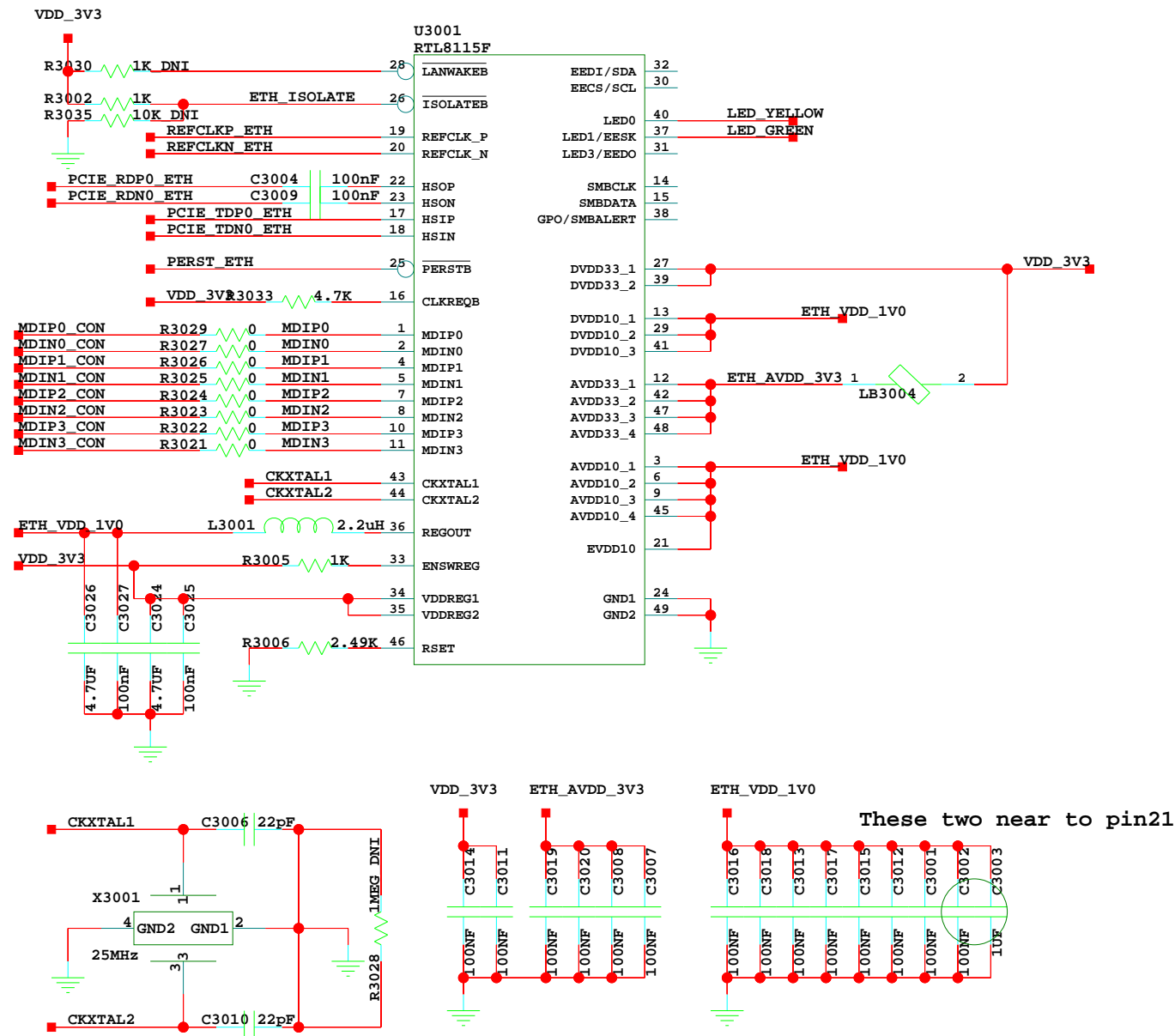


The type and specification of the components refer to the BOM

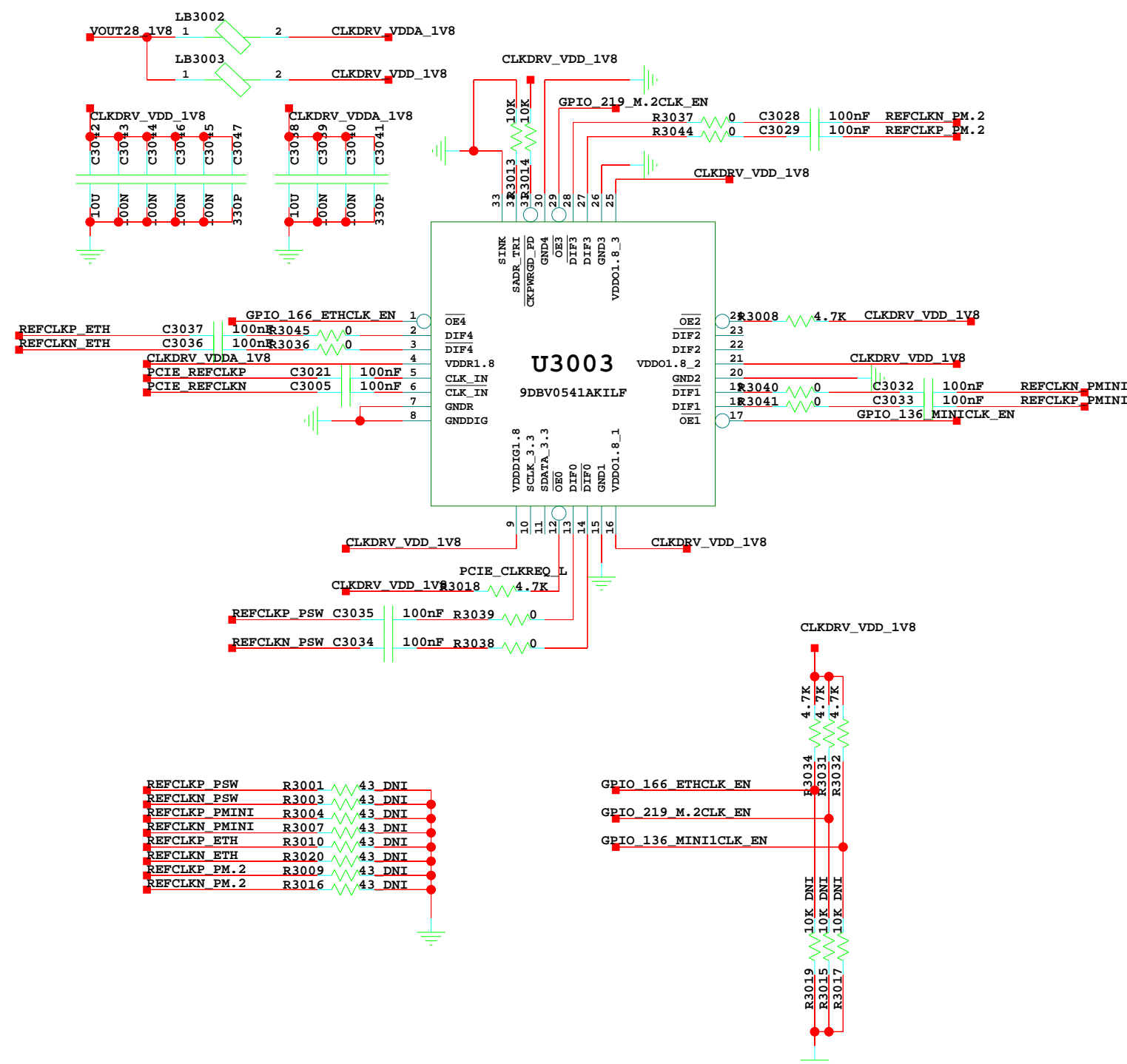
					2017/11/02
				ECA NO	DATE
DESIGNED	wqh	Hikey970			
REVIEWED					
		VER	PART_NUMBER	SHEET 29 OF 33	
				HUAWAI TECH CO.,LTD.	

30. ETHERNET/CLK DRIVER

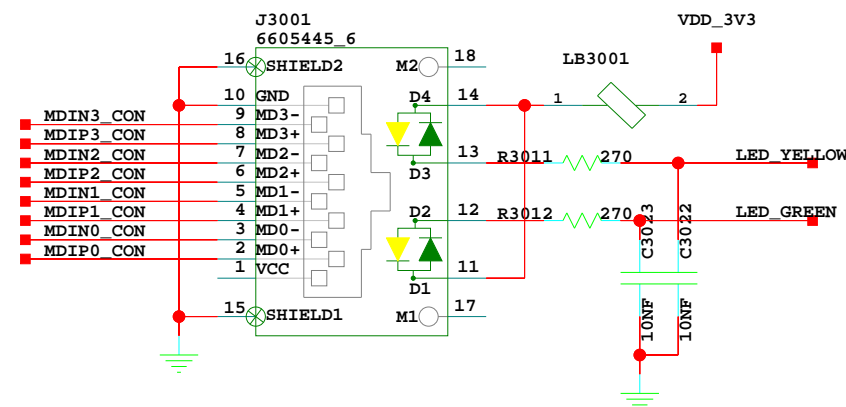
PCIE TO ETHERNET



CLOCK DRIVER 1T05



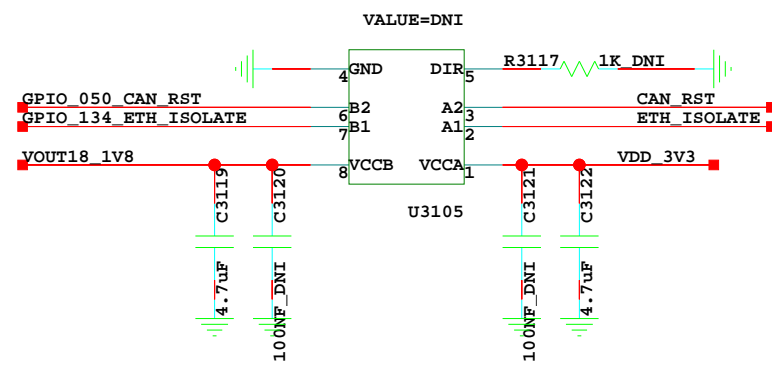
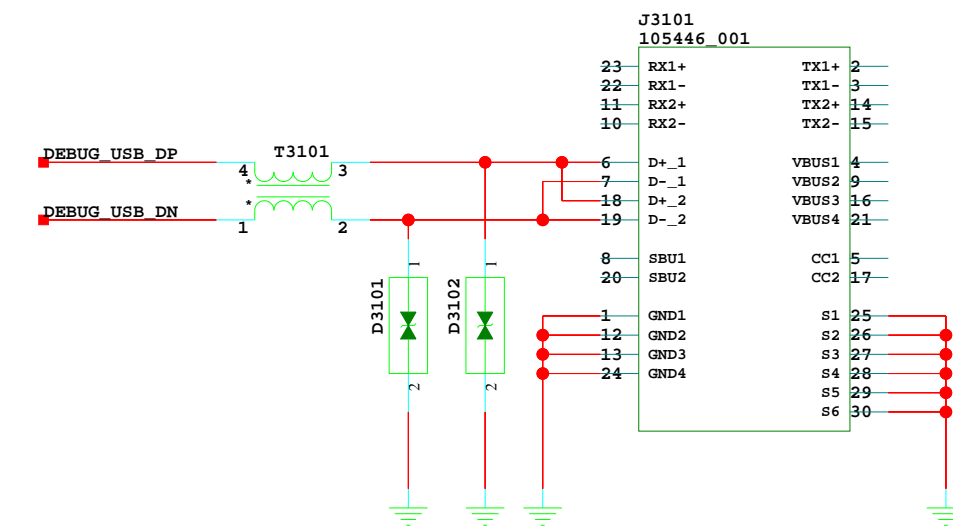
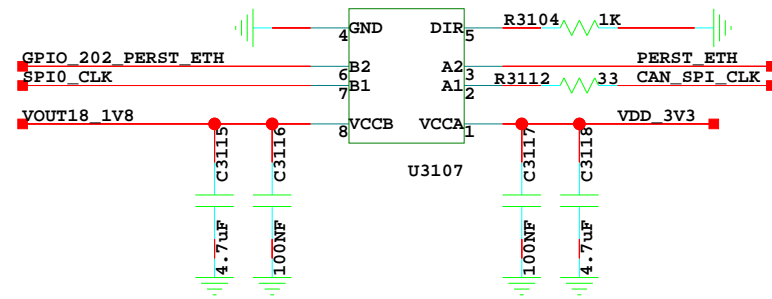
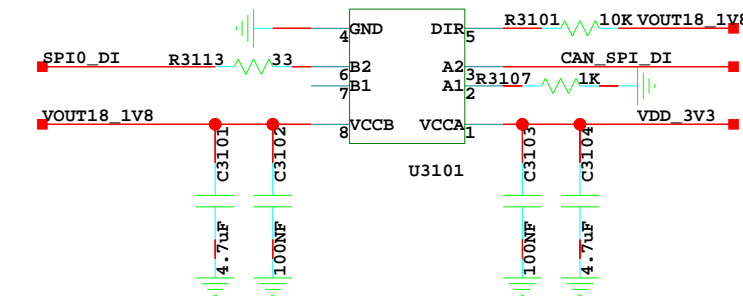
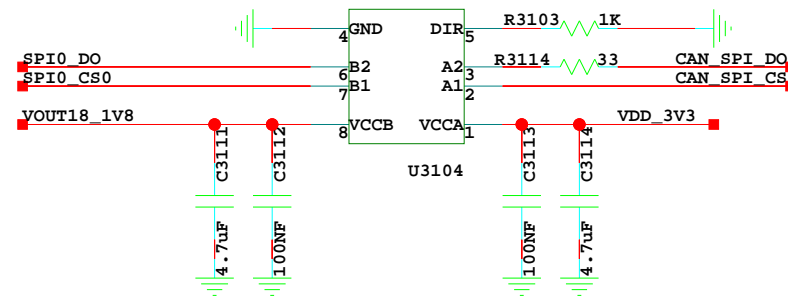
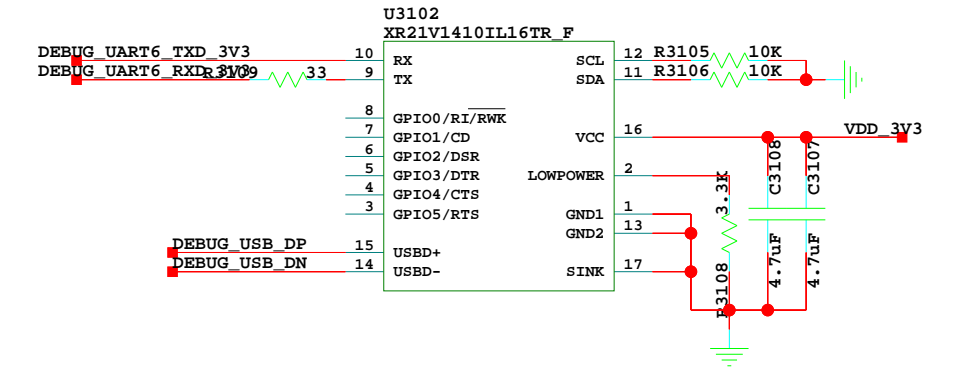
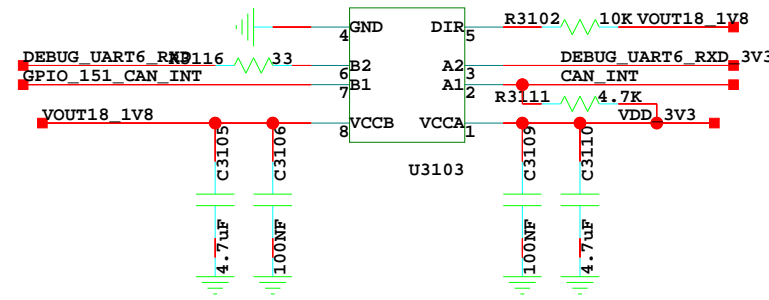
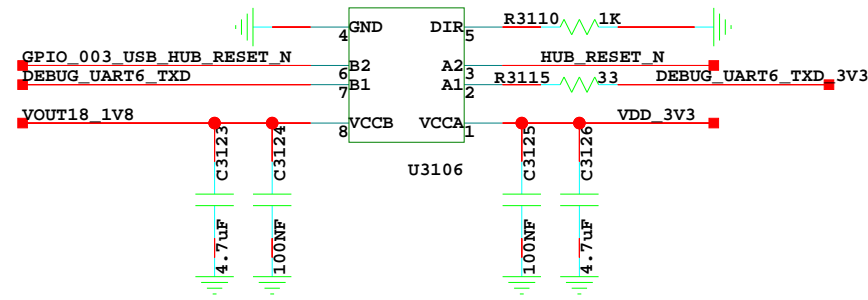
LANE CONNECTOR



The type and specification of the components refer to the BOM

DESIGNED	wqh			ECA NO	2017/11/02
REVIEWED				DATE	
		Hikey970			
VER	PART_NUMBER			SHEET 30 OF 33	
HUAWEI TECH CO.,LTD.					

31. DEBUG USB/LEVEL SHIFT

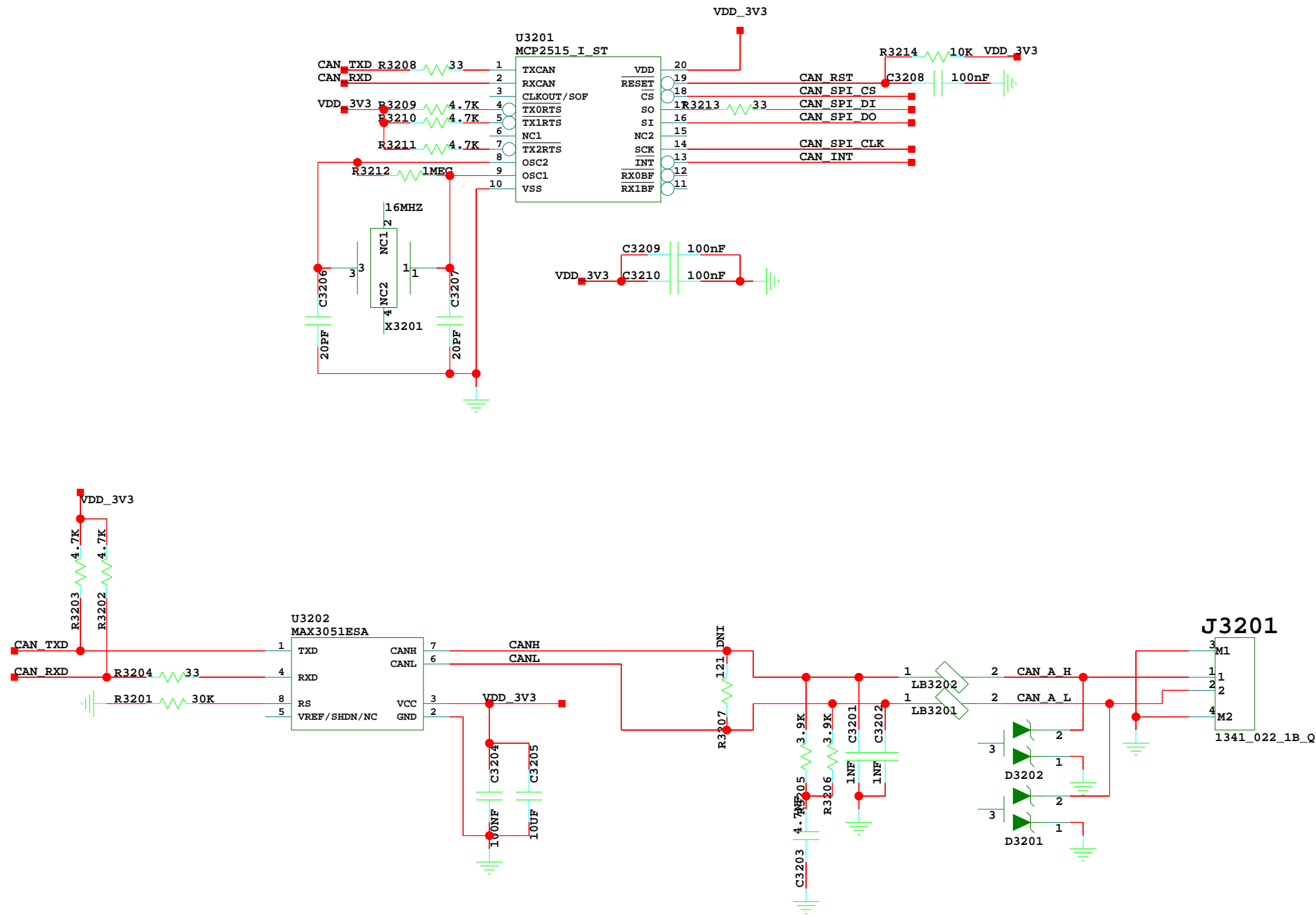


DIR	Operation
L	B DATA TO A BUS
H	A DATA TO B BUS

The type and specification of the components refer to the BOM

DESIGNED	wqh	VER	PART_NUMBER	SHEET	31 OF 33
REVIEWED				HUAWEI TECH CO.,LTD.	
				ECA NO	DATE
					2017/11/02

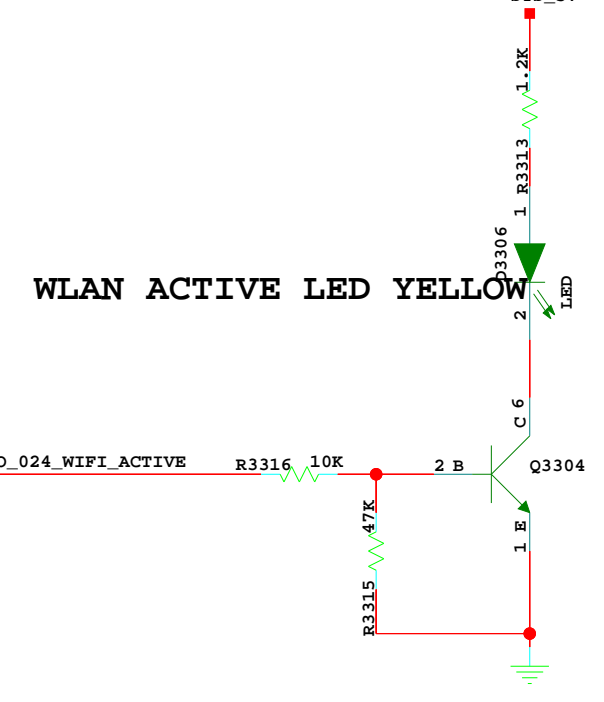
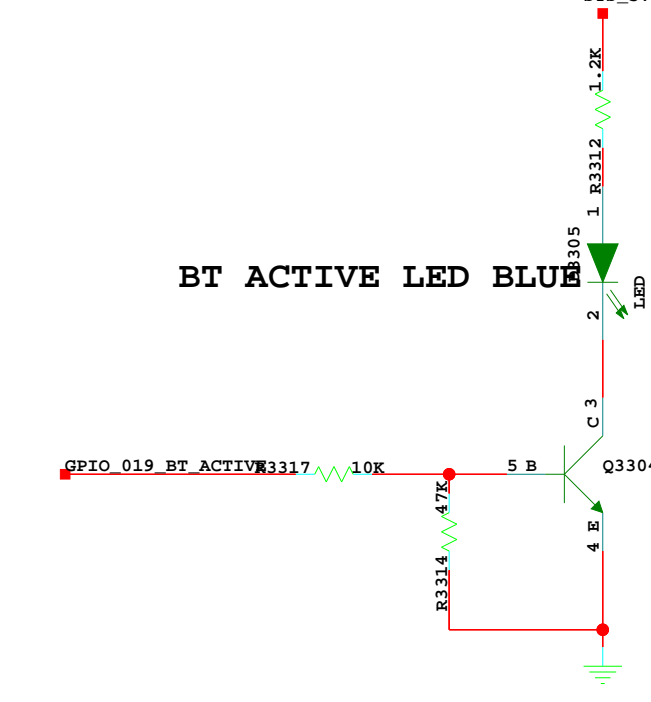
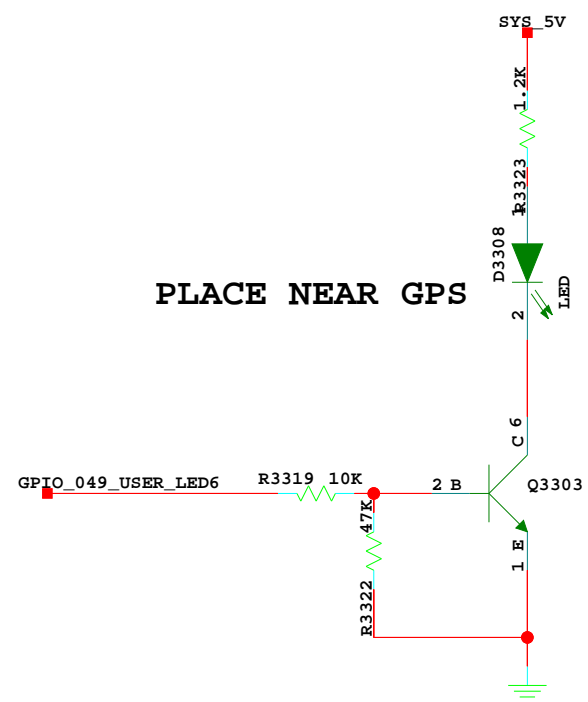
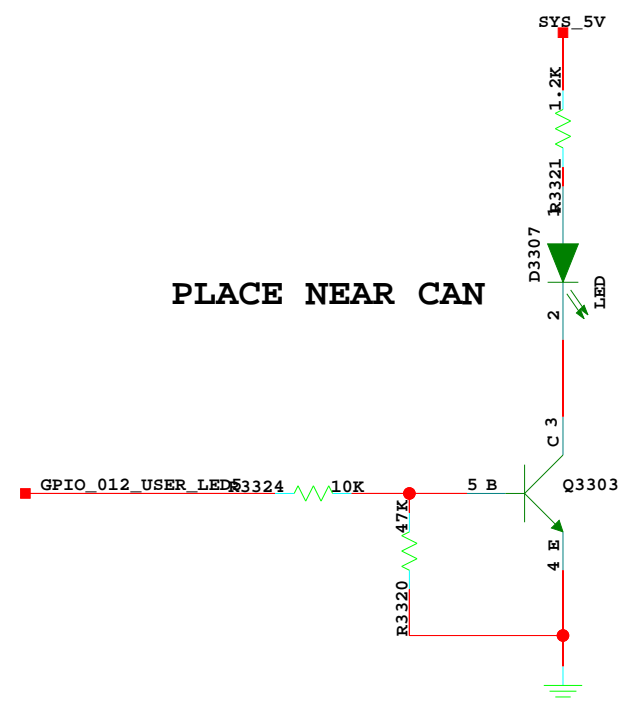
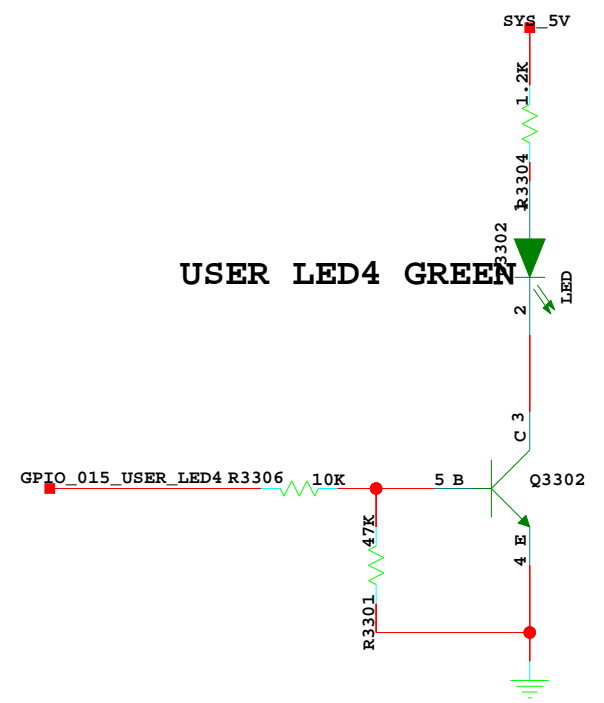
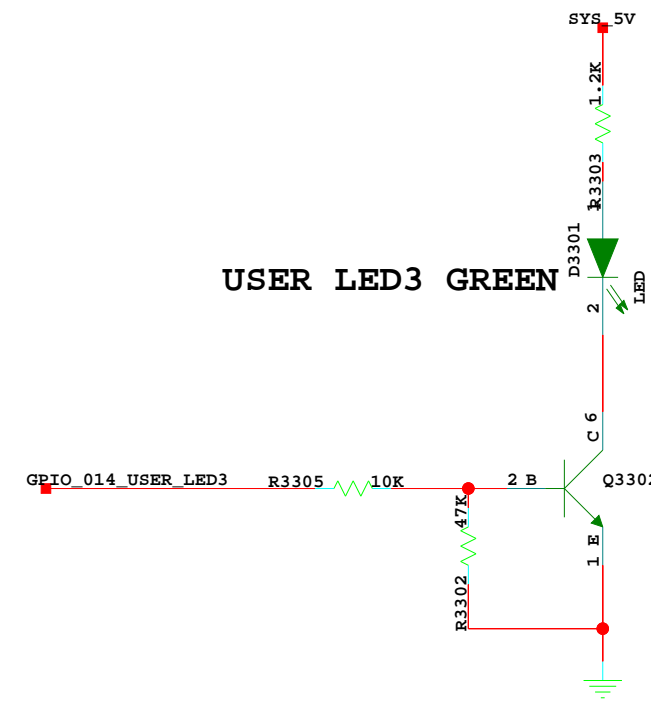
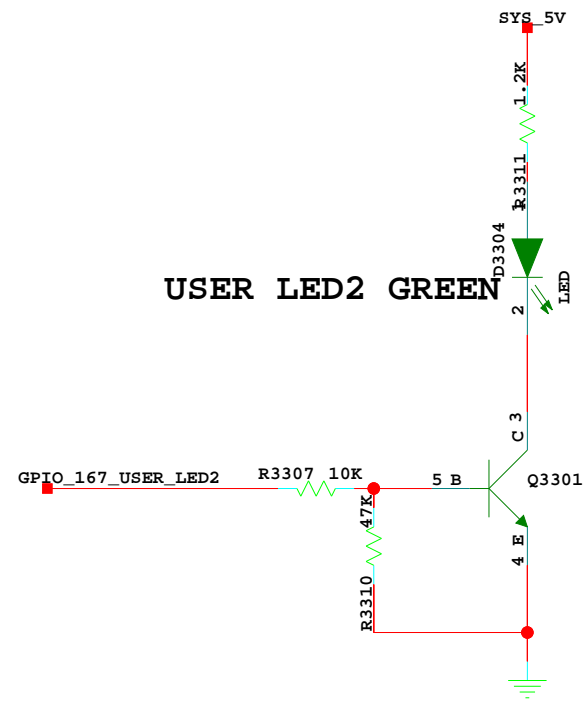
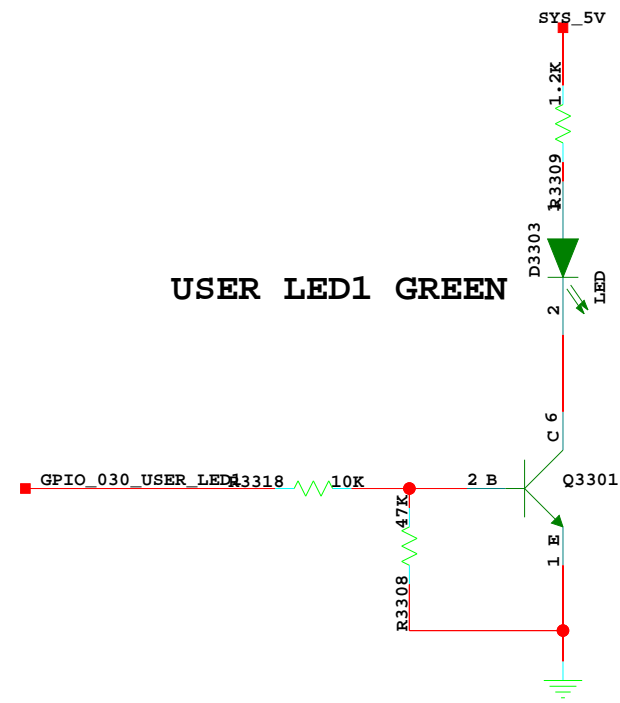
32.CAN



The type and specification of the components refer to the BOM

					2017/11/02
				ECA NO	DATE
DESIGNED	wqh	Hikey970			
REVIEWED					
		VER	PART_NUMBER	SHEET 32 OF 33	
				HUAWEI TECH CO.,LTD.	

33 User LED



The type and specification of the components refer to the BOM

					2017/11/02
				ECA NO	DATE
DESIGNED	wqh	Hikey970			
REVIEWED					
		VER	PART_NUMBER	SHEET 33 OF 33	
				HUAWEI TECH CO.,LTD.	