

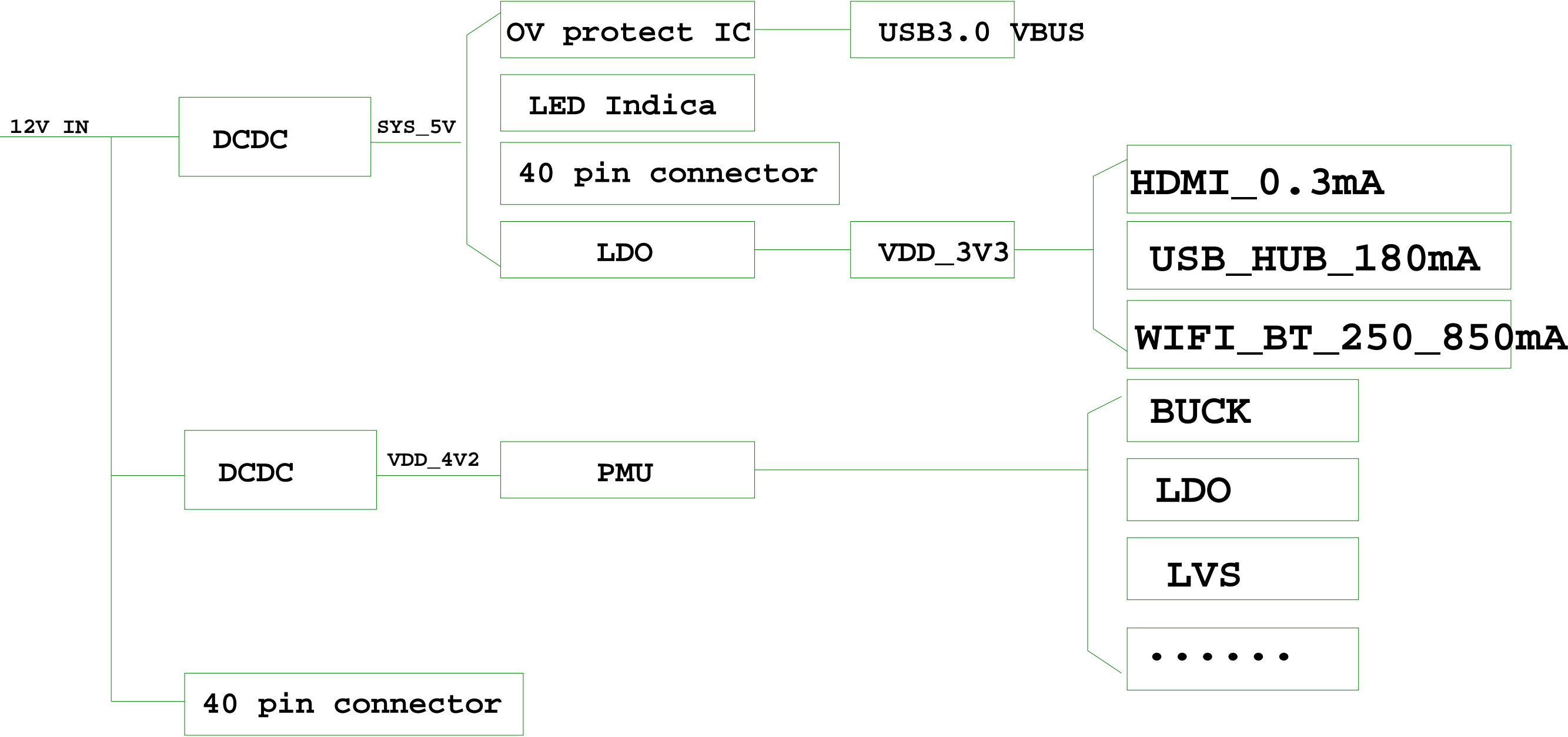
HiKEY SCH

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The type and specification of the components refer to the BOM

				ECA NO	DATE
DESIGNED		Hikey960 Board			
REVIEWED					
		VER	PART_NUMBER	SHEET	OF
		A		HUAWEI TECH CO.,LTD.	

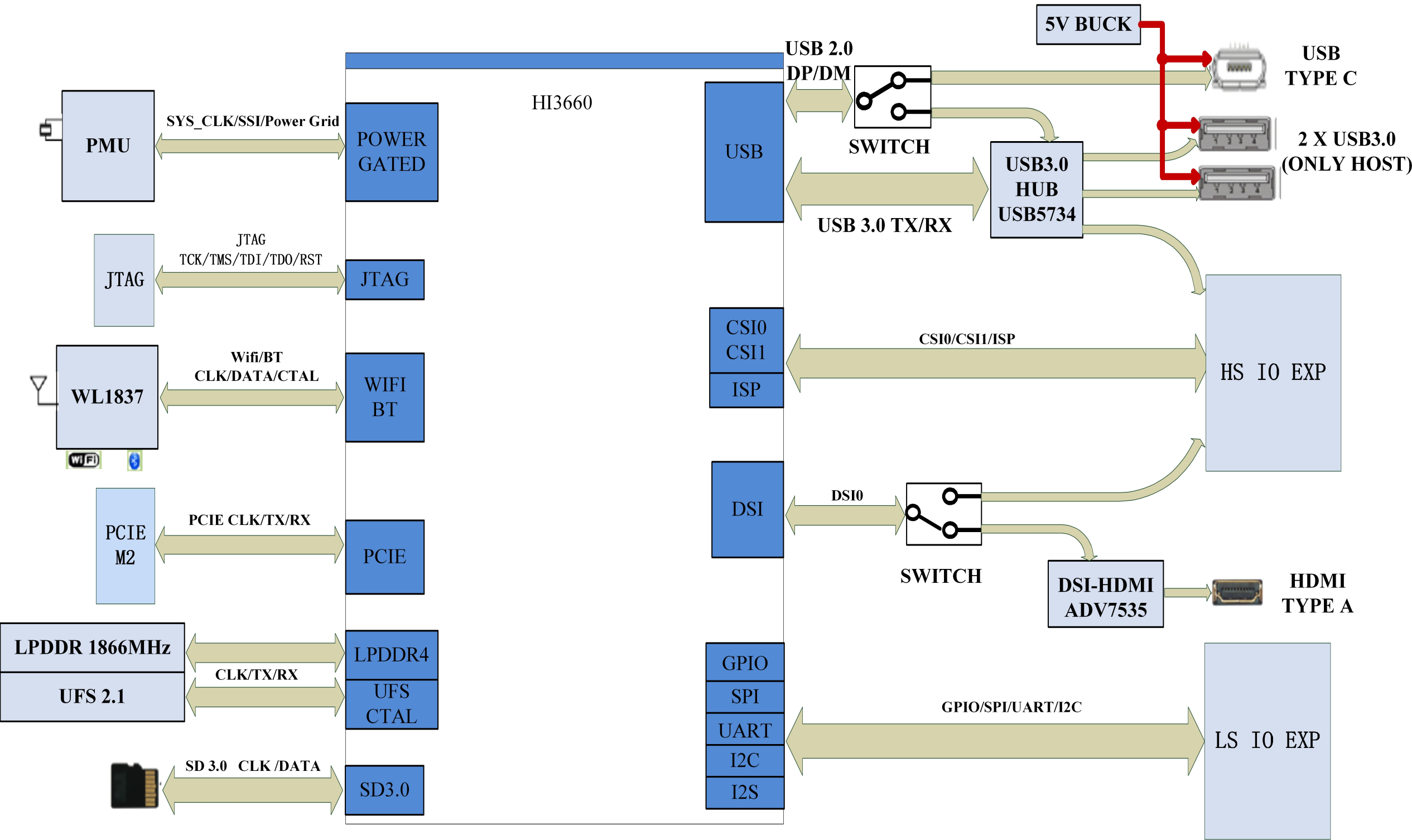
2. Power Tree



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3. Block Diagramm

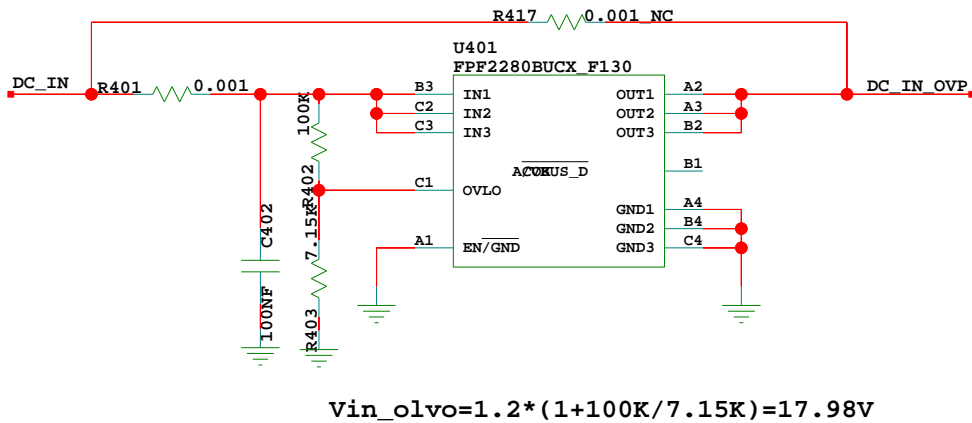
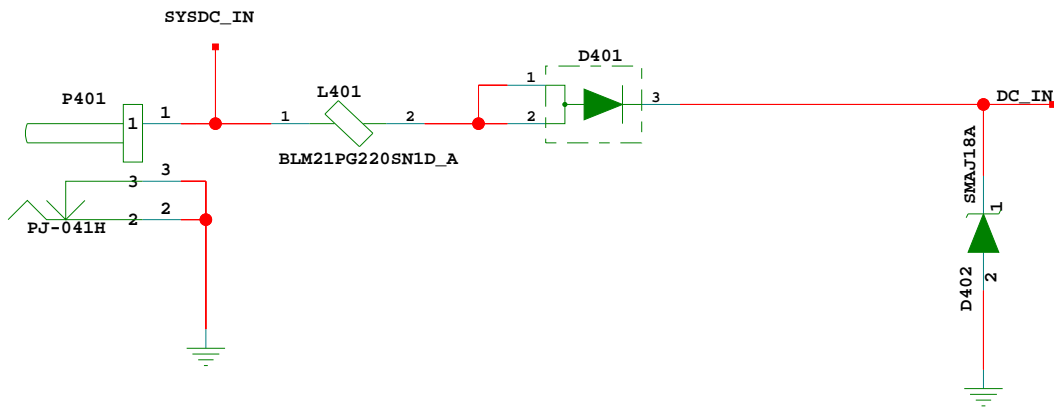


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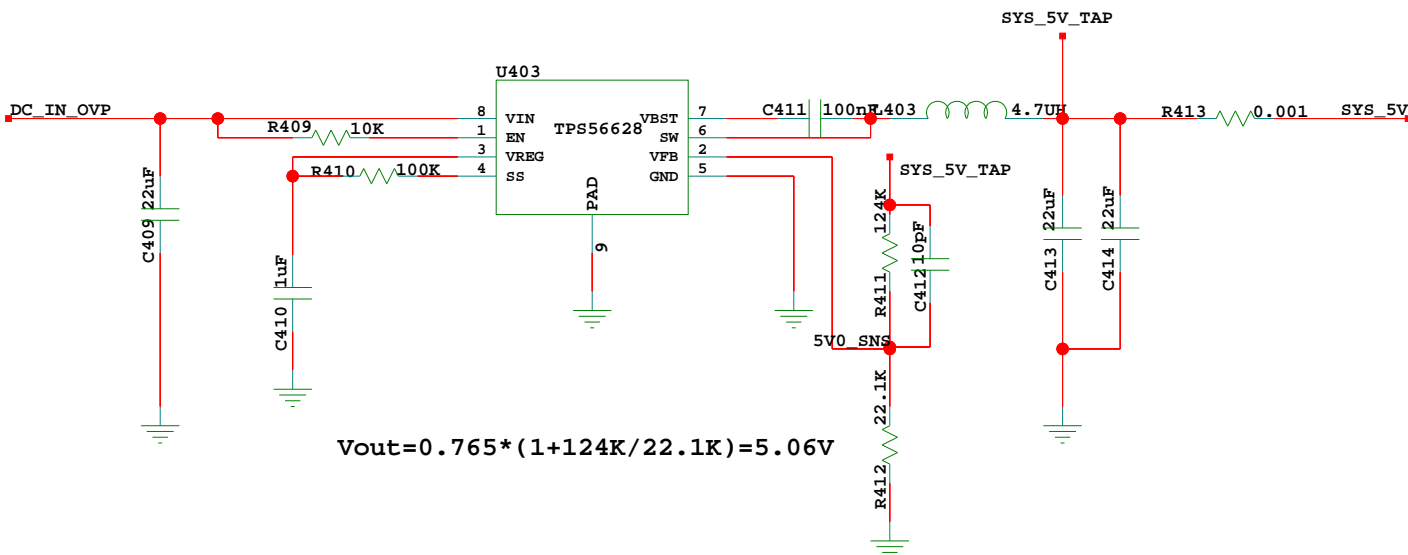
4. 12V DC_IN

DC 8-18V Input



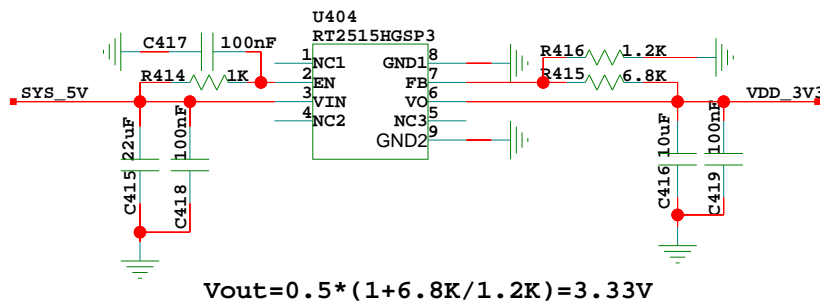
$V_{in_olvo}=1.2*(1+100K/7.15K)=17.98V$

DC_IN 12V0 To 5V 5A



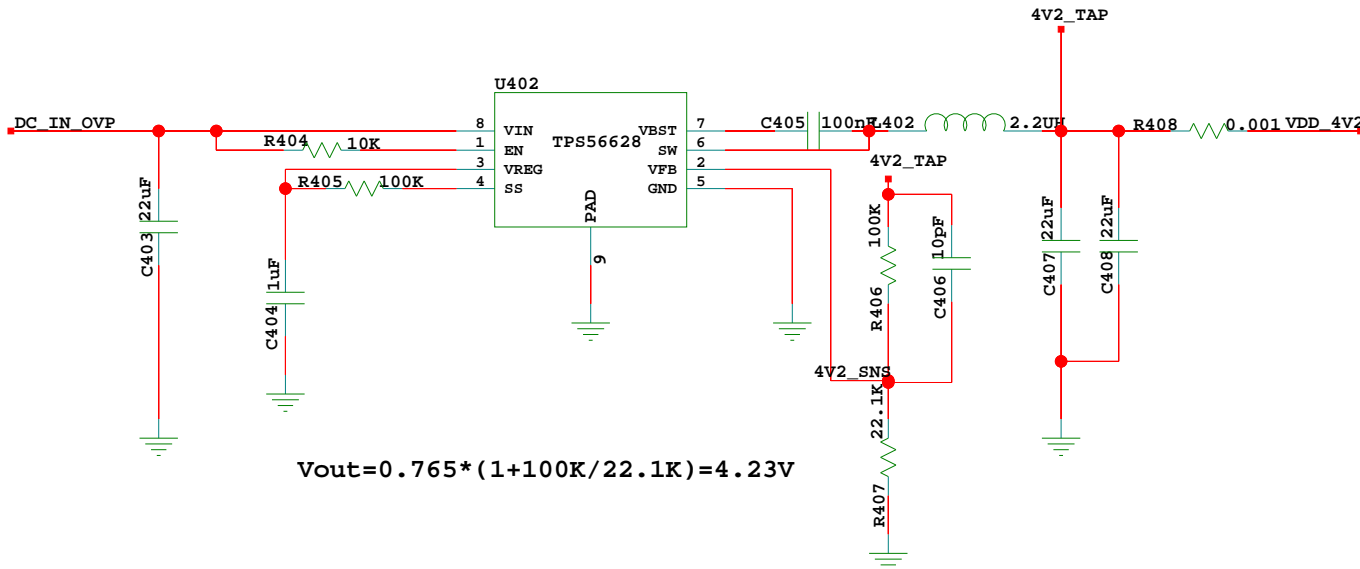
$V_{out}=0.765*(1+124K/22.1K)=5.06V$

5VDC to 3V3DC

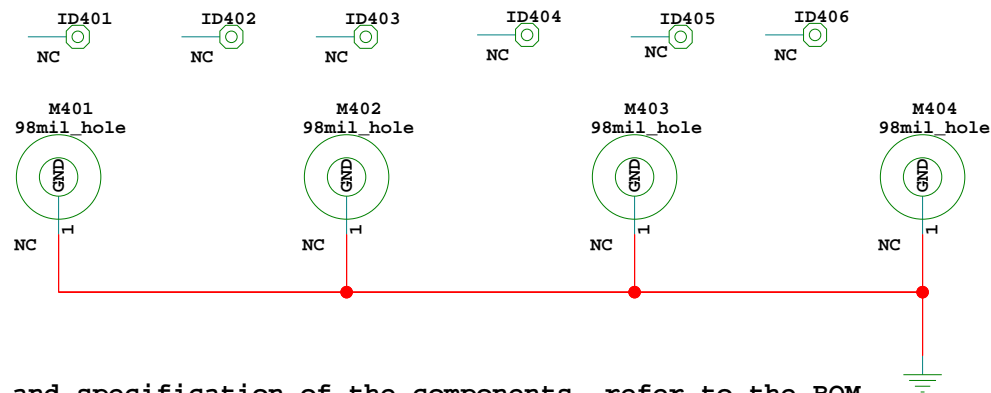


$V_{out}=0.5*(1+6.8K/1.2K)=3.33V$

DC_IN 12V0 To 4.2V 5A



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

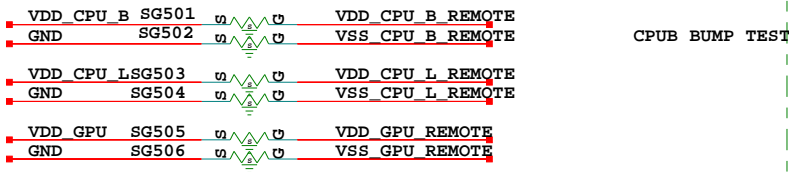


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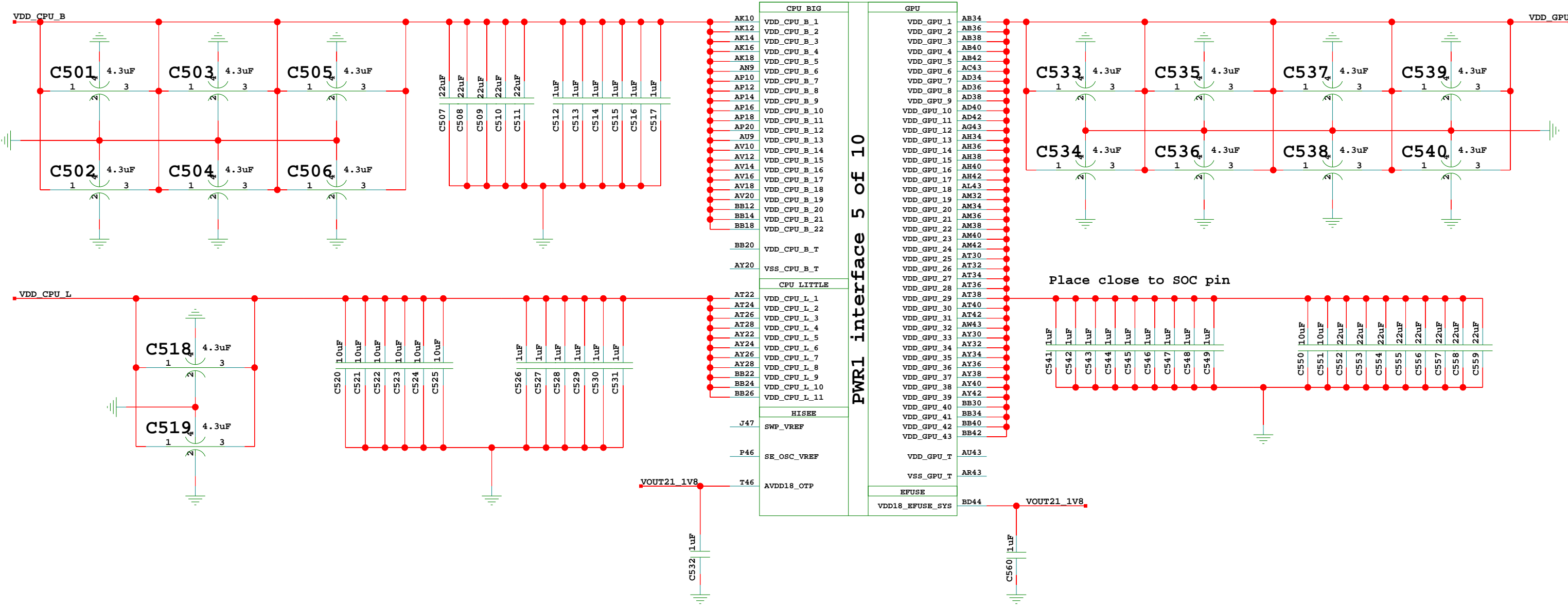
5. SOC PWR1

Reserved for later using



PWR1 interface 1 of 10

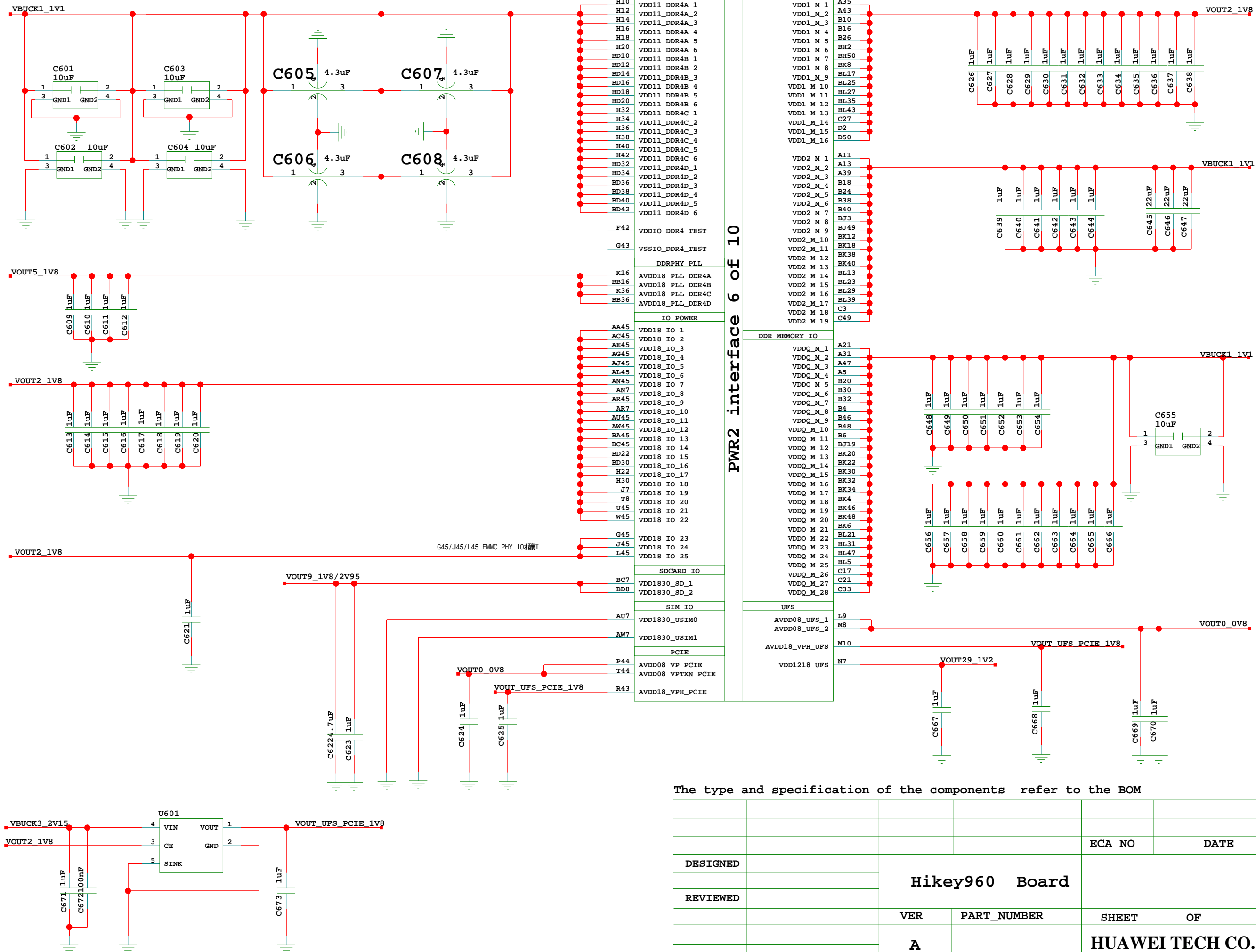
U501



The type and specification of the components refer to the BOM

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6. SOC PWR2



PWR2 interface 2 of 10

U501

DDRPHY	
H10	VDD11_DDR4A_1
H12	VDD11_DDR4A_2
H14	VDD11_DDR4A_3
H16	VDD11_DDR4A_4
H18	VDD11_DDR4A_5
H20	VDD11_DDR4A_6
BD10	VDD11_DDR4B_1
BD12	VDD11_DDR4B_2
BD14	VDD11_DDR4B_3
BD16	VDD11_DDR4B_4
BD18	VDD11_DDR4B_5
BD20	VDD11_DDR4B_6
H32	VDD11_DDR4C_1
H34	VDD11_DDR4C_2
H36	VDD11_DDR4C_3
H38	VDD11_DDR4C_4
H40	VDD11_DDR4C_5
H42	VDD11_DDR4C_6
BD32	VDD11_DDR4D_1
BD34	VDD11_DDR4D_2
BD36	VDD11_DDR4D_3
BD38	VDD11_DDR4D_4
BD40	VDD11_DDR4D_5
BD42	VDD11_DDR4D_6
F42	VDDIO_DDR4_TEST
G43	VSSIO_DDR4_TEST
DDRPHY PLL	
K16	AVDD18_PLL_DDR4A
BB16	AVDD18_PLL_DDR4B
K36	AVDD18_PLL_DDR4C
BB36	AVDD18_PLL_DDR4D
IO POWER	
AA45	VDD18_IO_1
AC45	VDD18_IO_2
AE45	VDD18_IO_3
AG45	VDD18_IO_4
AJ45	VDD18_IO_5
AL45	VDD18_IO_6
AN45	VDD18_IO_7
AR45	VDD18_IO_8
AW45	VDD18_IO_9
AU45	VDD18_IO_10
BA45	VDD18_IO_11
BC45	VDD18_IO_12
BD22	VDD18_IO_13
BD30	VDD18_IO_14
H22	VDD18_IO_15
H30	VDD18_IO_16
J7	VDD18_IO_17
T8	VDD18_IO_18
U45	VDD18_IO_19
W45	VDD18_IO_20
G45	VDD18_IO_21
J45	VDD18_IO_22
L45	VDD18_IO_23
BC7	VDD18_IO_24
BD8	VDD18_IO_25
SDCARD IO	
BC7	VDD1830_SD_1
BD8	VDD1830_SD_2
SIM IO	
AU7	VDD1830_USIM0
AW7	VDD1830_USIM1
PCIE	
P44	AVDD08_VP_PCIE
T44	AVDD08_VPTXN_PCIE
R43	AVDD18_VPH_PCIE

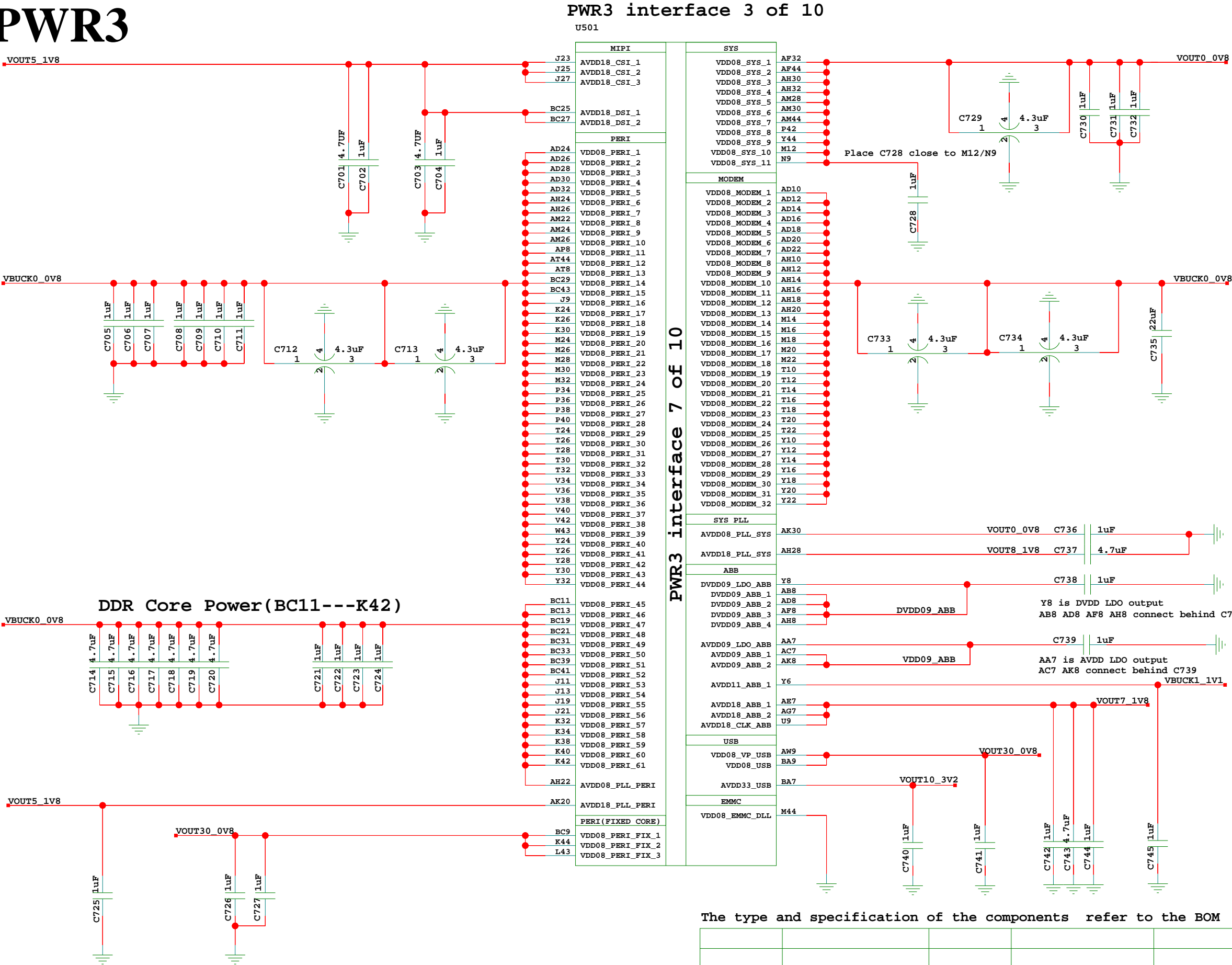
PWR2 interface 6 of 10

DDR MEMORY	
A35	VDD1_M_1
A43	VDD1_M_2
B10	VDD1_M_3
B16	VDD1_M_4
B26	VDD1_M_5
BH2	VDD1_M_6
BH50	VDD1_M_7
BK8	VDD1_M_8
BL17	VDD1_M_9
BL25	VDD1_M_10
BL27	VDD1_M_11
BL35	VDD1_M_12
BL43	VDD1_M_13
C27	VDD1_M_14
D2	VDD1_M_15
D50	VDD1_M_16
A11	VDD2_M_1
A13	VDD2_M_2
A39	VDD2_M_3
B18	VDD2_M_4
B24	VDD2_M_5
B38	VDD2_M_6
B40	VDD2_M_7
BJ3	VDD2_M_8
BJ49	VDD2_M_9
BK12	VDD2_M_10
BK18	VDD2_M_11
BK38	VDD2_M_12
BK40	VDD2_M_13
BL13	VDD2_M_14
BL23	VDD2_M_15
BL29	VDD2_M_16
BL39	VDD2_M_17
C3	VDD2_M_18
C49	VDD2_M_19
DDR MEMORY IO	
A21	VDDQ_M_1
A31	VDDQ_M_2
A47	VDDQ_M_3
A5	VDDQ_M_4
B20	VDDQ_M_5
B30	VDDQ_M_6
B32	VDDQ_M_7
B4	VDDQ_M_8
B46	VDDQ_M_9
B48	VDDQ_M_10
B6	VDDQ_M_11
BJ19	VDDQ_M_12
BK20	VDDQ_M_13
BK22	VDDQ_M_14
BK30	VDDQ_M_15
BK32	VDDQ_M_16
BK34	VDDQ_M_17
BK4	VDDQ_M_18
BK46	VDDQ_M_19
BK48	VDDQ_M_20
BK6	VDDQ_M_21
BL21	VDDQ_M_22
BL31	VDDQ_M_23
BL47	VDDQ_M_24
BL5	VDDQ_M_25
C17	VDDQ_M_26
C21	VDDQ_M_27
C33	VDDQ_M_28
UFS	
L9	AVDD08_UFS_1
M8	AVDD08_UFS_2
M10	AVDD18_VPH_UFS
N7	VDD1218_UFS

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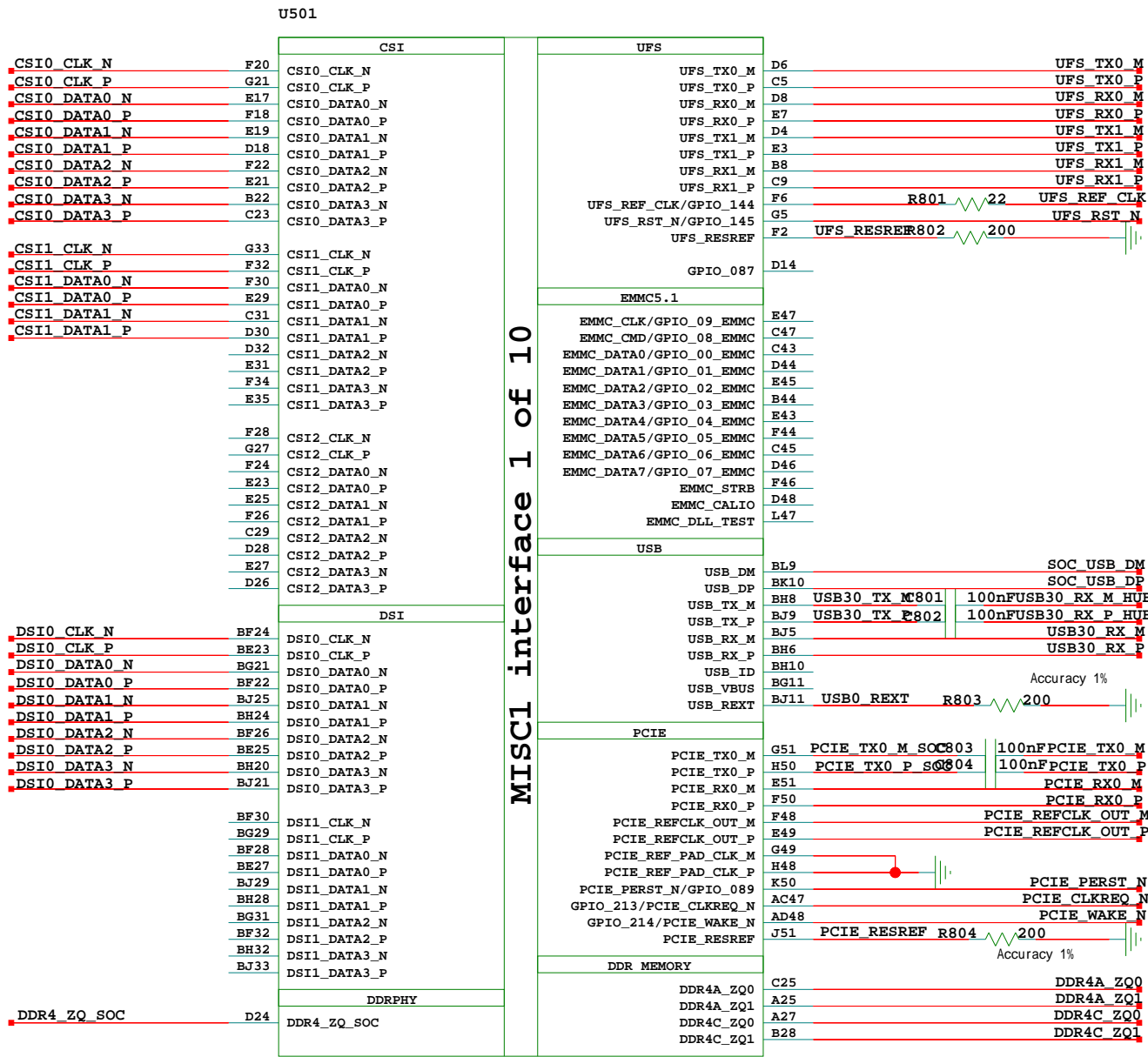
7. SOC PWR3



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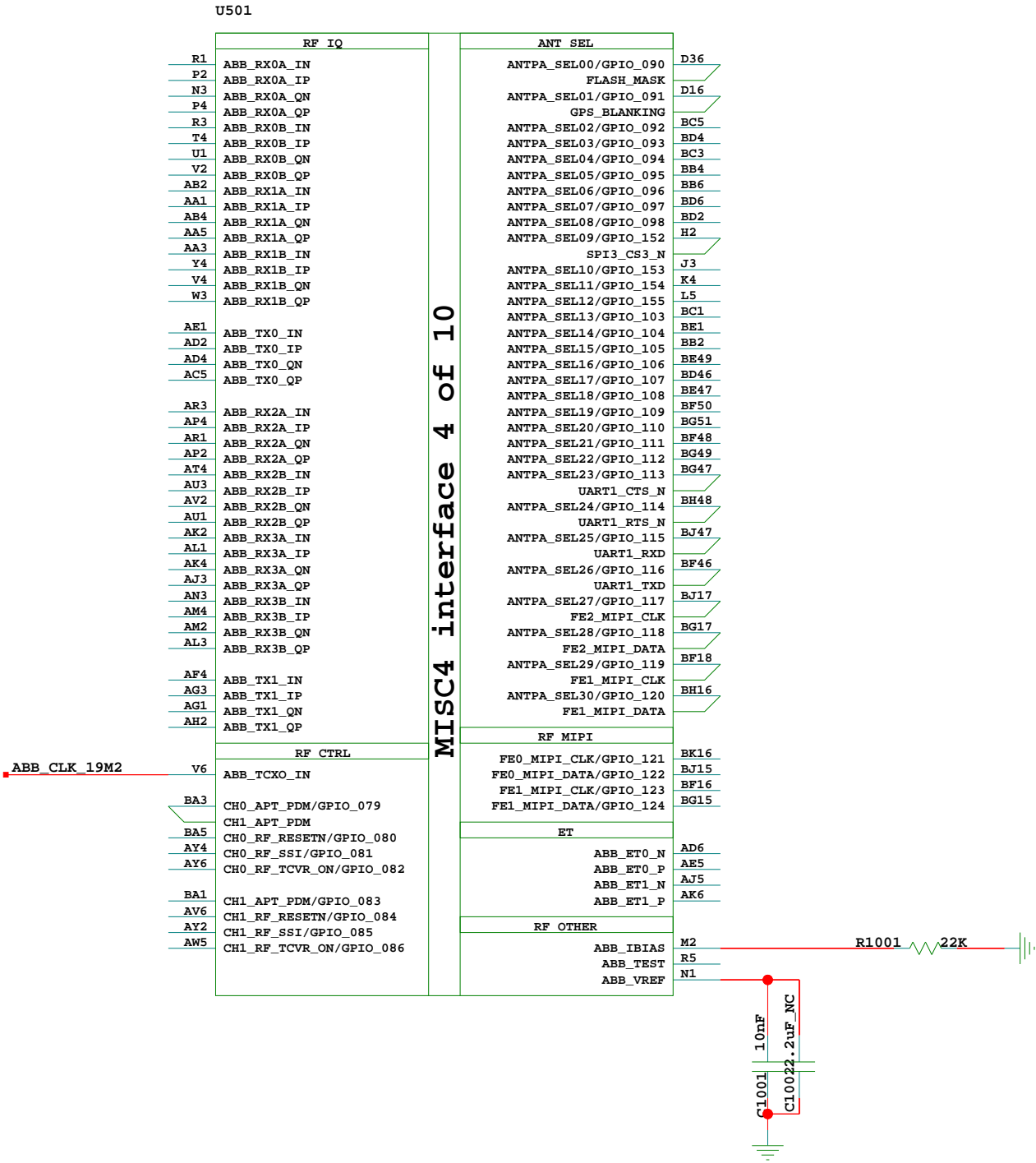
8. SOC HS



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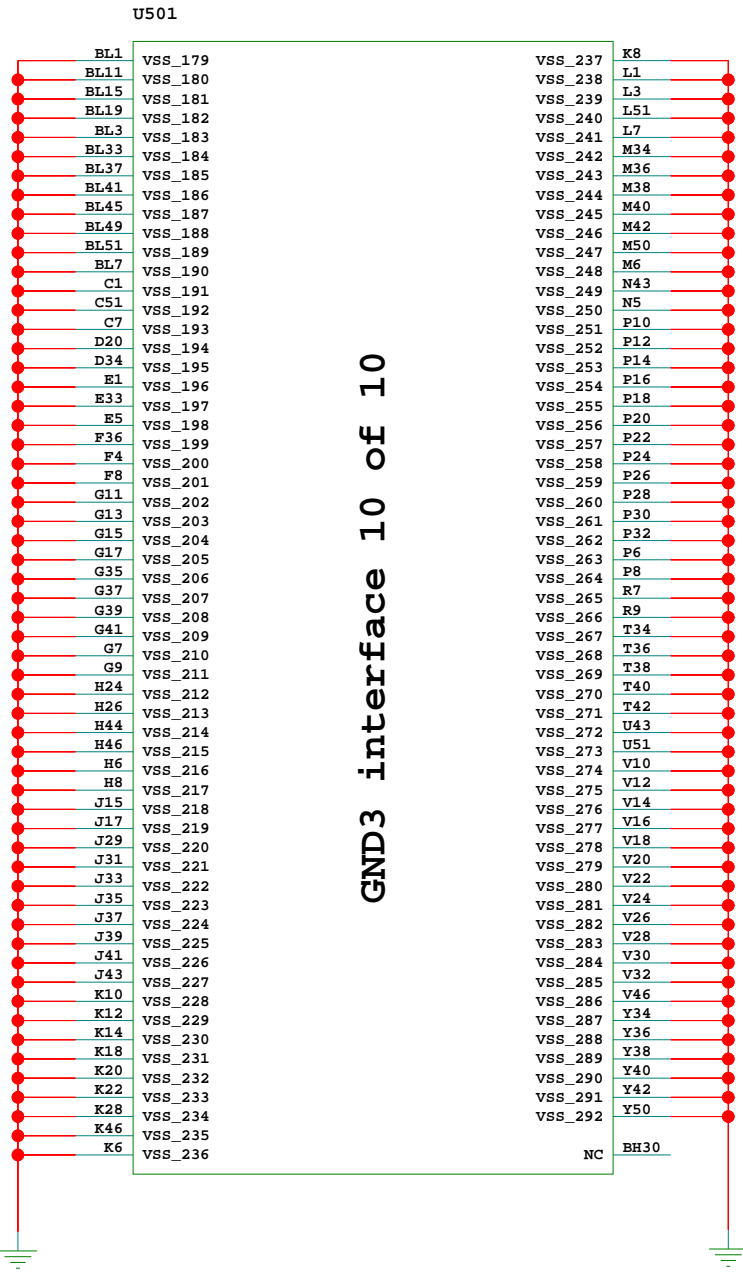
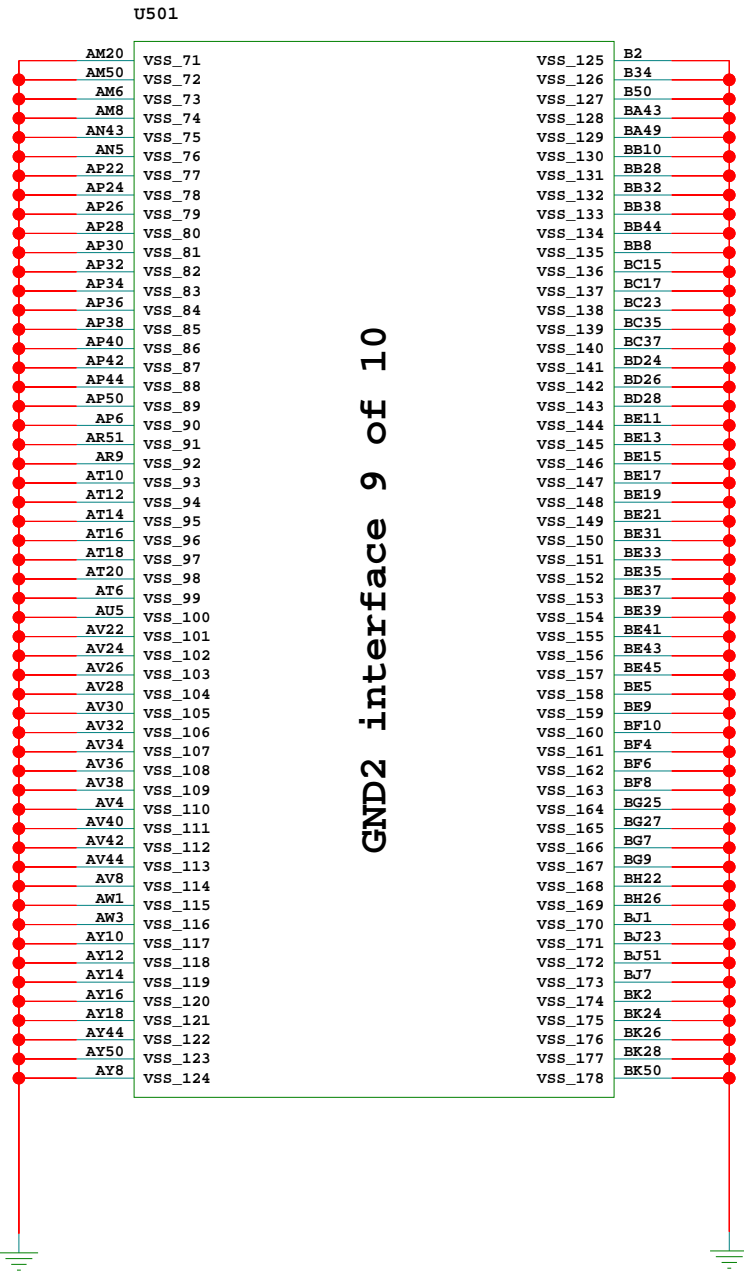
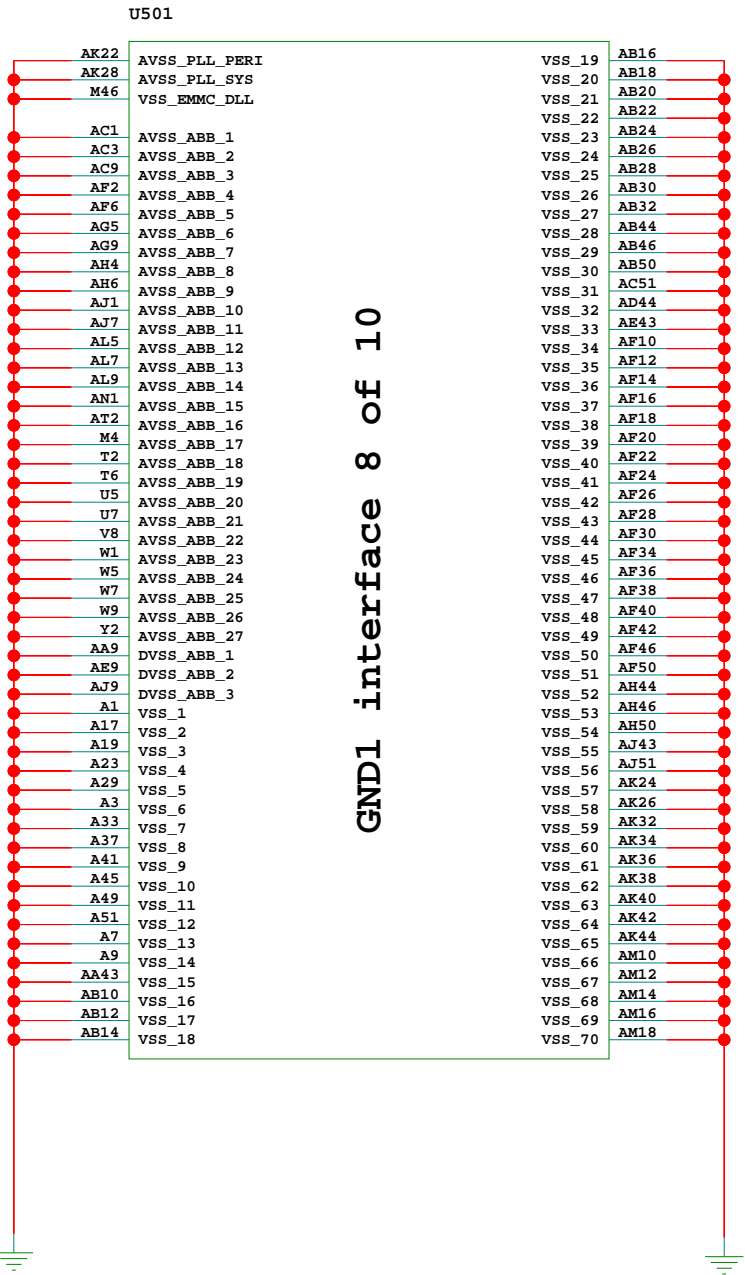
10. SOC RF



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11. SOC GND

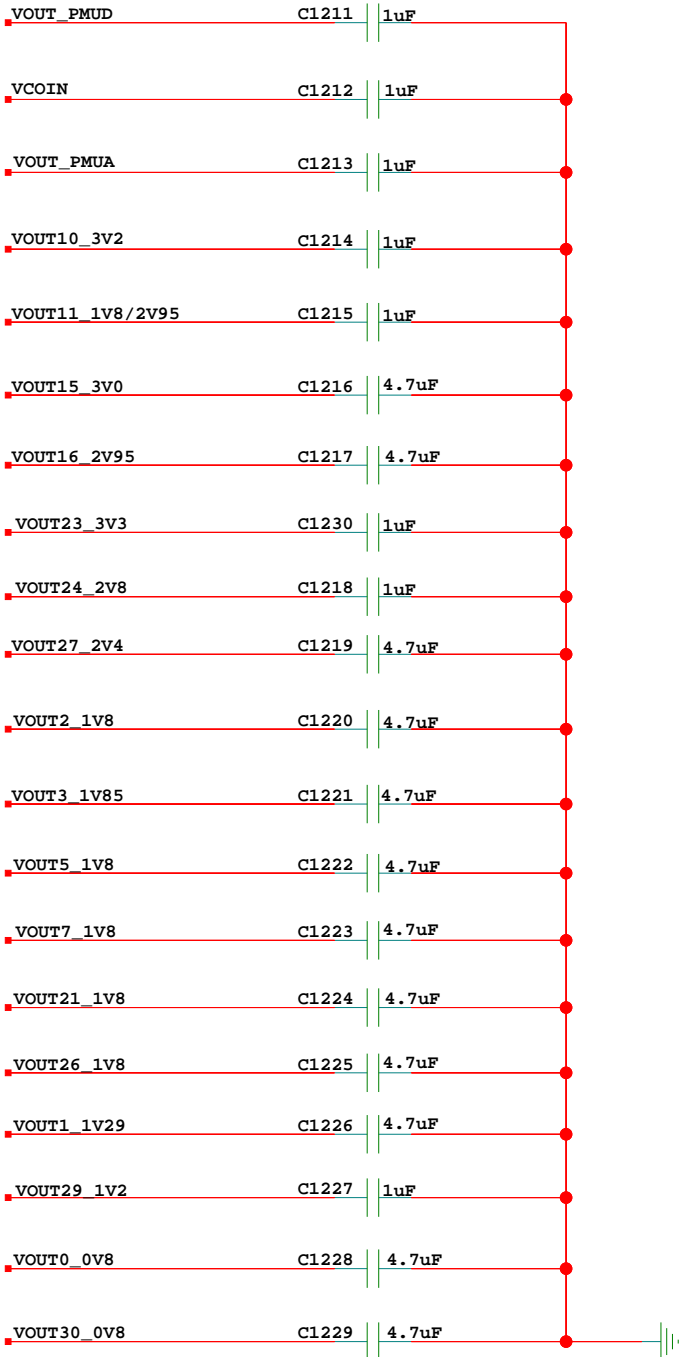
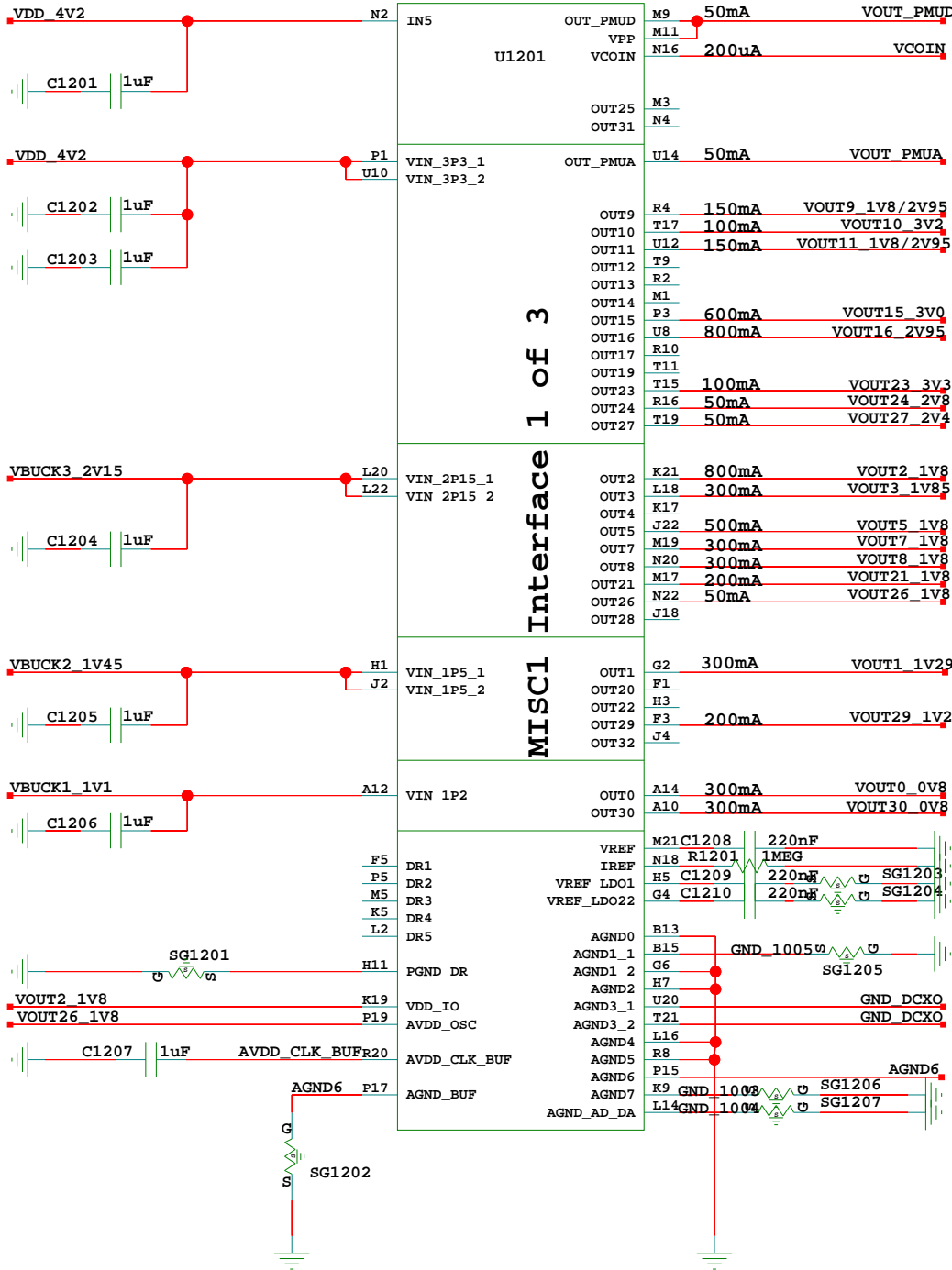


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12. PMU-1

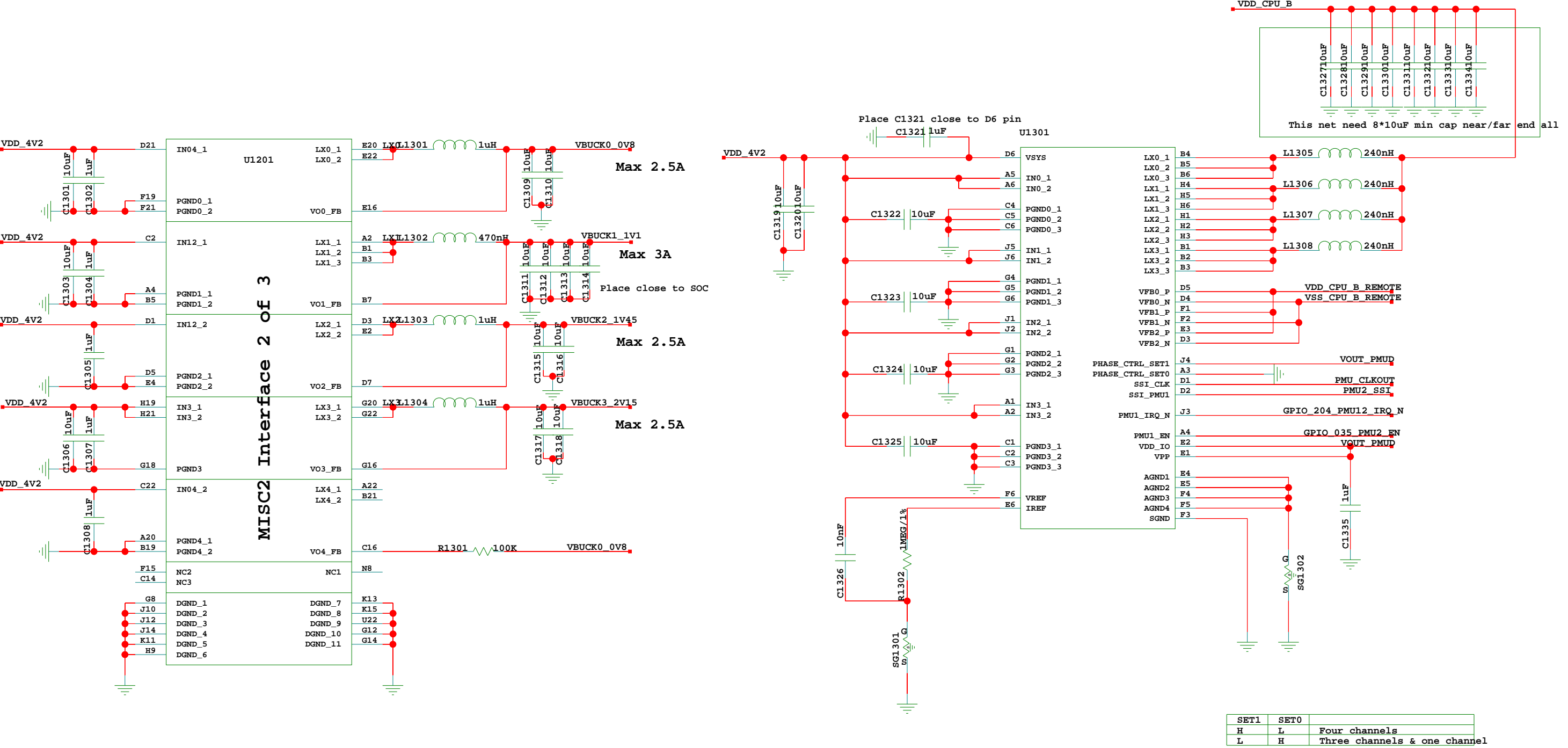
Name	Voltage	Max Current	Function
LDO0	0.8	300	UFS,SYS
LDO1	1.29	300	HDMI V1P2
LDO2	1.8	800	1V8 IO
LDO3	1.85	300	HDMI
LDO4	1.85	200	NC
LDO5	1.8	500	MIPI PHY&DDR PHY&HKADC
LDO7	1.8	300	ABB&PLL ANA_1V8
LDO8	1.8	300	SOC SYS PLL
LDO9	1.8/2.95	150	SDCARD IO
LDO10	3.2	100	USB PHY 3.3V
LDO11	1.8	150	40PIN CONNECTOR
LDO12	1.8	150	NC
LDO13	2.8	150	NC
LDO14	2.85	50	NC
LDO15	3	600	UFS VCC
LDO16	2.95	800	SD
LDO17	3.3	50	NC
LDO19	2.8	300	NC
LDO20	1.1	600	NC
LDO21	1.8	200	EFUSE_SYS
LDO22	1.29	300	NC
LDO23	3.3	100	RESERVED
LDO24	2.8	50	RESERVED
LDO25	2.85	400	NC
LDO26	1.8	50	19M2 XO
LDO27	2.4	50	RESERVED
LDO28	1.8	50	NC
LDO29	1.2	200	SOC UFS 1.2V
LDO30	0.8	300	UFS/EMMC 0.8V Core
LDO31	2.8	300	NC
LDO32	1.25	600	NC



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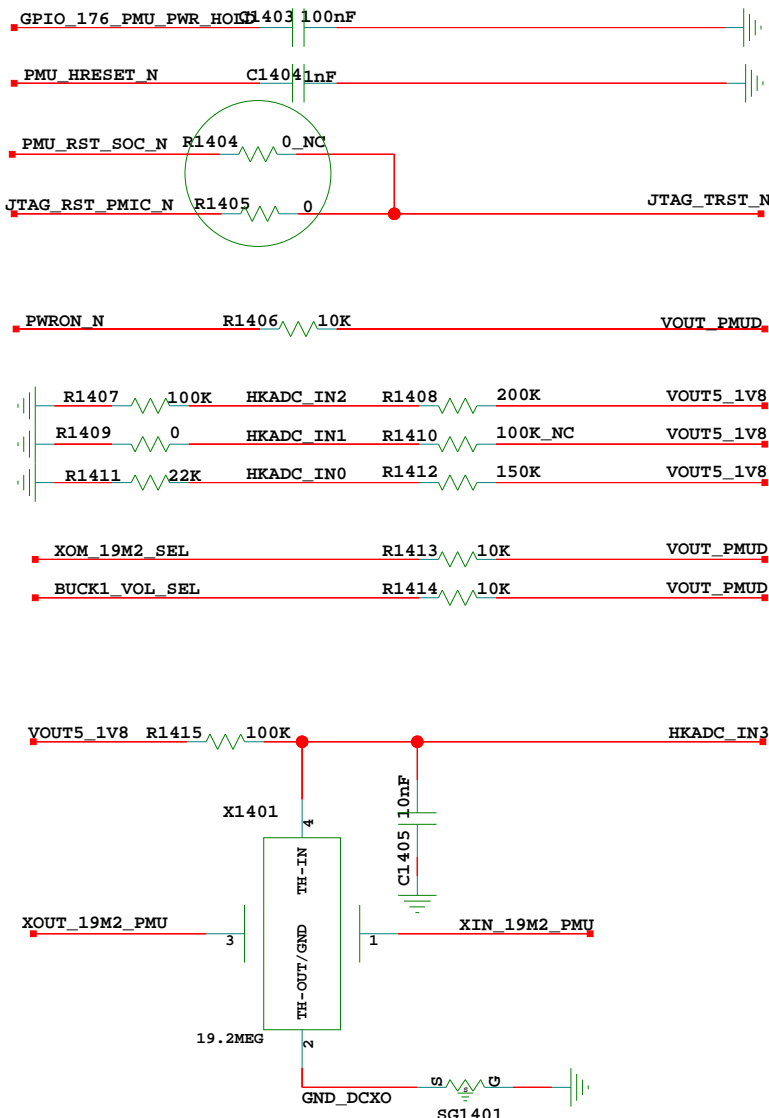
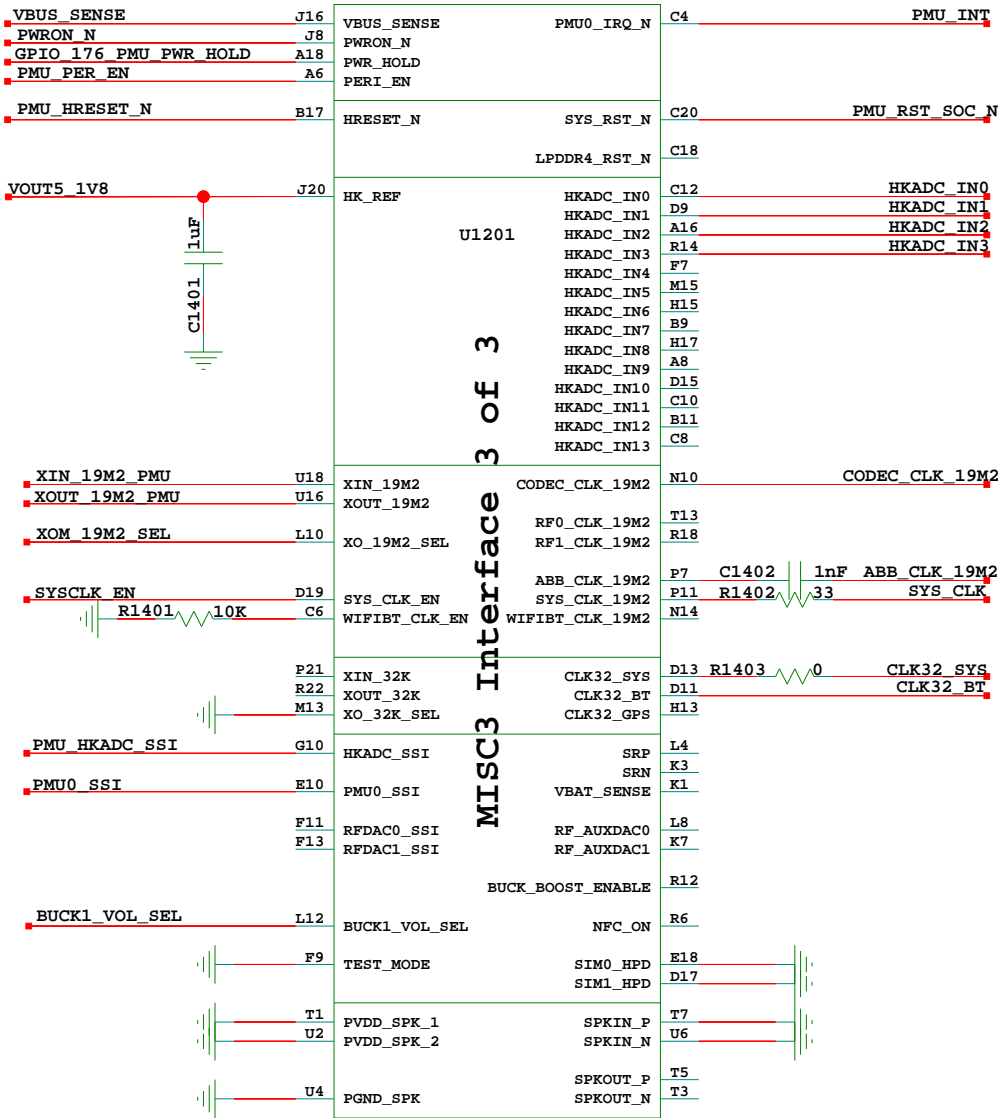
13. PMU-2



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14. PMU-3



BOARD ID

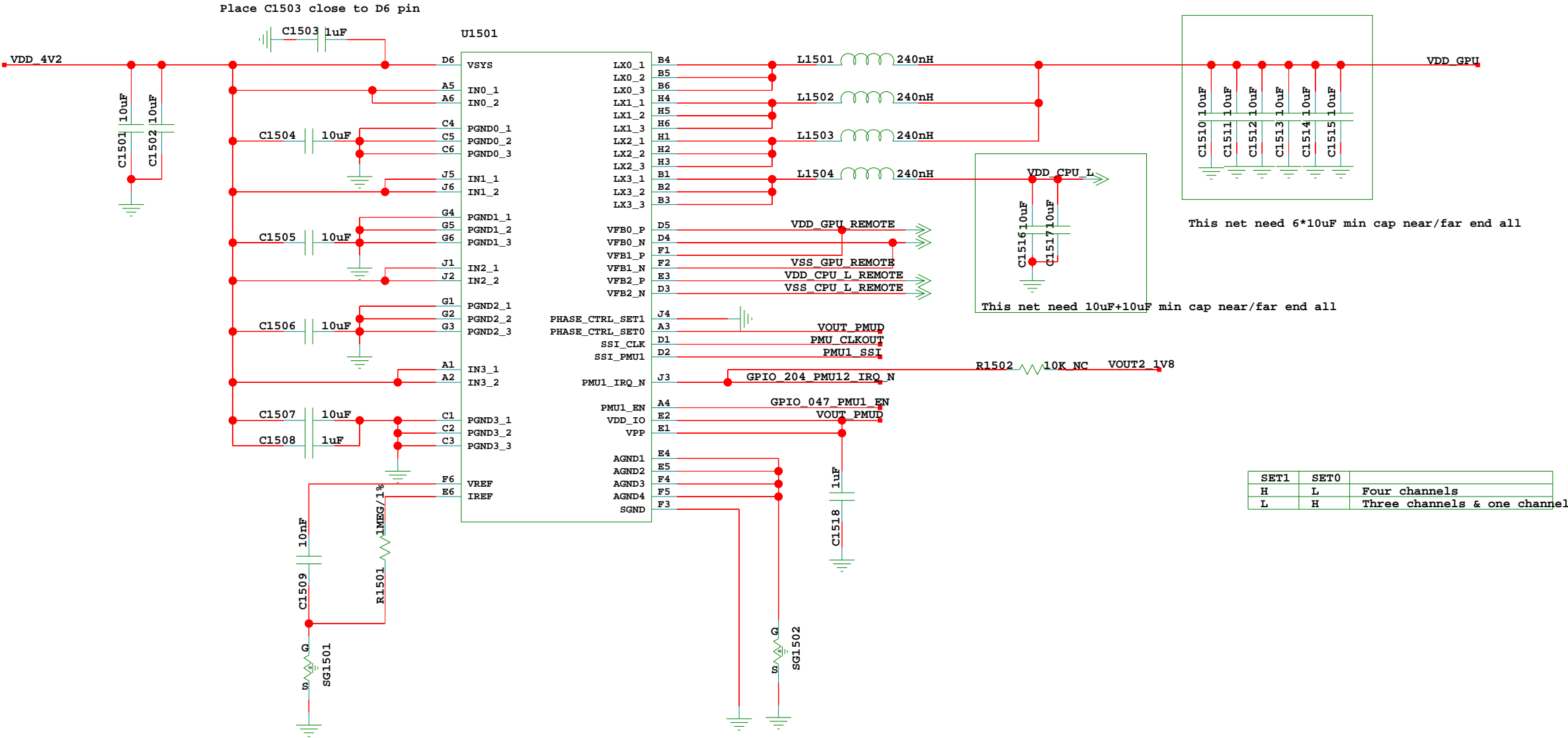
Board ID	HKADC2	HKADC1	HKADC0
hikey960	3	0	1

	0	1
XO 32K_SEL	WITHOUT CRYSTAL	WITH CRYSTAL
XO 19M2_SEL	38M4	19M2
BUCK1_VOL_SEL	1V2	1V1

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15. PMU-4

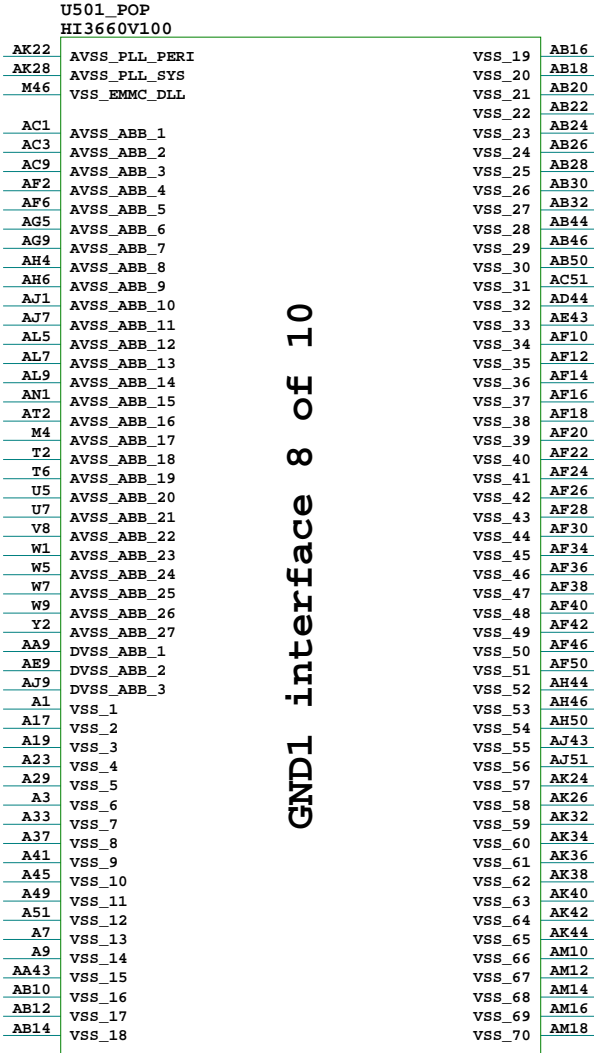


The type and specification of the components refer to the BOM

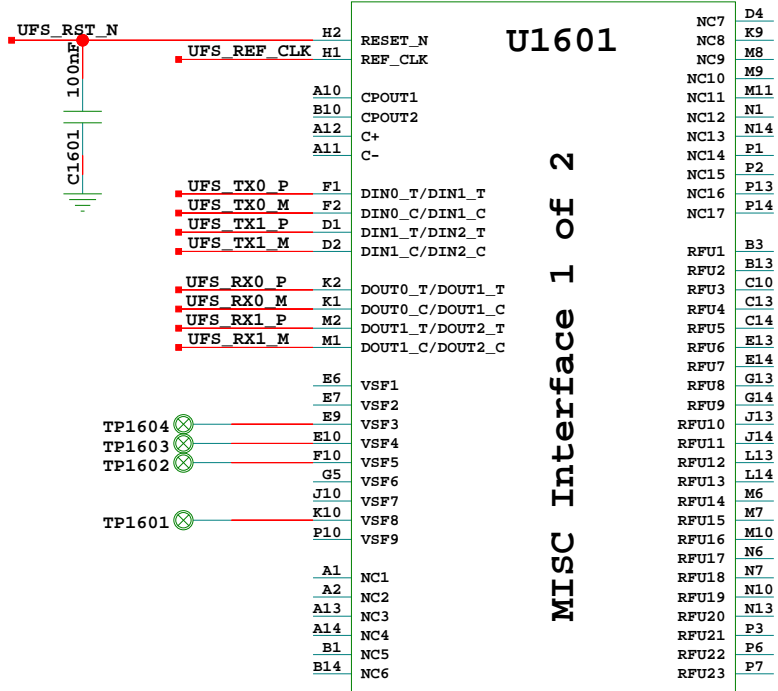
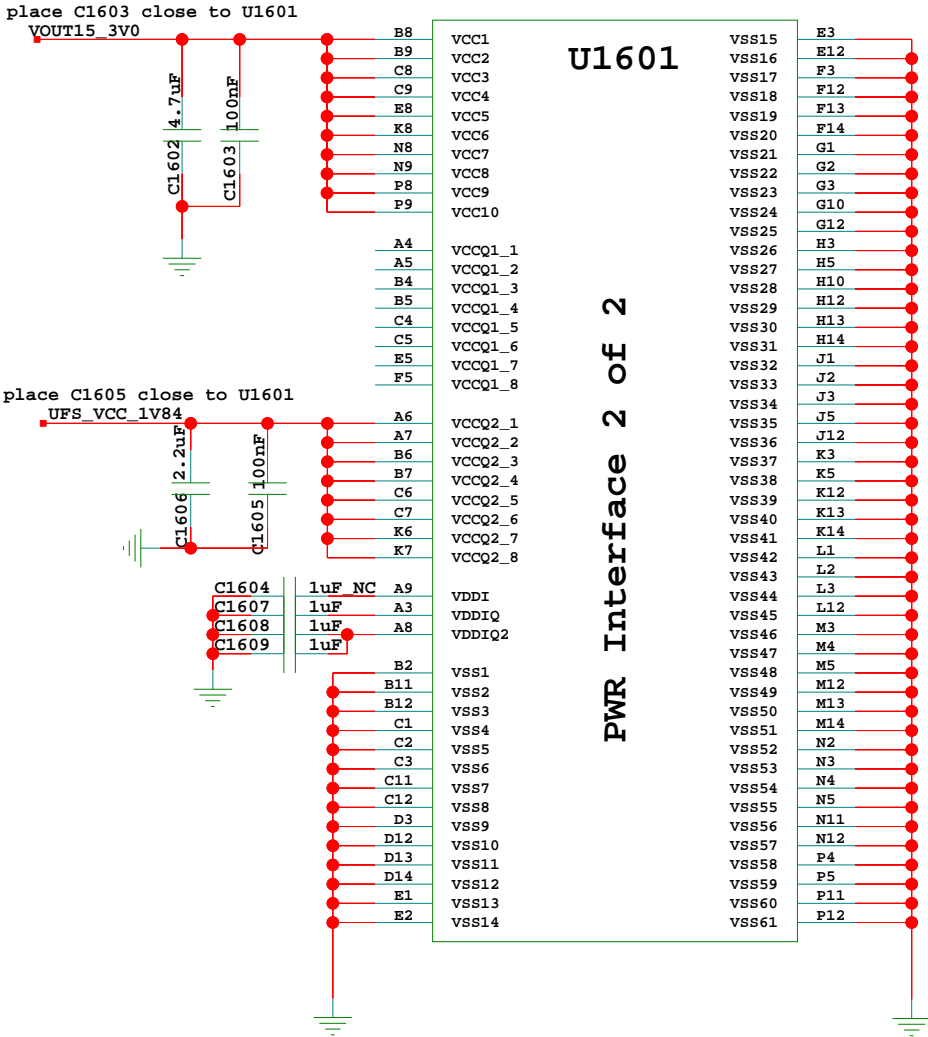
				ECA NO	DATE
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		VER	PART_NUMBER	SHEET	OF
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16. UFS/LPDDR4

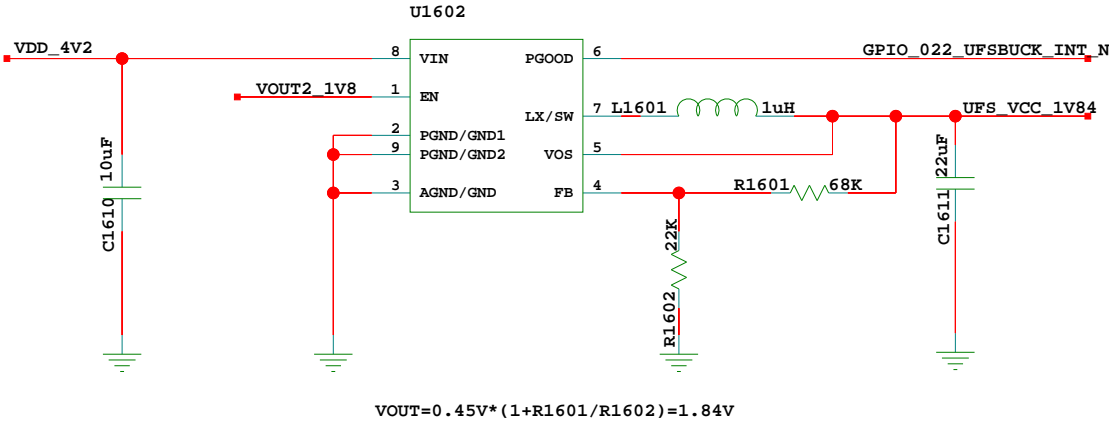
LPDDR4



GND1 interface 8 of 10



UFS BUCK

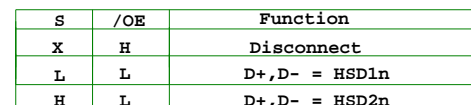


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A

B

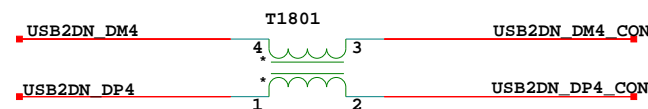


A



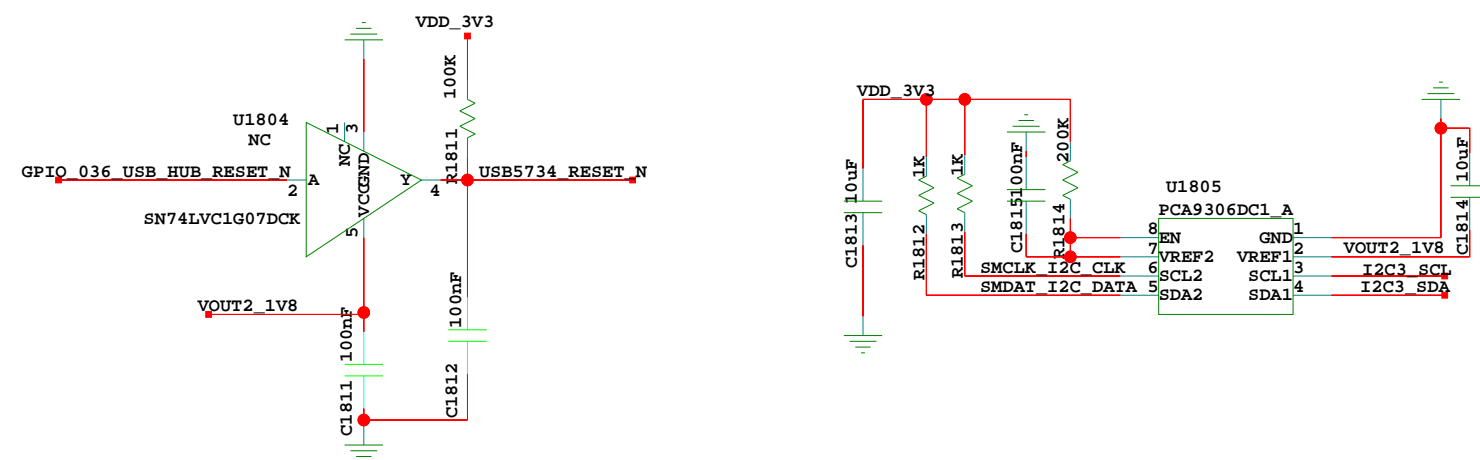
				ECA NO	DATE
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D



Vout=3.3V

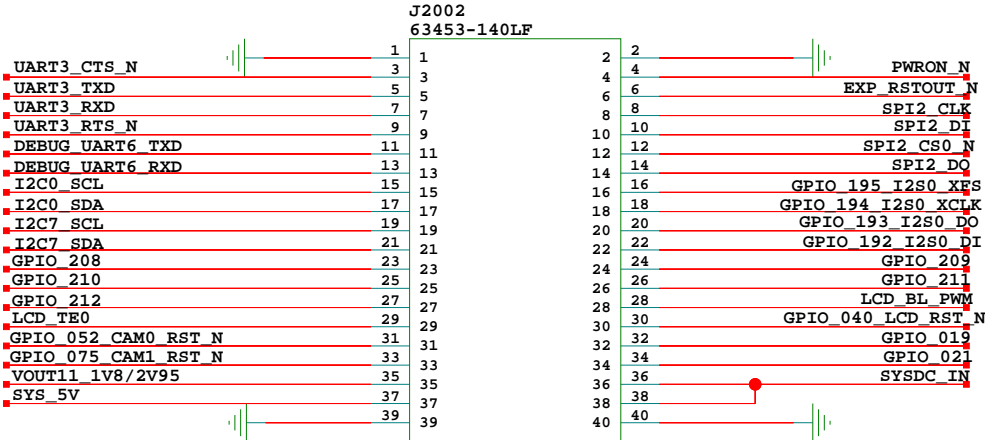
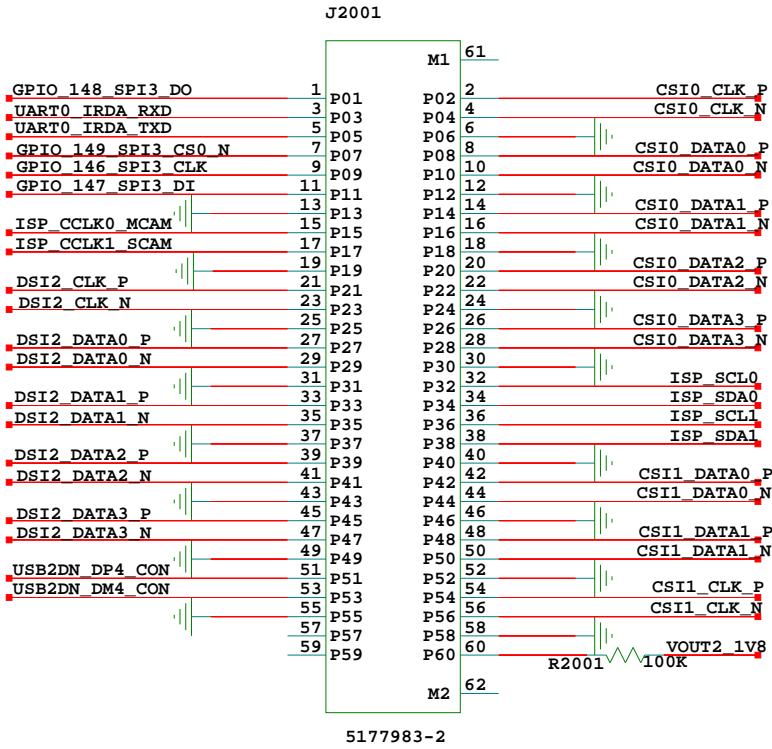
C



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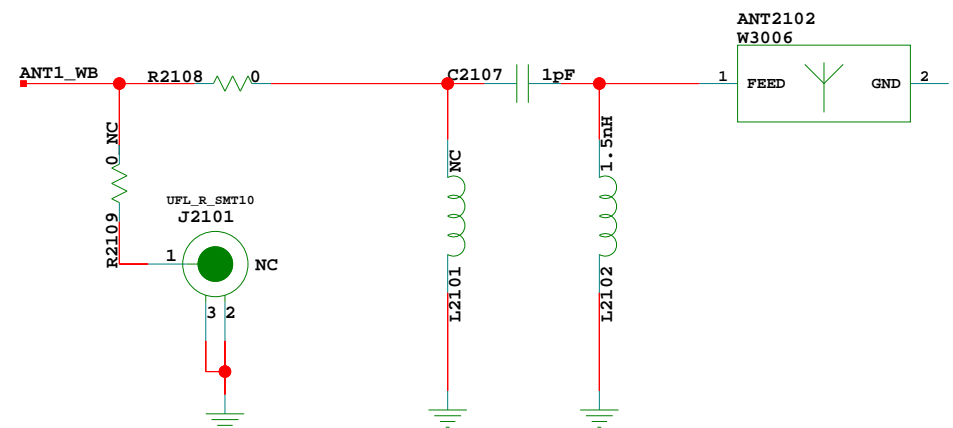
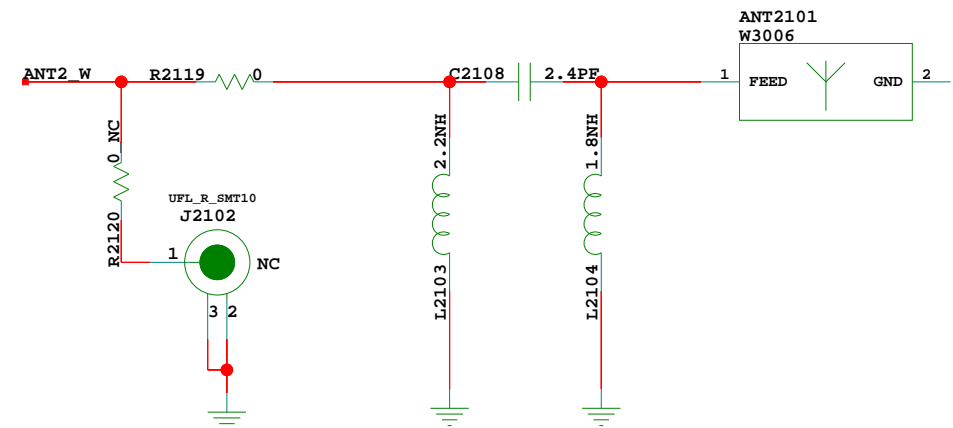
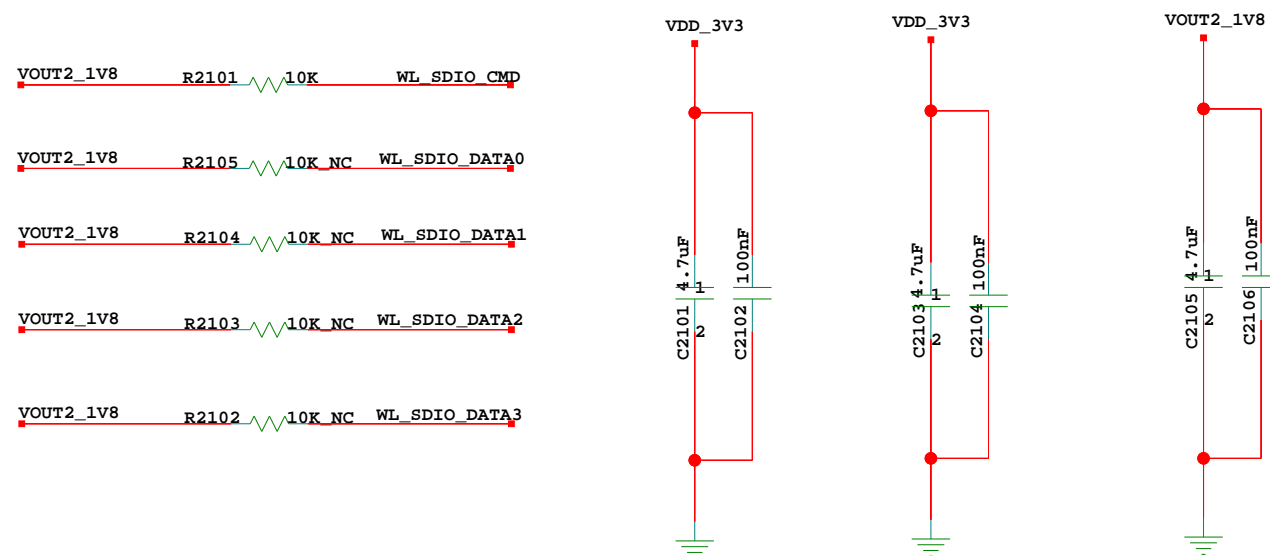
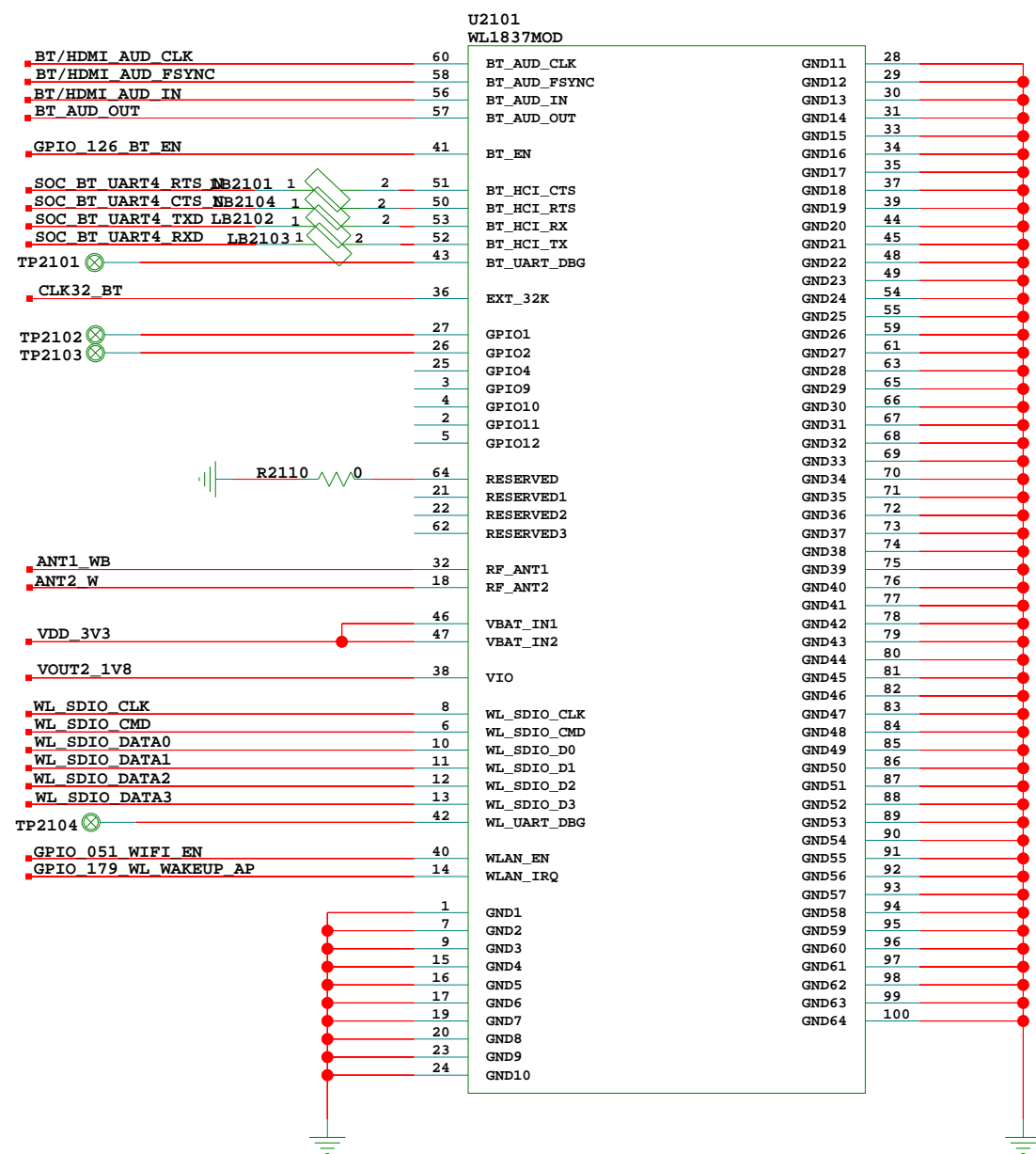
20 IO_CONN



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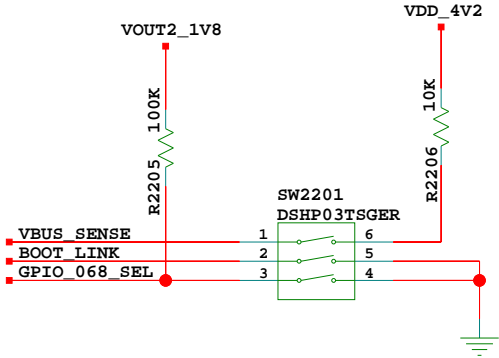
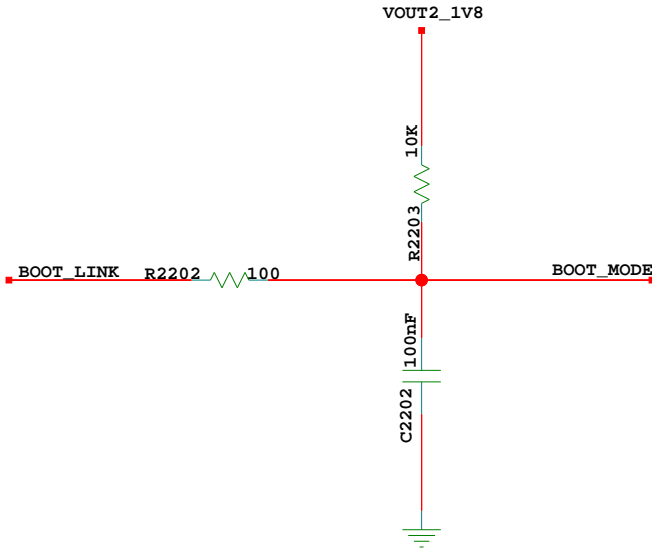
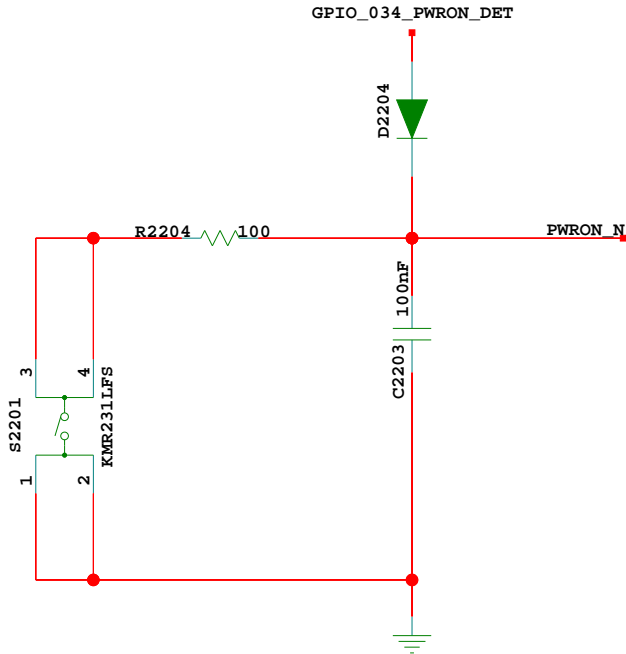
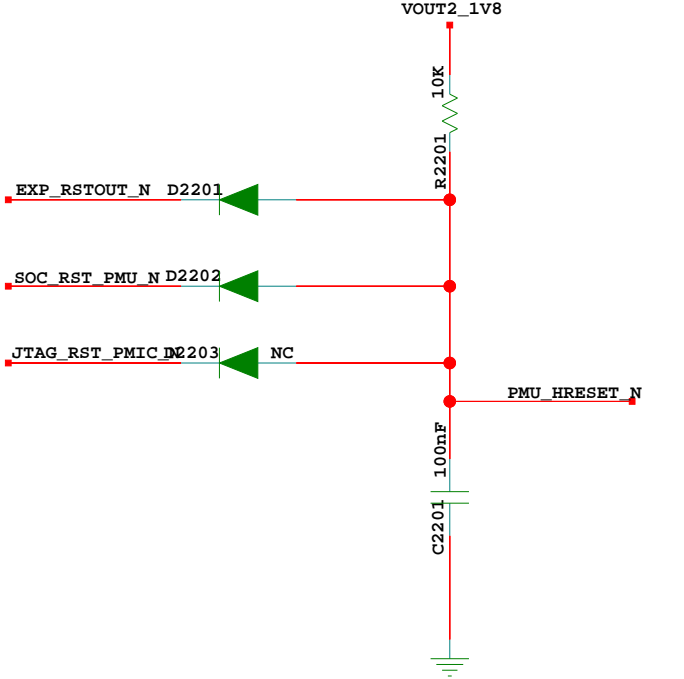
21 WIFI/BT



The type and specification of the components refer to the BOM

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22 KEY



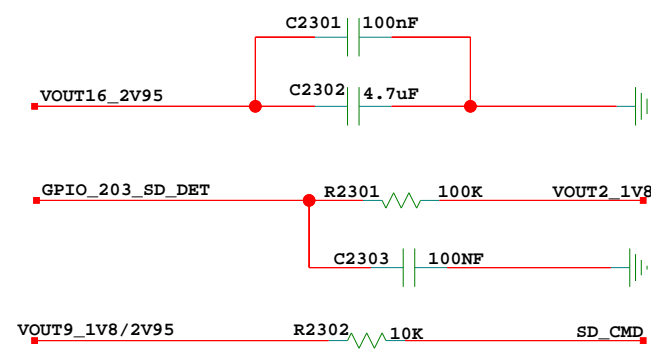
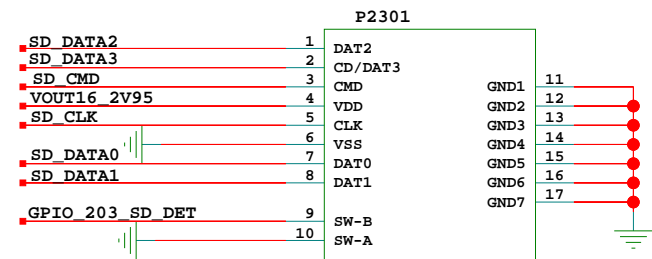
Auto Power Boot SEL

The type and specification of the components refer to the BOM

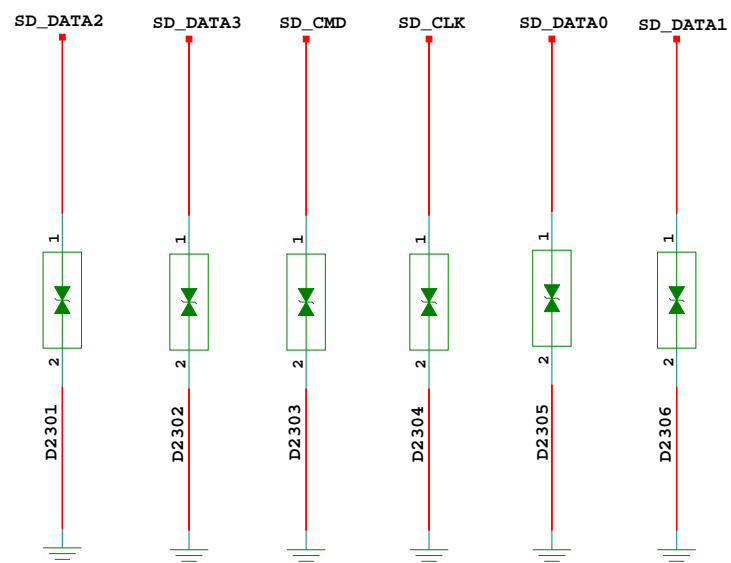
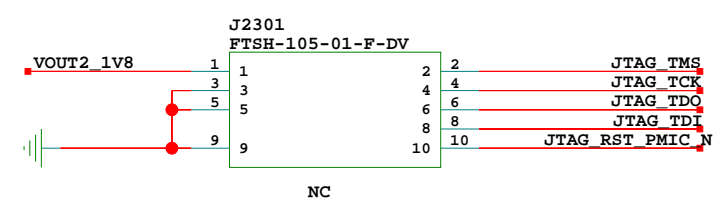
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		A		HUAWEI TECH CO.,LTD.	

23 SD/JTAG

SD



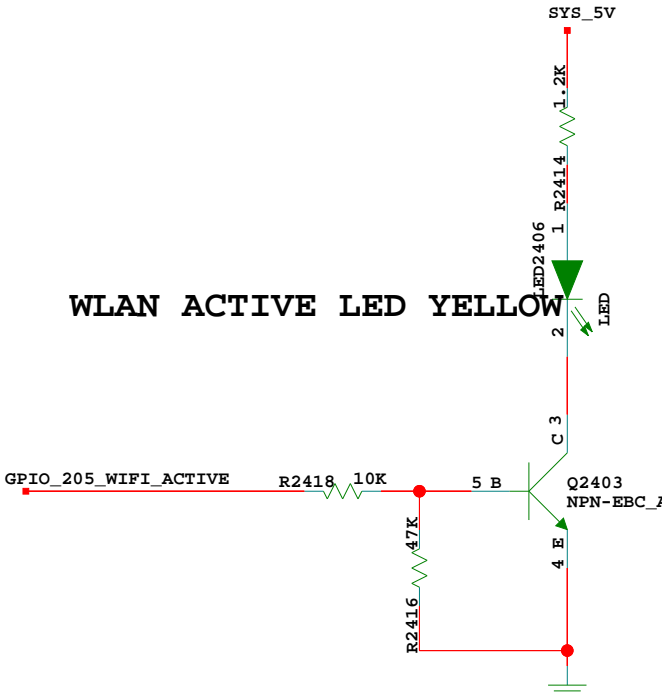
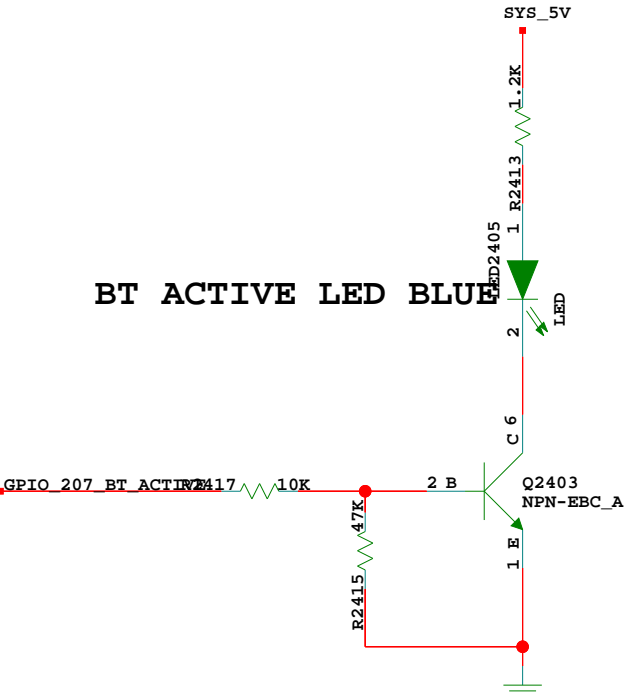
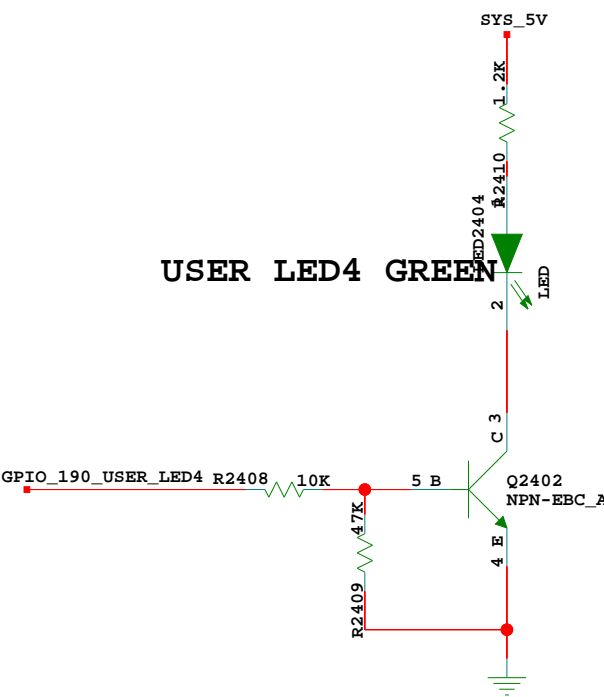
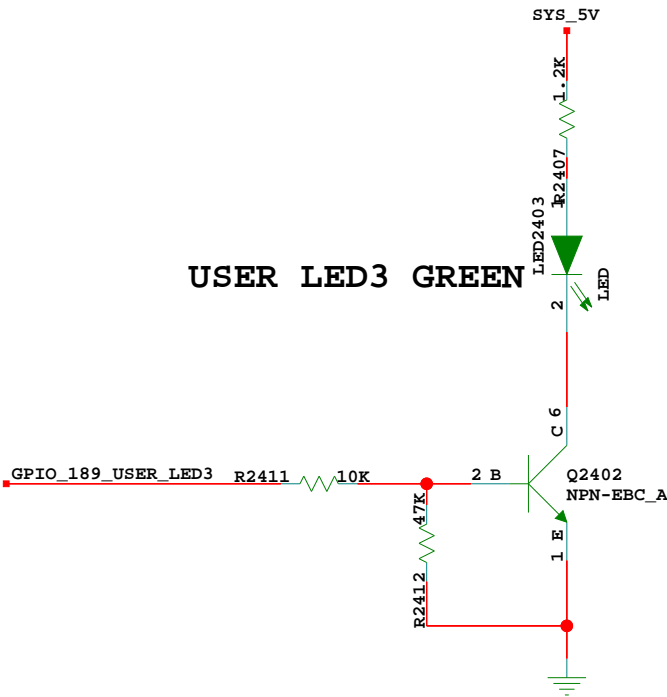
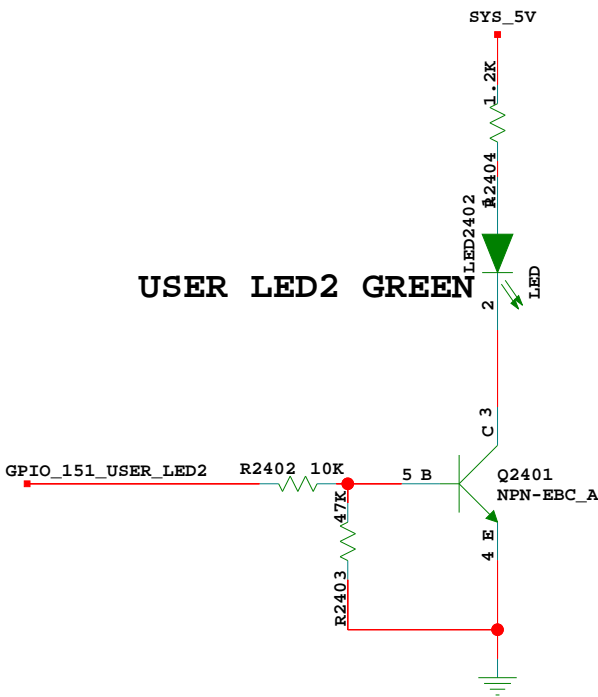
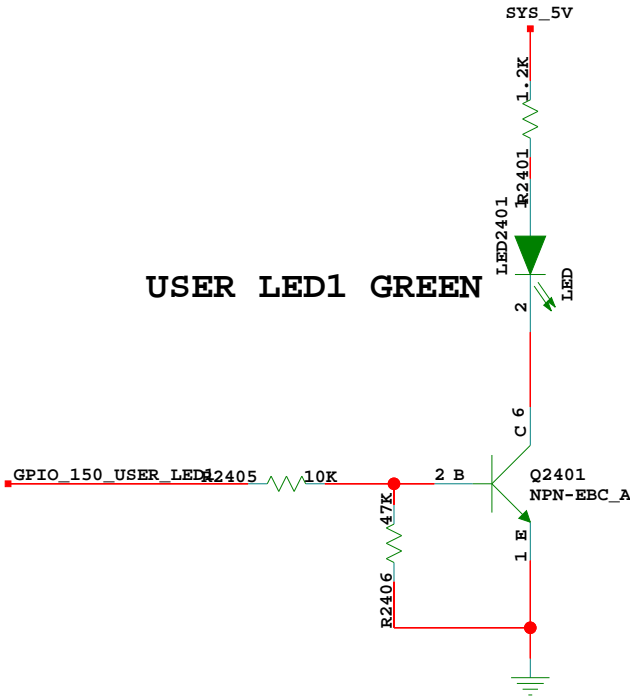
JTAG



The type and specification of the components refer to the BOM

				ECA NO	DATE
DESIGNED		Hikey960 Board			
REVIEWED					
		VER	PART_NUMBER	SHEET	OF
		A		HUAWEI TECH CO.,LTD.	

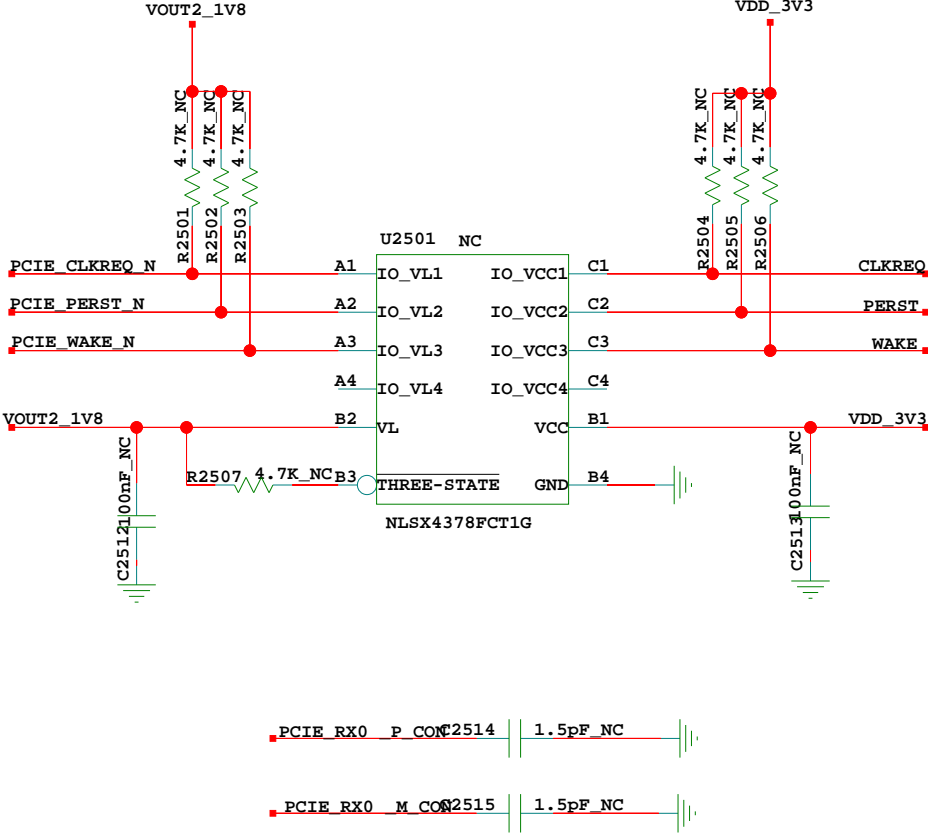
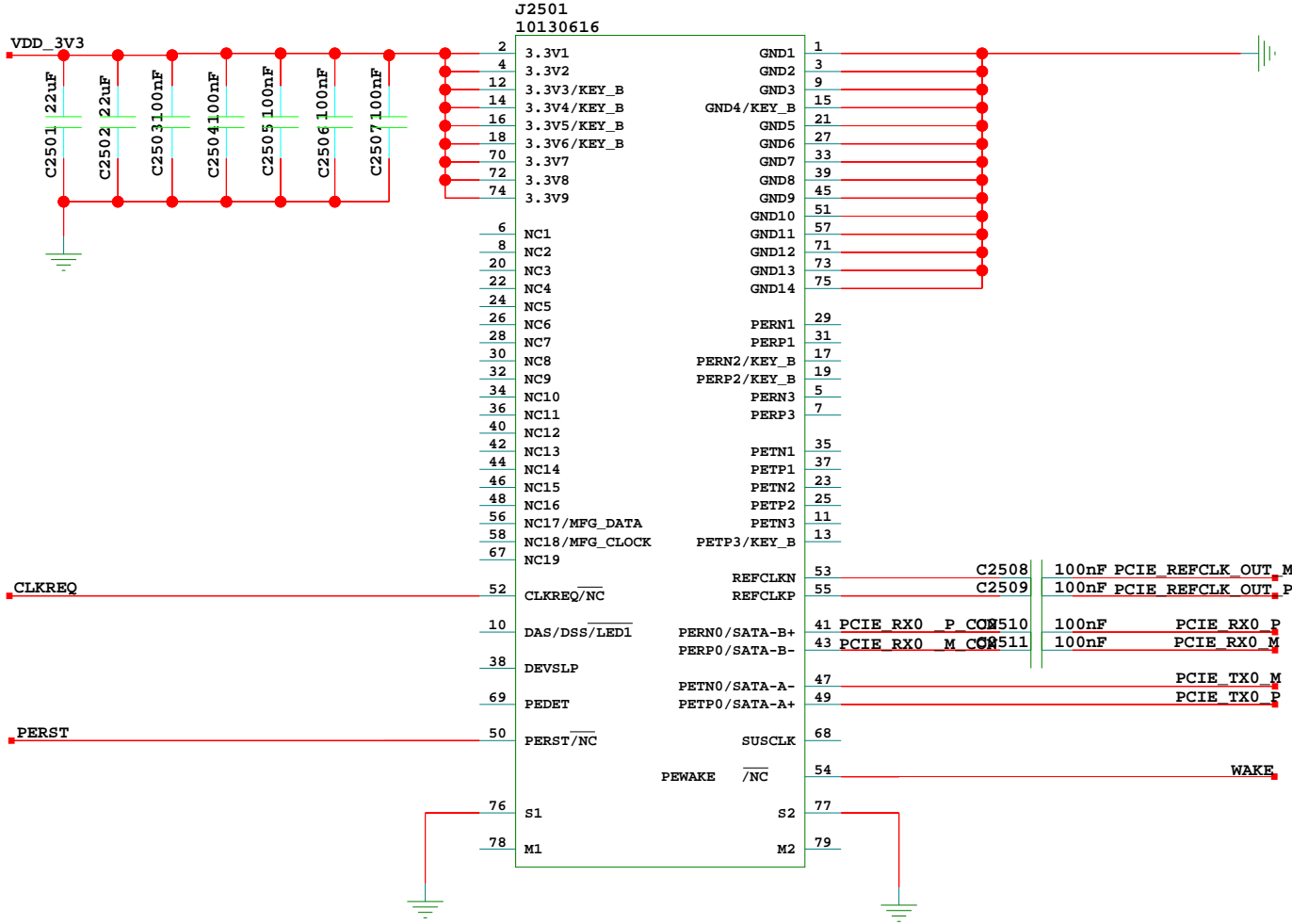
24 User LED



The type and specification of the components refer to the BOM

				ECA NO	DATE
DESIGNED		Hikey960 Board			
REVIEWED					
		VER	PART_NUMBER	SHEET	OF
		A		HUAWEI TECH CO.,LTD.	

25 PCIE M.2



The type and specification of the components refer to the BOM

				ECA NO	DATE
DESIGNED		Hikey960 Board			
REVIEWED					
		VER	PART_NUMBER	SHEET	OF
		A		HUAWEI TECH CO.,LTD.	