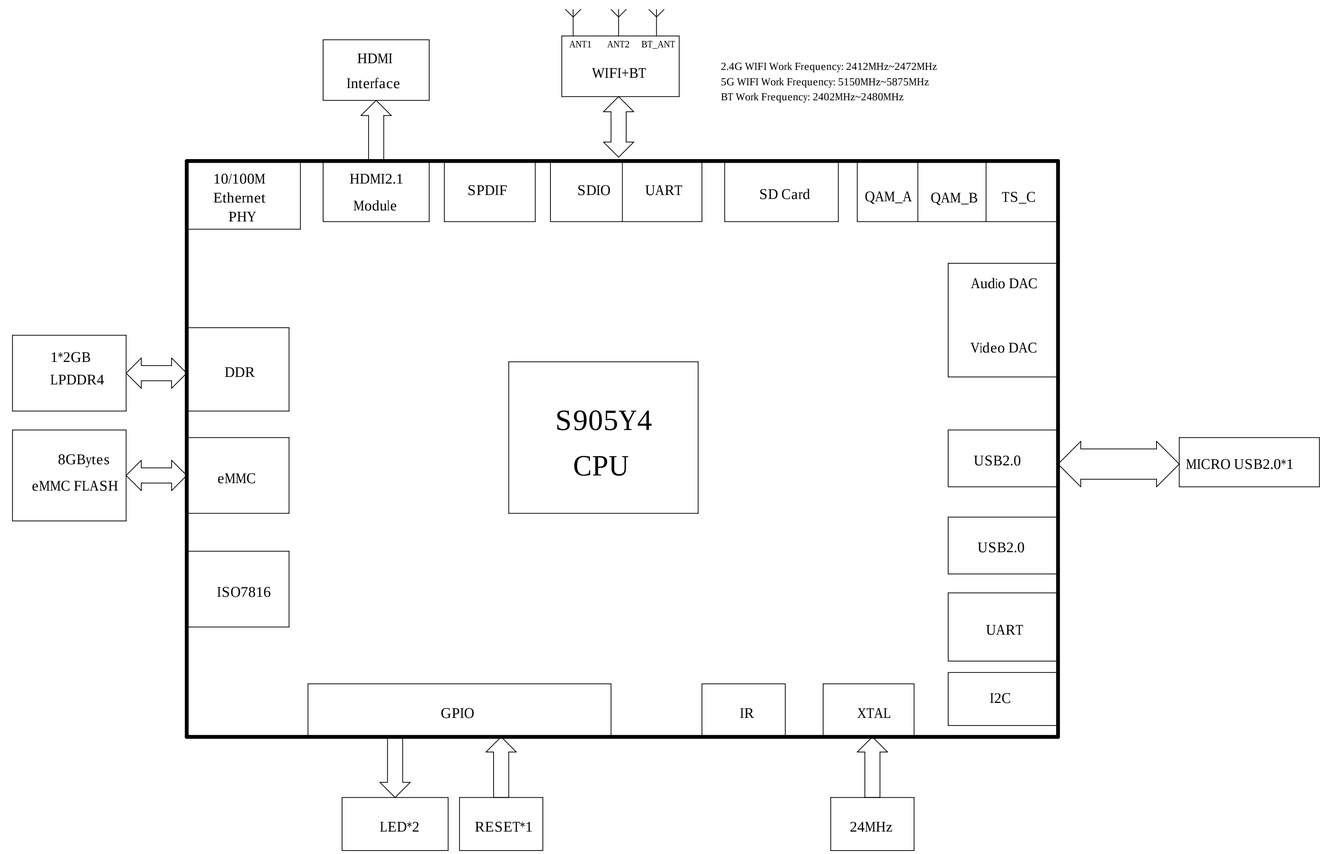
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

DV6071Z-LD4-V2

HW VER:	2.0
CPU:	S905Y4-B
DDR:	LPDDR4-3200(32bit) 2GB *1
FLASH:	eMMC(8GB)
VIDEO:	HDMI 2.1
WIFI+BT:	RTL8822CS(ac/a/b/g/n 2T2R,BT5.0)
REMOTE:	BT
OTHERS:	LED*2+Reset key

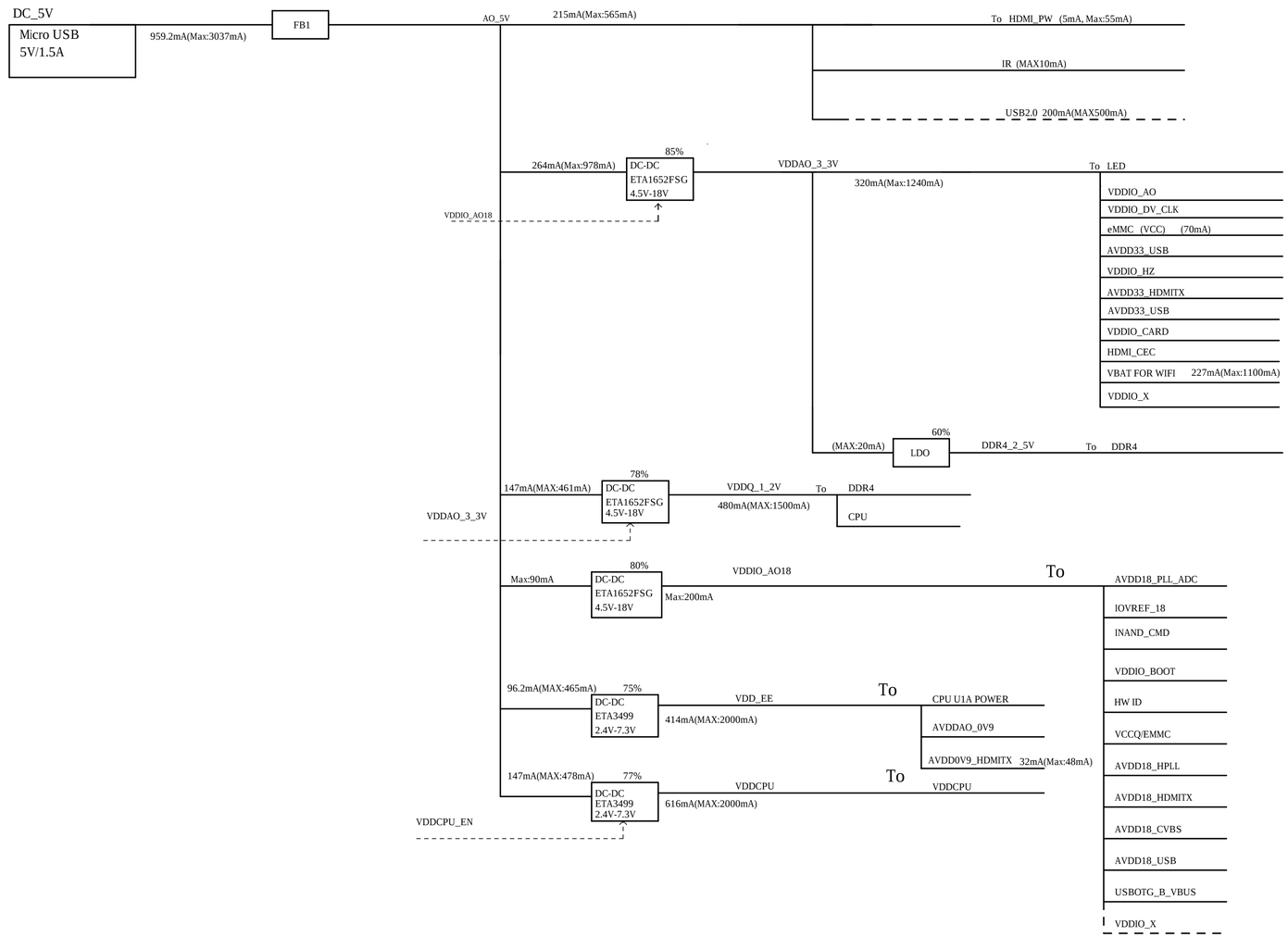
DRAWN: SIMON	DATED: 2021/09/07	COMPANY: SDMC			
		TITLE: P01_VIEW_MAIN			
CHECKED:	DATED:	CODE:	SIZE: D	DRAWING NO: DV6071Z-LD4	REV: V2
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:	SCALE:		SHEET: 1 OF 9	

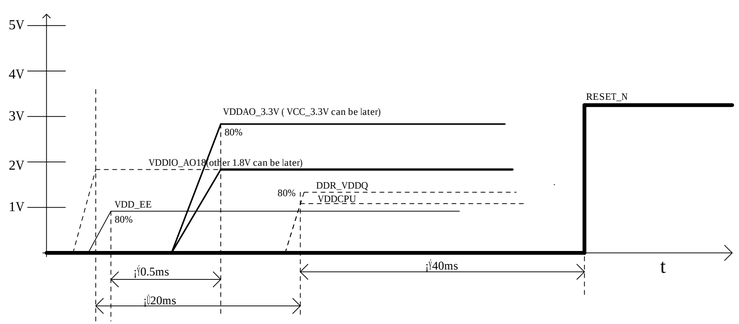
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



DRAWN: SIMON	DATED: 2021/09/07	COMPANY: SDMC			
		TITLE: P02_BLOCK			
CHECKED:	DATED:	CODE:	SIZE: D	DRAWING NO: DV6071Z-LD4	REV: V2
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:	SCALE:		SHEET: 2 OF 9	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:





NOTE:

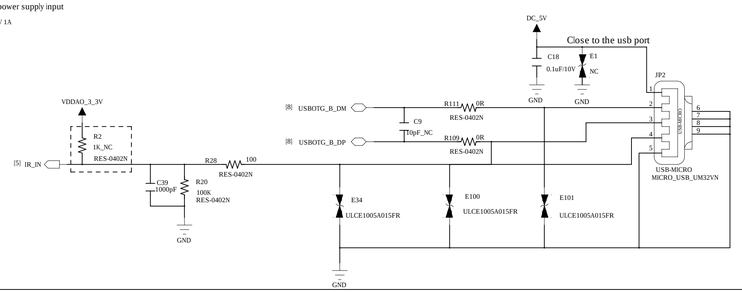
1¡¢ All test value refer to 80% of typical power voltage.
2¡¢ VDDAO_3.3V & VCC3.3V should ramp up > 0.5ms later than VDD_EE.
3¡¢ All power sources should get stable within 20ms(except for DDR_VDDQ).
4¡¢ No sequence requirement between VDDCPU & DDR_VDDQ and other power source.
5¡¢ VDDIO_AO18 should ramps up earlier or at the same time with VDDAO_3.3V & VCC3.3V, VDDAO_3.3V & VCC3.3V should never be 2.5V higher than VDDIO_AO18.
6¡¢ In some designs, VDDCPU & VDD_EE are merged to VCC_CORE, the power on sequence should be same as VDD_EE.
7¡¢ RESET_n should keep low for at least 40ms after power up (except DDR_VDDQ).

DRAWN: SIMON	DATED: 2021/09/07	COMPANY: SDMC	
CHECKED:	DATED:	TITLE: P03_POWER_TREE	
QUALITY CONTROL:	DATED:	CODE:	SIZE: D / DRAWING NO: DV6071Z-LD4 / REV: V2
RELEASED:	DATED:	SCALE:	SHEET: 3 OF 9

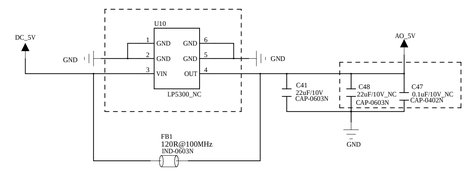
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

DC power supply input

DC 5V 1A



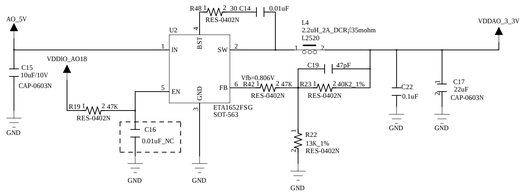
OVP



5V_TO_VDDAO_3_3V

Design Max:2A

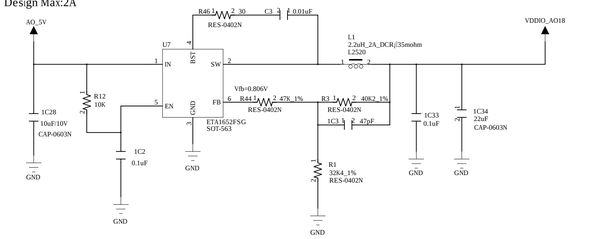
Vout=0.806*(1+40.2/13)=3.30V



5V_TO_VDDIO_18

Design Max:2A

Vout=0.806*(1+40.2/32.4)=1.80V

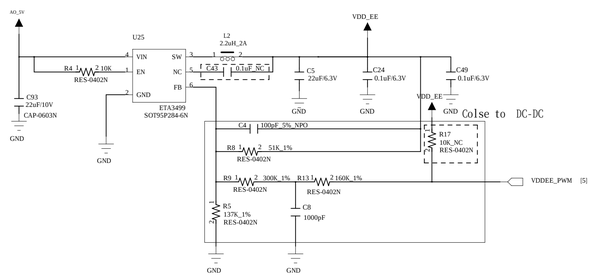


5V_TO_VDDEE

Design Max:2A

Vout=0.6*(1+51/137)=0.82V

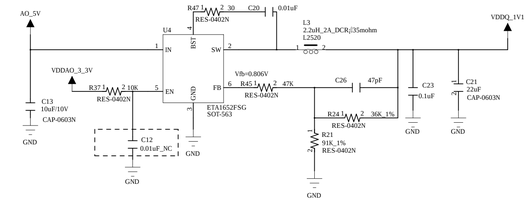
For DC-DC FB=0.6V



5V_TO_VDDQ_1_1V

Design Max:2A

Vout=0.806*(1+36/91)=1.12V

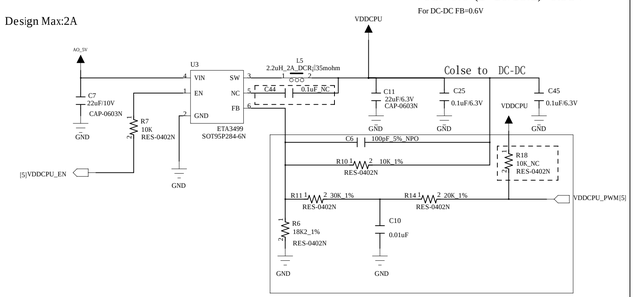


5V_TO_VDDCPU

Design Max:2A

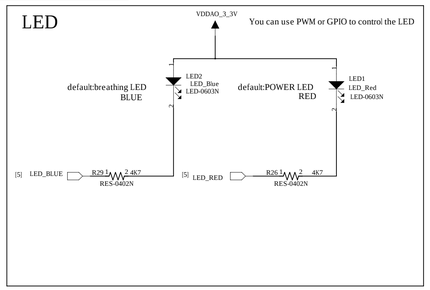
Vout=0.6*(1+10/18.2)=0.93V

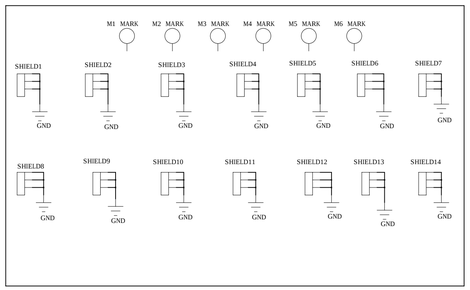
For DC-DC FB=0.6V



LED

You can use PWM or GPIO to control the LED





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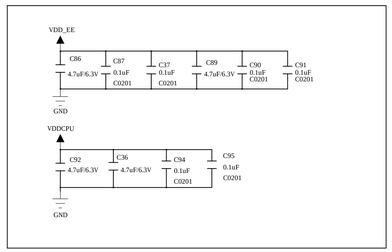
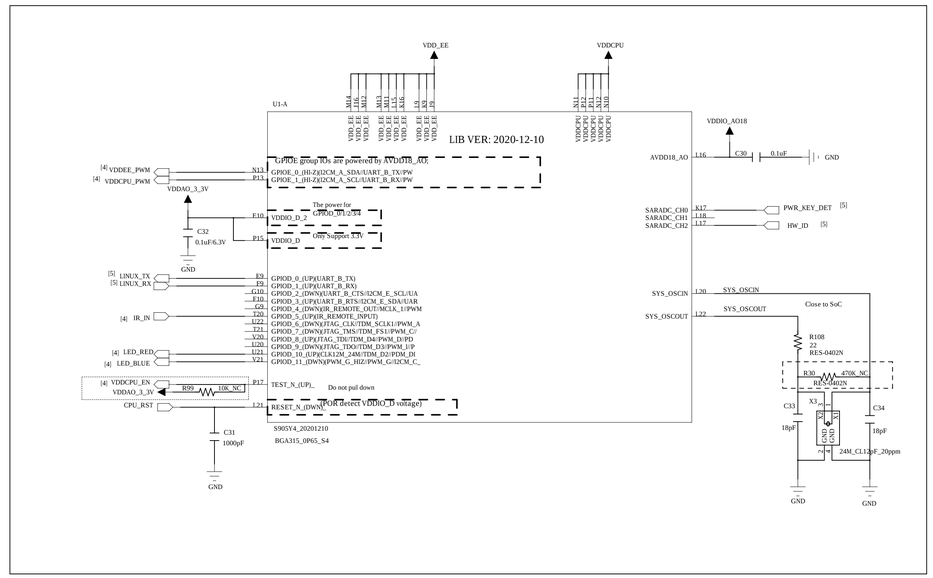
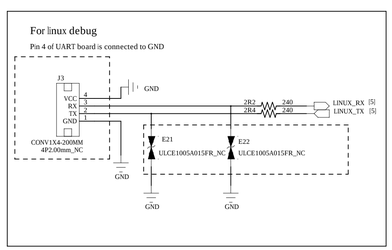
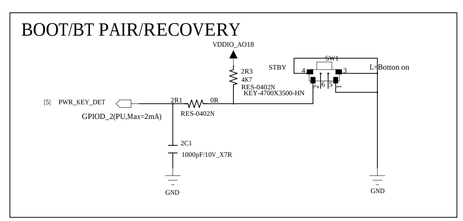
CHECKED:	DATED:	TITLE: P04_POWER	
QUALITY CONTROL:	DATED:	CODE:	SIZE: D / DRAWING NO: DV6071Z-LD4 / REV: V2
RELEASED:	DATED:	SCALE:	SHEET: 4 OF 9

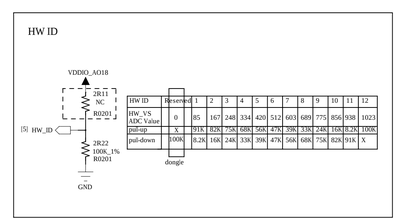
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:









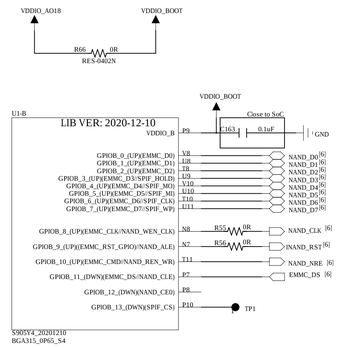


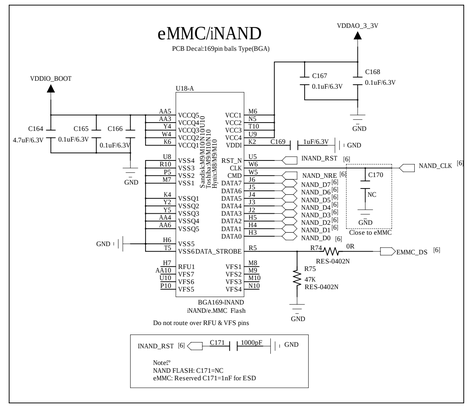
HW ID	Reserved	1	2	3	4	5	6	7	8	9	10	11	12
HW_VS ADC Value	0	85	167	248	334	420	512	603	689	775	856	938	1023
pull-up	X	91K	82K	75K	68K	56K	47K	39K	33K	24K	16K	8.2K	100K
pull-down	100K	8.2K	16K	24K	33K	39K	47K	56K	68K	75K	82K	91K	X

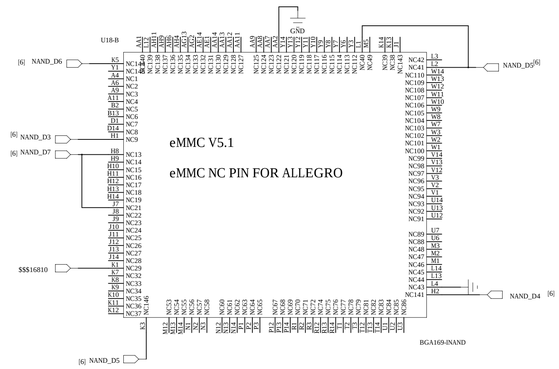
dosage

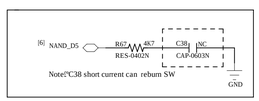
COMPANY: SDMC					
TITLE: P05_CPU					
DRAWN: SIMON	DATED: 2021/09/07	CODE:	SIZE: D	DRAWING NO: DV6071Z-LD4	REV: V2
CHECKED:	DATED:				
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:	SCALE:		SHEET: 5 OF 9	

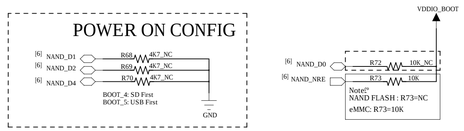
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:







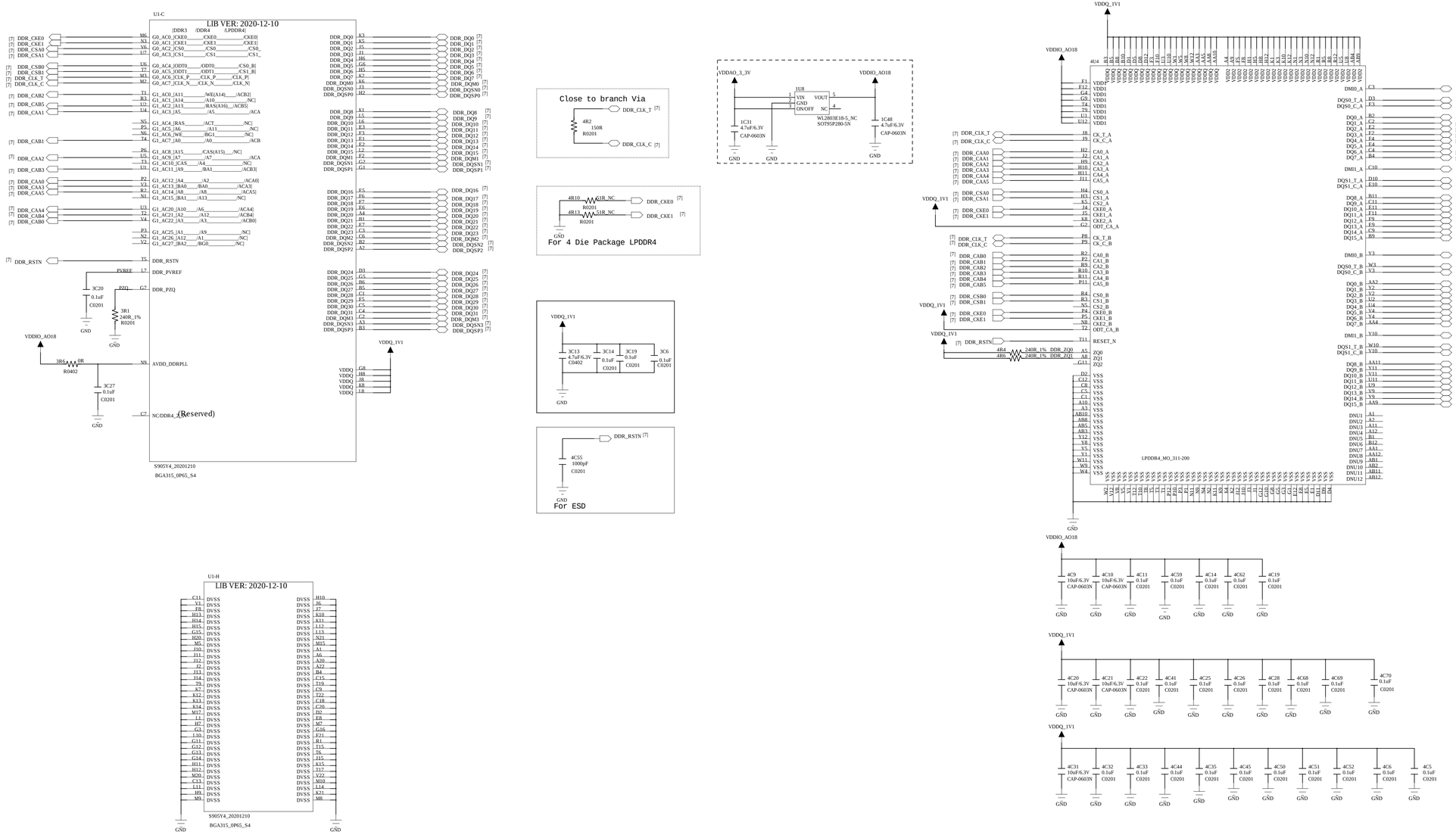




POWER ON CONFIG					
GROUP	GPIOB_5	GPIOB_4	1st	2nd	3rd
	0	0	SD	STORAGE	USB
	0	1	USB	STORAGE	SD
	1	0	SD	STORAGE	USB
	1	1	STORAGE	SD	USB
STORAGE	GPIOB_2	GPIOB_3	1st	2nd	3rd
	0	0	SPINOR	NAND	EMMC
	0	1	NAND	EMMC	SPINOR
	1	0	SPINOR	EMMC	NAND
	1	1	EMMC(Default)	NAND	SPINOR

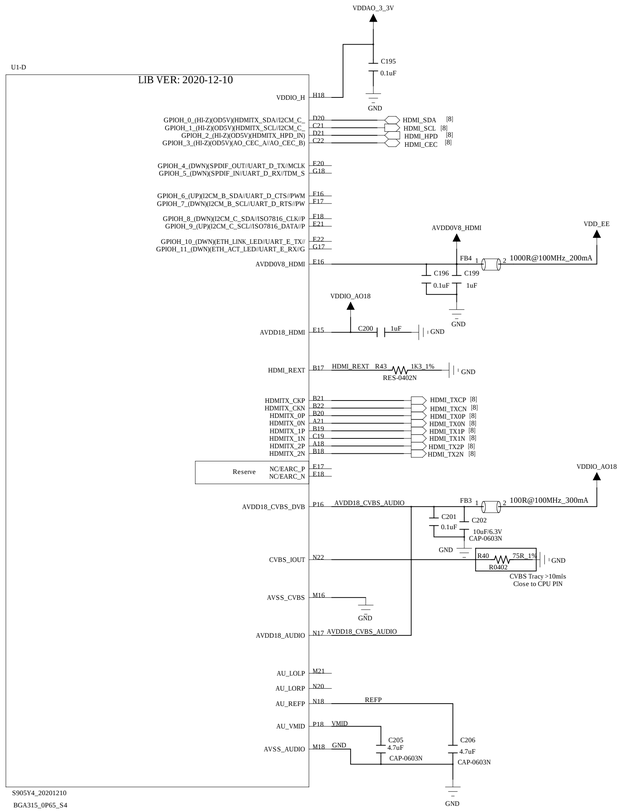
			COMPANY: SDMC		
			TITLE: P06_EMMC		
DRAWN: SIMON	DATED: 2021/09/07	CODE:	SIZE: D	DRAWING NO: DV6071Z-LD4	REV: V2
CHECKED:	DATED:				
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:	SCALE:		SHEET: 6 OF 9	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

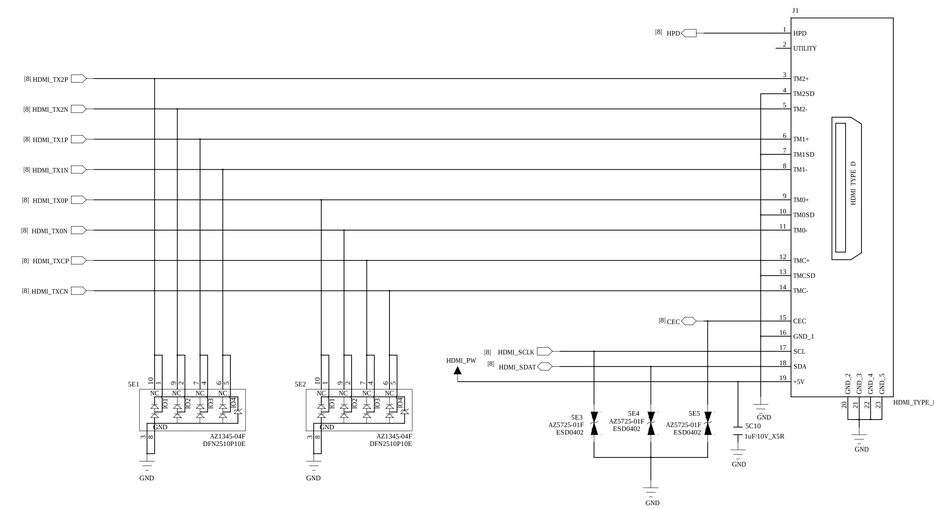


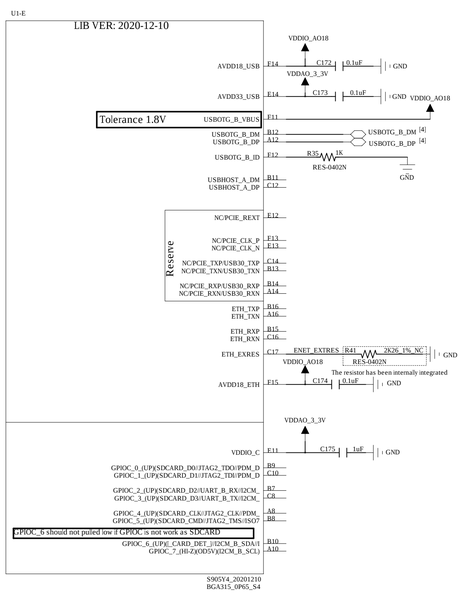
DRAWN: SIMON	DATED: 2021/09/07	COMPANY: SDMC	
CHECKED:	DATED:	TITLE: P07_LPDDR4	
QUALITY CONTROL:	DATED:	CODE:	SIZE: D / DRAWING NO: DV6071Z-LD4 / REV: V2
RELEASED:	DATED:	SCALE:	SHEET: 7 OF 9

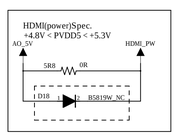
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

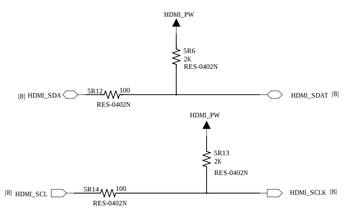


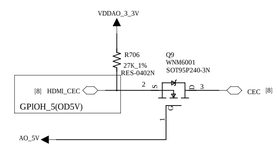
HDMI Output



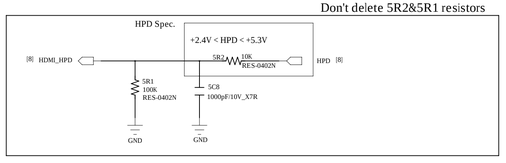






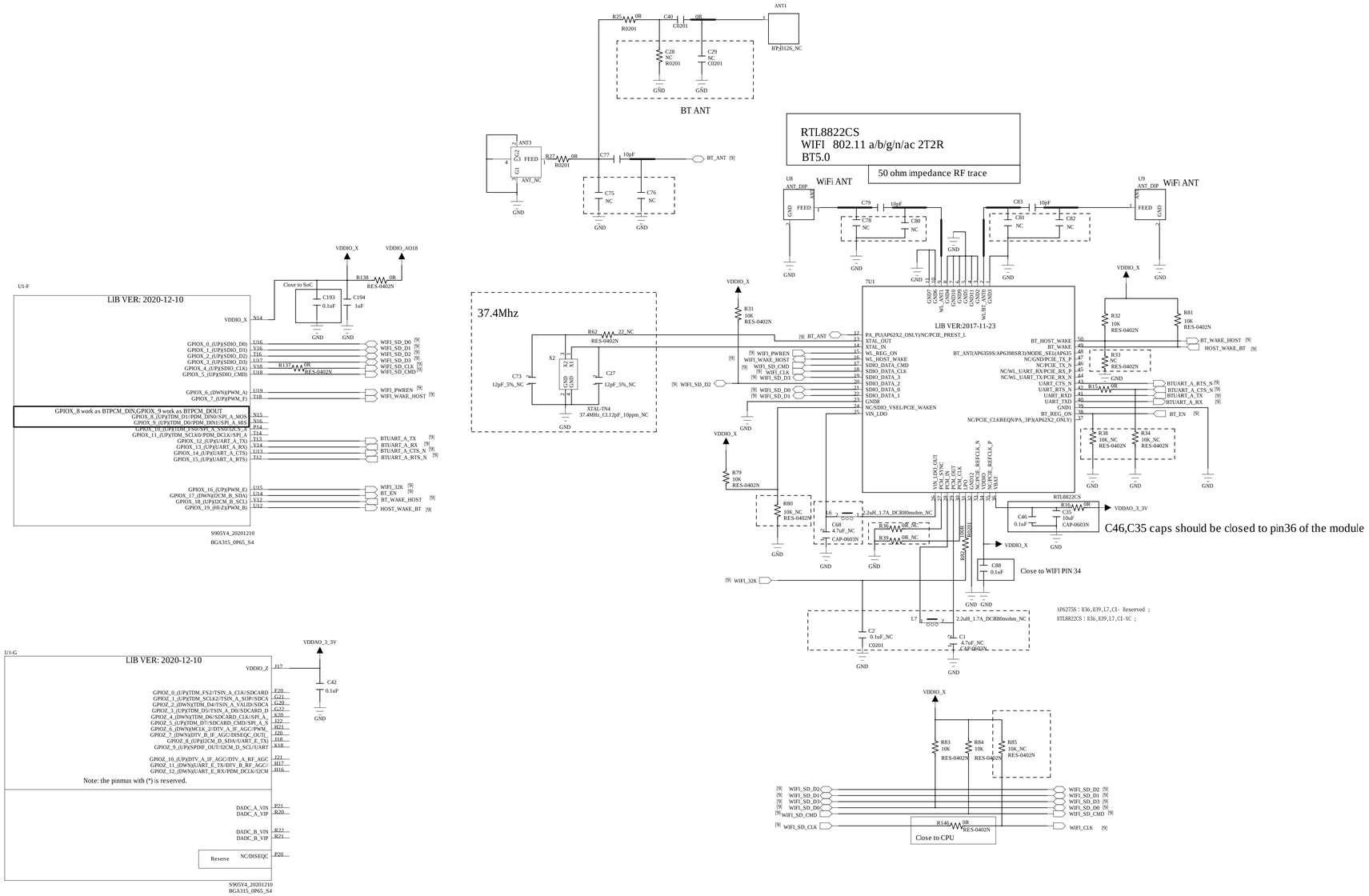


Don't delete 5R2&5R1 resistors



DRAWN: SIMON	DATED: 2021/09/07	COMPANY: SDMC	
CHECKED:	DATED:	TITLE: P08_HDMI_USB	
QUALITY CONTROL:	DATED:	CODE:	SIZE: D / DRAWING NO: DV6071Z-LD4 / REV: V2
RELEASED:	DATED:	SCALE:	SHEET: 8 OF 9

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



	R79	R31
AP6356	NC	NC
AP6398	soldered	soldered
RTL8822CS	soldered	soldered
AP6275S	NC	NC

DRAWN: SIMON	DATED: 2021/09/07	COMPANY: SDMC	
CHECKED:	DATED:	TITLE: P09_WIFI	
QUALITY CONTROL:	DATED:	CODE:	SIZE: D / DRAWING NO: DV6071Z-LD4 / REV: V2
RELEASED:	DATED:	SCALE:	SHEET: 9 OF 9