

PAGE LIST	
PAGE	PAGE NAME
001	Revision History
002	002_Block Diagram
003	003_Power Tree
004	004_I2C Usage Diagram
005	005_DCDC & PMIC
006	006_SoC Power
007	007_SoC DCAPs
008	008_SoC DDR & DDR4
009	009_SoC SDIO & eMMC & SD
010	010_SoC RGMII & GBE PHY
011	011_SoC RMII & SPE PHY
012	012_SoC DDS & HDMI
013	013_SoC GPIO 3.3V
014	014_SoC GPIO 1.8V & Bootstrap
015	015_SoC USB & USB_A & USB_C
016	016_SoC Reset & MCU
017	017_SoC CSI & OLDI
018	018_RTC & ID & DEBUG
019	019_CC1352P
020	020_WiFi WL1807MOD
021	021_BUTTONs & LEDs
022	022_GROVE &QWIIC &MikroBus &ADC

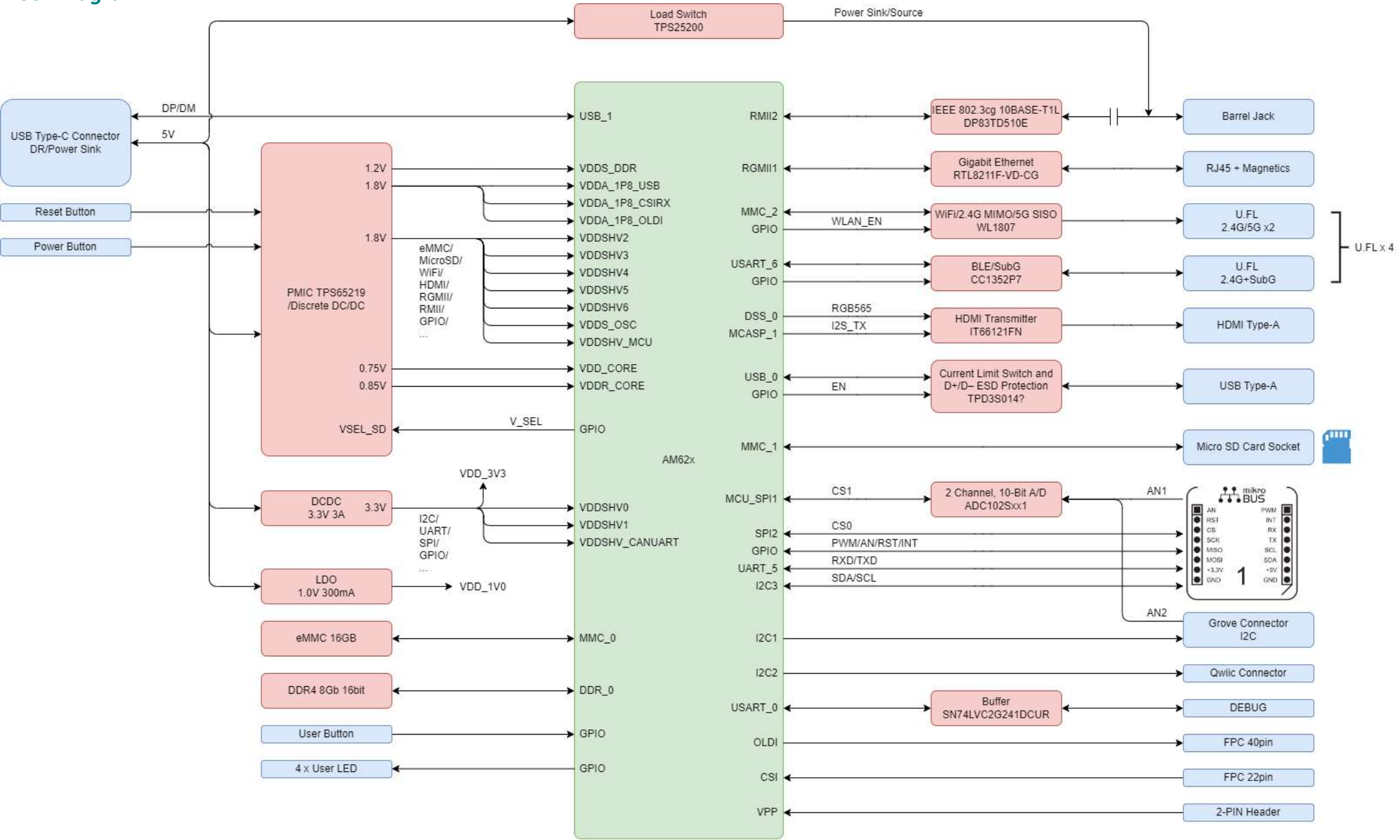
REVISION HISTORY			
VER #	DATE	DESCRIPTION OF CHANGES	AUTHOR
0.20	15 Sep. 2022	DVT1 Board release	qxn
0.21	Nov. 10, 2022	1. Modify all crystal CL value to match frequency 2. Add serial termination resistors for RGB data lane 3. Add CMC on HDMI output 4. Use WKUP_CLKOUT0 for WiFi 5. Use MCU_OBSCLK0 for GBE 6. Increase resistance on all board LEDs 7. Remove R243 TP_INT Pulldown 8. Add ferrite bead on Grove and QWIIC 9. Add feed forward capacitor on TLV62595 10. Remove ESDs on HDMI TMDS signals	qxn
0.22	Dc. 12, 2022	1. Add feed forward capacitor on TLV62595 2. Remove ESDs on HDMI TMDS signals 3. Add ferrite bead on HDMI shield 4. Change R16 and R80 to 0R 5. Change pullup resistors to 2.2k on I2C0-I2C3 6. Change FB30 and FB31 to 0R	qxn
1.0	Dc. 27, 2022	1. Add testpoint to QWIIC 2. Add serial resistors on I2C0 - I2C3 SCL 3. Add more capacitors on VDD_1V2 4. Add 0R on HDMI shield 5. Add series resistor on SPE LED control	qxn

Main

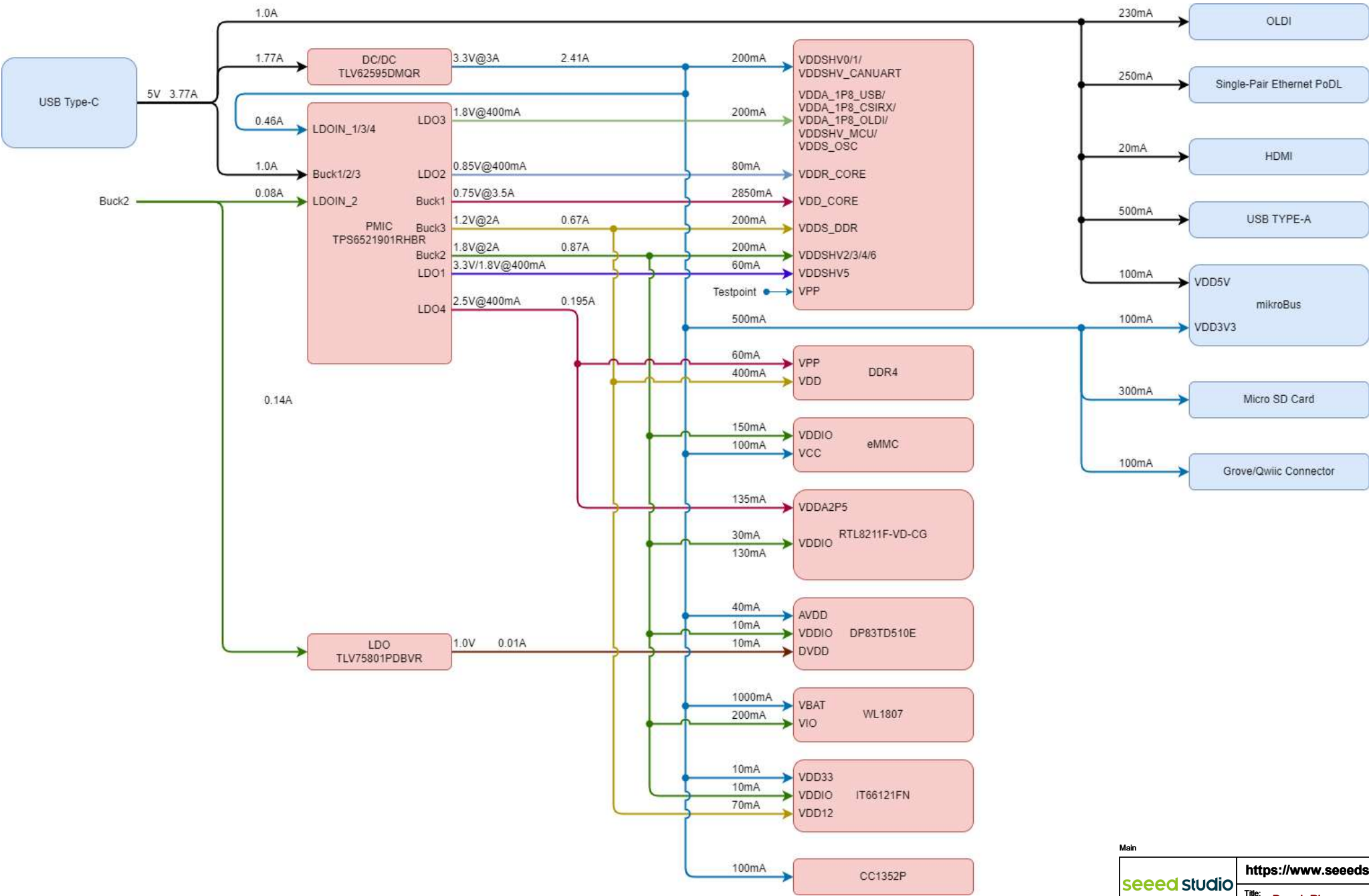


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Size: A3		Title: BeaglePlay	
Document Number:	001_Revision History	Rev:	v1.0
Draw By: qxn	Date: Monday, March 06, 2023	Sheet:	1 of 22

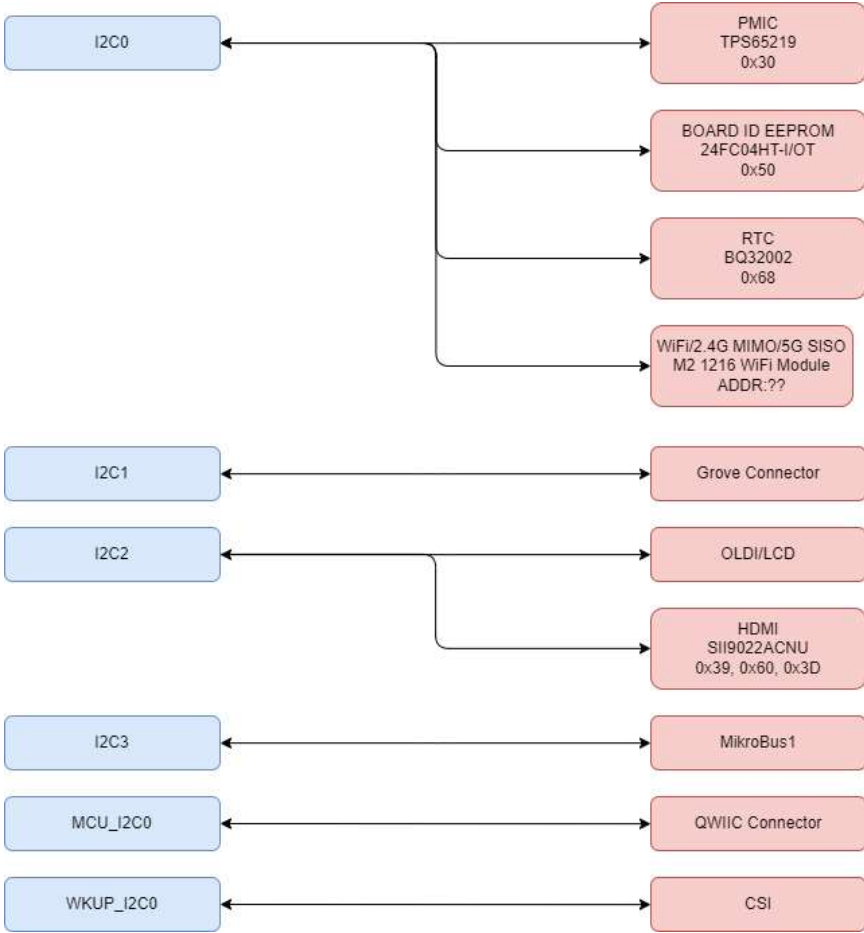
Block Diagram



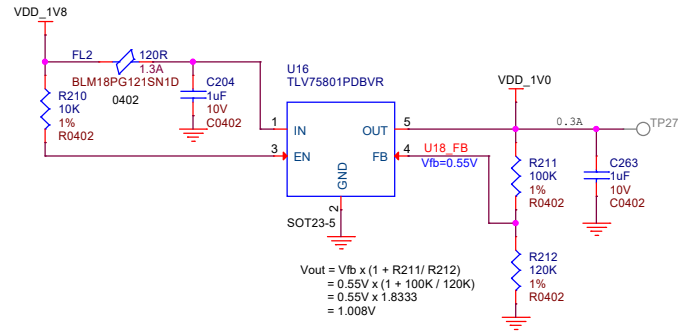
Power tree



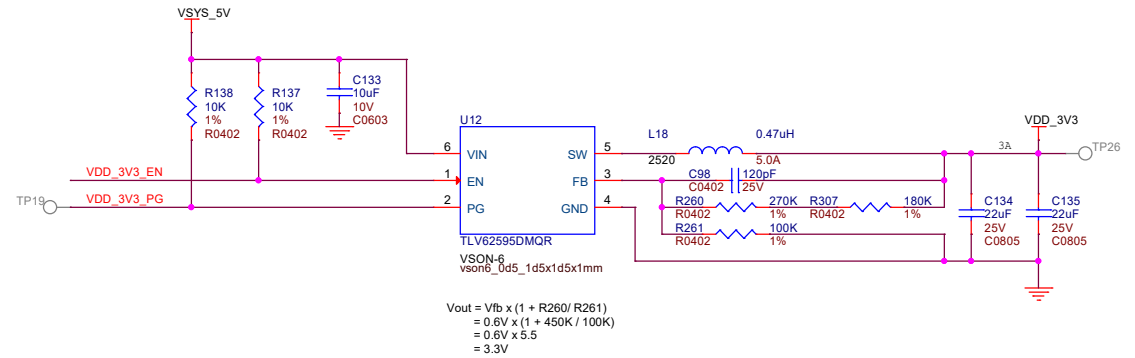
I2C Usage Diagram



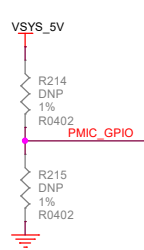
## LDO 1V0



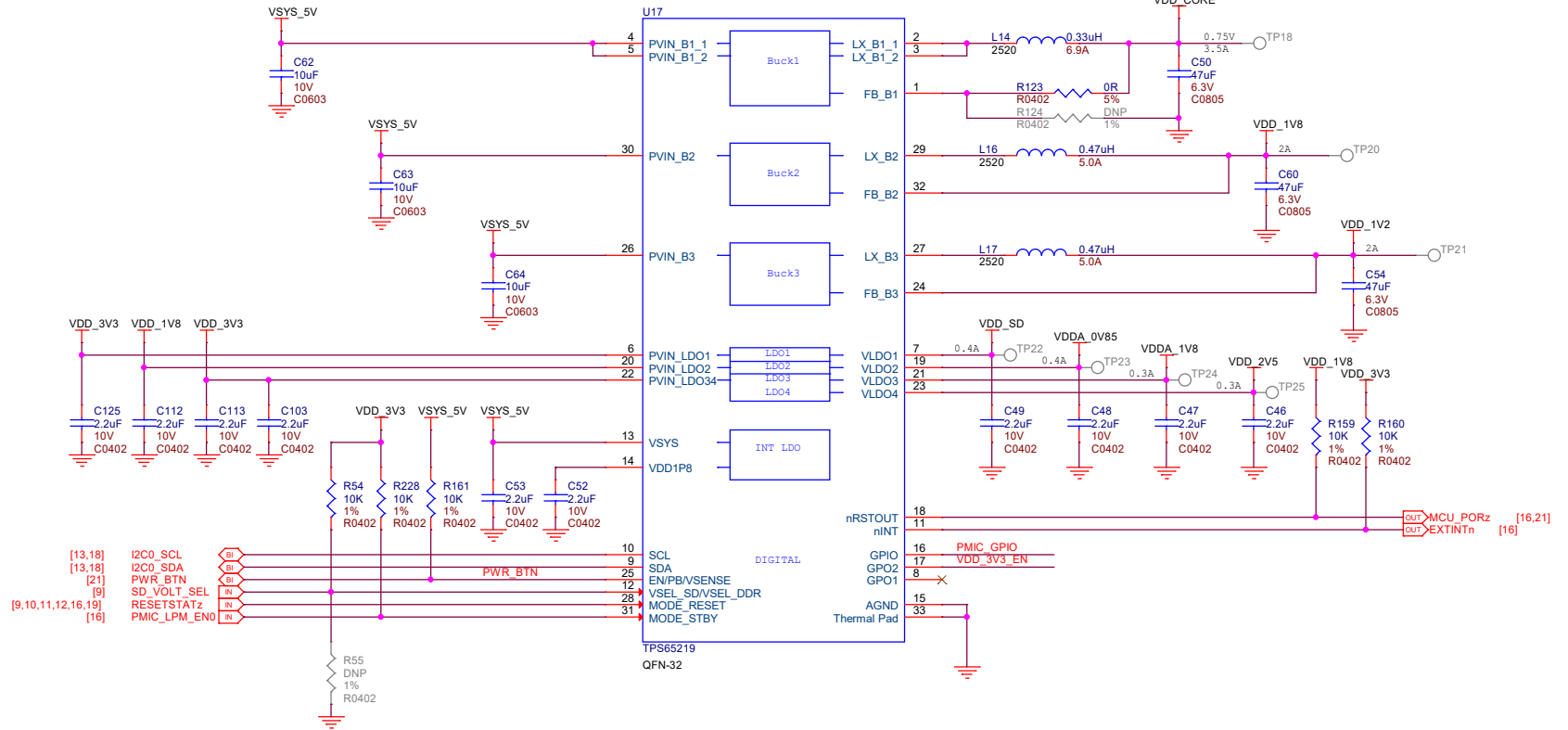
## DCDC 3V3



## PMIC\_Strap option

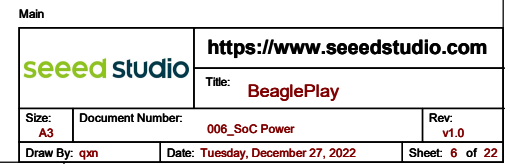


## PMIC

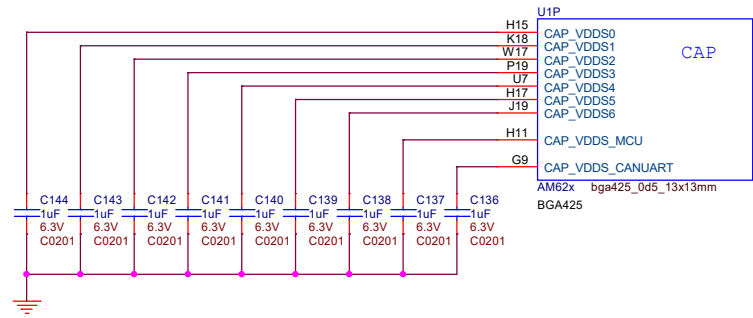
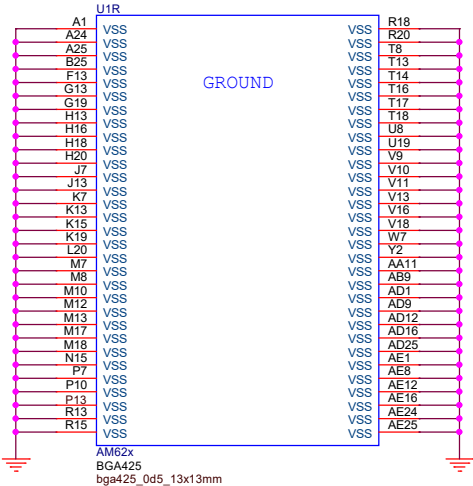
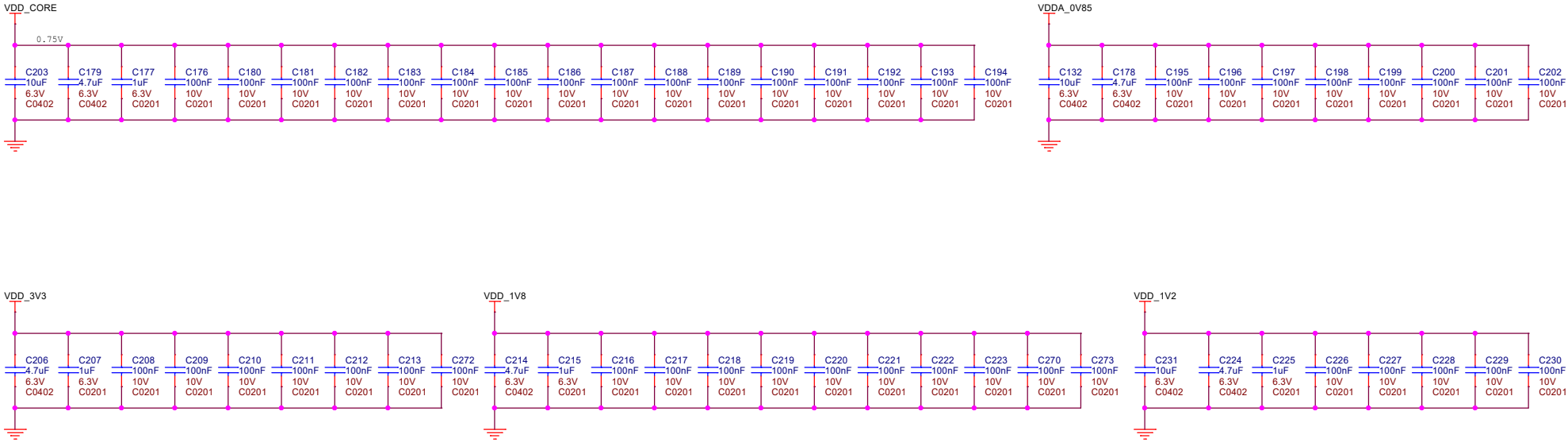


Main

		<a href="https://www.seeedstudio.com">https://www.seeedstudio.com</a>	
		<b>Title:</b> BeaglePlay	
<b>Size:</b> A3	<b>Document Number:</b> 005_DCDC & PMIC	<b>Rev:</b> v1.0	
<b>Draw By:</b> qxm	<b>Date:</b> Tuesday, December 27, 2022	<b>Sheet:</b> 5 of 22	

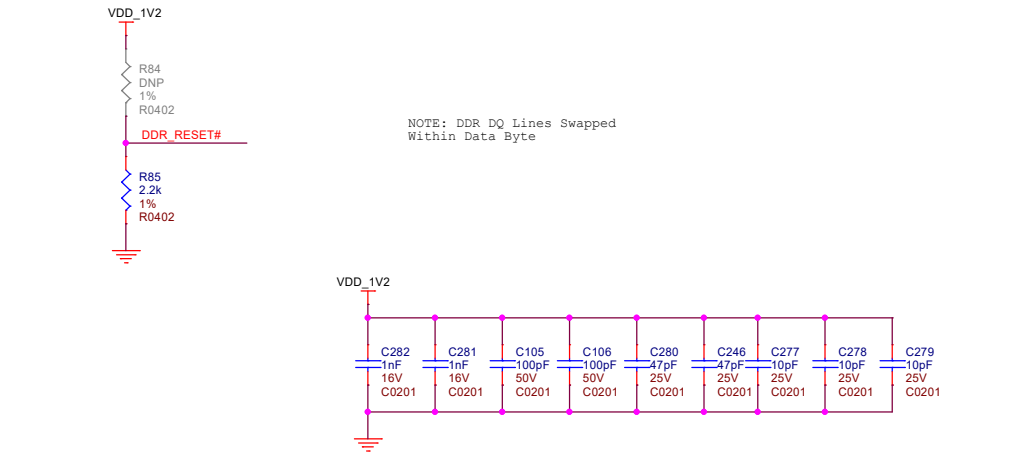
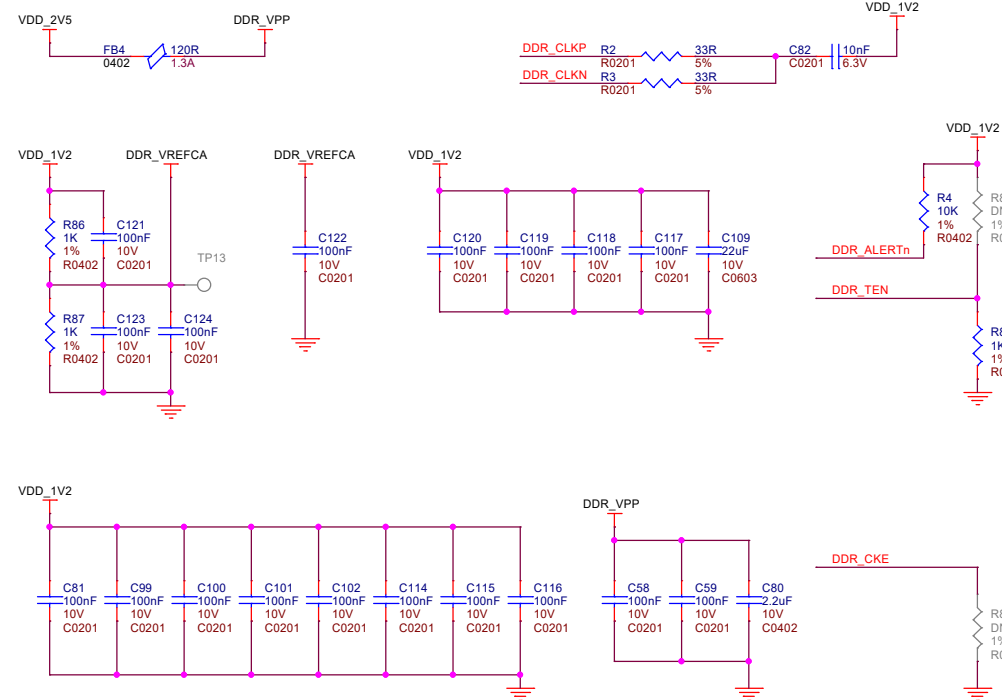
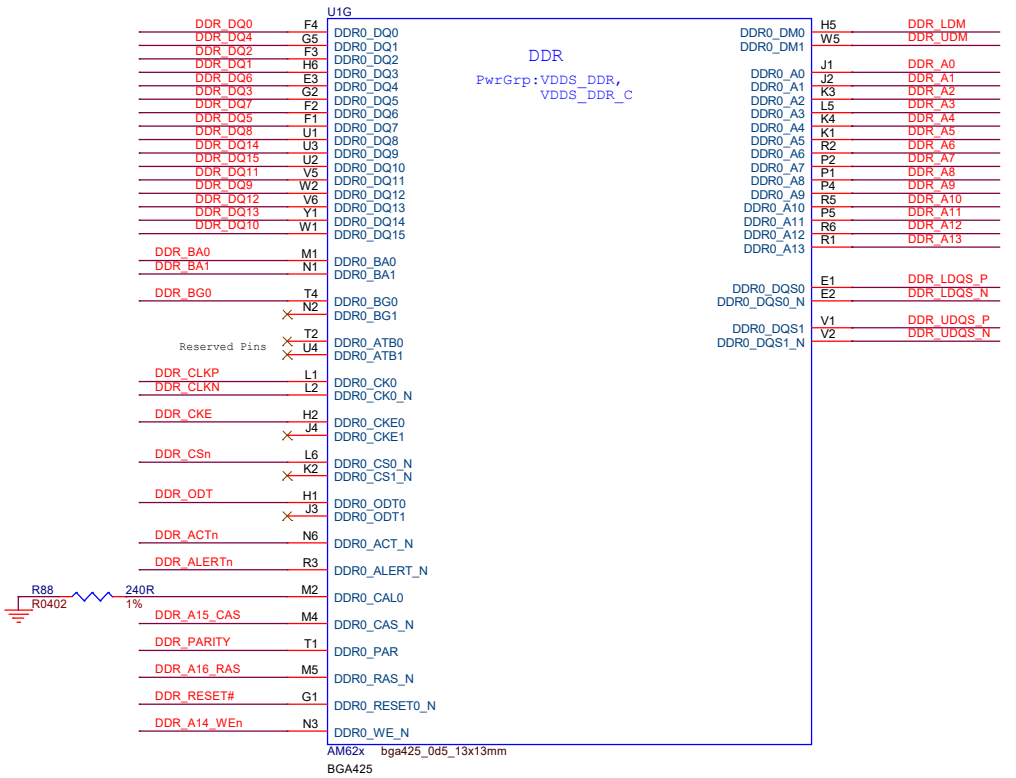
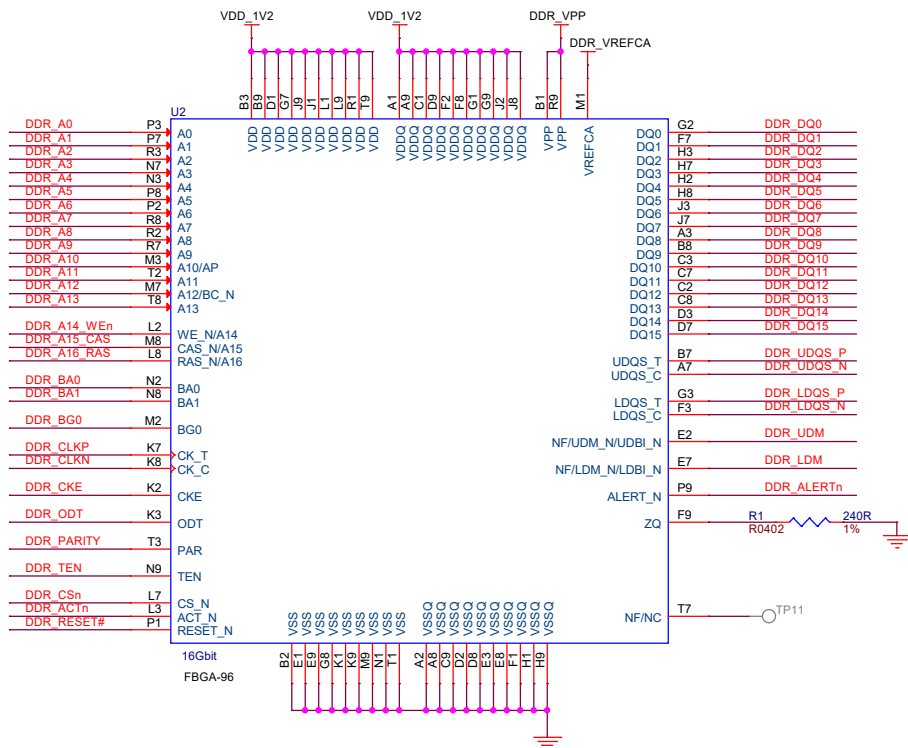


SoC DCAPs



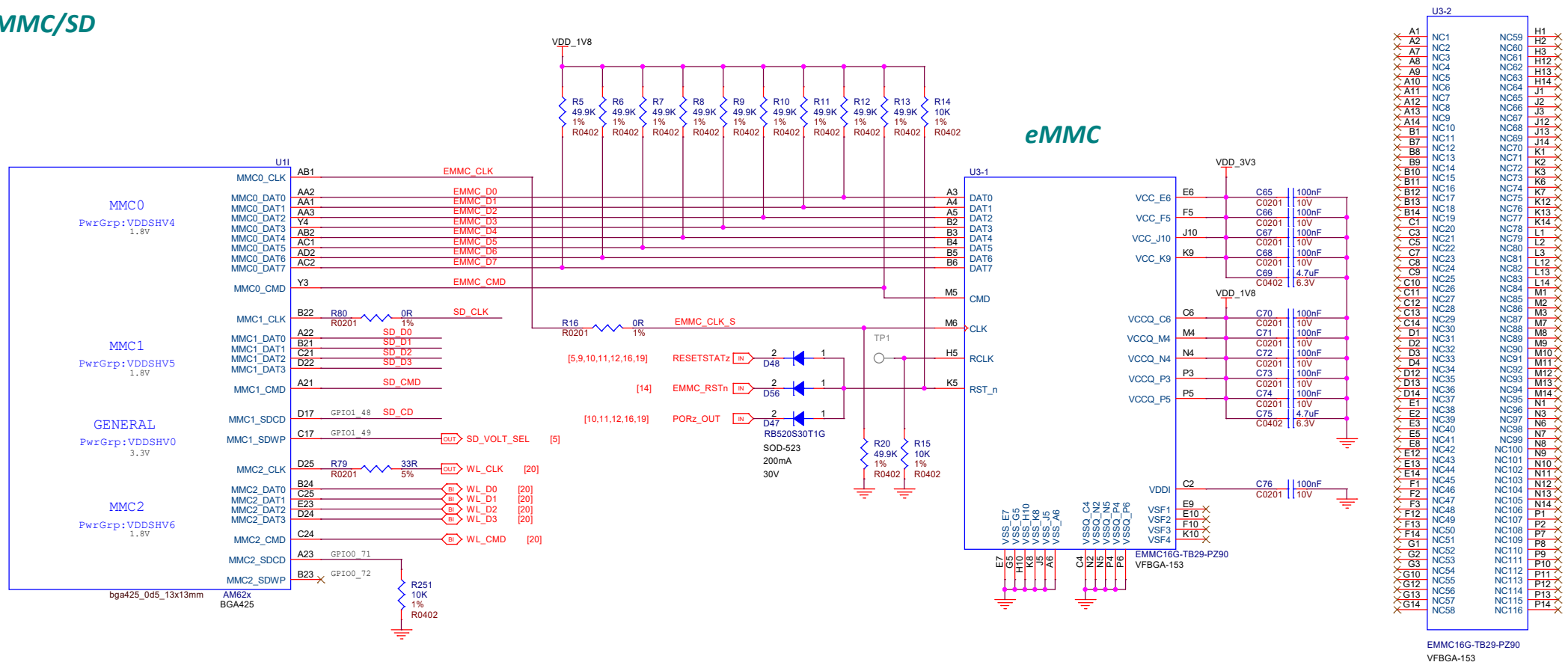
# DDR4

# SoC DDR controller

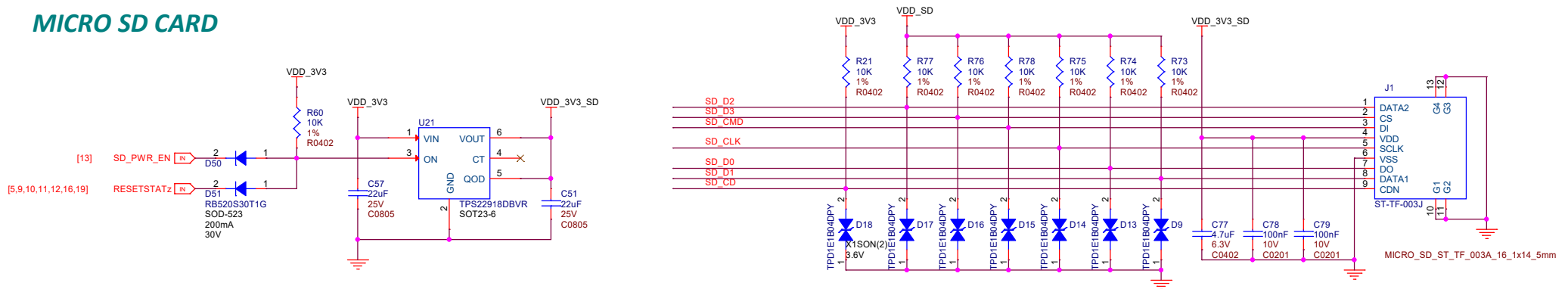




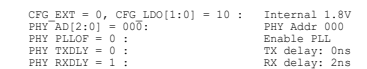
**eMMC/SD**




## MICRO SD CARD

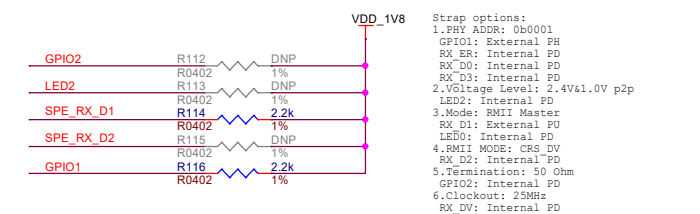


### SoC MAC 1.8V



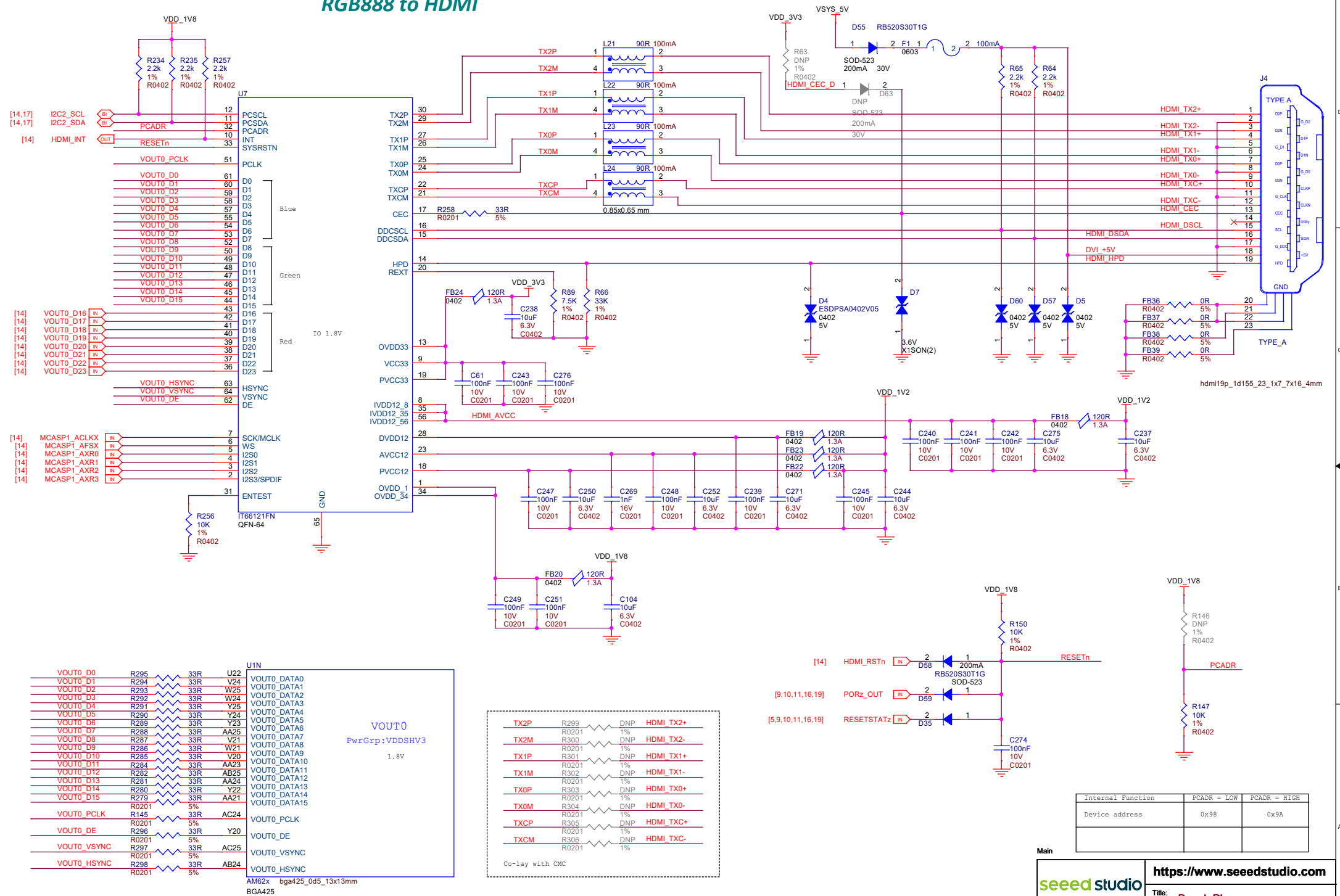
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		Title: <b>BeaglePlay</b>	
Size: <b>A3</b>	Document Number:	<b>010_SoC RGMII &amp; GBE PHY</b>	Rev: <b>v1.0</b>
Draw By: <b>qxm</b>	Date:	<b>Tuesday, December 27, 2022</b>	Sheet: <b>10 of 22</b>

## SoC MAC 1.8V



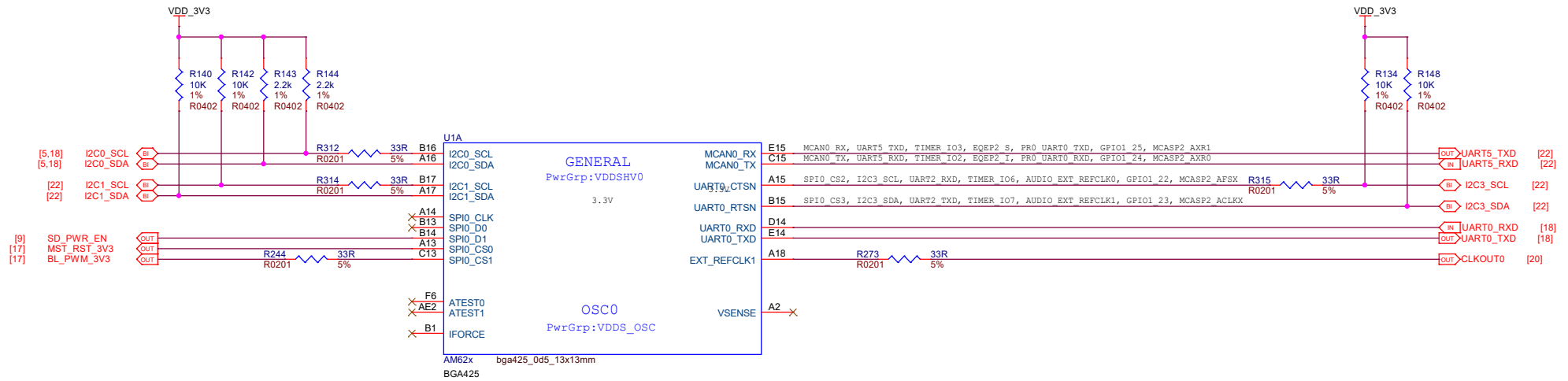
Main

## RGB888 to HDMI



Internal Function	PCADR = LOW	PCADR = HIGH
Device address	0x98	0x9A

## SoC GPIO 3.3V

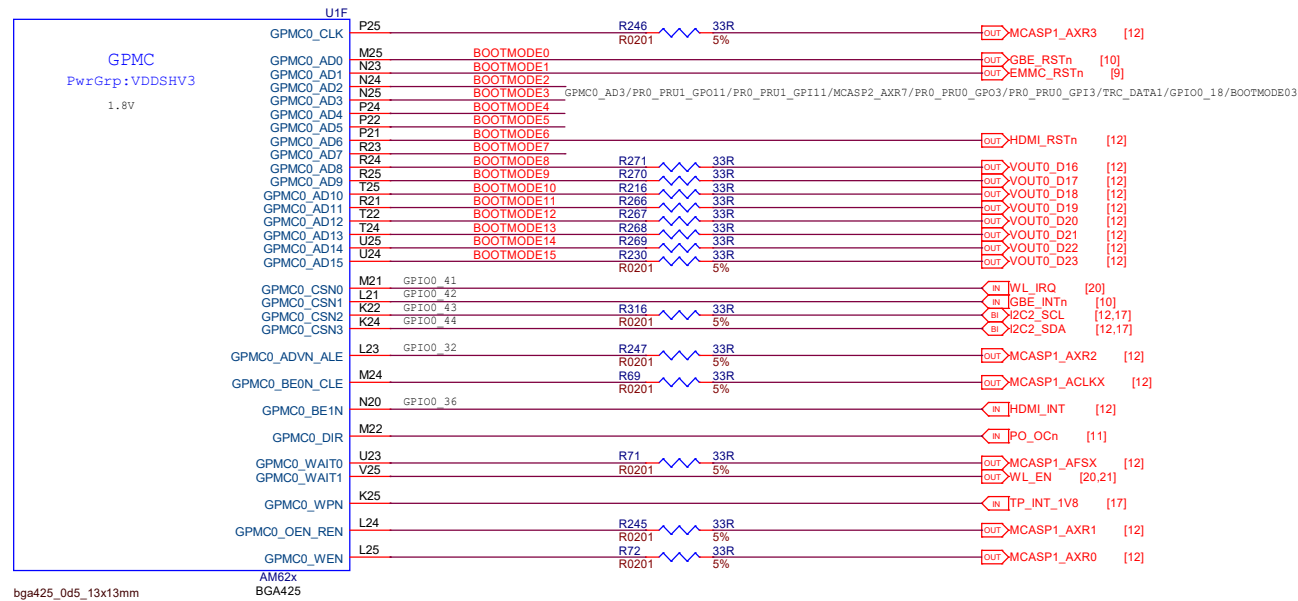


## SoC GPIO 3.3V

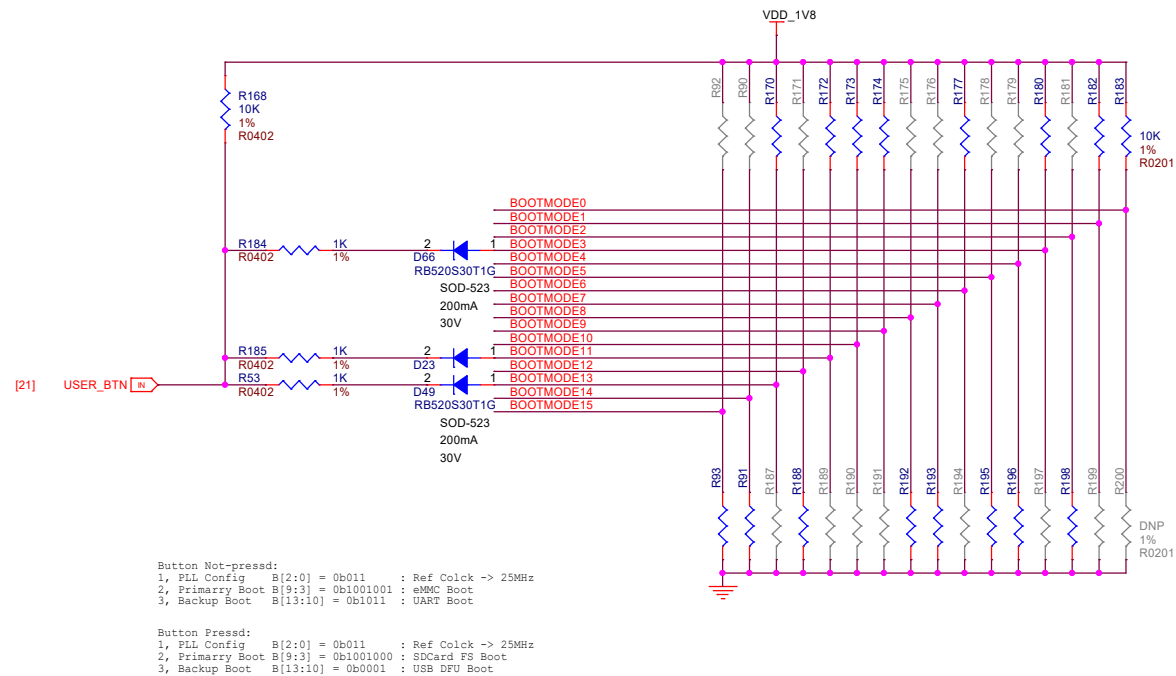


## Main

## SoC GPIO 1.8V

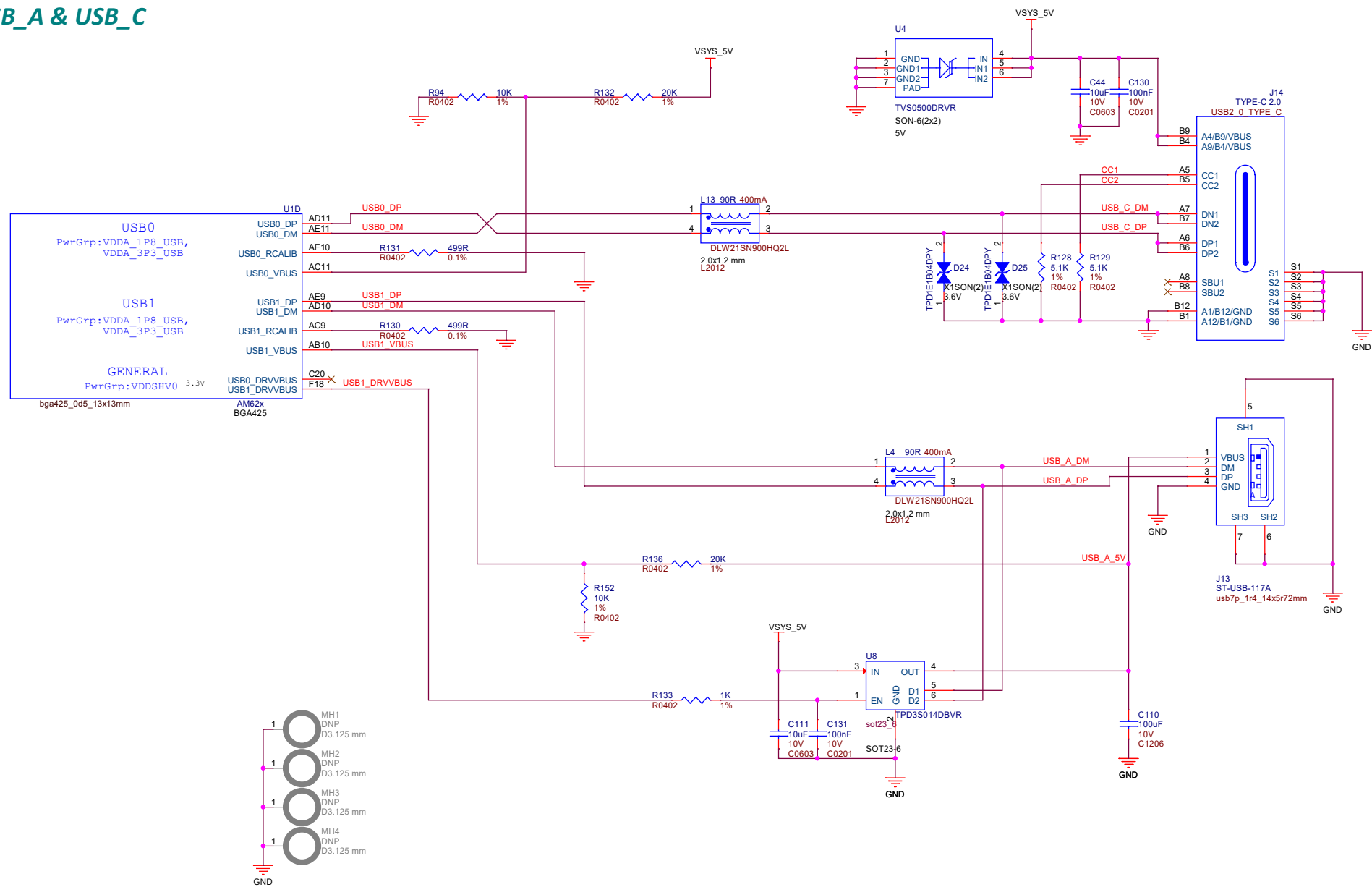


## Bootstrap



Main

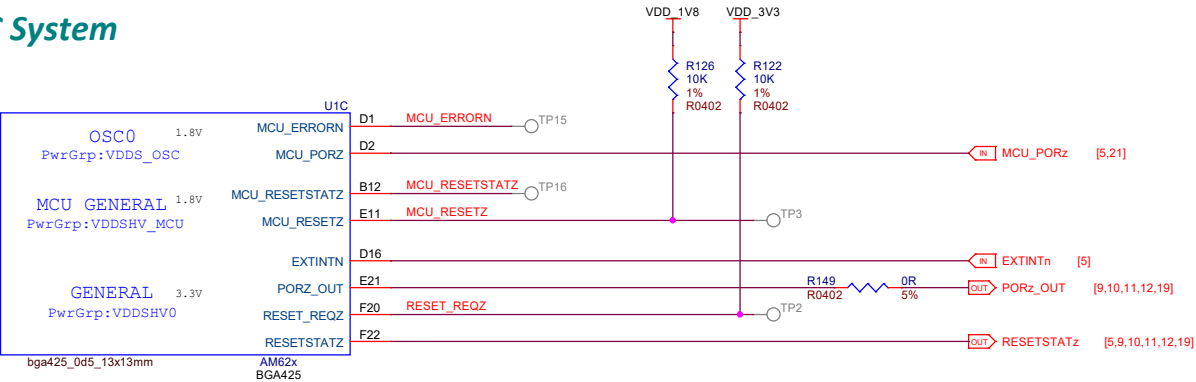
# USB\_A & USB\_C



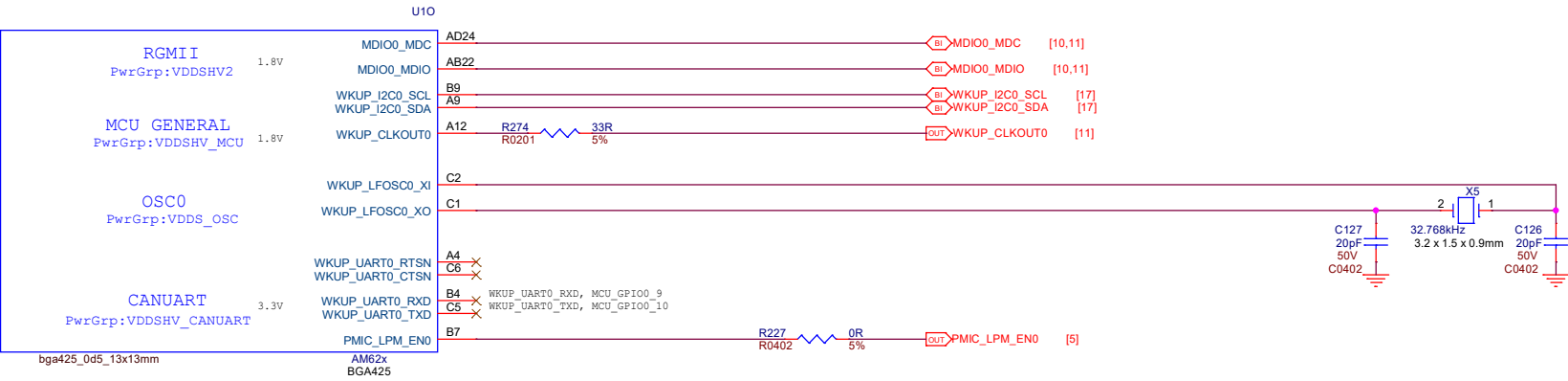
Main

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Title:		BeaglePlay	
Size: A3	Document Number:	015_SoC USB & USB_A & USB_C	Rev: v1.0
Draw By: qm	Date: Tuesday, December 27, 2022	Sheet: 15 of 22	

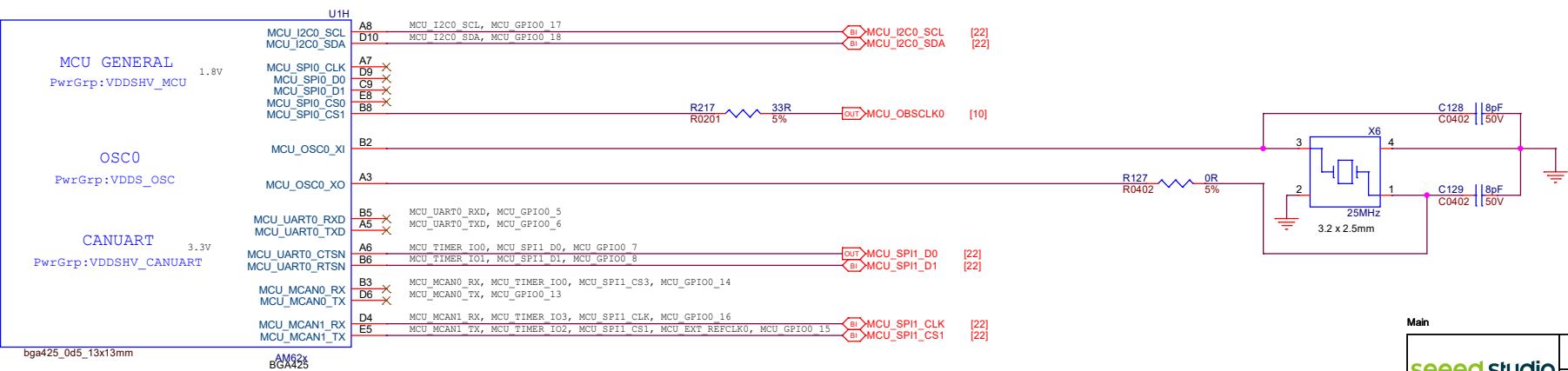
SoC System



WKUP Domain

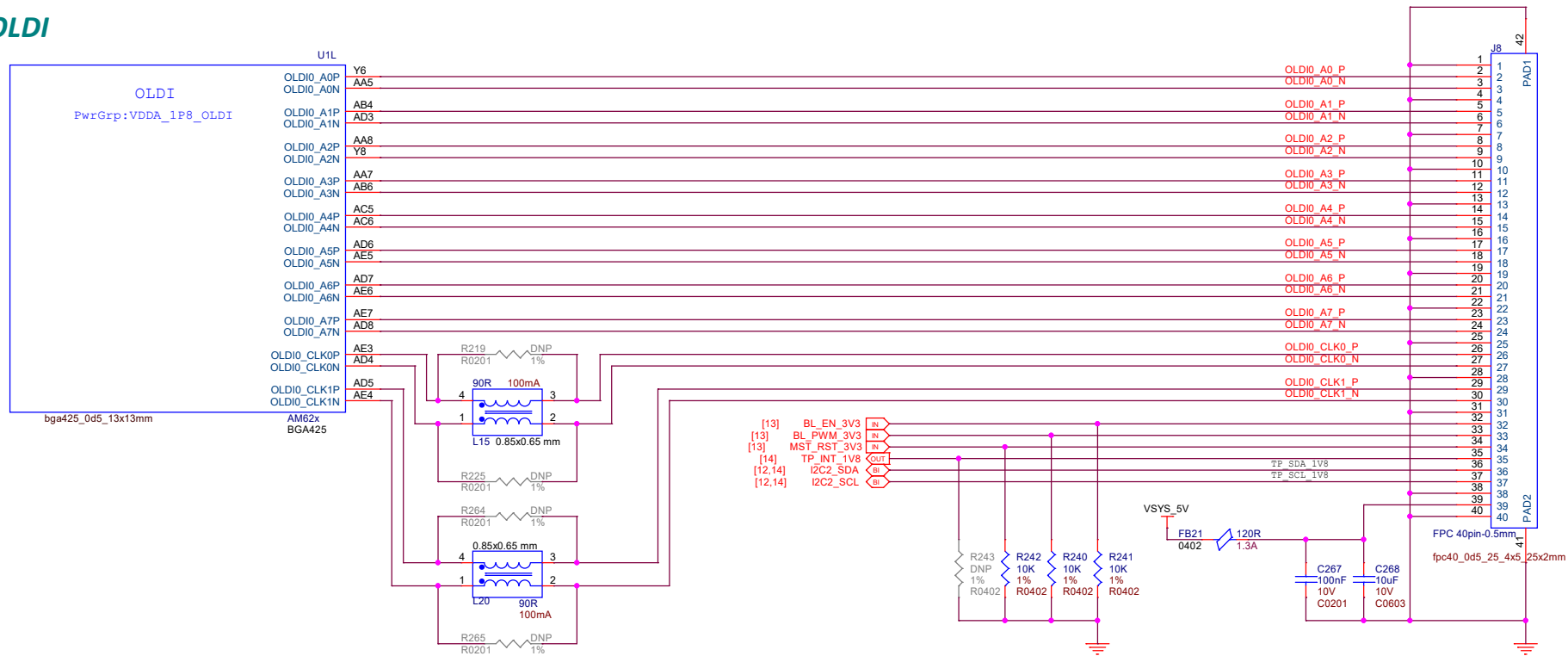


MCU Domain

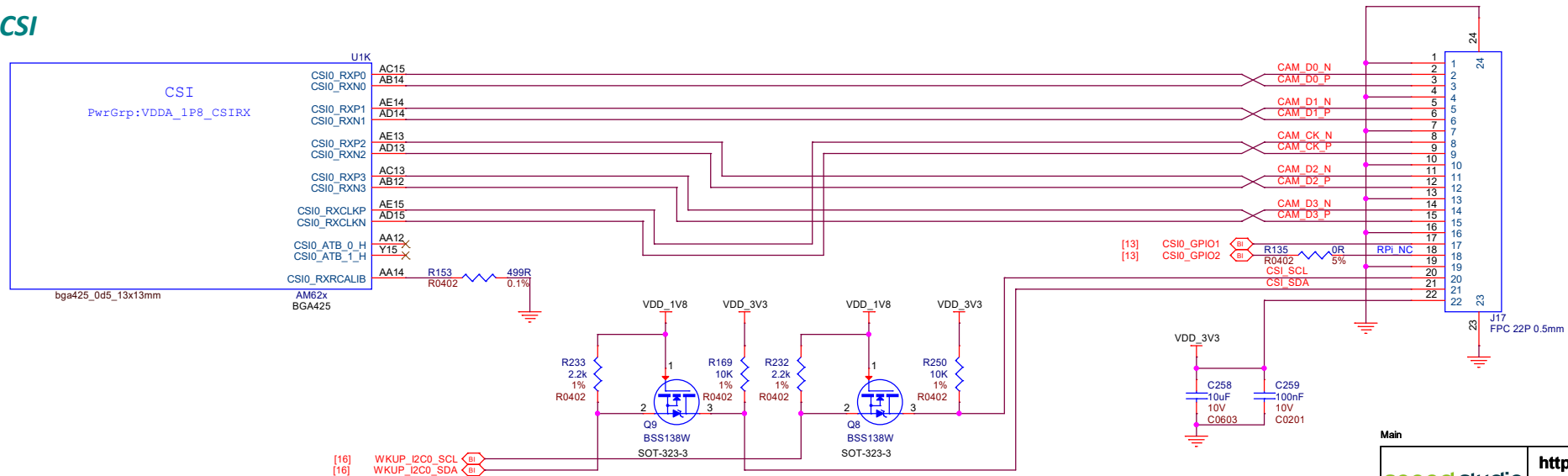




# OLDI



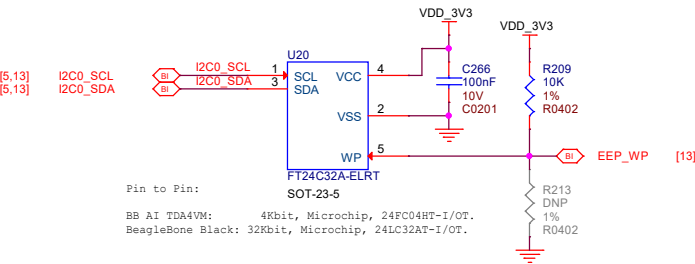
# CSI



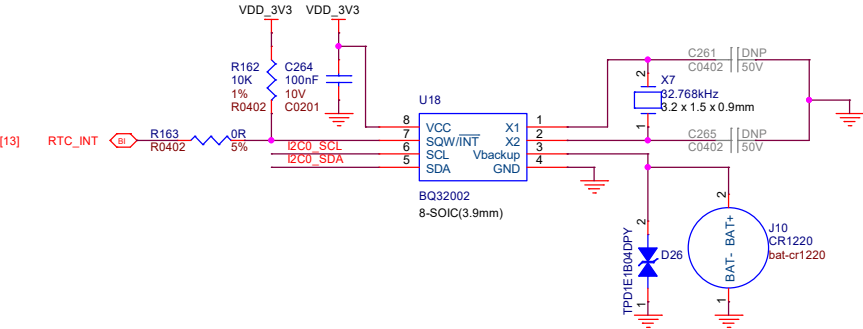
Main

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<b>Size:</b> A3	<b>Document Number:</b> 017_SoC CSI & OLDI	<b>Draw By:</b> qm	
<b>Date:</b> Tuesday, December 27, 2022		<b>Sheet:</b> 17 of 22	

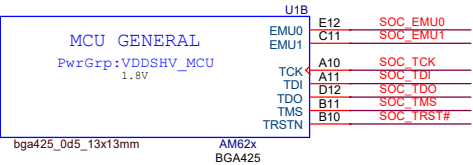
BOARD ID EEPROM 4Kbit



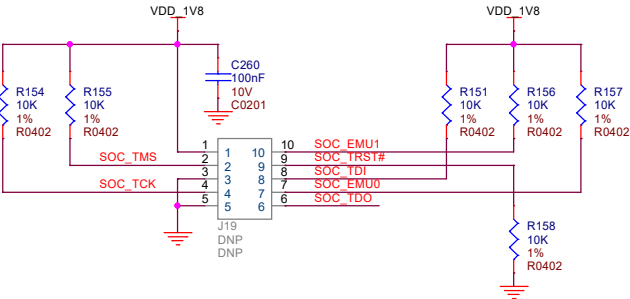
RTC



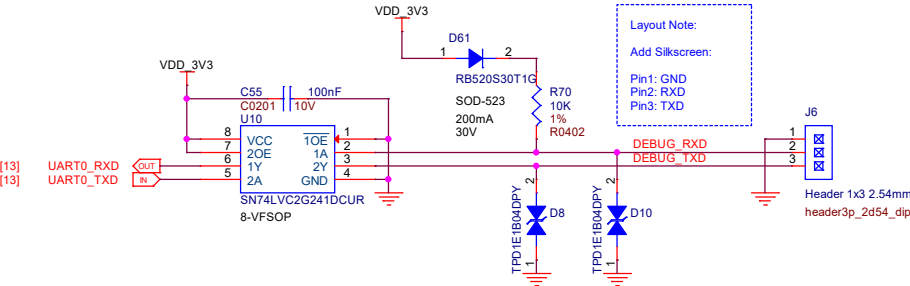
JTAG



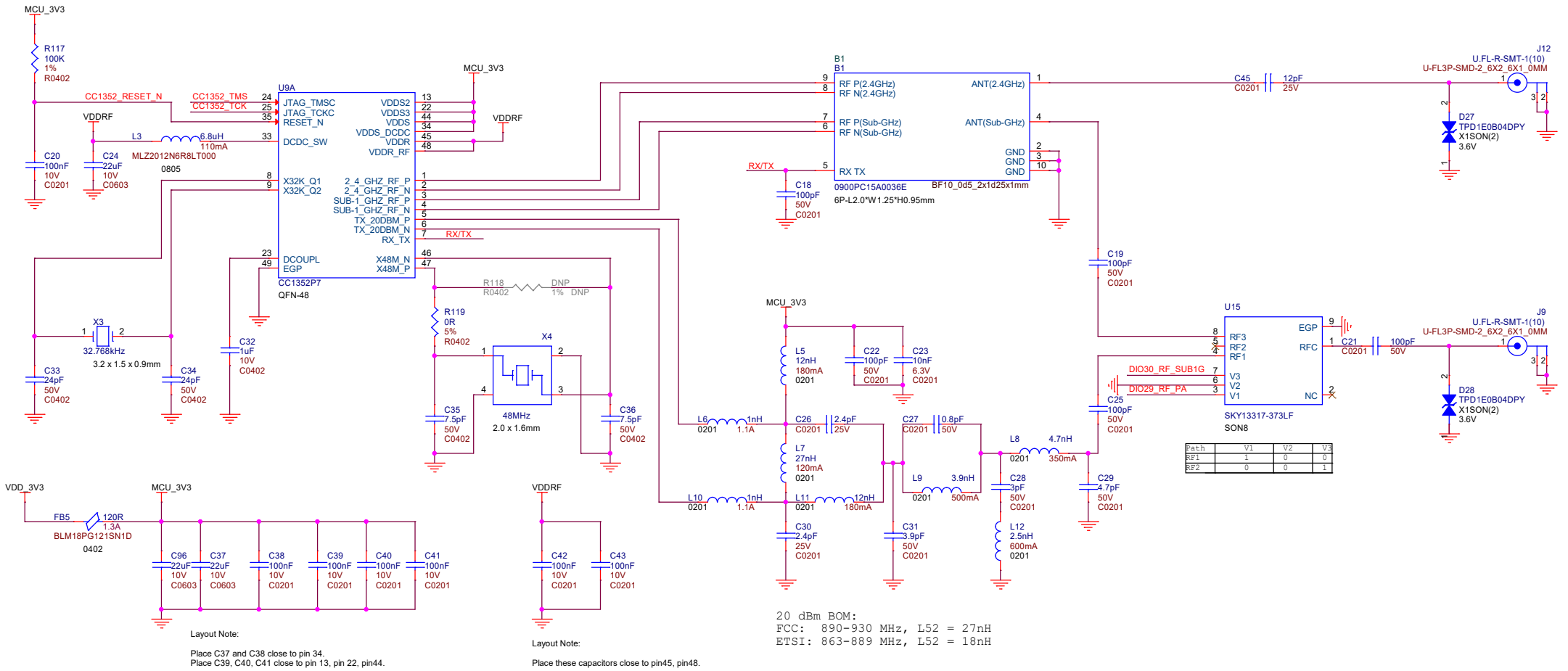
Tag-Connect



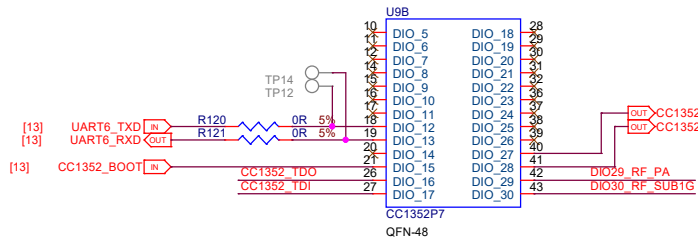
Debug



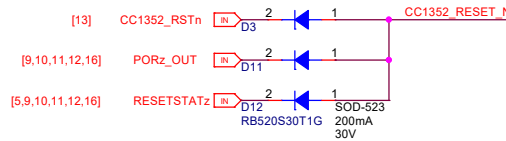
## CC1352P RF



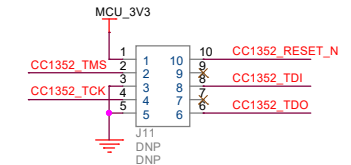
## CC1352P GPIO



## RESET



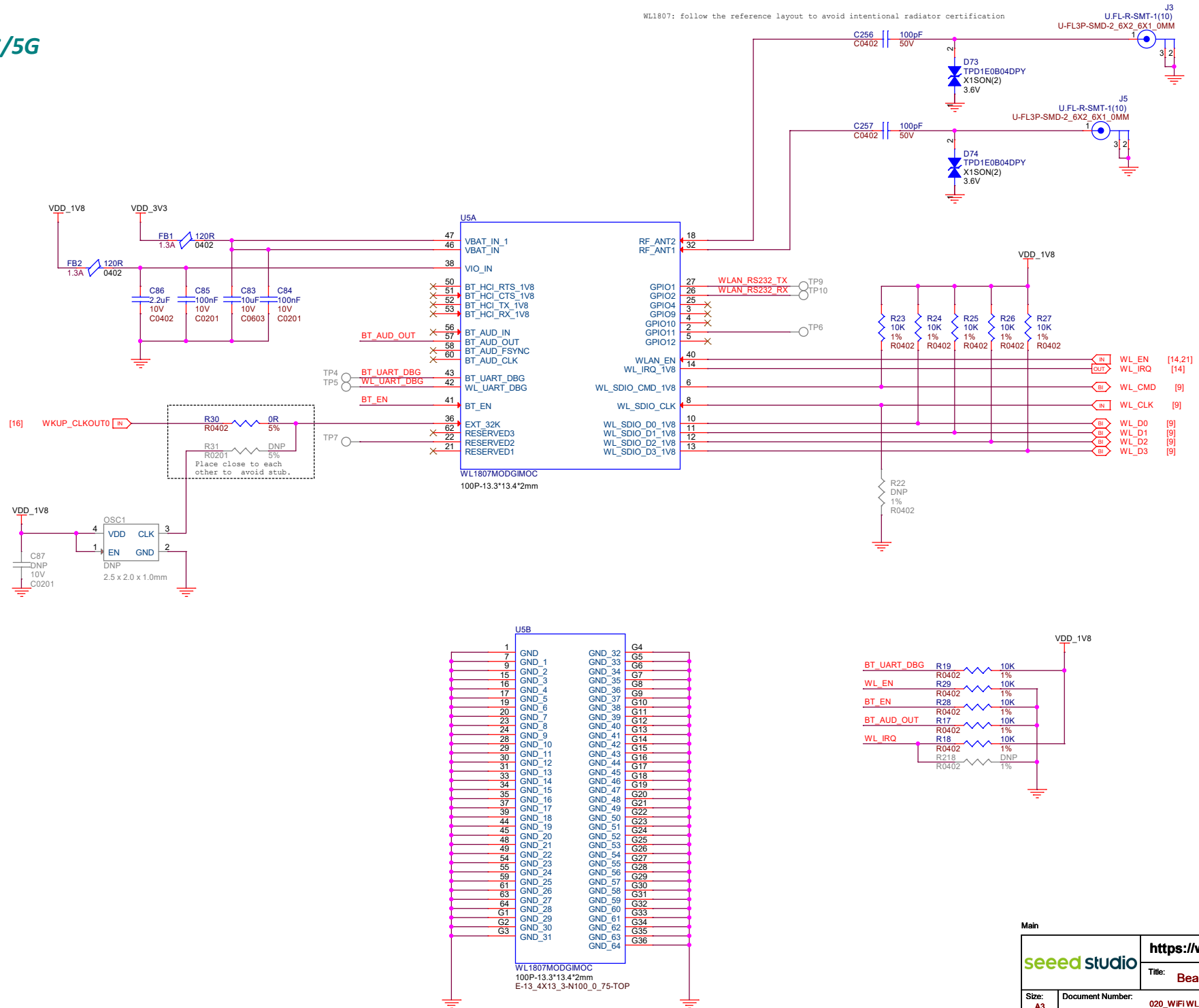
## CC1352P JTAG Tag-Connect



Main

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Title:		BeaglePlay	
Size: A3	Document Number:	019_CC1352P	Rev: v1.0
Draw By: qm	Date: Tuesday, December 27, 2022	Sheet: 19 of 22	

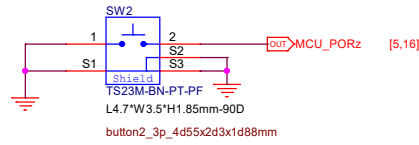
# WiFi 2.4G/5G



Main

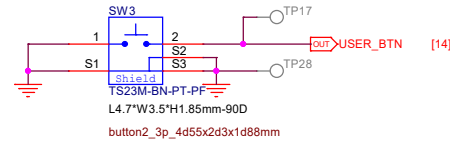
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<b>Draw By:</b> qm	<b>Date:</b> Tuesday, December 27, 2022	<b>Sheet:</b> 20 of 22	

## Reset Button

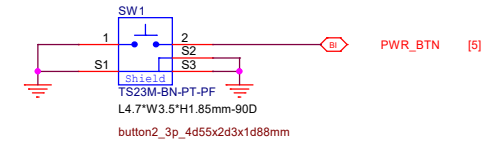


## User Button

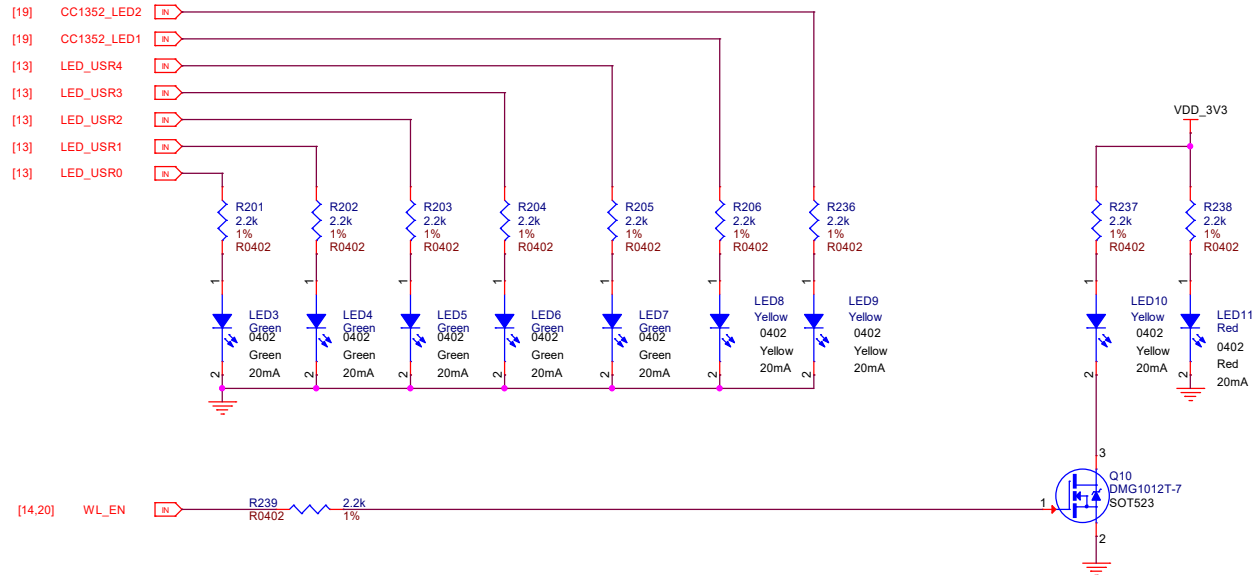
Layout Noete:  
Place TP17 and TP28 close to each other, keep 2.54mm spacing.



## Power Button



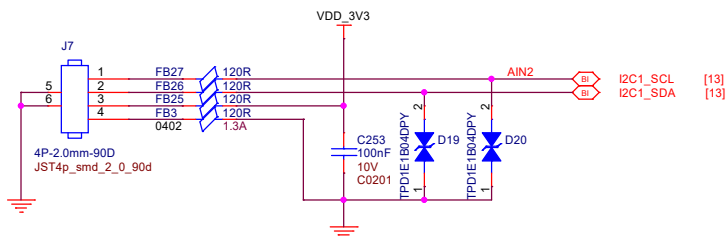
## LEDs



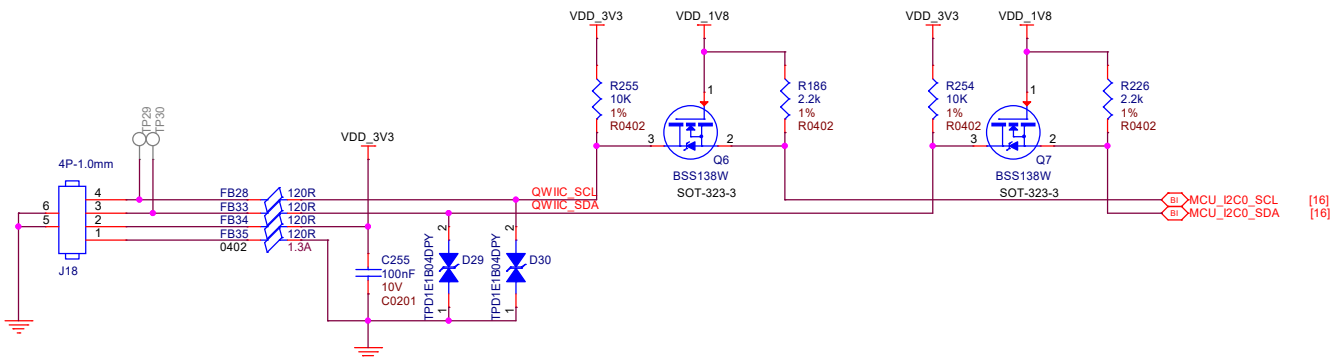
Main

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<b>Draw By:</b> qxm	<b>Date:</b> Tuesday, December 27, 2022	<b>Sheet:</b> 21 of 22	

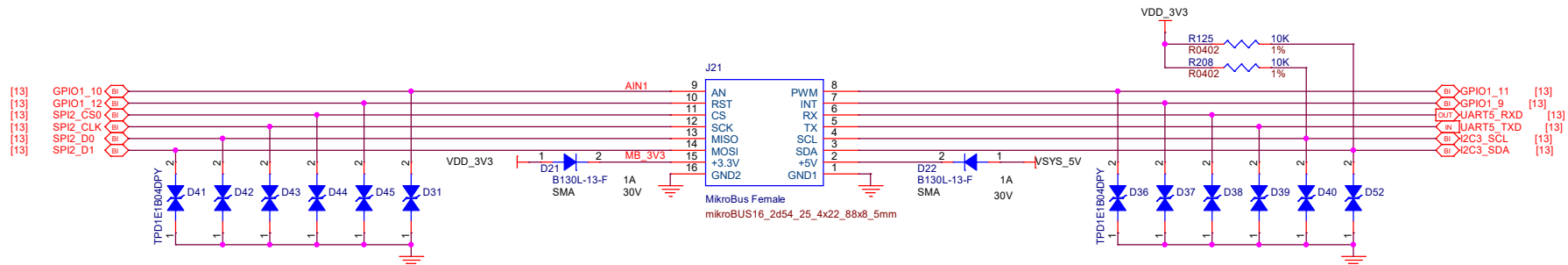
## Grove Connector



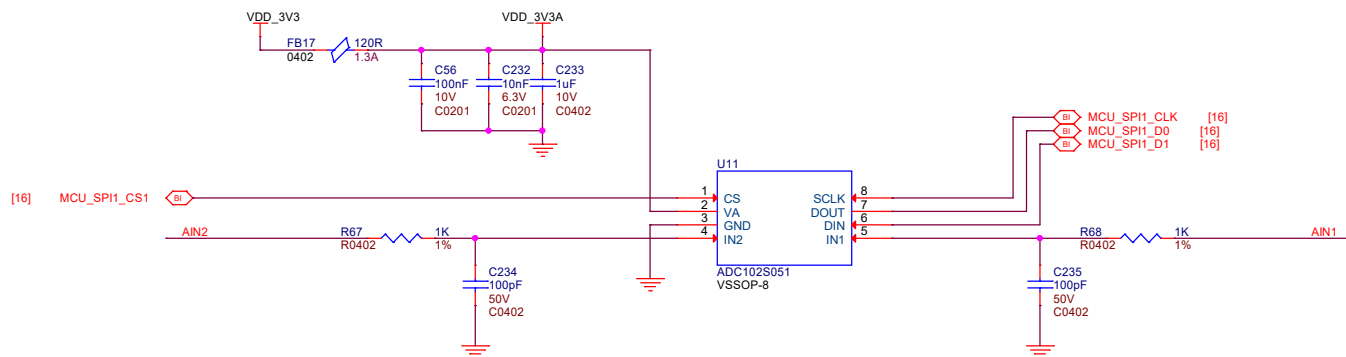
## QWIIC Connector



## MikroBus



## ADC



Main

		<a href="https://www.seeedstudio.com">https://www.seeedstudio.com</a>	
<b>Title:</b> BeaglePlay			
<b>Size:</b> A3	<b>Document Number:</b> 022_GROVE & QWIIC & MikroBus & ADC	<b>Rev:</b> v1.0	
<b>Draw By:</b> qm	<b>Date:</b> Tuesday, December 27, 2022	<b>Sheet:</b> 22 of 22	