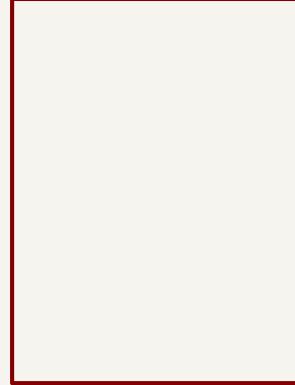
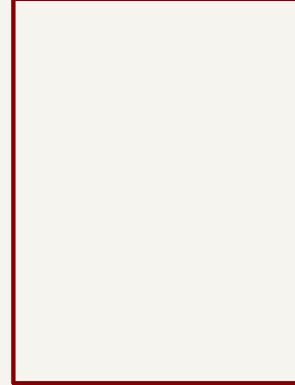


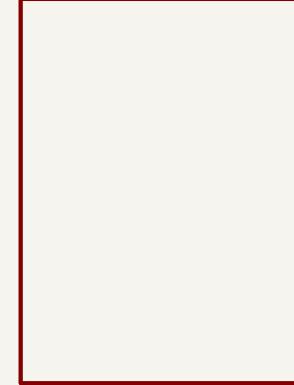
A

**01 Descriptions**

File: 01 Descriptions.kicad\_sch

**02 Block Diagram**

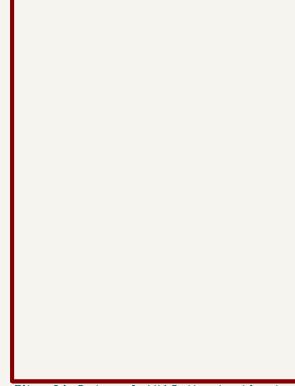
File: 02 Block Diagram.kicad\_sch

**03 Power**

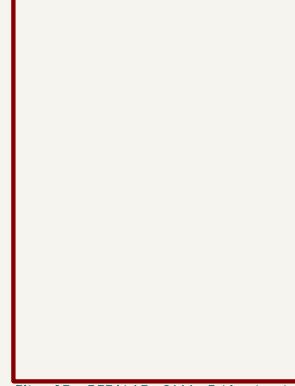
File: 03 Power.kicad\_sch

B

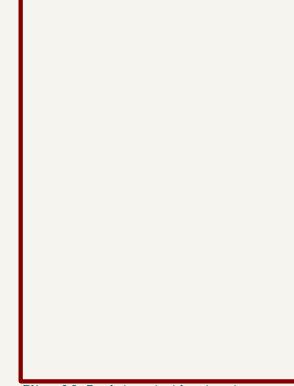
A

**04 Debug & XIAO Header**

File: 04 Debug &amp; XIAO Header.kicad\_sch

**05 nRF54L15–CAAA–R**

File: 05 nRF54L15–CAAA–R.kicad\_sch

**06 Peripherals**

File: 06 Peripherals.kicad\_sch

C

B

D

C

**seeed studio**

Sheet: /  
File: XIAO\_nRF54L15.kicad\_sch

<b>Title:</b> XIAO nRF54L15	CC BY-SA 4.0
Size: A4	Date: 2025-05-29
KiCad E.D.A. 9.0.0	Design: Wenkang.Liu

Rev: V0.9  
Id: 1/7

A

Version	Descriptions	Data	Name
v1.0	First Release	4/16/2024	wenkang.liu

B

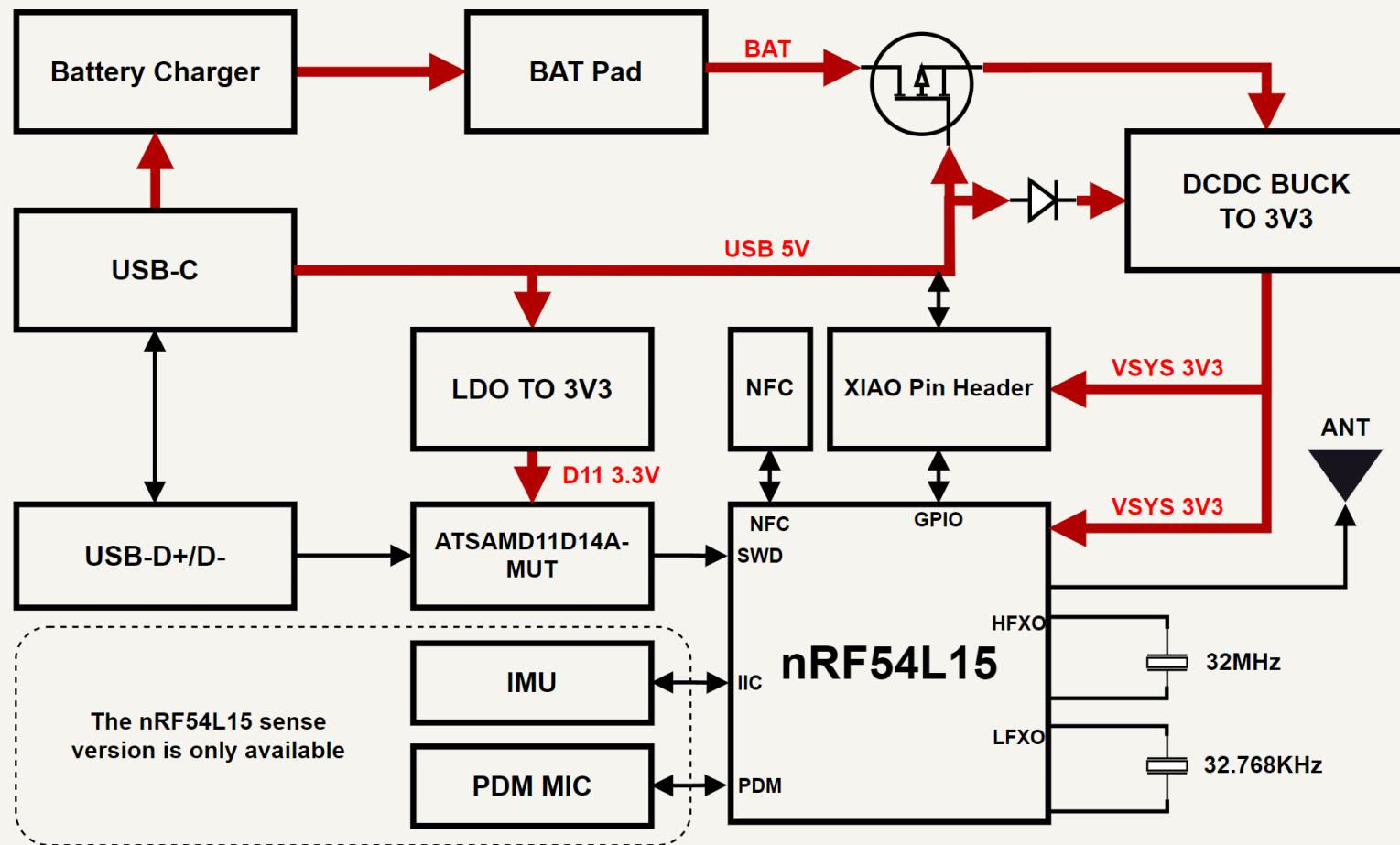
C

D

The logo for Seeed Studio, featuring the word "seeed" in a green sans-serif font and "studio" in a dark blue sans-serif font, with a small red heart icon between them.

Sheet: /01 Descriptions/  
File: 01\_Descriptions.kicad\_sch

<b>Title:</b> XIAO nRF54L15	CC BY-SA 4.0		
Size: A4	Date: 2025-05-29	Design: Wenkang.Liu	Rev: V0.9
KiCad E.D.A. 9.0.0			Id: 2/7



# seeed studio

Sheet: /02 Block Diagram/  
File: 02 Block Diagram.kicad\_sch

Title: XIAO nRF54L15

Size: A4 Date: 2025-05-29

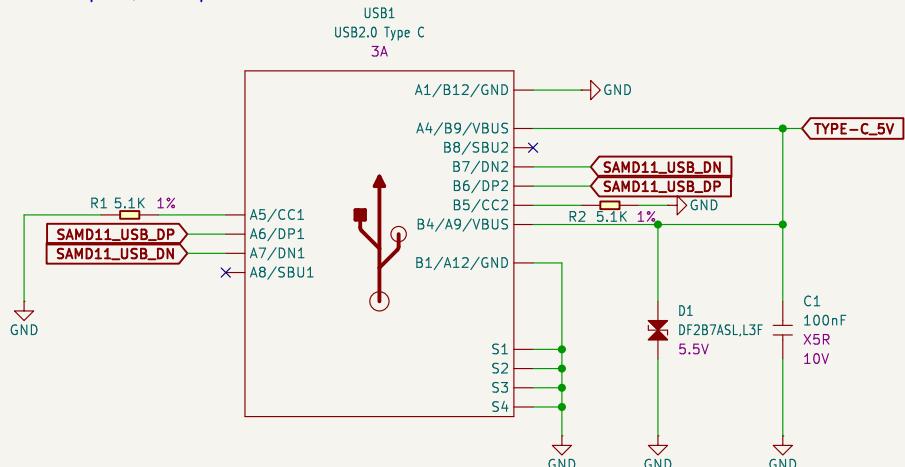
Design: Wenkang.Liu

Rev: V0.9

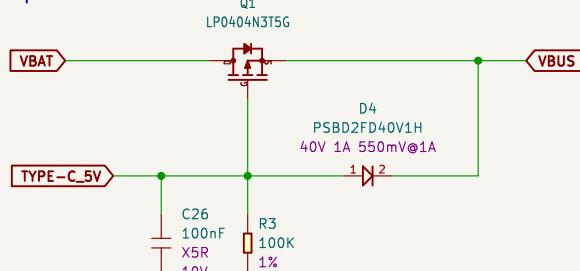
KiCad E.D.A. 9.0.0

Id: 3/7

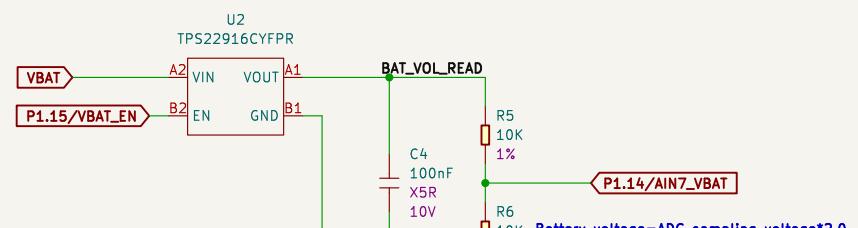
## TYPE C input/output:



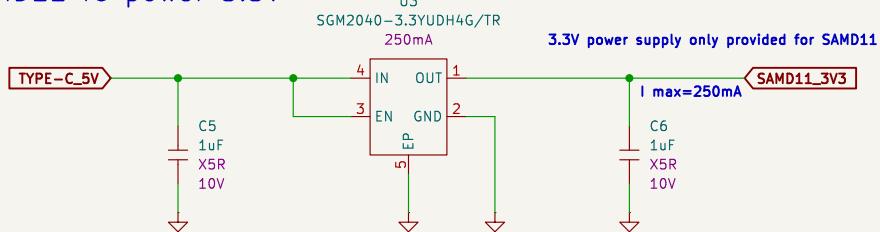
## User Power input:



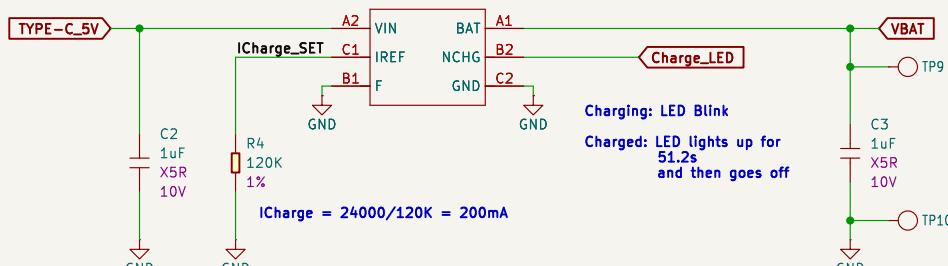
## Battery voltage detection



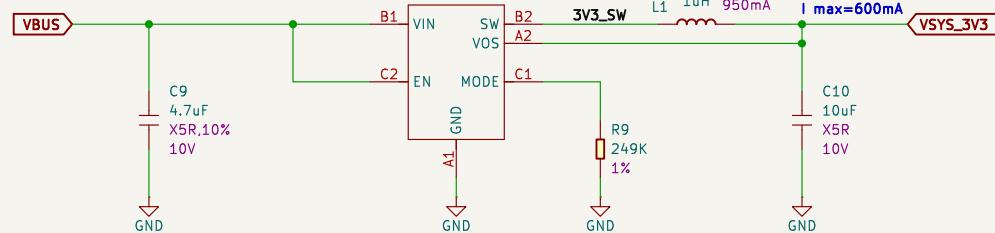
## SAMD11 IC power 3.3V



## Battery charge



## System 3.3V



**seeed studio**

Sheet: /03 Power/  
File: 03 Power.kicad\_sch

Title: XIAO nRF54L15

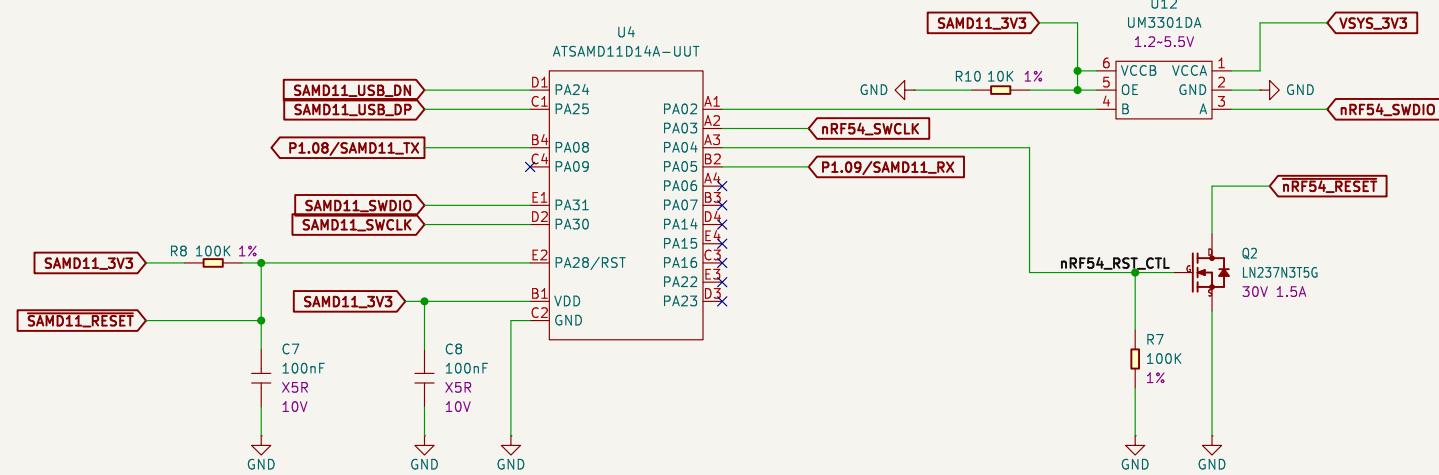
Size: A4 Date: 2025-05-29

Design: Wenkang.Liu Rev: V0.9

KiCad E.D.A. 9.0.0

Id: 4/7

SWD Debug IC (ATSAMD11D14A)



Back debugging function points

nRF54_SWCLK	TP1	SWCLK
nRF54_SWDIO	TP2	SWDIO
GND	TP3	GND
nRF54_RESET	TP4	RST
VSYS_3V3	TP5	3V3
AMD11_RESET	TP6	RST2
AMD11_SWCLK	TP7	SWCLK2
AMD11_SWDIO	TP8	SWDIO2

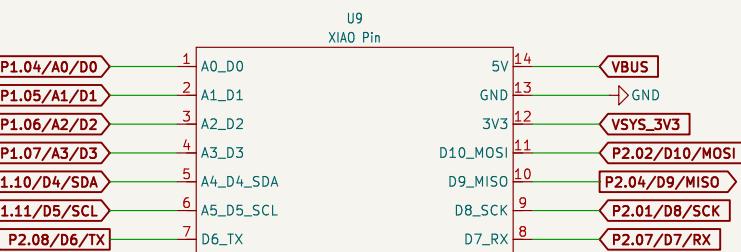
NFC Function Points

The diagram illustrates two NFC function points. Each point is represented by a red rounded rectangle containing the text "P1.02/NFC1" or "P1.03/NFC2". A green line connects the left side of each rectangle to a small red circle labeled "TP19" and "TP20" respectively. The entire diagram is set against a light blue background.

**Back functional points**

```

graph LR
    P1_08[P1.08/SAMD11_TX] --> TP11((TP11))
    TP11 --> TP18((TP18))
    TP18 --> P2_00[P2.00/USR_LED]
    
    P1_09[P1.09/SAMD11_RX] --> TP12((TP12))
    TP12 --> D15((D15))
    TP12 --> TP17((TP17))
    D15 --> P2_06[D2.06/D15]
    
    P0_03[P0.03/D11/IMU_SCL] --> TP13((TP13))
    TP13 -.-> D11((D11))
    TP13 -.-> D14((D14))
    TP13 --> TP16((TP16))
    D14 --> P2_09[P2.09/D14]
    
    P0_04[P0.04/D12/IMU_SDA] --> TP14((TP14))
    TP14 -.-> D12((D12))
    TP14 -.-> D13((D13))
    TP14 --> TP15((TP15))
    D13 --> P2_10[P2.10/D13]
  
```



seeed studio

Sheet: /04 Debug & XIAO Header/  
File: 04 Debug & XIAO Header.kicad\_sch

Title: XIAO nRF54L15

Size: A4 Date: 2025-05-29

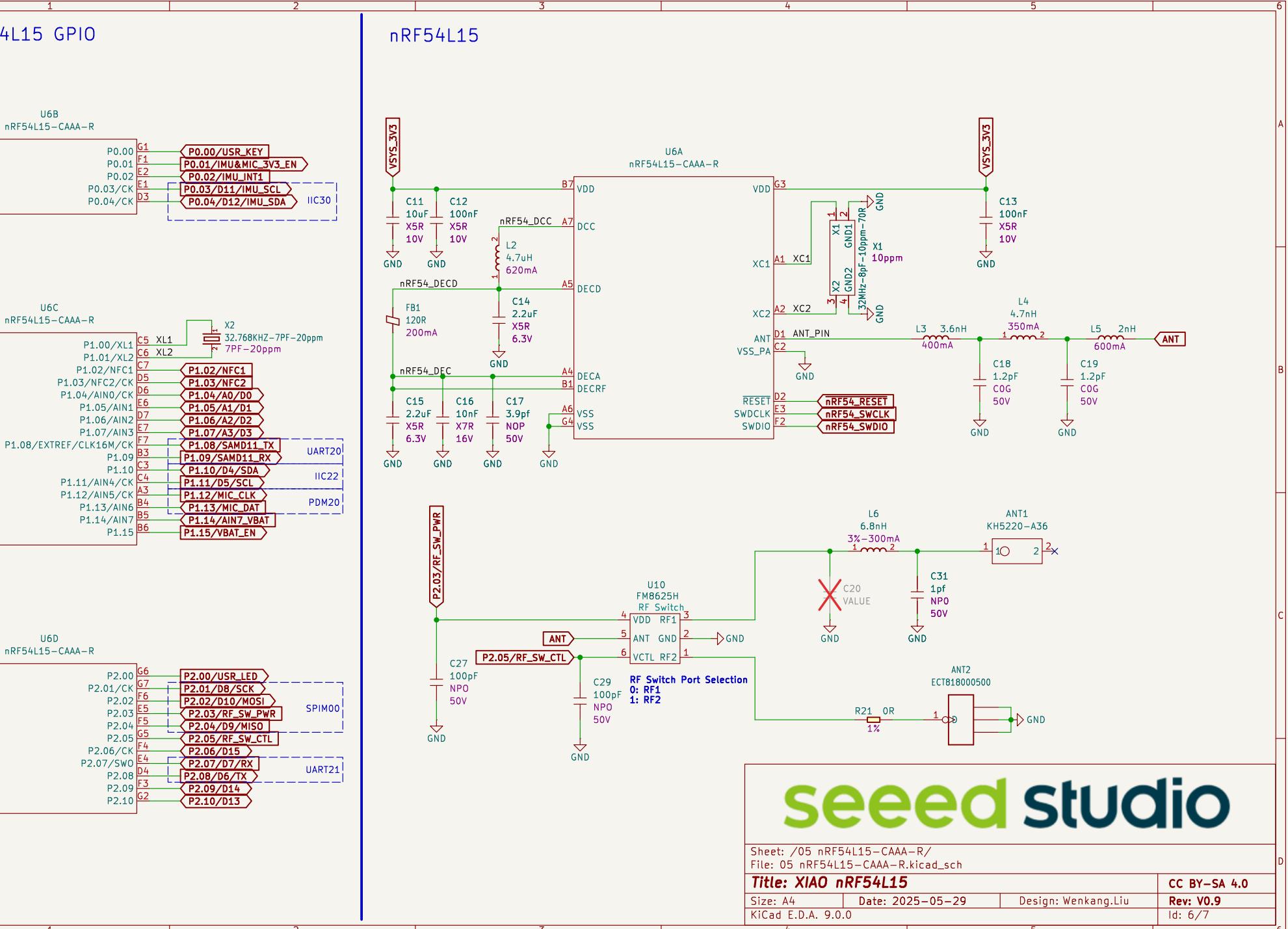
KiCad E.D.A. 9.0.0

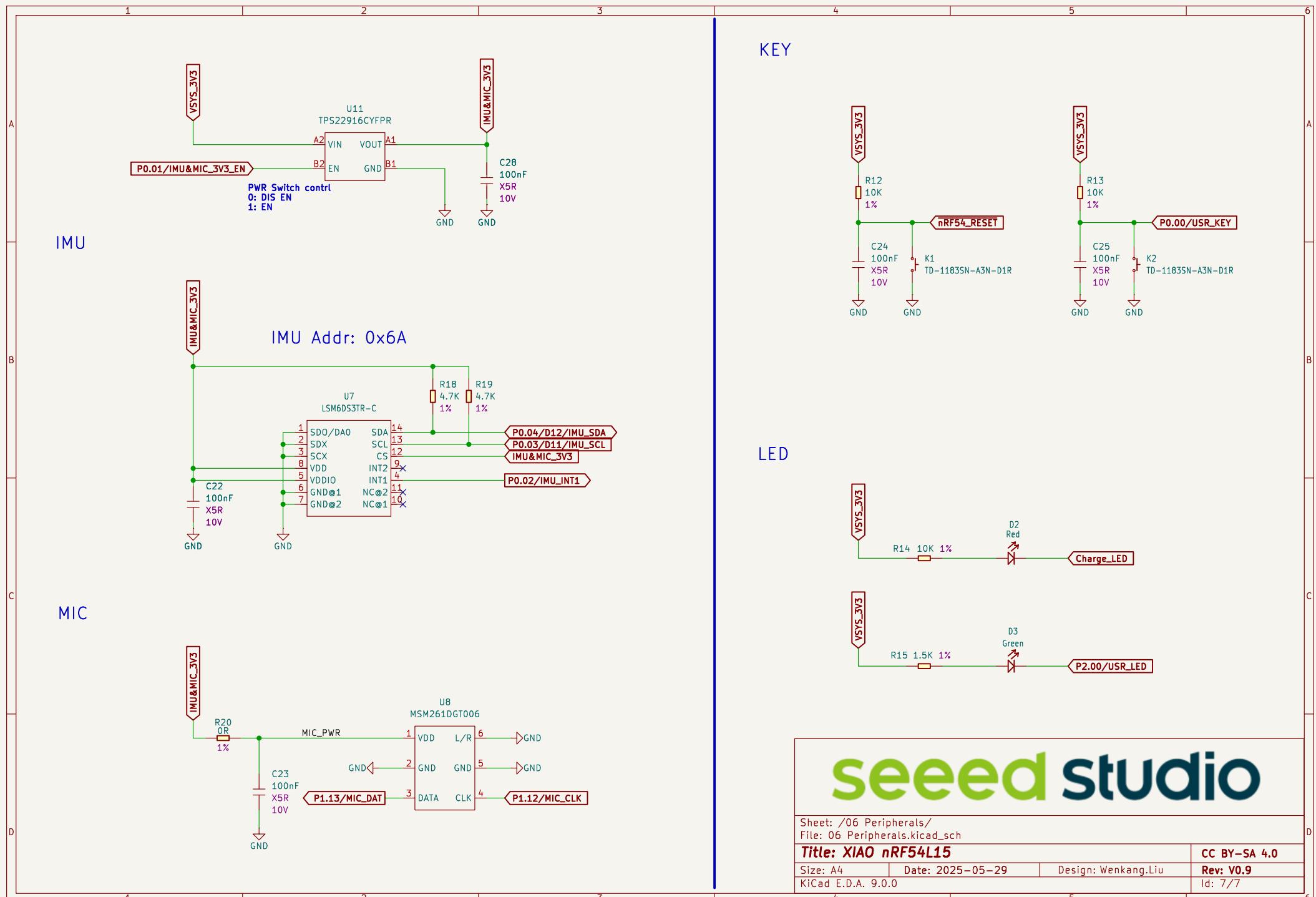
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Rev. V0.9

Id: 5/7

100





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Sheet: /06 Peripherals/  
File: 06\_Peripherals.kicad\_sch

Title: XIAO nRF54L15

Size: A4 Date: 2025-05-29

Design: Wenkang.Liu

Rev: V0.9

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Id: 7/7