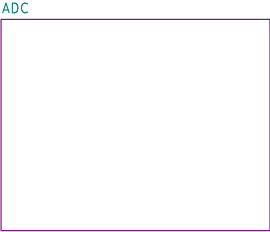
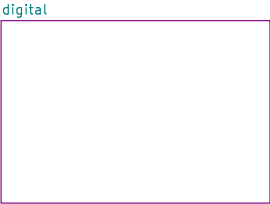




File: power.kicad\_sch



File: adc.kicad\_sch



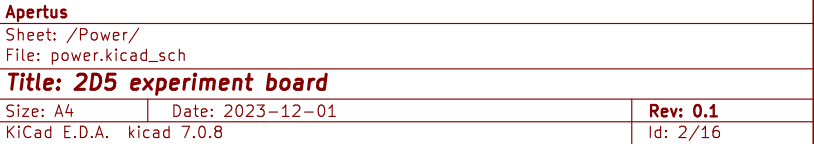
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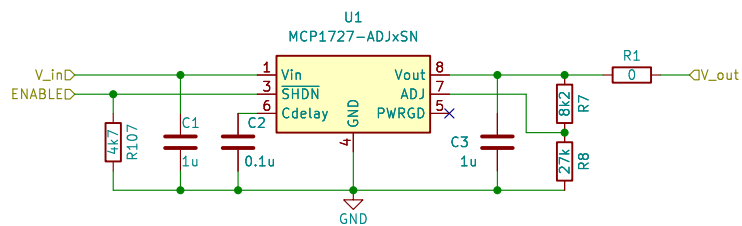
Apertus

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**Title: 2D5 experiment board**

Size: A4	Date: 2023-12-01	Rev: 0.1
KiCad E.D.A. kicad 7.0.8		Id: 1/16





# Apertus

Sheet: /Power/adc\_1v8/

File: adc\_rail.kicad\_sch

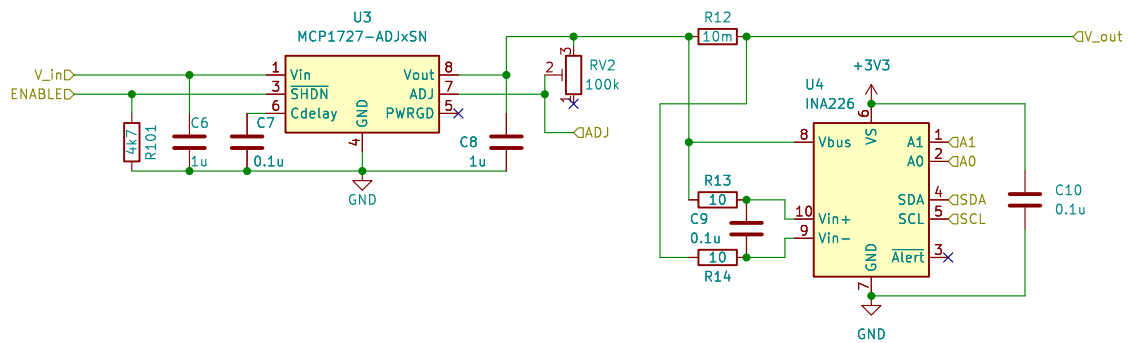
## Title: 2D5 experiment board

Size: A4 Date: 2023-12-01

KiCad E.D.A. kicad 7.0.8

Rev: 0.1

Id: 3/16



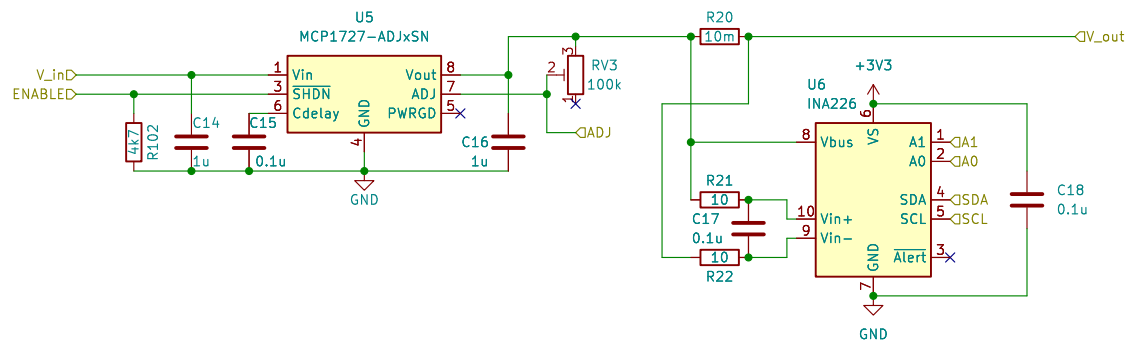
#### Apertus

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File: ordinary\_rail.kicad\_sch

#### Title: 2D5 experiment board

Size: A4 Date: 2023-12-01  
KiCad E.D.A. kicad 7.0.8

Rev: 0.1  
Id: 3/16



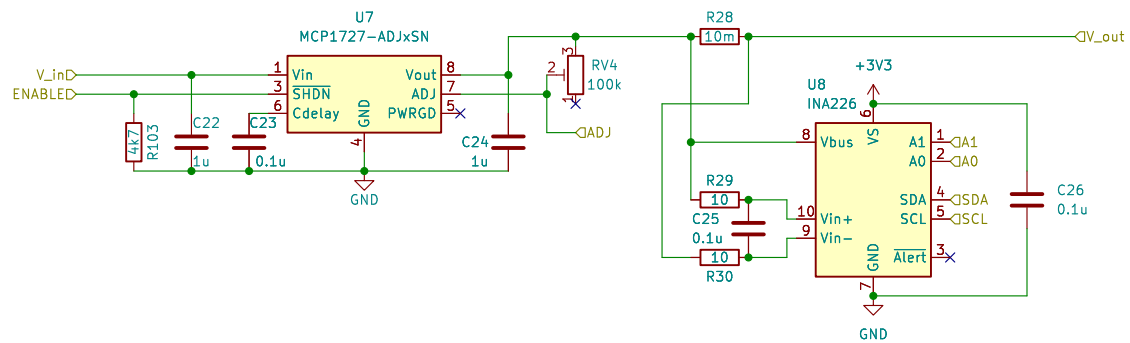
# Apertus

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## Title: 2D5 experiment board

Size: A4 Date: 2023-12-01  
KiCad E.D.A. kicad 7.0.8

Rev: 0.1  
Id: 4/16



# Apertus

Sheet: /Power/sensor 1V5/

File: ordinary\_rail.kicad\_sch

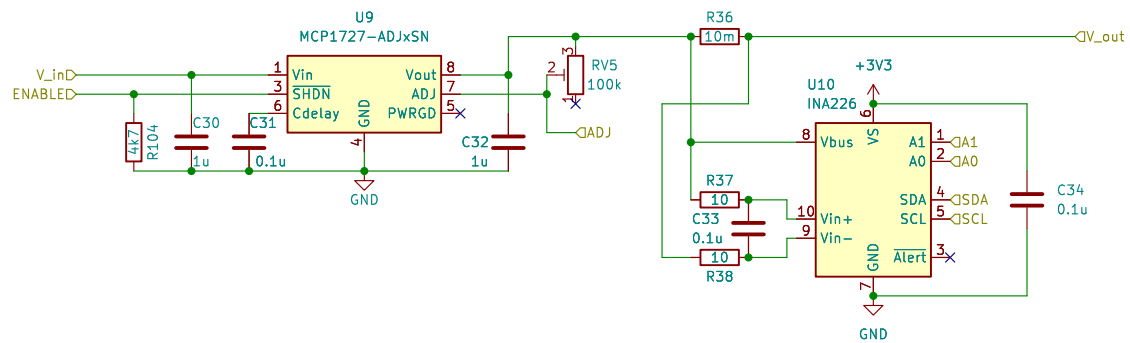
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Size: A4 Date: 2023-12-01

KiCad E.D.A. kicad 7.0.8

Rev: 0.1

Id: 5/16



# Apertus

Sheet: /Power/sensor 1v3/  
File: ordinary\_rail.kicad\_sch

## Title: 2D5 experiment board

Size: A4 Date: 2023-12-01  
KiCad E.D.A. kicad 7.0.8

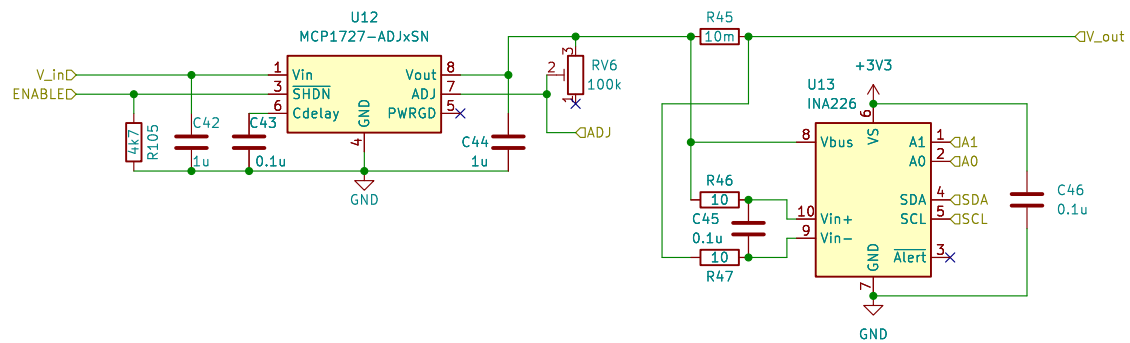
Rev: 0.1  
Id: 6/16

This is constructed after the TI appnote SLVAEJ3

The schematic shows a buck converter circuit centered around the U11 chip, a TPS55340PWR. The input voltage VinD is connected to pin 3 (VIN) through capacitor C35 (1uF). Pin 4 (EN) is connected to the ENABLE signal. Pin 5 (SS) is connected to ground through resistor R106 (4k7). Pin 6 (SYNC) is connected to ground through resistor R39 (40k). Pin 10 (FREQ) is connected to ground through capacitor C36 (0.1uF). Pins 7 (AGND), 12 (PGND), 13 (PGND), 14 (PGND), and 15 (EPAD) are all connected to ground. Pin 8 (COMP) is connected to ground through capacitor C37 (0.1uF). Pin 9 (FB) is connected to the output Vout+ through resistor R42 (39k). Pin 11 (NC) is connected to ground through resistor R40 (2.55k). Pin 1 (SW) is connected to pin 2 (SW) through diode D1. Pin 2 (SW) is connected to the inductor L1 (10uH). The other end of L1 is connected to the positive output terminal Vout+ through resistor R41 (1R). The negative output terminal Vout- is connected to ground through diode D3. Diode D2 is connected between Vout+ and Vout-. Capacitor C40 (10uF) is connected across the output terminals. Resistor R43 (10k) is connected between Vout+ and ground. Capacitor C41 (10uF) is connected across the output terminals. A 100pF capacitor C38 is connected between pins 8 and 9.

Apertus	
Sheet: /Power/5v reg/ File: 5v_reg.kicad_sch	
Title: 2D5 experiment board	
Size: A4	Date: 2023-12-01
KiCad E.D.A. kicad 7.0.8	Rev: 0.1 Id: 7/16





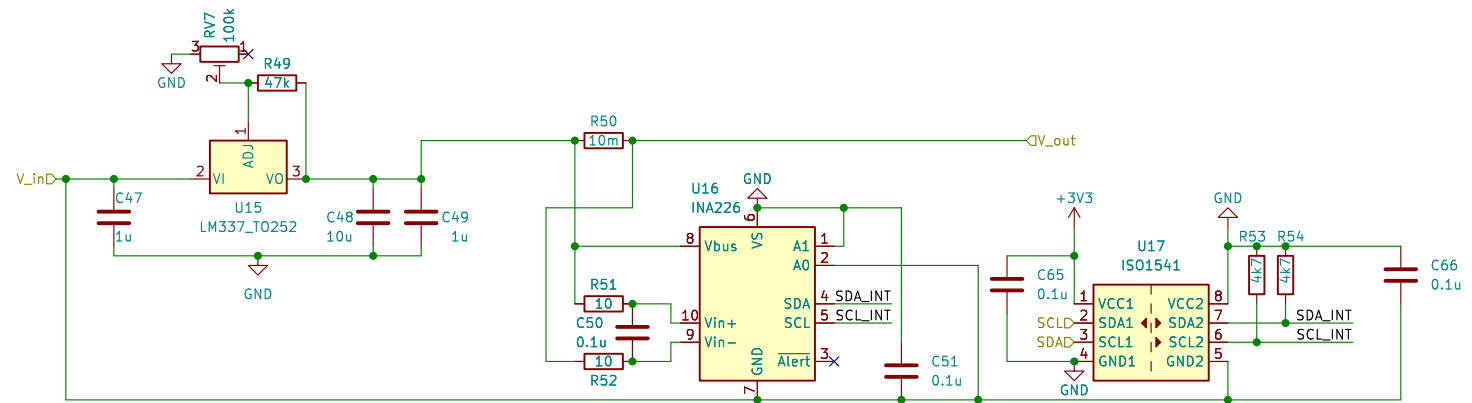
# Apertus

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File: ordinary\_rail.kicad\_sch

## Title: 2D5 experiment board

Size: A4 Date: 2023-12-01  
KiCad E.D.A. kicad 7.0.8

Rev: 0.1  
Id: 8/16



# Apertus

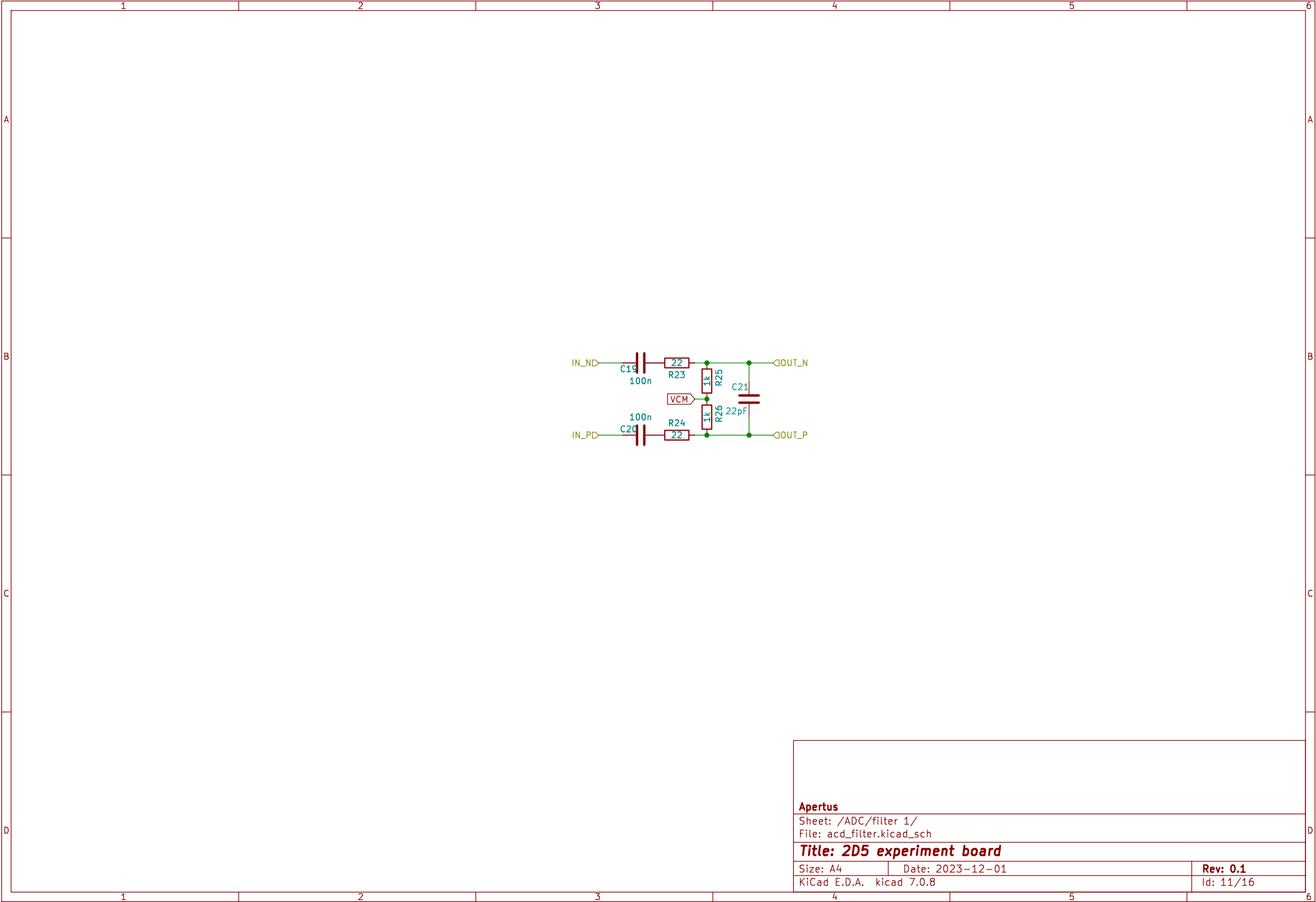
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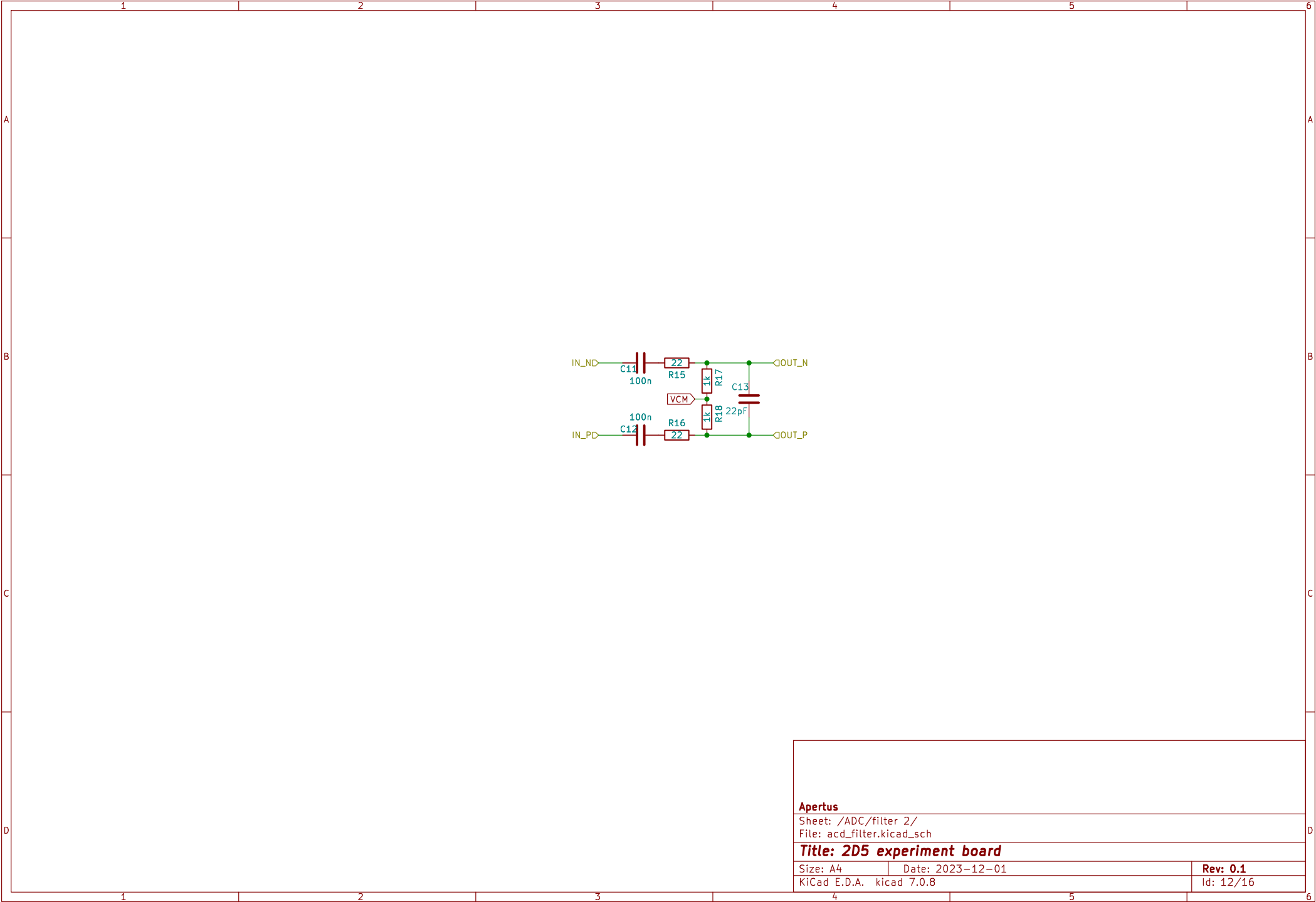
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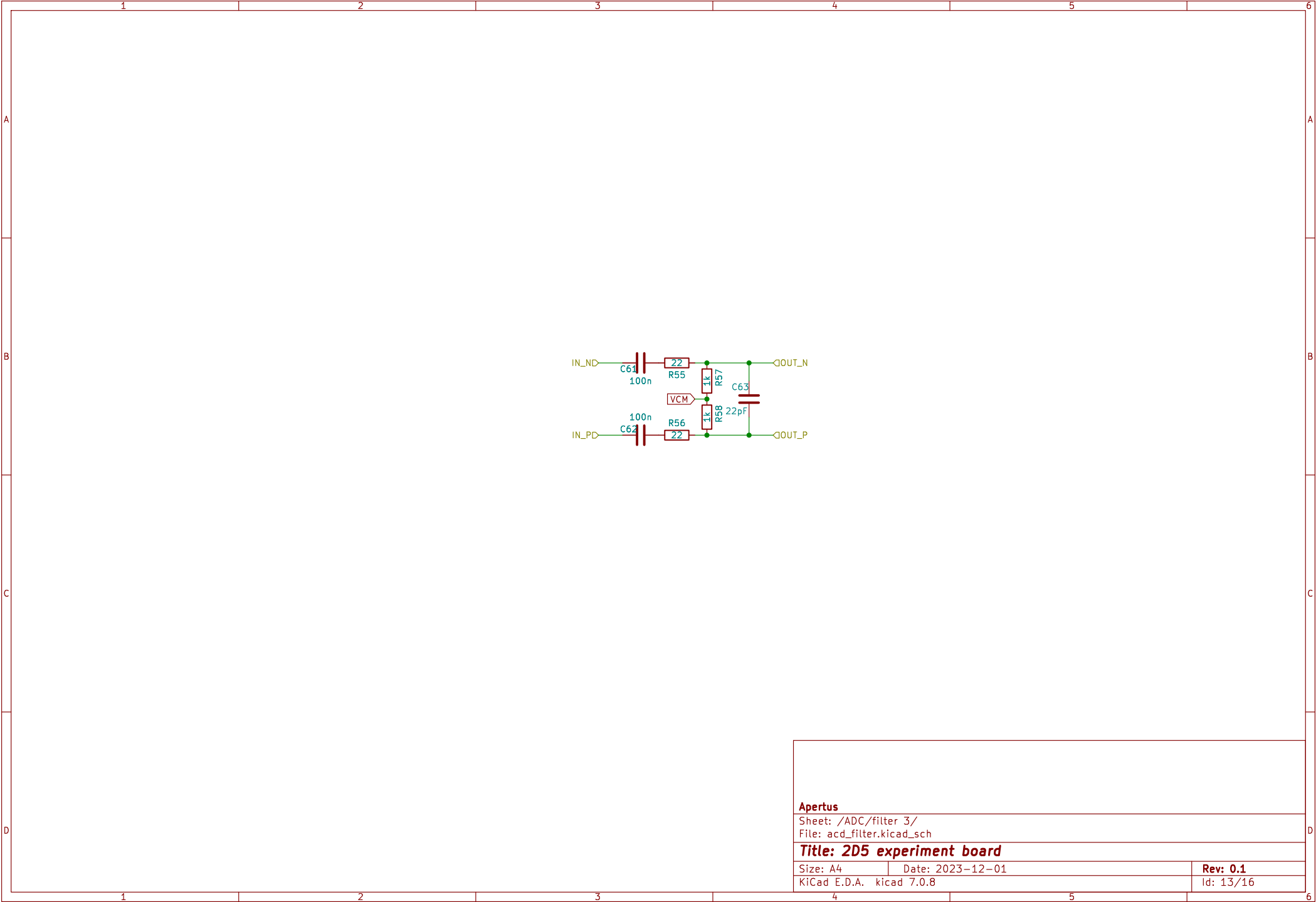
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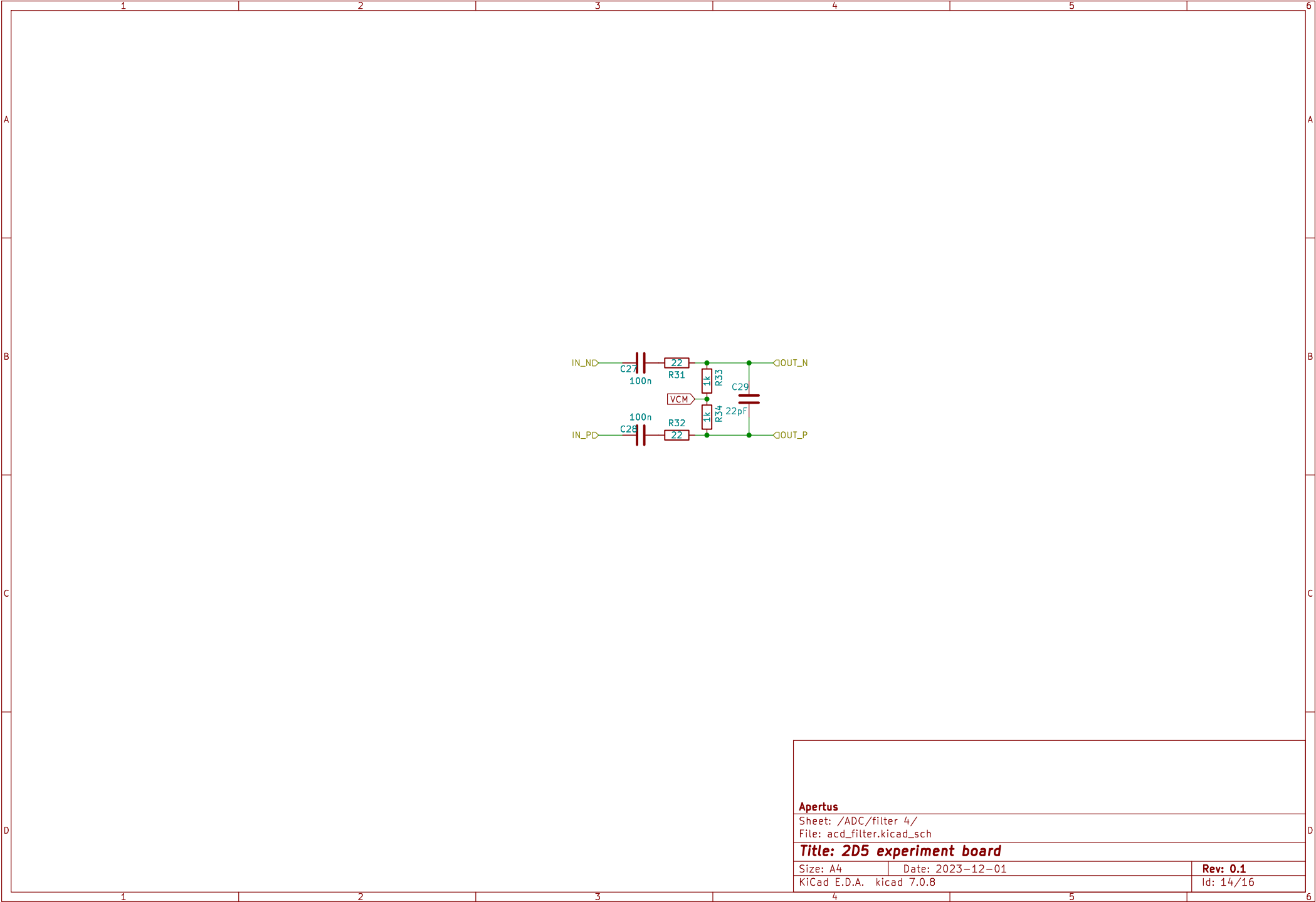
Rev: 0.1  
Id: 9/16

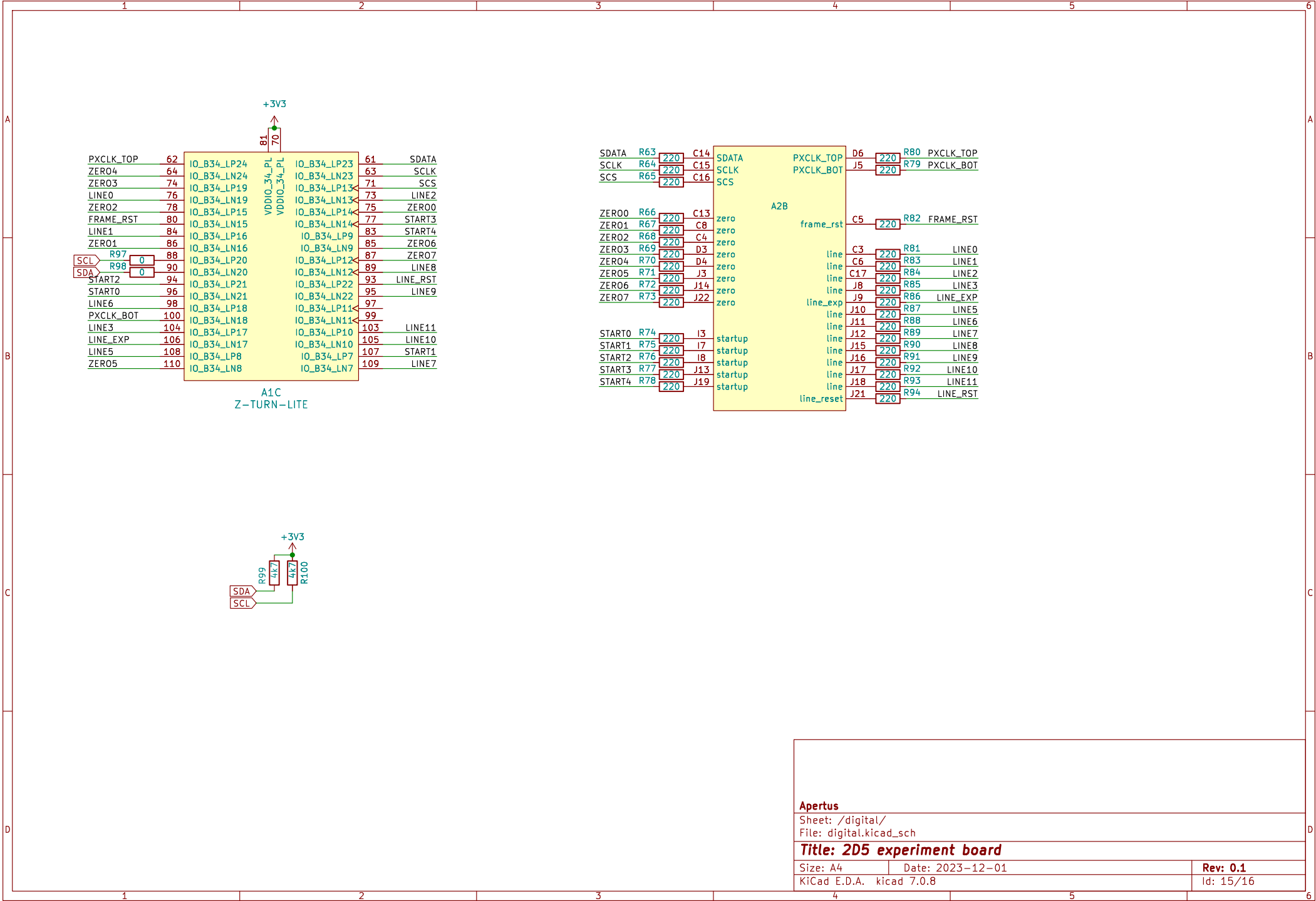












Apertus

Sheet: /digital/

File: digital.kicad\_sch

**Title: 2D5 experiment board**

Size: A4

Date: 2023-12-01

KiCad E.D.A. kicad 7.0.8

Rev: 0.1

Id: 15/16