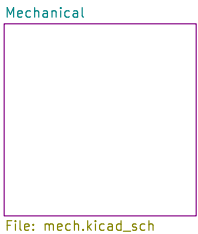
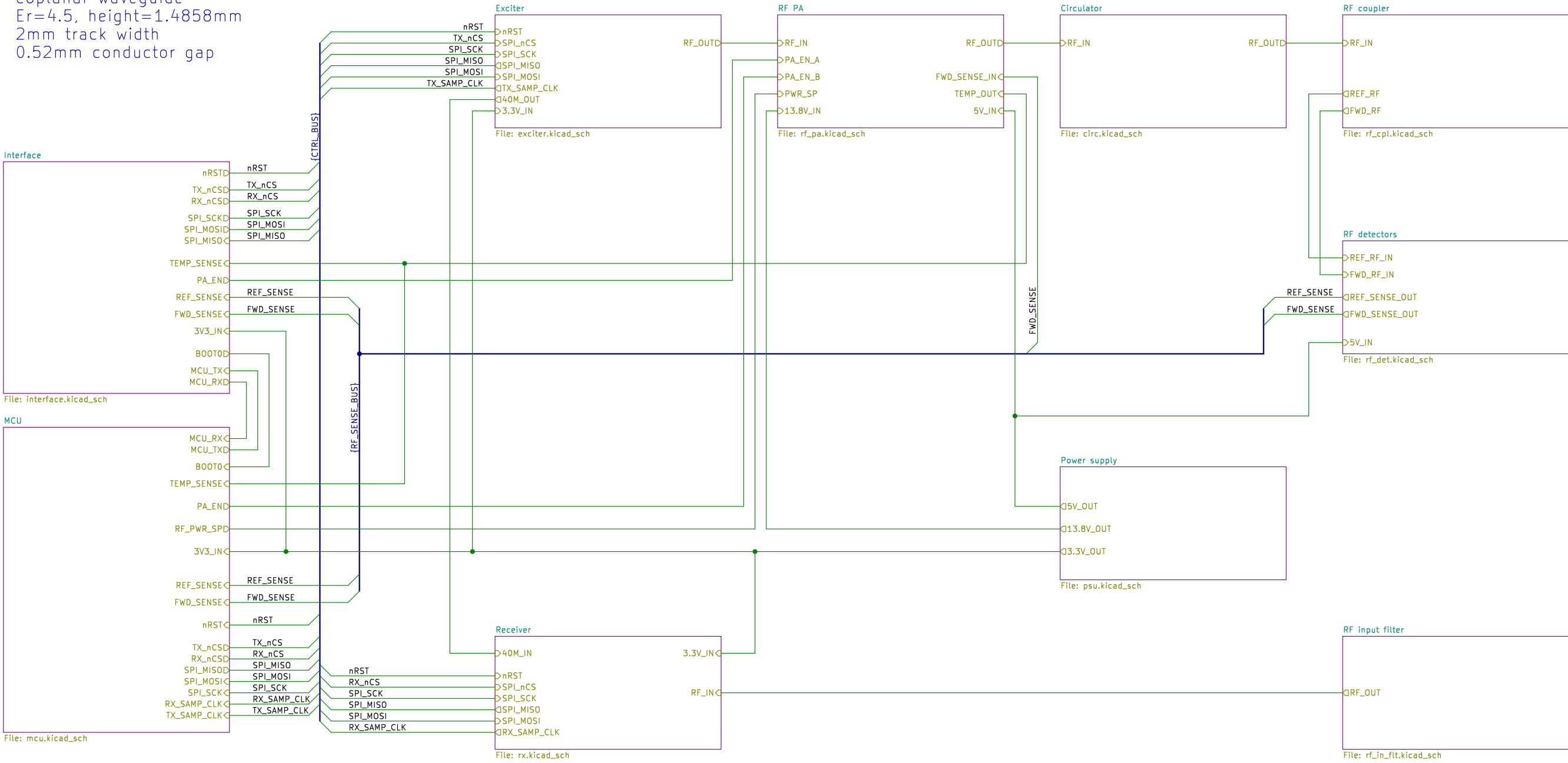


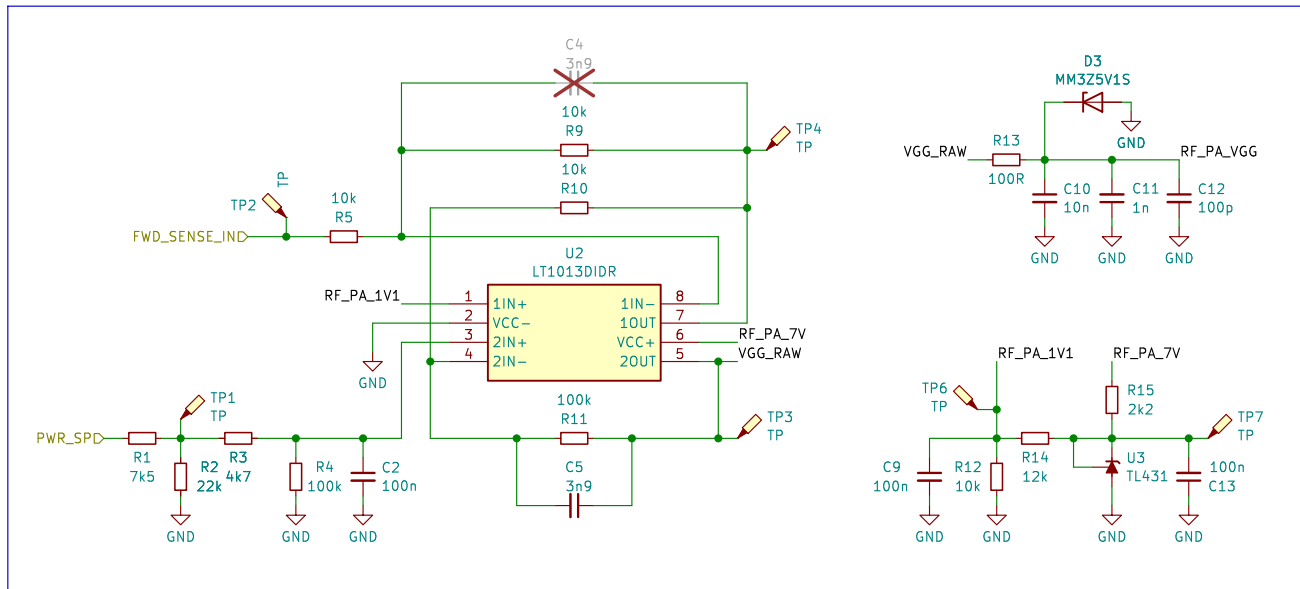
Low power RF tracks:  
coplanar waveguide  
Er=4.4, height=0.2104mm  
0.25mm track width  
0.052mm conductor gap

High power RF tracks:  
coplanar waveguide  
Er=4.5, height=1.4858mm  
2mm track width  
0.52mm conductor gap

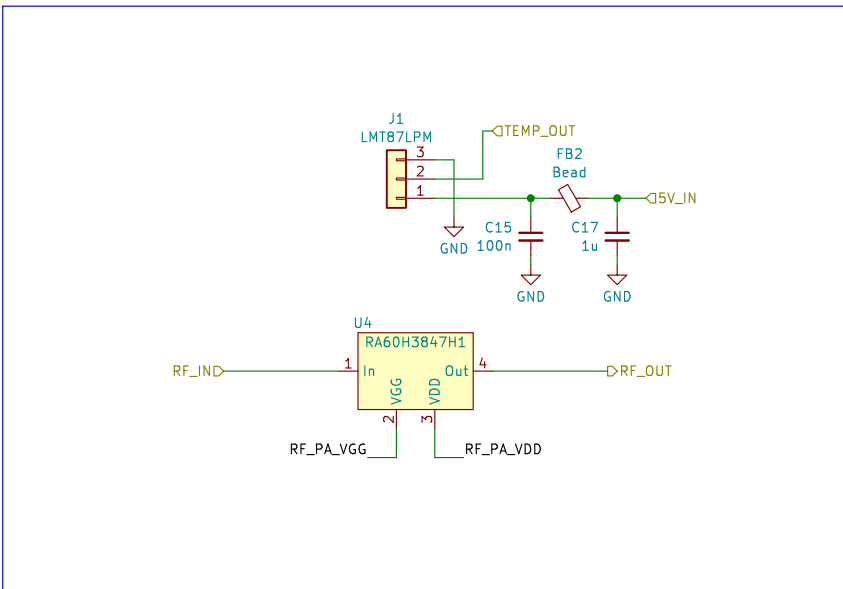


Wojciech Kaczmarek, SP5WWP		
M17 Project		
Sheet: /		
File: m17-rru-rf.kicad_sch		
Title: Remote Radio Unit – RF board		
Size: A3	Date: 20–01–2024	Rev: B
KiCad E.D.A. kicad 7.0.8		Id: 1/12

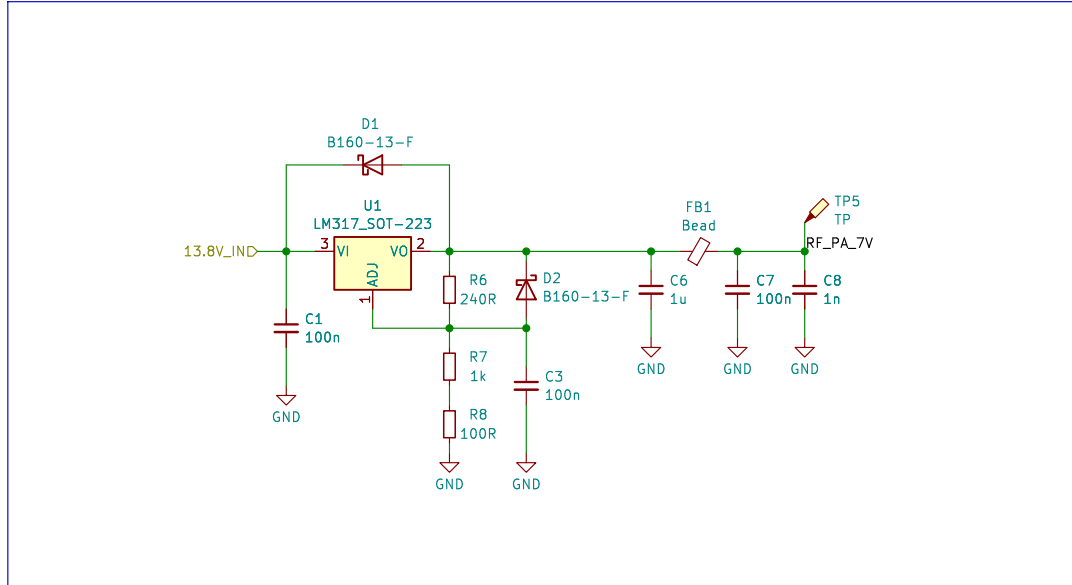
## ALC



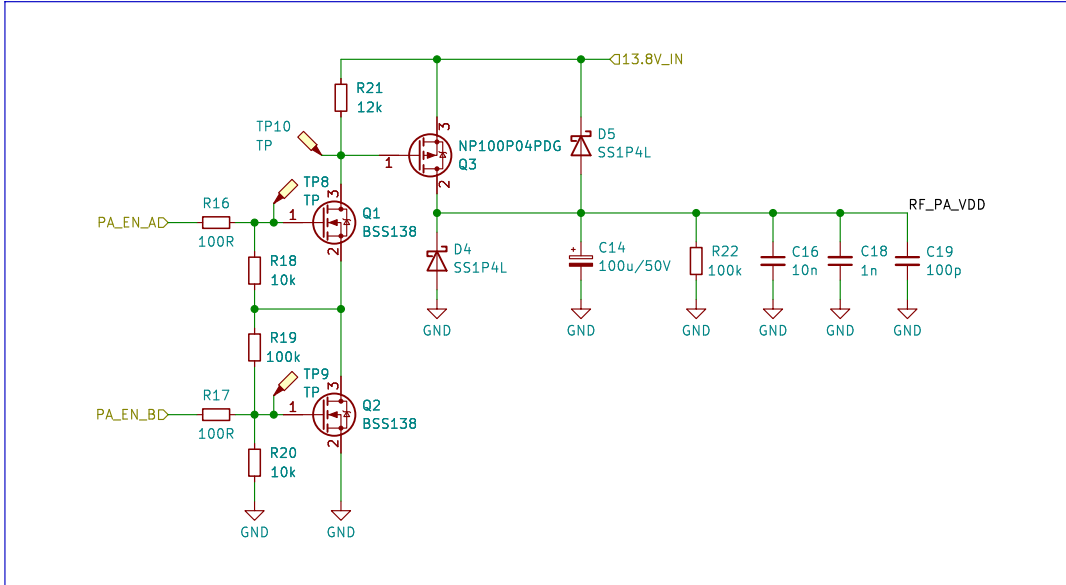
## RF PA



## Voltage reg.



## Supply switching



Wojciech Kaczmarek, SP5WWP

**M17 Project**

Sheet: /RF PA/

File: rf\_pa.kicad\_sch

**Title: Remote Radio Unit – RF board**

Size: A3

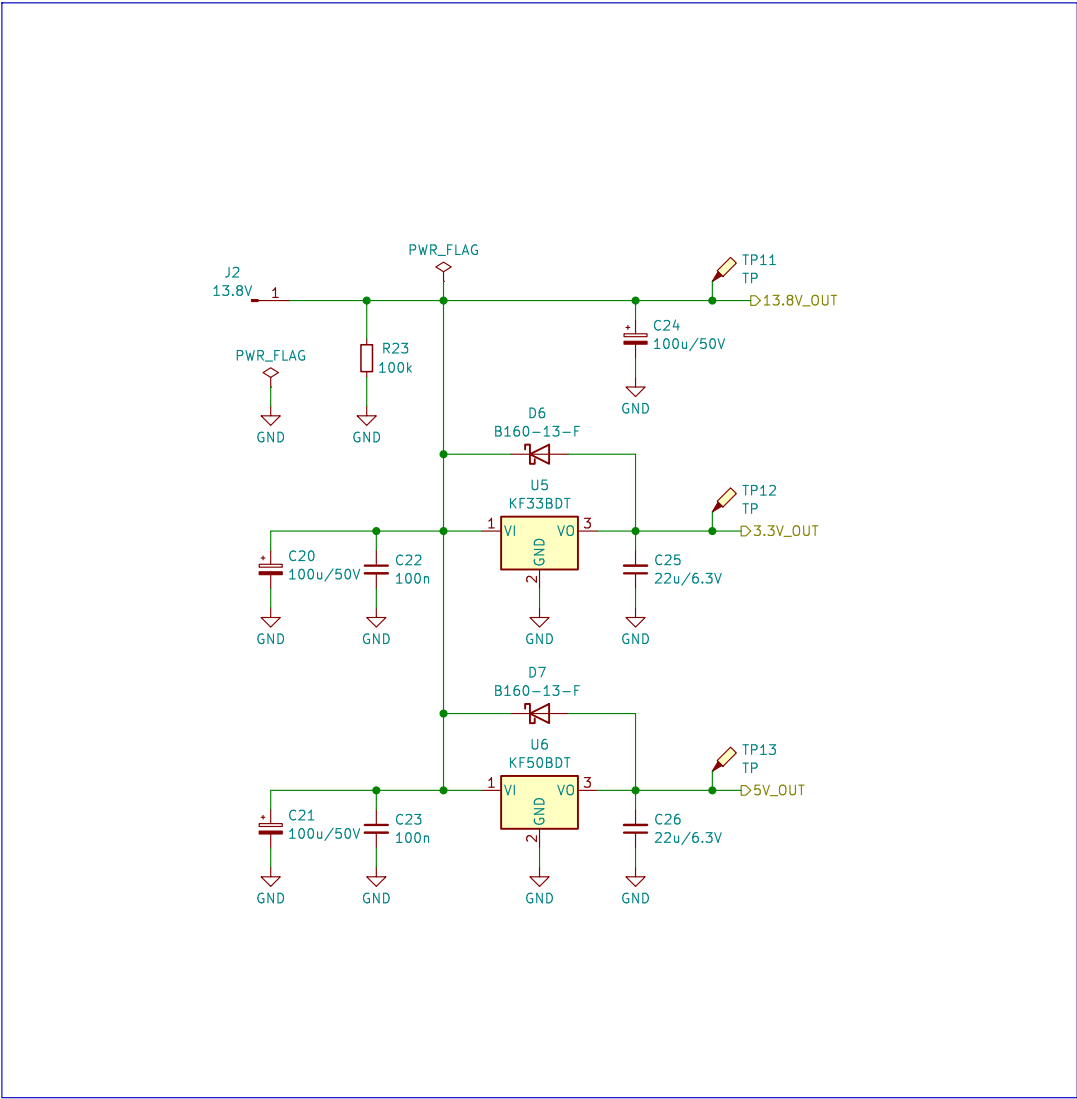
Date: 20-01-2024

Rev: B

KiCad E.D.A. kicad 7.0.8

Id: 2/12

Voltage reg.

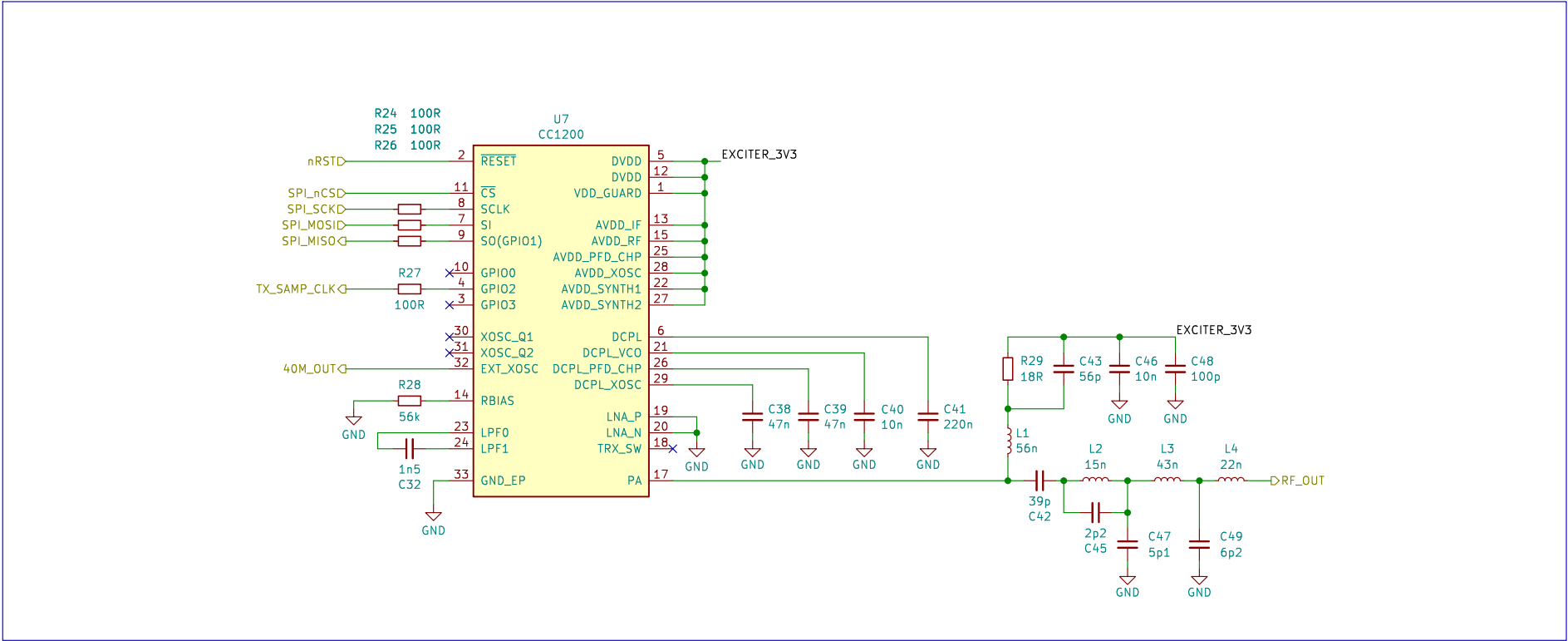


Wojciech Kaczmarek, SP5WWP  
M17 Project  
Sheet: /Power supply/  
File: psu.kicad\_sch

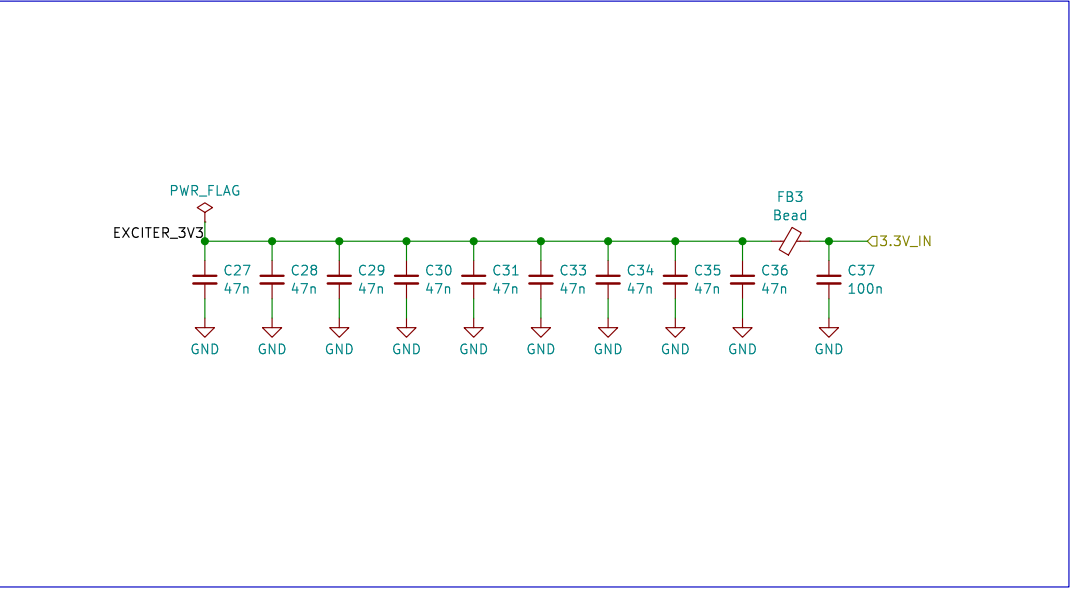
Title: Remote Radio Unit – RF board

Size: A3	Date: 20-01-2024	Rev: B
KiCad E.D.A. kicad 7.0.8		Id: 3/12

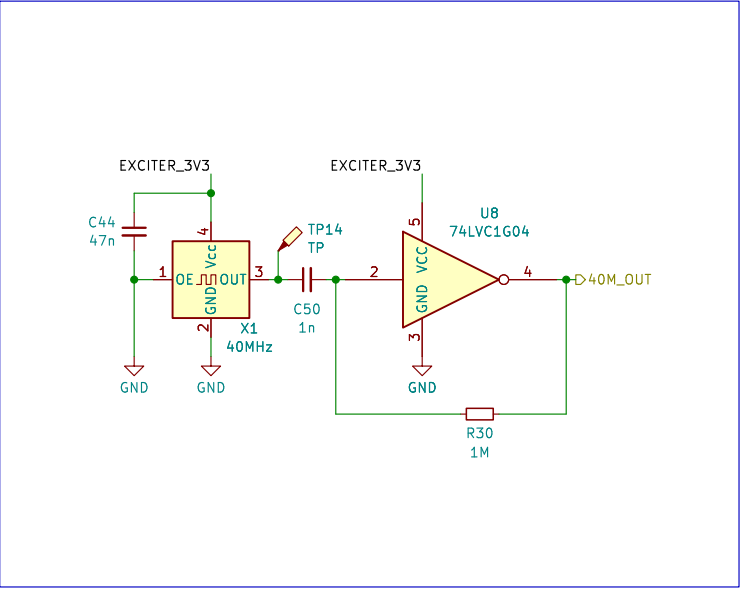
Exciter

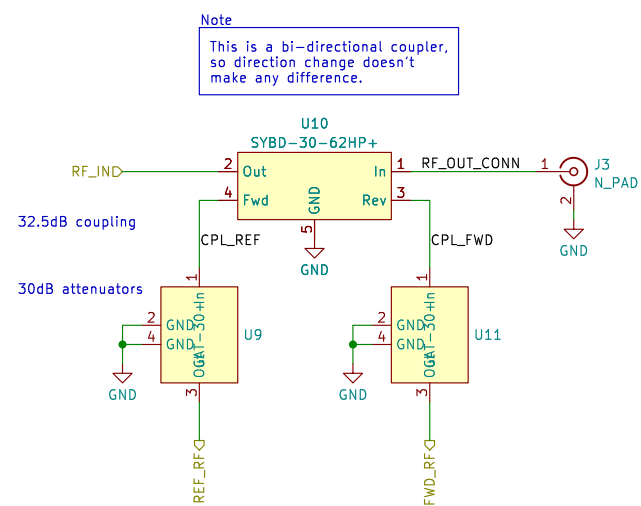


Decoupling



40MHz reference





Wojciech Kaczmarek, SP5WWP

## M17 Project

Sheet: /RF coupler/

File: rf\_cpl.kicad\_sch

**Title: Remote Radio Unit – RF board**

Size: A3

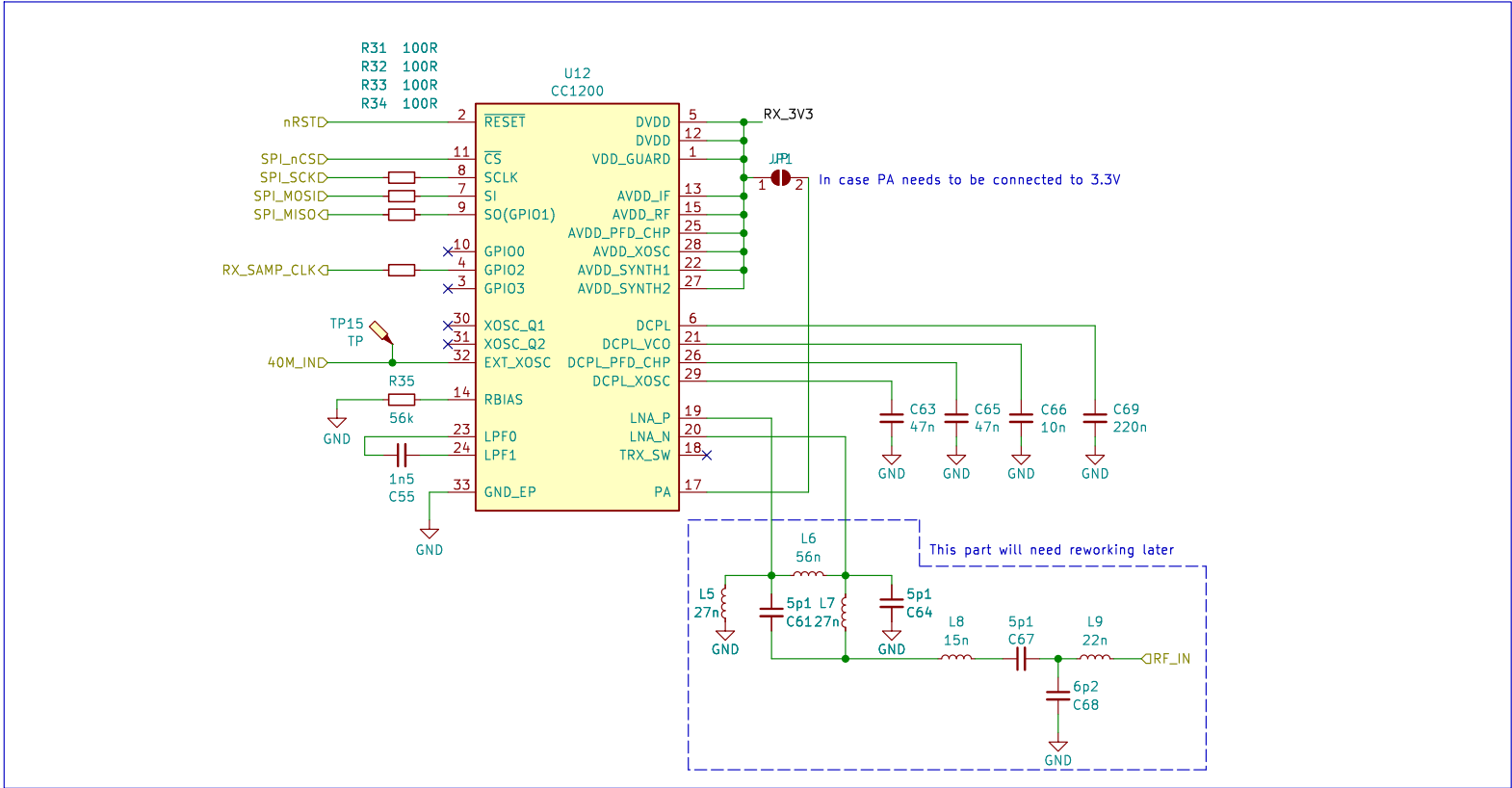
Date: 20-01-2024

Rev: B

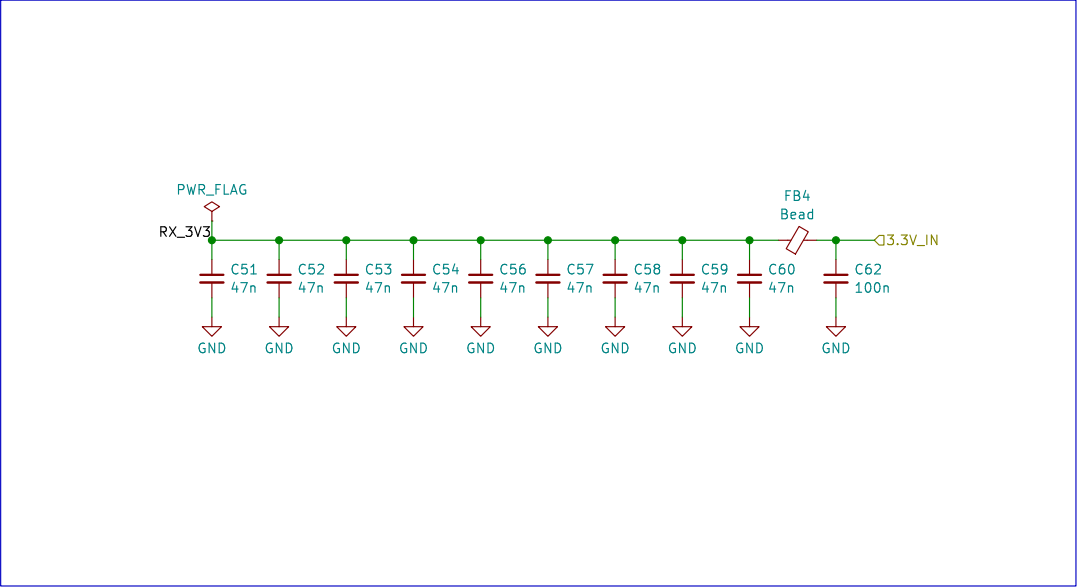
Size: A3	Date: 2
KiCad E.D.A. kicad 7.0.8	

Id: 5/12

Receiver

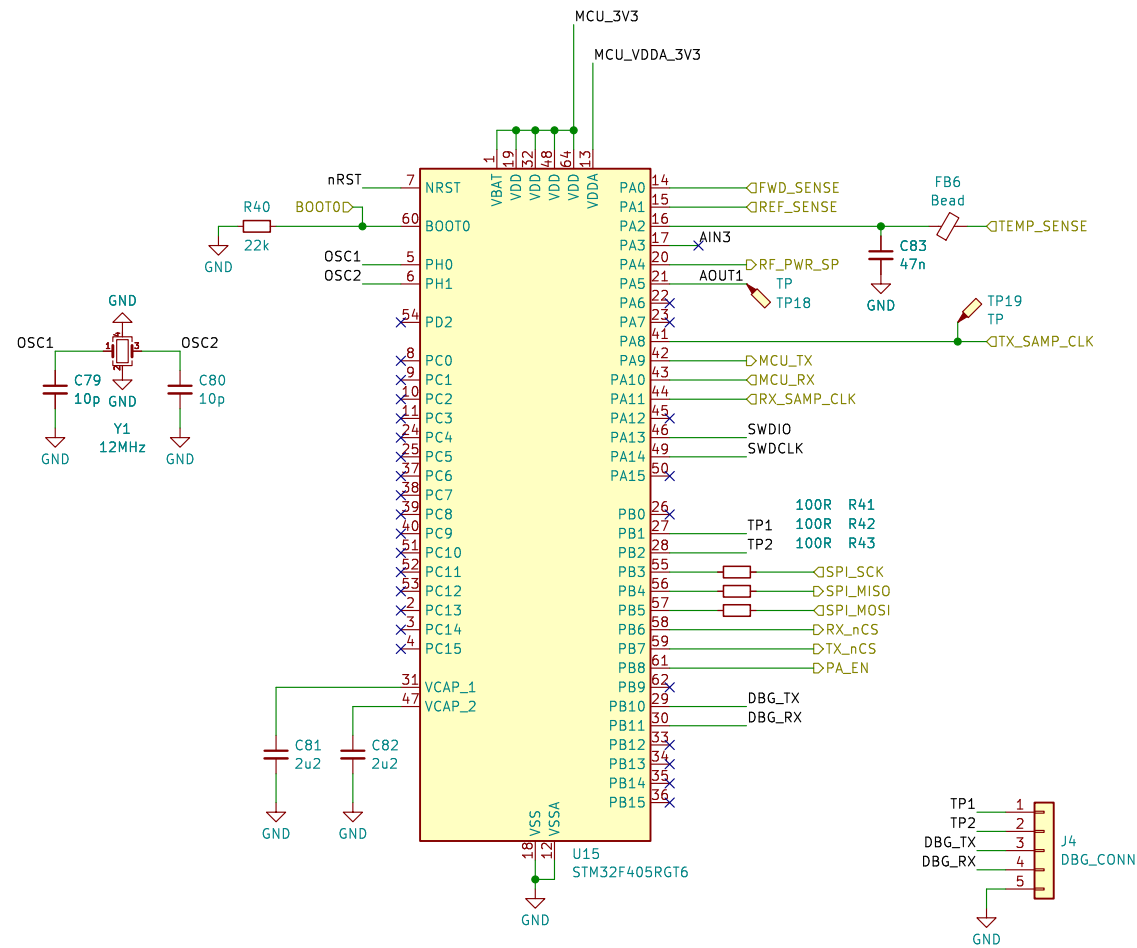


Decoupling

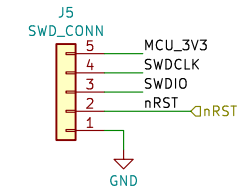


The schematic shows a 5V power distribution network. It starts with a 5V\_IND input connected to a node with a 1uF capacitor (C70) to GND. This node is followed by an FB5 Bead. After the bead, there is a node with a 100nF capacitor (C73) to GND. This is followed by a node with a 1nF capacitor (C75) to GND. The final node is connected to PWR\_FLAG and RF\_DET\_5V.

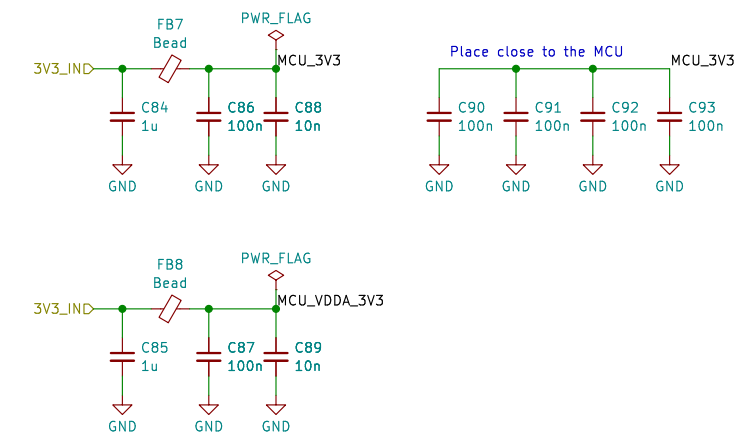
## MCU



## SWD



## Decoupling



Wojciech Kaczmarek, SP5WWP

M17 Project

Sheet: /MCU/

File: mcu.kicad\_sch

Title: Remote Radio Unit – RF board

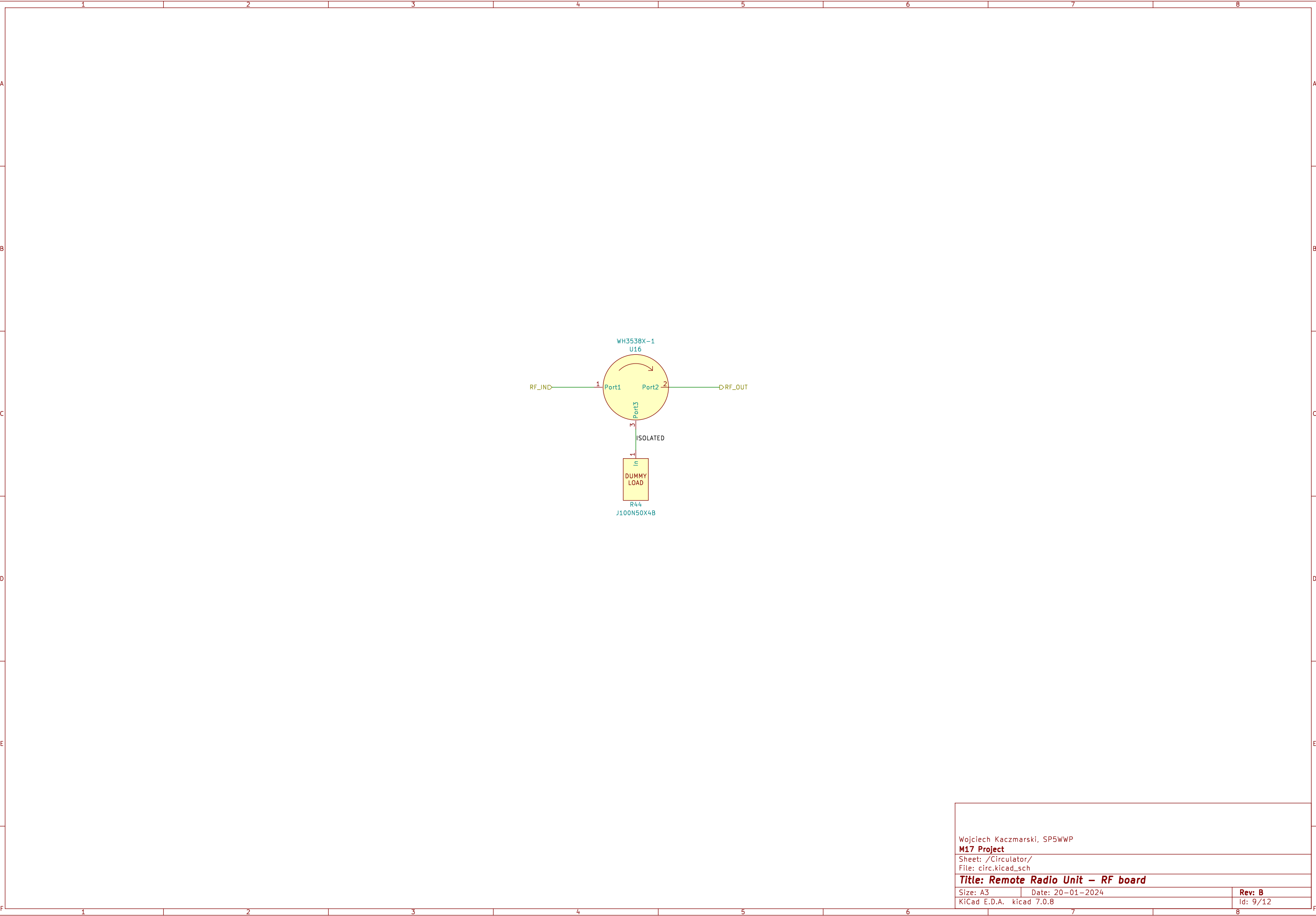
Size: A3 Date: 20-01-2024

Rev: B

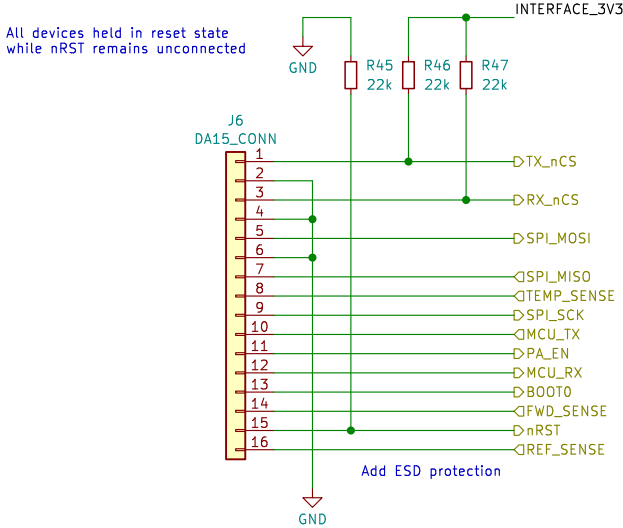
KiCad E.D.A. kicad 7.0.8

Id: 8/12

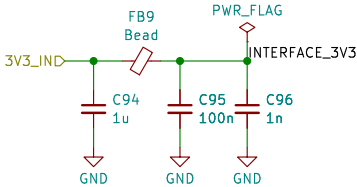


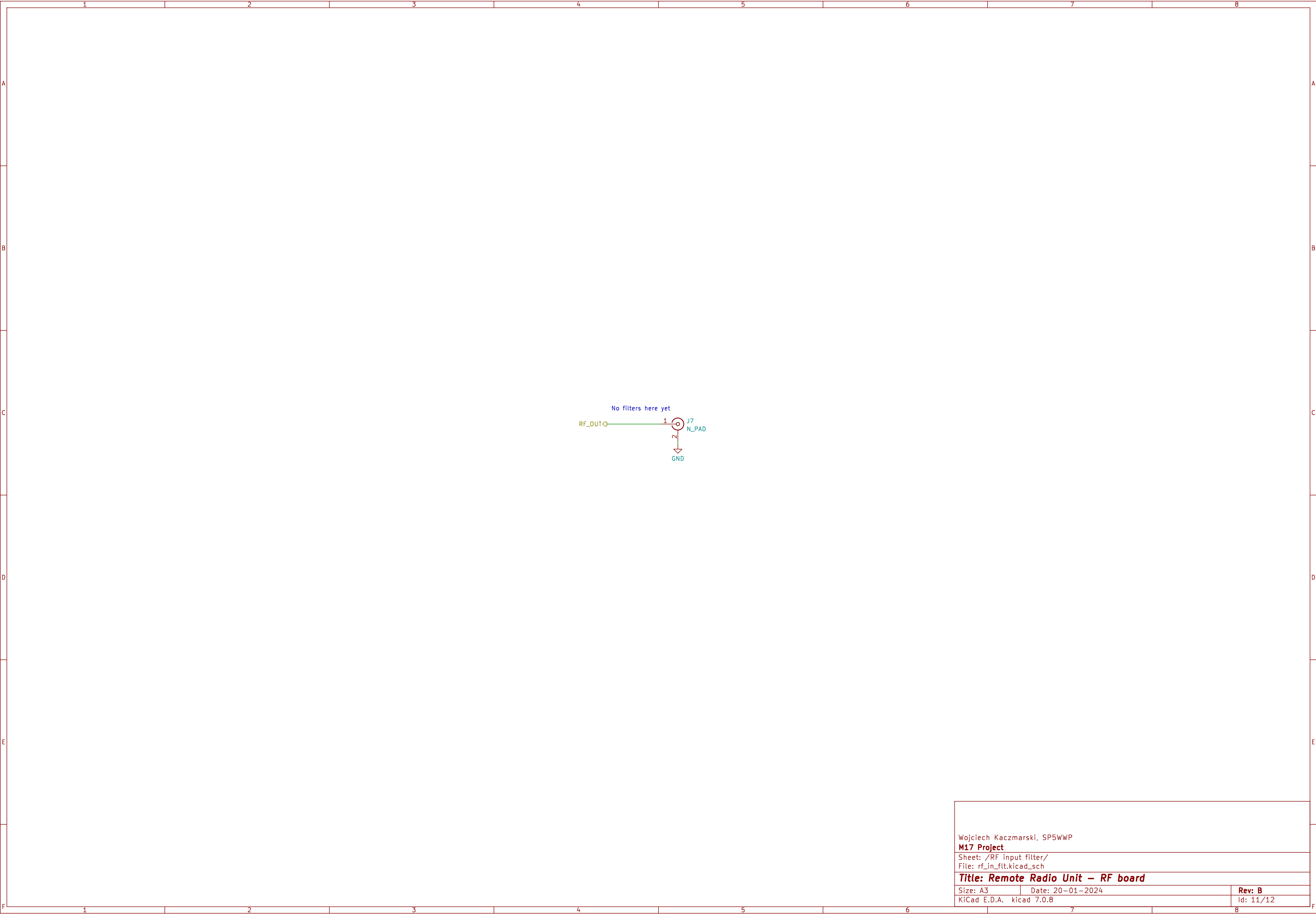


External connector



Decoupling





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M17 Project

Sheet: /RF input filter/  
File: rf\_inflt.kicad\_sch

Title: Remote Radio Unit – RF board

Size: A3

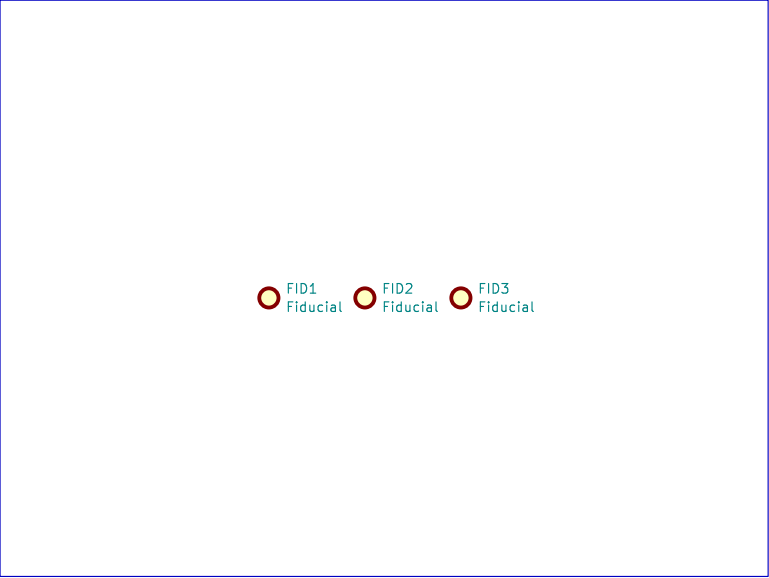
Date: 20–01–2024

Rev: B

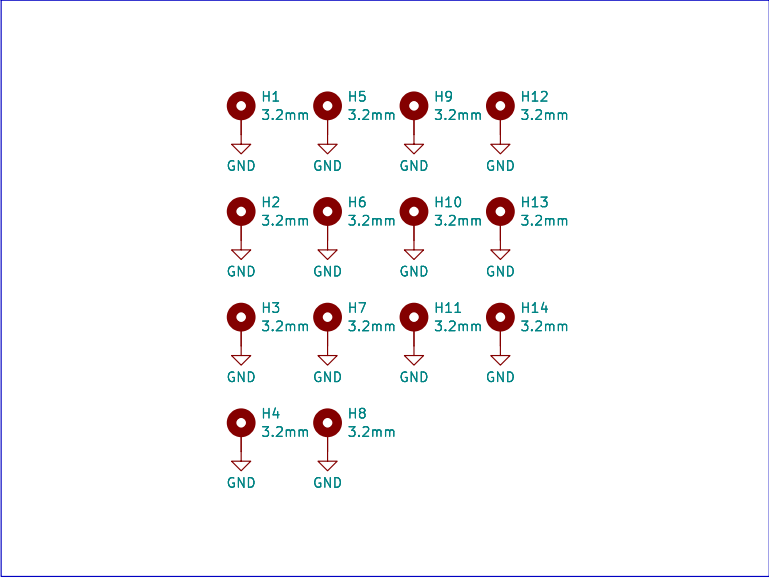
KiCad E.D.A.   kicad 7.0.8

Id: 11/12

Fiducials



Mounting holes



Graphics

