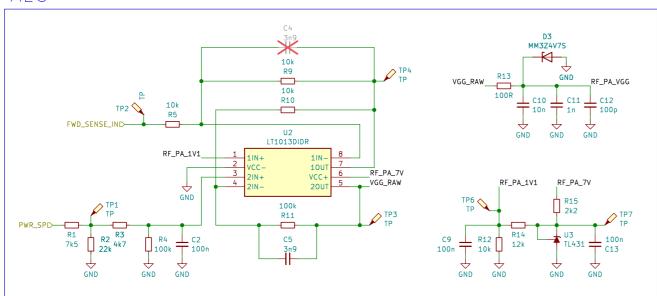
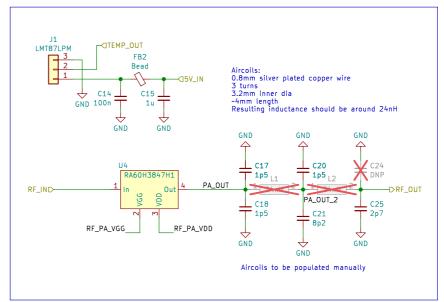
Low power RF tracks: coplanar waveguide Er=4.4, height=0.2104mm 0.25mm track width 0.052mm conductor gap High power RF tracks: coplanar waveguide RF PA RF coupler Circulator Er=4.5, height=1.4858mm 2mm track width RF\_OUT RF\_OUT >RF\_IN RF\_OUT[ >RF\_IN >RF\_IN 0.52mm conductor gap PA\_EN\_A PA\_EN\_B FWD\_SENSE\_IN >PWR\_SP TEMP\_OUT OREF\_RF >3.3V\_IN >13.8V\_IN 5V\_IN< GFWD\_RF File: rf\_pa.kicad\_sch File: exciter.kicad\_sch File: circ.kicad\_sch File: rf\_cpl.kicad\_sch TX\_nCS RX\_nCS TX\_nCSD RX\_nCSD SPI\_SCK SPI\_MOSI SPI\_MISO SPI\_SCKD SPI\_MOSIC RF detectors >REF\_RF\_IN TEMP\_SENSE >FWD\_RF\_IN PA\_ENG REF\_SENSE\_OUT REF\_SENSE REF\_SENSE< FWD\_SENSE OFWD\_SENSE\_OUT FWD\_SENSE FWD\_SENSE 3V3\_IN< >5V\_IN воото File: rf\_det.kicad\_sch MCU\_TX< File: interface.kicad\_sch MCU\_RX< Power supply воото TEMP\_SENSE< PA\_ENG 35V\_0UT RF\_PWR\_SP[ 13.8V\_OUT 3V3\_IN REF\_SENSE REF\_SENSE< File: psu.kicad\_sch FWD\_SENSE FWD\_SENSE< nRST nRST TX\_nCS
RX\_nCS
SPI\_MISO
SPI\_MOSI
SPI\_SCK
RX\_SAMP\_CLK
TX\_SAMP\_CLK TX\_nCSD-RX\_nCSD-SPI\_MISOD-SPI\_MOSIC-3.3V\_IN< DnRST
DSPI\_nCS
DSPI\_SCK
DSPI\_MISO
DSPI\_MOSI
DRX\_SAMP\_CLK RX\_nCS SPI\_SCK SPI\_MISO SPI\_MOSI RX\_SAMP\_CLI RX\_SAMP\_CLK< File: mcu.kicad\_sch File: rx.kicad\_sch File: rf\_in\_flt.kicad\_sch Mechanical Wojciech Kaczmarski, SP5WWP M17 Project Sheet: / File: m17-rru-rf.kicad\_sch Title: Remote Radio Unit - RF board Size: A3 Date: 05-04-2024 KiCad E.D.A. 8.0.4 File: mech.kicad\_sch

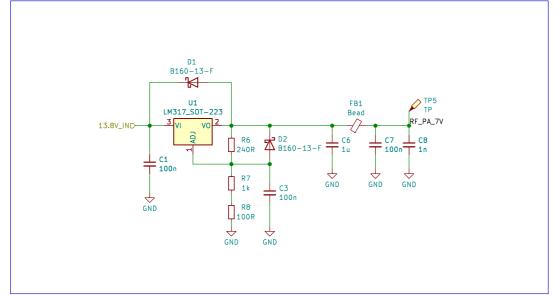
#### ALC



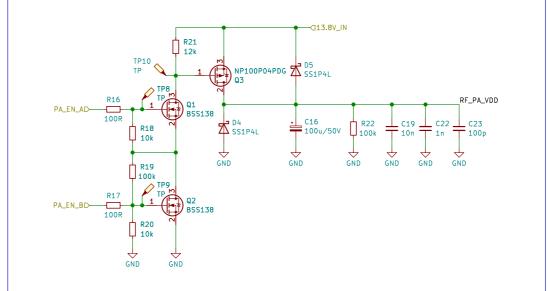
#### RF PA



## Voltage reg.



# Supply switching



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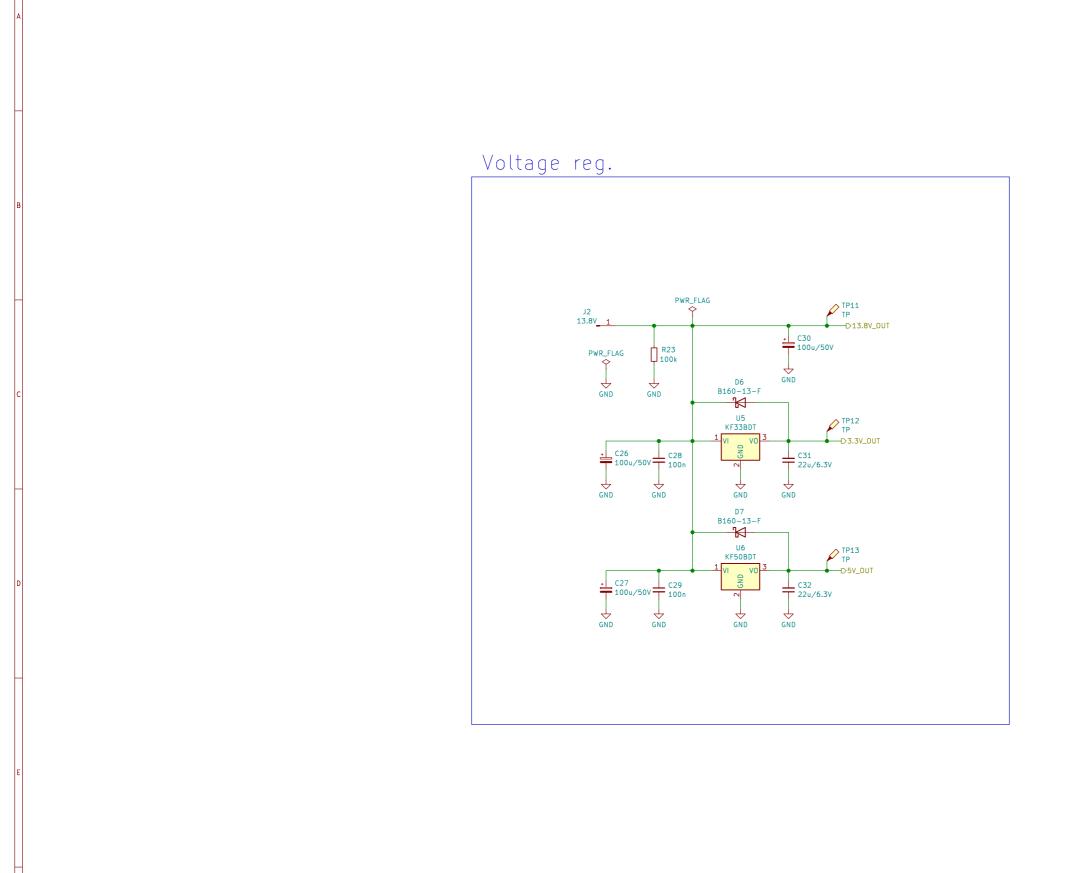
M17 Project

Sheet: /RF PA/
File: rf\_pa.kicad\_sch

Title: Remote Radio Unit — RF board

Size: A3 Date: 05-04-2024 Rev: C

KiCad E.D.A. 8.0.4



Wojciech Kaczmarski, SP5WWP

M17 Project

Sheet: /Power supply/
File: psu.kicad\_sch

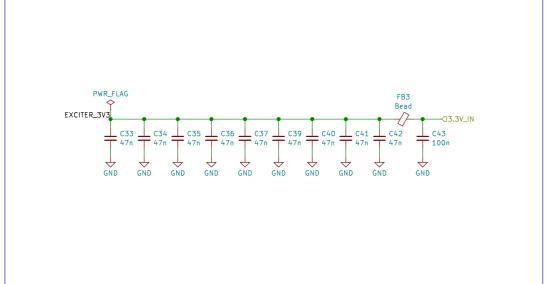
Title: Remote Radio Unit — RF board

Size: A3 Date: 05-04-2024 Rev: C

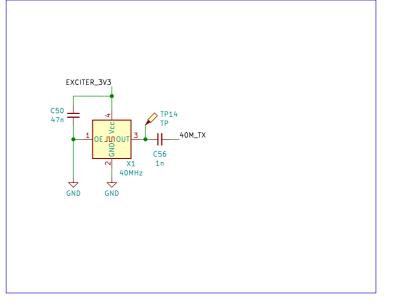
KiCad E.D.A. 8.0.4

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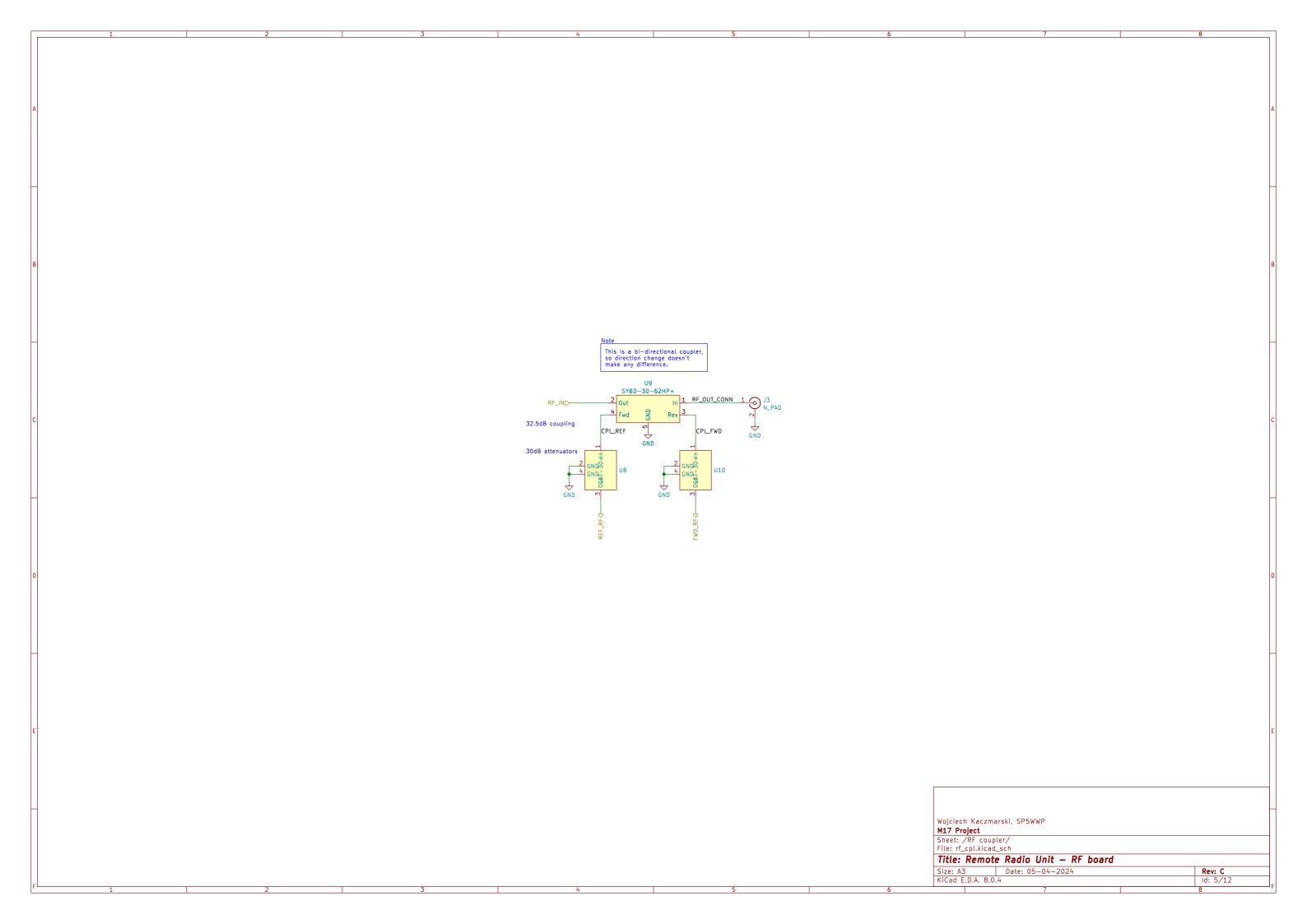
# Decoupling



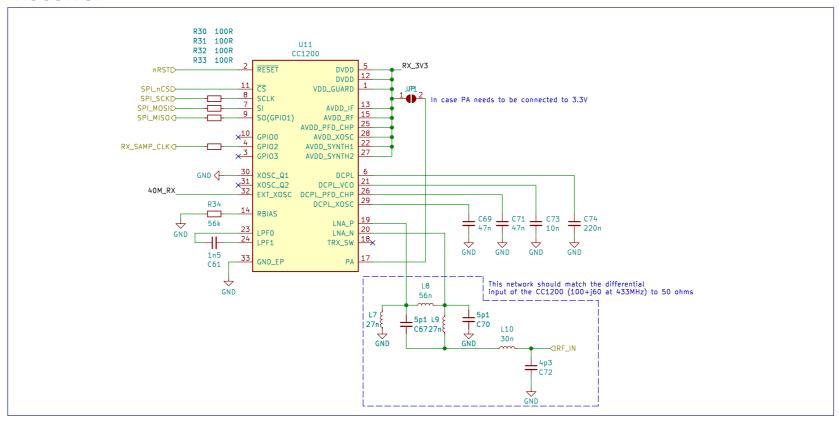
## Local 40MHz reference



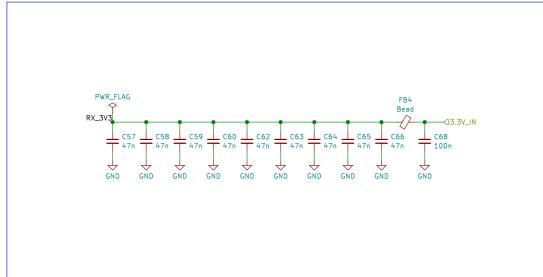
Wojciech Kaczmarski, SP5WWP M17 Project			
Title: Rem	ote Radio Unit — RF board		
Size: A3	Date: 05-04-2024	Rev: C	
KiCad E.D.A.	8.0.4	ld: 4/12	
	7	8	



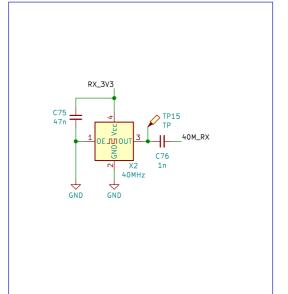
#### Receiver



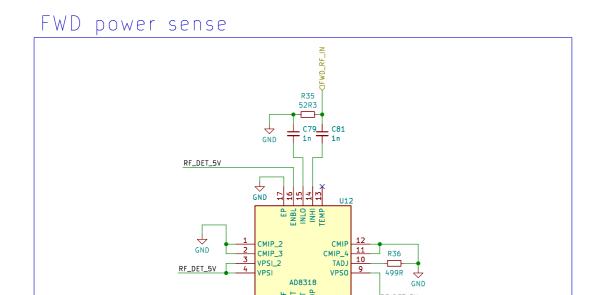
## Decoupling

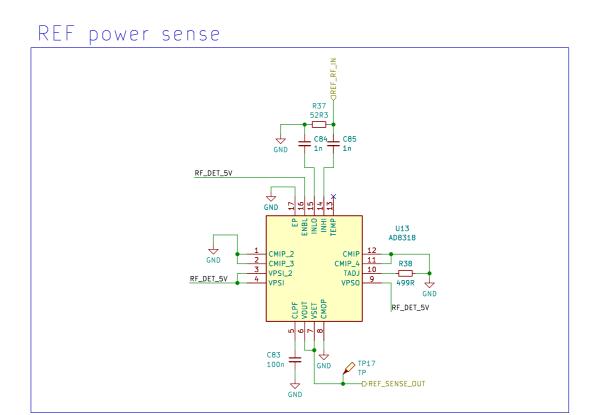


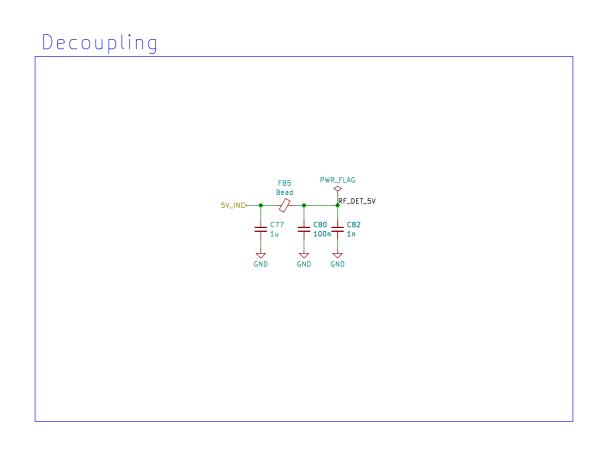
## Local 40MHz reference



Wojciech Kaczmarski, SP5WWP				
M17 Project				
Sheet: /Receiver/				
File: rx.kicad_scl	h			
Title: Remote Radio Unit — RF board				
Size: A3	Date: 05-04-2024	Rev: C		
KiCad E.D.A. 8.0	ld: 6/12			
<u> </u>	7	ρ		







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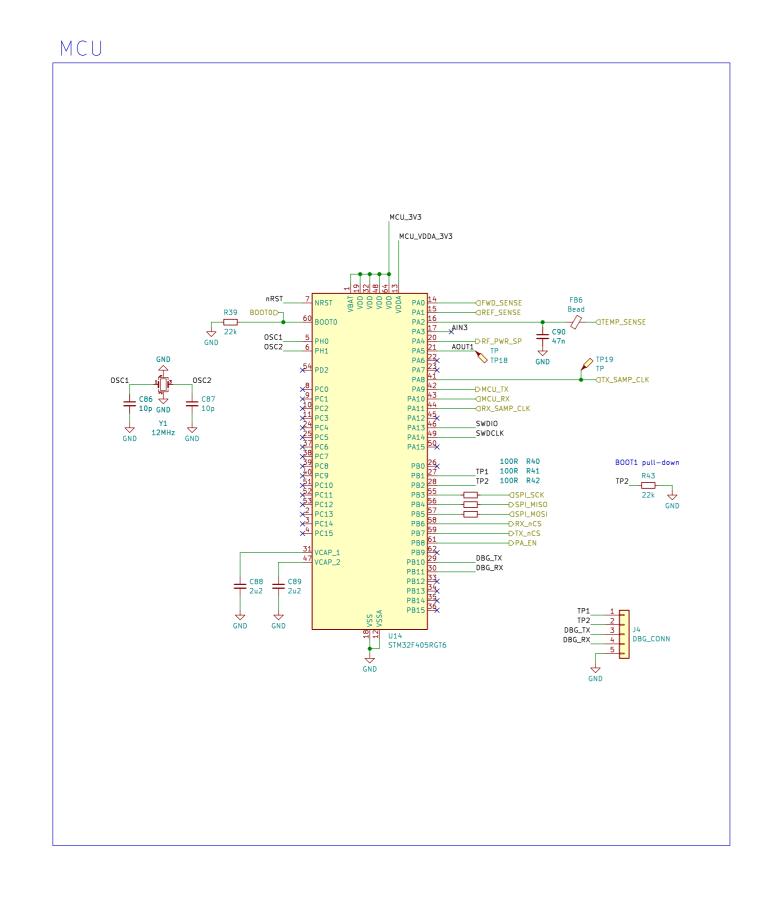
M17 Project

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File: rf\_det.kicad\_sch

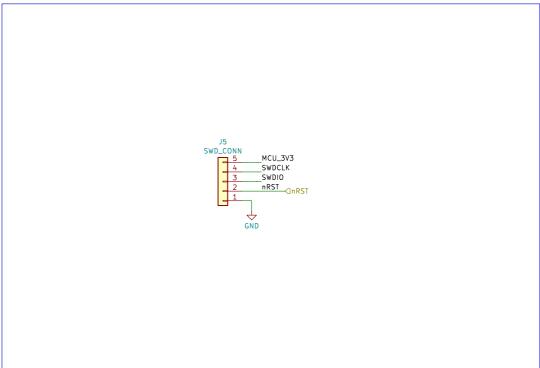
Title: Remote Radio Unit — RF board

Size: A3 Date: 05-04-2024 Rev: C

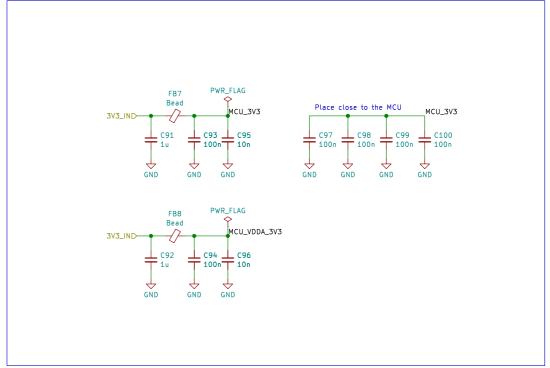
KiCad E.D.A. 8.0.4







Decoupling



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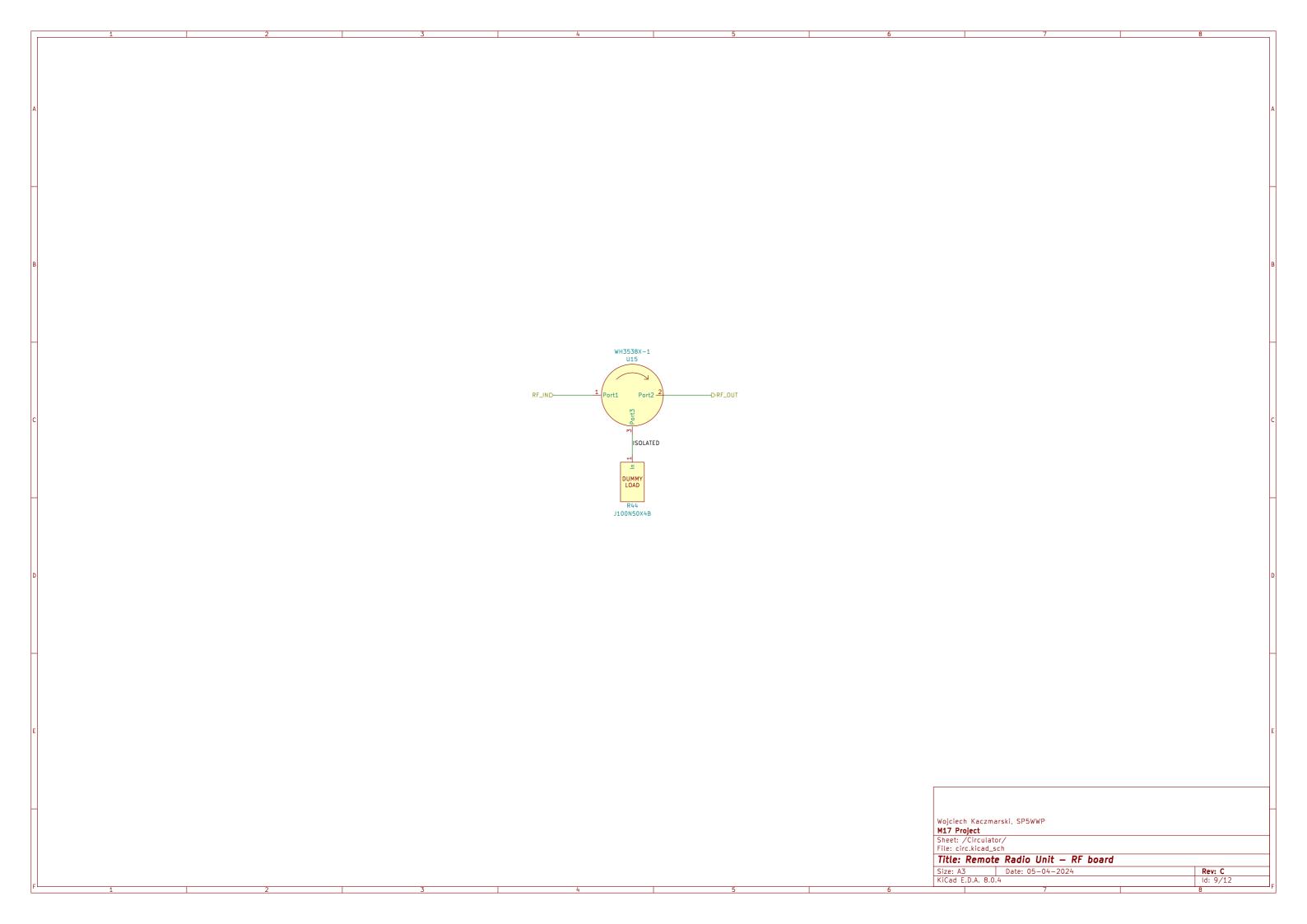
M17 Project

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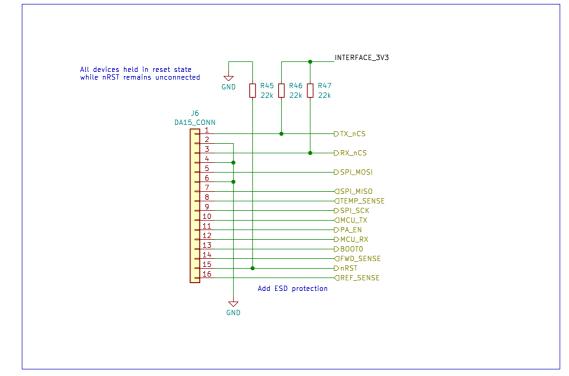
Title: Remote Radio Unit — RF board

Size: A3 Date: 05-04-2024 Rev: C

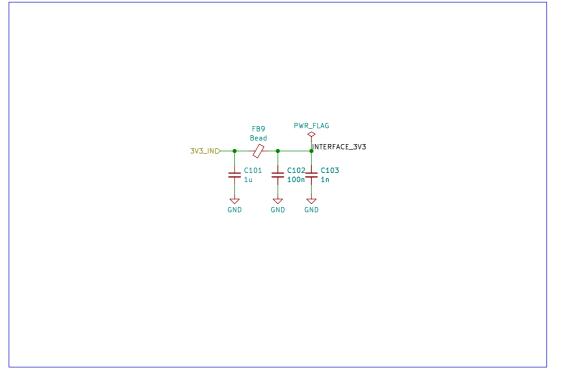
KiCad E.D.A. 8.0.4 Id: 8/12



#### External connector



## Decoupling



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M17 Project

Sheet: /Interface/
File: interface.kicad\_sch

Title: Remote Radio Unit - RF board

Size: A3 Date: 05-04-2024 Rev: C

KiCad E.D.A. 8.0.4 Id: 10/12

