

Mixed-Signal Demo PCB

[1] Power

Power



File: Power.kicad_sch

[2] MCU

MCU



File: MCU.kicad_sch

[3] ADC

ADC



File: ADC.kicad_sch

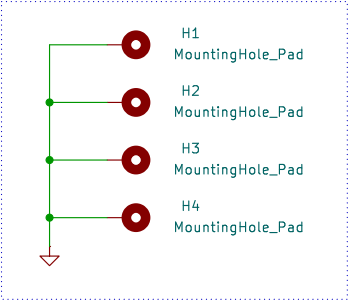
[4] DAC

DAC



File: DAC.kicad_sch

[5] Mounting Holes (M3)



<https://github.com/tsokomalusi/>

Sheet: /
File: mixed_signal_hw_pcb.kicad_sch

Title: Mixed-Signal-PCB-Design

Size: A4

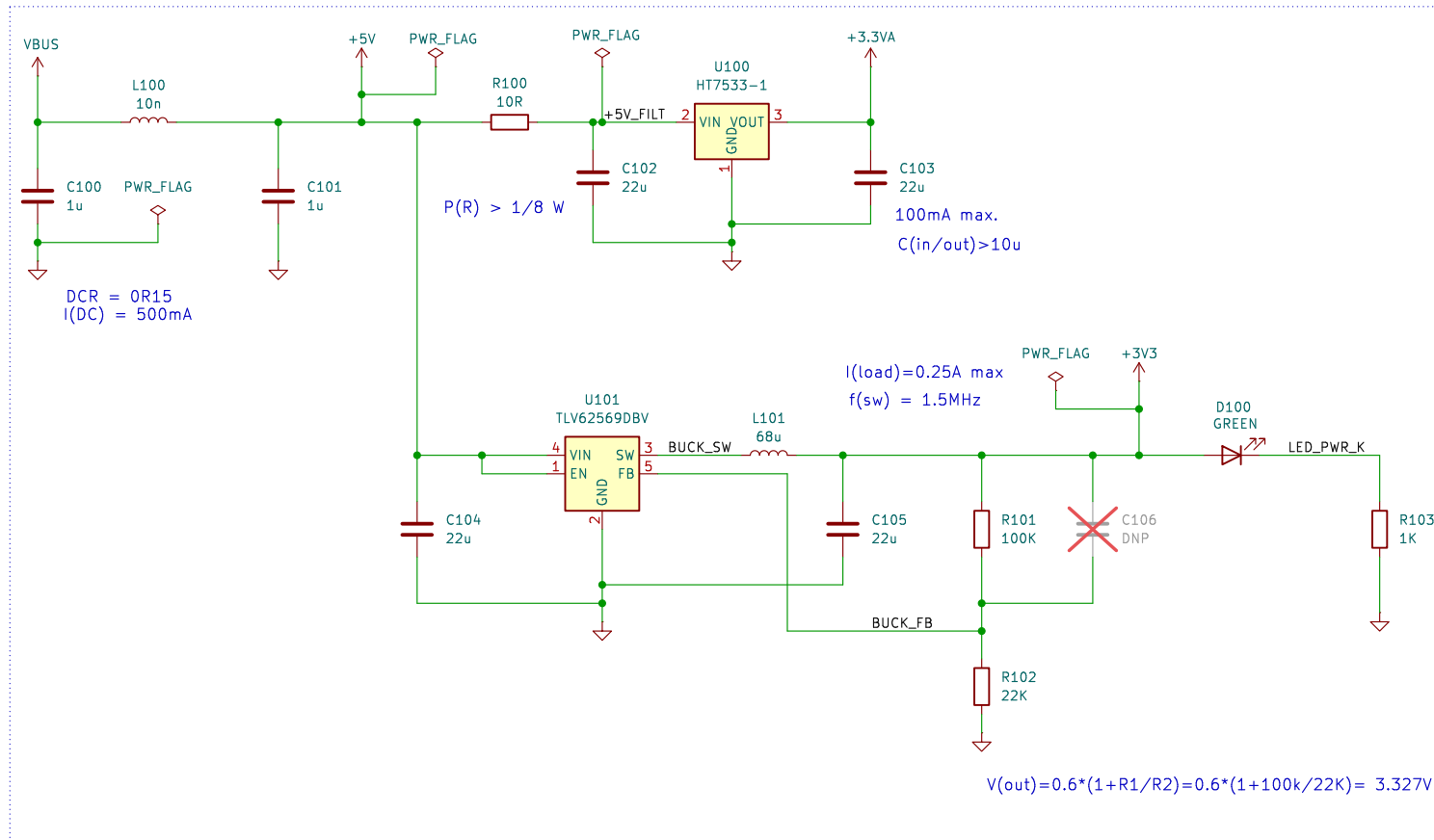
Date: 2025-09-13

Rev: 1.0

KiCad E.D.A. 9.0.0

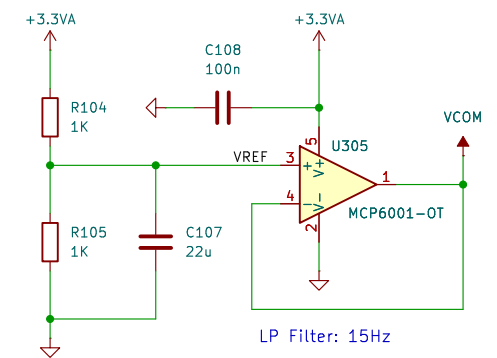
Id: 1/5

Input Filtering, Analogue & Digital Supplies



VBUS comes from USB Type C Connector (see schematic page 2.)

Bias Generator



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Sheet: /Power/
File: Power.kicad_sch

Title: Mixed-Signal-PCB-Design

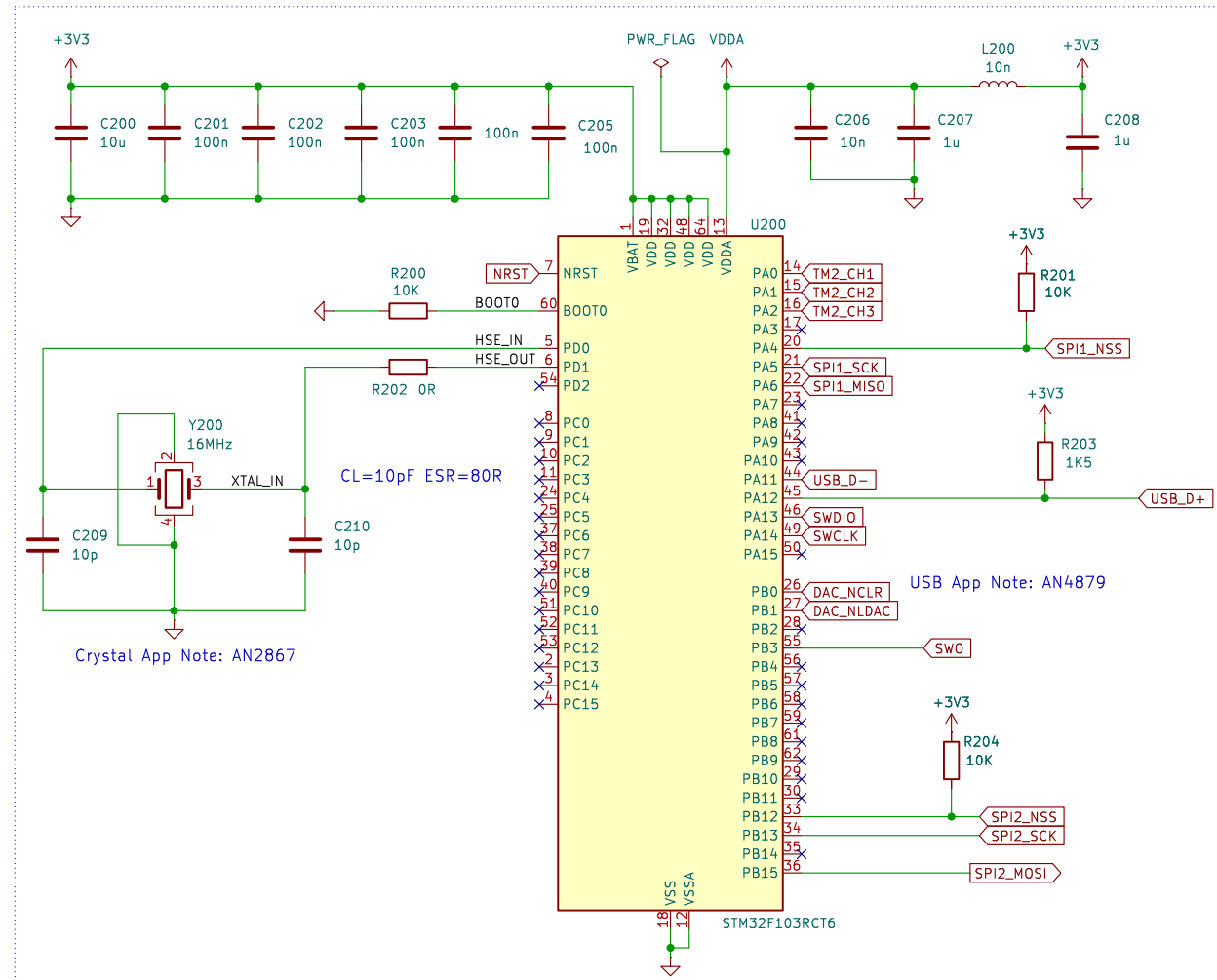
Size: A4 Date: 2025-09-13

KiCad E.D.A. 9.0.0

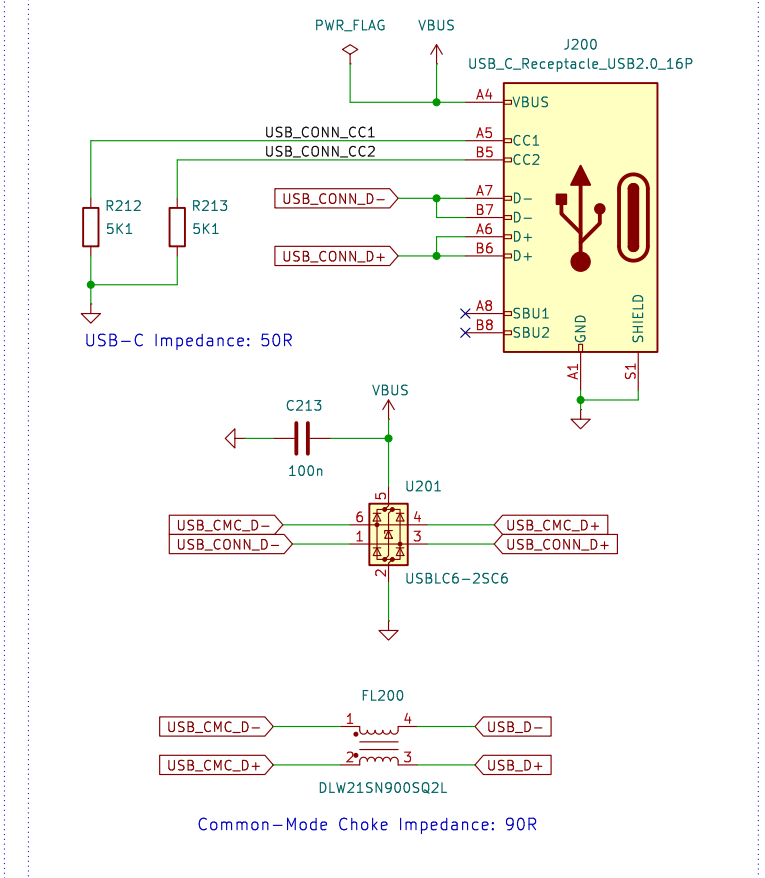
Rev: 1.0

Id: 2/5

MCU STM32F1

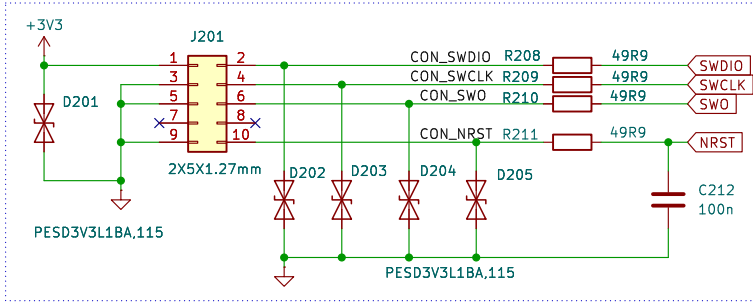


USB Type C

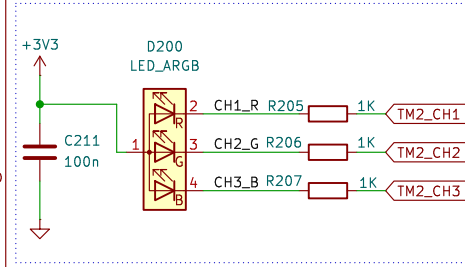


Signal Path:
Connector <--> ESD Protection <--> Common-Mode Choke <--> Pull-Up <--> MCU

SWD HEADER



RGB LED



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Sheet: /MCU/
File: MCU.kicad_sch

Title: Mixed-Signal-PCB-Design

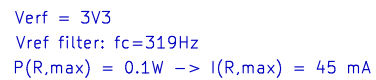
Size: A4 Date: 2025-09-13

KiCad E.D.A. 9.0.0

Rev: 1.0

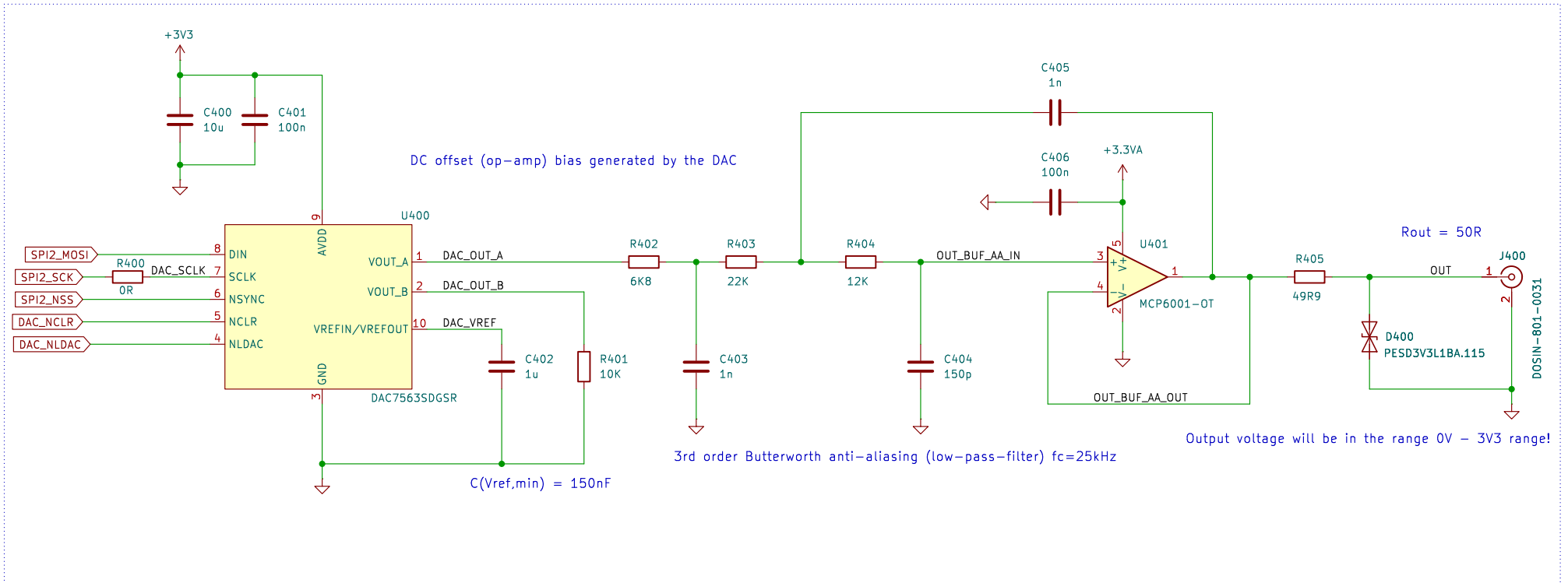
Id: 3/5

Rin = 1.1M
RF filter: $f_c=1.1\text{MHz}$



DAC

Anti Aliasing Filter And Output Connector (BNC)



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Sheet: /DAC/
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Size: A4
KiCad E.D.A. 9.0.0

Date: 2025-09-13

Rev: 1.0

Id: 5/5