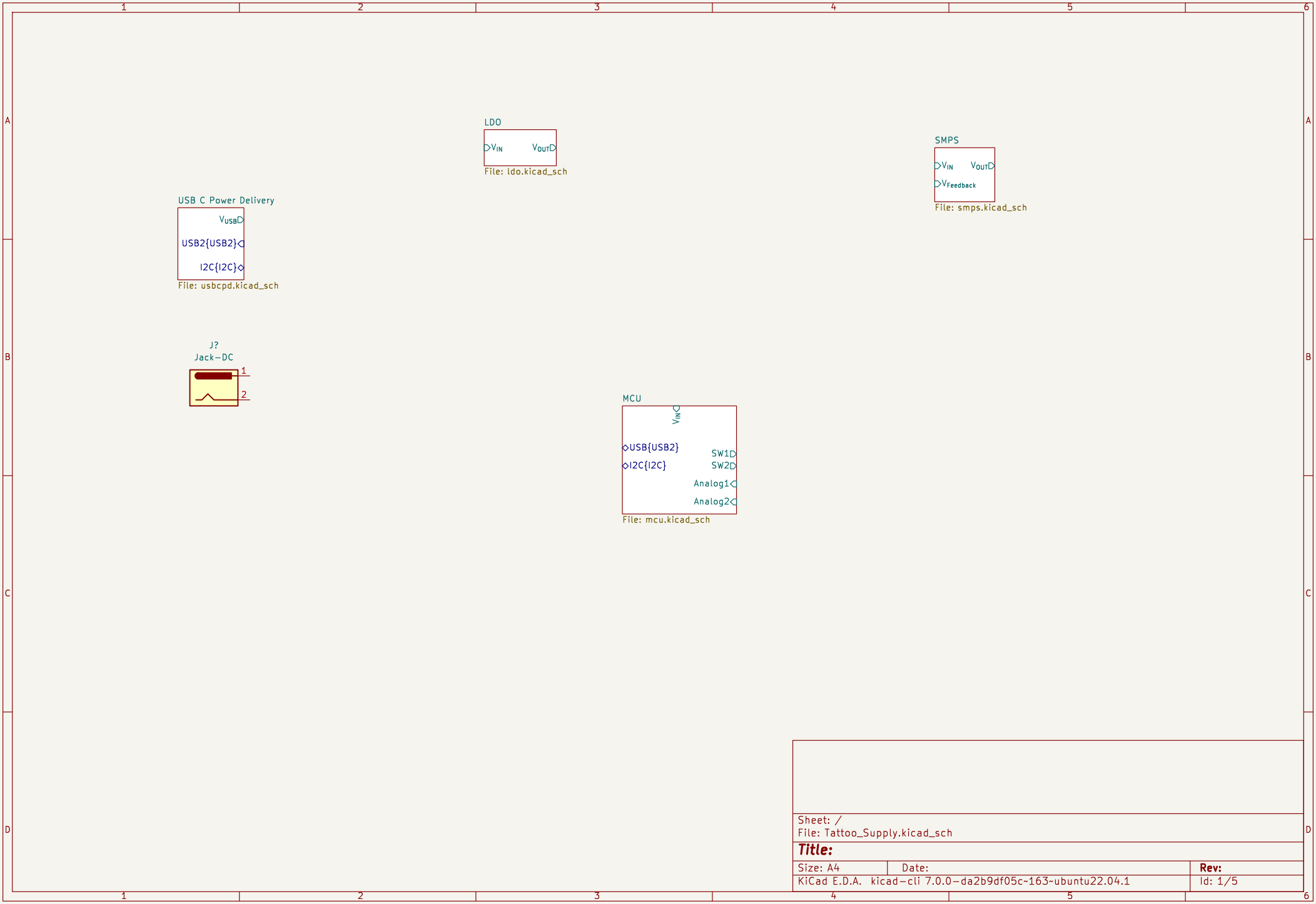
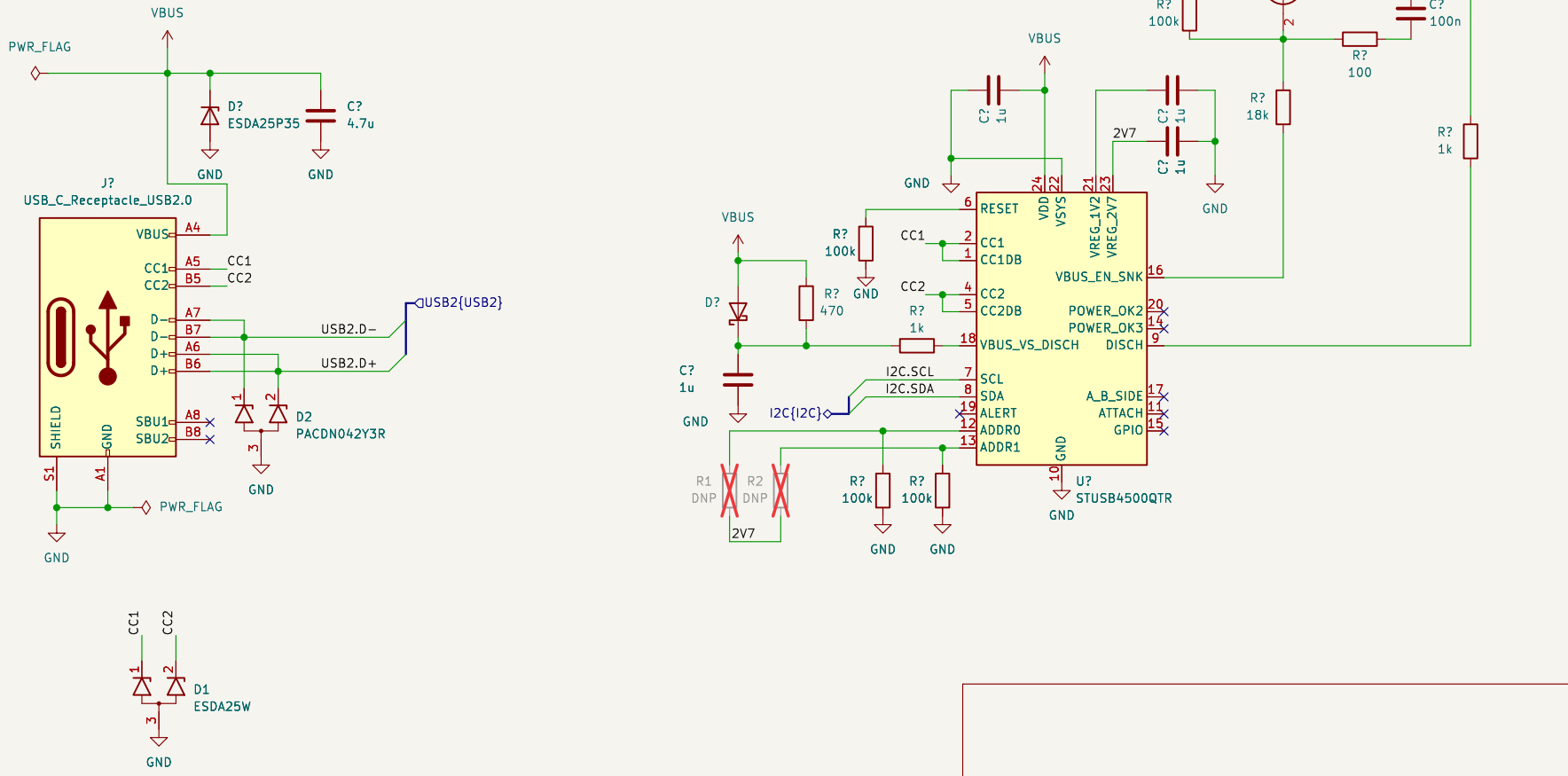

LDO
VIN
VOUT
File: ldo.kicad_sch
SMPS
VIN
VOUT
VFeedback
File: smps.kicad_sch
USB C Power Delivery
VUSB
USB2{USB2}
I2C{I2C}
File: usbcpd.kicad_sch
J?
Jack-DC
1
2
MCU
VIN
USB{USB2}
I2C{I2C}
SW1
SW2
Analog1
Analog2
File: mcu.kicad_sch
Sheet: /
File: Tattoo_Supply.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad-cli 7.0.0-da2b9df05c~163~ubuntu22.04.1
Id: 1/5



Sheet: /USB C Power Delivery/
File: usbcpd.kicad_sch

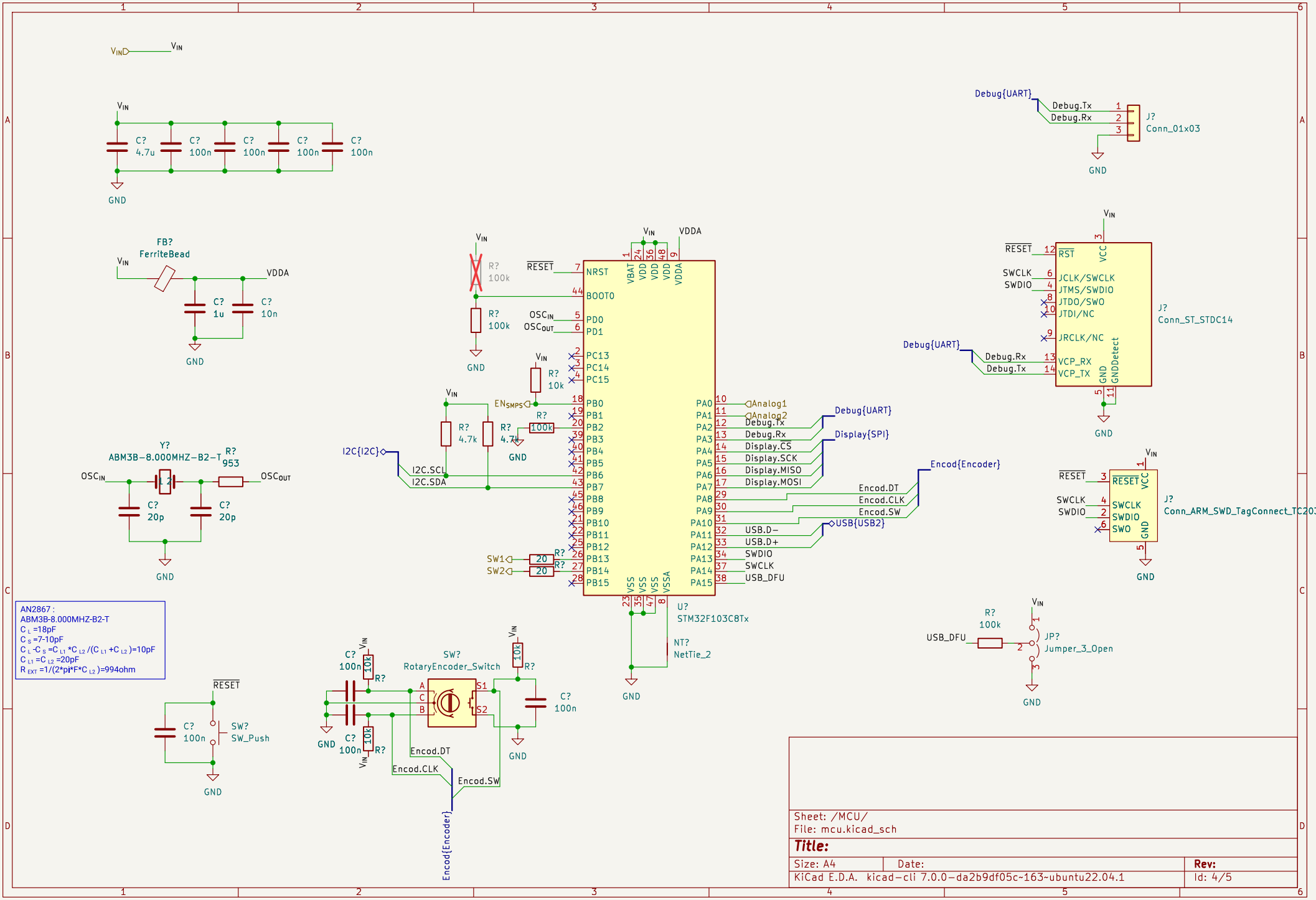
Title:

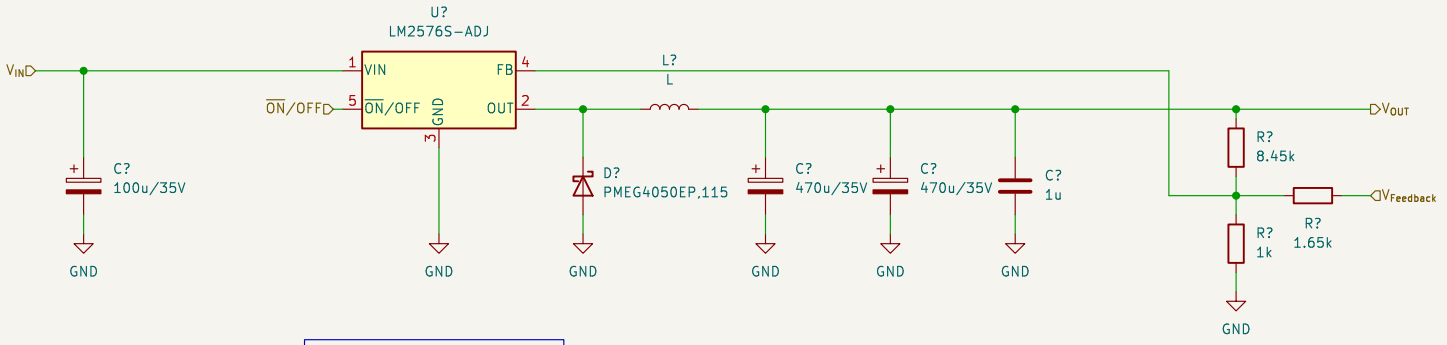
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad-cli 7.0.0-da2b9df05c-163~ubuntu22.04.1		Id: 2/5

Sheet: /LDO/
File: ldo.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad-cli 7.0.0-da2b9df05c-163~ubuntu22.04.1		Id: 3/5


VIN
C? 4.7u
C? 100n
C? 100n
C? 100n
C? 100n
GND
FB?
FerriteBead
VDDA
C? 1u
C? 10n
Y?
ABM3B-8.000MHZ-B2-T
R? 953
OSCIN
OSCOUT
C? 20p
C? 20p
AN2867 :
ABM3B-8.000MHZ-B2-T
CL =18pF
CS =7-10pF
CL -CS =CL1 *CL2 /(CL1 +CL2)=10pF
CL1 =CL2 =20pF
REXT =1/(2*pi*F*CL2)=994ohm
RESET
C? 100n
SW? SW_Push
R? 100k
R? 10k
R? 4.7k
R? 100k
R? 20
R? 20
ENSMPS
I2C{I2C}
I2C.SCL
I2C.SDA
SW1
SW2
U?
STM32F103C8Tx
NT?
NetTie_2
PA0 Analog1
PA1 Analog2
PA2 Debug.Tx
PA3 Debug.Rx
PA4 Display.CS
PA5 Display.SCK
PA6 Display.MISO
PA7 Display.MOSI
PA8 Encod.DT
PA9 Encod.CLK
PA10 Encod.SW
PA11 USB.D-
PA12 USB.D+
PA13 SWDIO
PA14 SWCLK
PA15 USB_DFU
Debug{UART}
Display{SPI}
Encod{Encoder}
USB{USB2}
SW? RotaryEncoder_Switch
Encod.DT
Encod.CLK
Encod.SW
Encod{Encoder}
J? Conn_01x03
Debug.Tx
Debug.Rx
J? Conn_ST_STDC14
JCLK/SWCLK
JTMS/SWDIO
JTDO/SWO
JTDI/NC
JRCLK/NC
VCP_RX
VCP_TX
GNDDetect
J? Conn_ARM_SWD_TagConnect_TC2030-NL
JP? Jumper_3_Open
USB_DFU
Sheet: /MCU/
File: mcu.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad-cli 7.0.0-da2b9df05c-163~ubuntu22.04.1
Id: 4/5



For L :
E*T=(V_{IN} -V_{OUT} *(V_{OUT} /V_{IN})*(1000/52)
With V_{IN} = 20V
E*T(max) = 96.154 V*us at V_{OUT} =10V
L = 150uH
I_{MAX} =1.15*3 = 3.45A

Check Python Notebook for Resistors calculations

Sheet: /SMPS/		
File: smps.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad-cli 7.0.0-da2b9df05c-163~ubuntu22.04.1		Id: 5/5