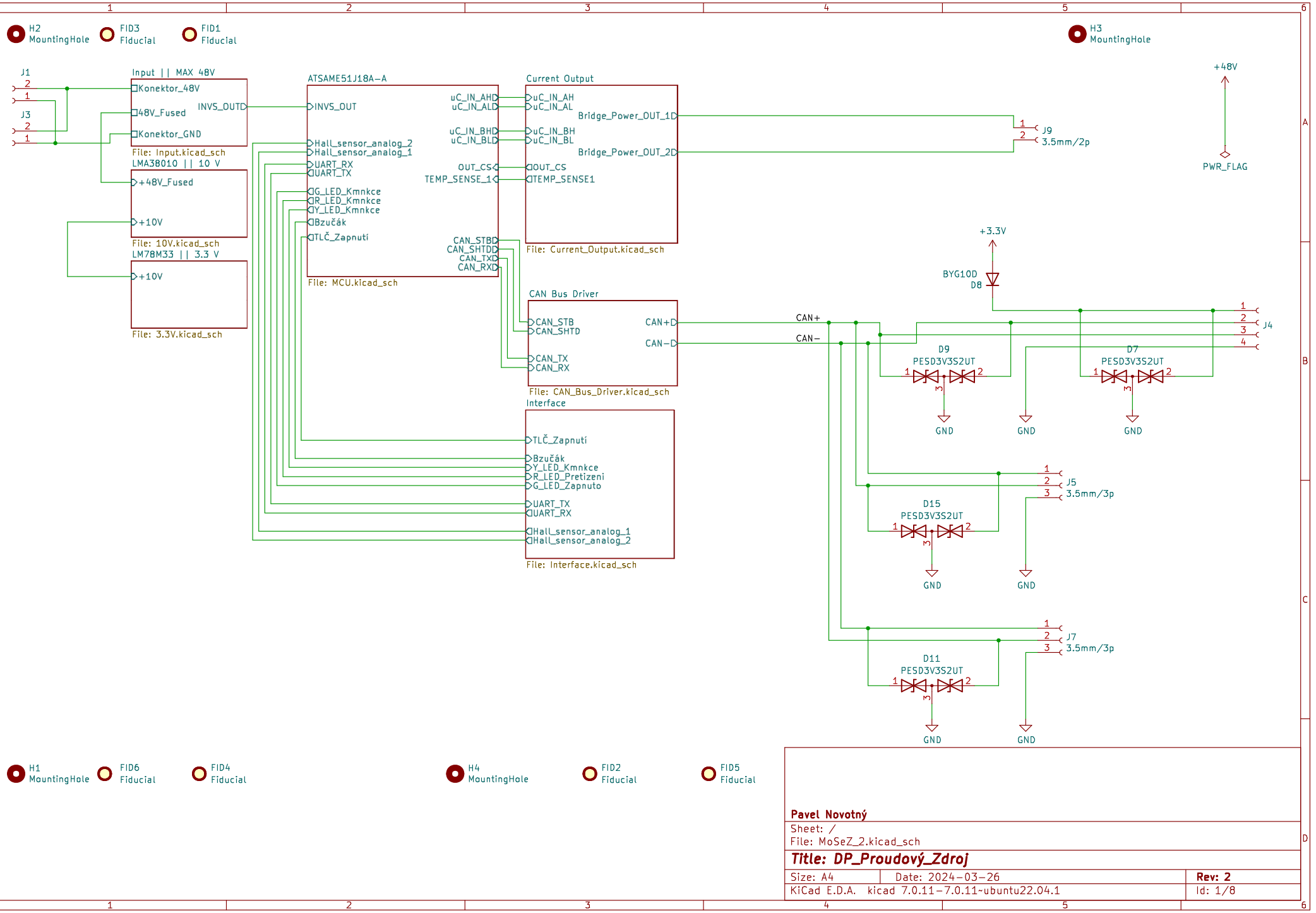
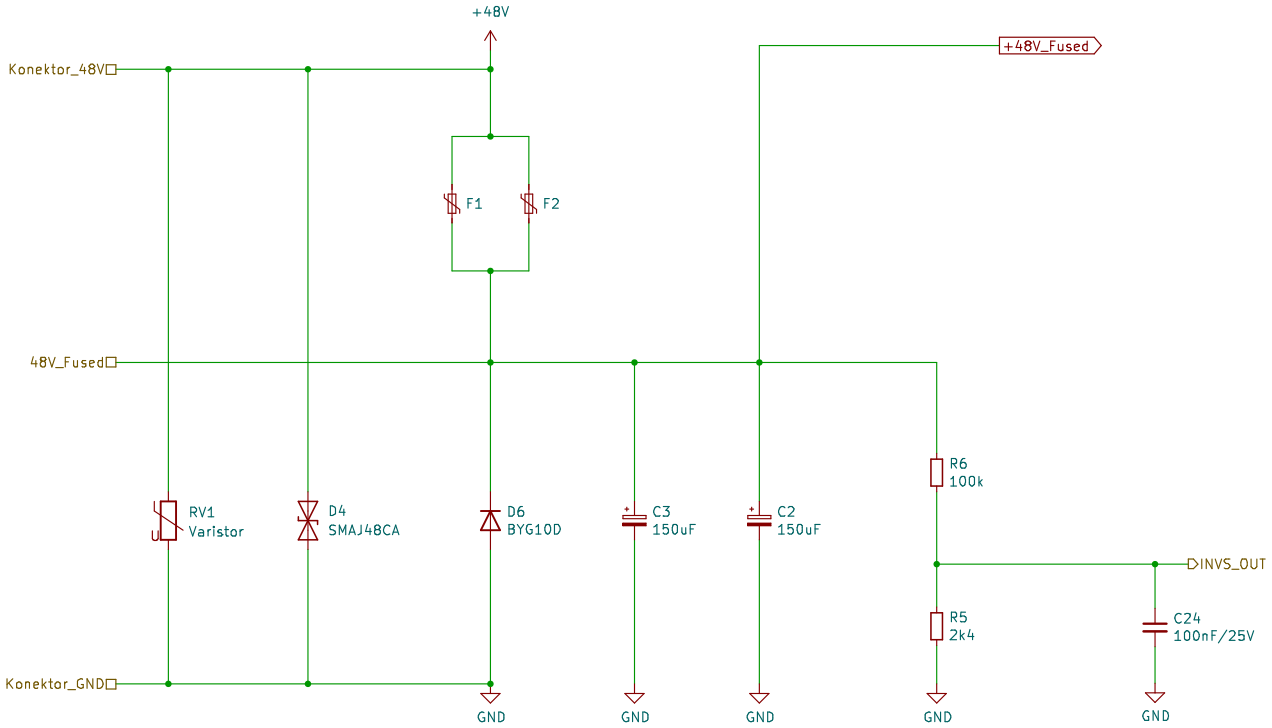

H2
MountingHole
FID3
Fiducial
FID1
Fiducial
H3
MountingHole
J1
J3
Input || MAX 48V
Konektor_48V
48V_Fused
Konektor_GND
INVS_OUT
File: Input.kicad_sch
LMA38010 || 10 V
+48V_Fused
+10V
File: 10V.kicad_sch
LM78M33 || 3.3 V
+10V
File: 3.3V.kicad_sch
ATSAME51J18A-A
INVS_OUT
Hall_sensor_analog_2
Hall_sensor_analog_1
UART_RX
UART_TX
G_LED_Kmnkce
R_LED_Kmnkce
Y_LED_Kmnkce
Bzučák
TLČ_Zapnutí
uC_IN_AH
uC_IN_AL
uC_IN_BH
uC_IN_BL
OUT_CS
TEMP_SENSE_1
CAN_STBD
CAN_SHTDD
CAN_TXD
CAN_RXD
File: MCU.kicad_sch
Current Output
uC_IN_AH
uC_IN_AL
Bridge_Power_OUT_1D
uC_IN_BH
uC_IN_BL
Bridge_Power_OUT_2D
OUT_CS
TEMP_SENSE1
File: Current_Output.kicad_sch
CAN Bus Driver
CAN_STB
CAN_SHTD
CAN_TX
CAN_RX
CAN+D
CAN-D
File: CAN_Bus_Driver.kicad_sch
Interface
TLČ_Zapnutí
Bzučák
Y_LED_Kmnkce
R_LED_Pretizeni
G_LED_Zapnuto
UART_TX
UART_RX
Hall_sensor_analog_1
Hall_sensor_analog_2
File: Interface.kicad_sch
J9
3.5mm/2p
+48V
PWR_FLAG
+3.3V
BYG10D
D8
CAN+
CAN-
J4
D9
PESD3V3S2UT
D7
PESD3V3S2UT
GND
J5
3.5mm/3p
D15
PESD3V3S2UT
J7
3.5mm/3p
D11
PESD3V3S2UT
H1
MountingHole
FID6
Fiducial
FID4
Fiducial
H4
MountingHole
FID2
Fiducial
FID5
Fiducial
Pavel Novotný
Sheet: /
File: MoSeZ_2.kicad_sch
Title: DP_Proudový_Zdroj
Size: A4
Date: 2024-03-26
Rev: 2
KiCad E.D.A. kicad 7.0.11-7.0.11~ubuntu22.04.1
Id: 1/8

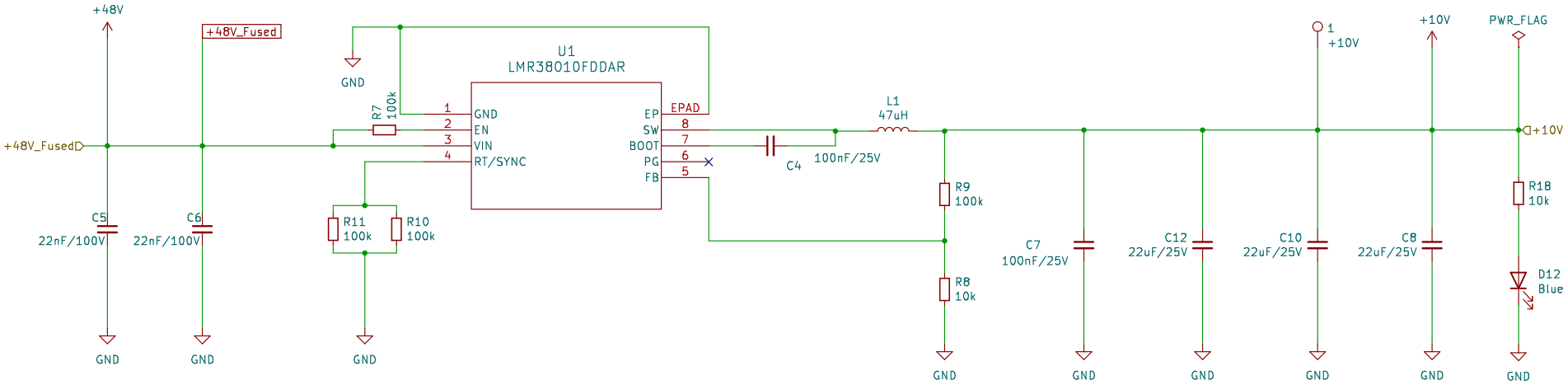


Má vůbec smysl nechat?
Dělič přepočítán na 1,65V při 48V (10k spodní)
2 x PTC = 140W přídržný výkon (72W/24V, 36V/12V))
Moc PTC, 1.5A při 48V je 72W | 24 V (36W) | 12V (18W))

Sheet: /Input || MAX 48V/
File: Input.kicad_sch

Title: Input Filtration

Size: A4	Date: 2024-02-20	**Rev: V2**
KiCad E.D.A. kicad 7.0.11-7.0.11-ubuntu22.04.1		Id: 2/8

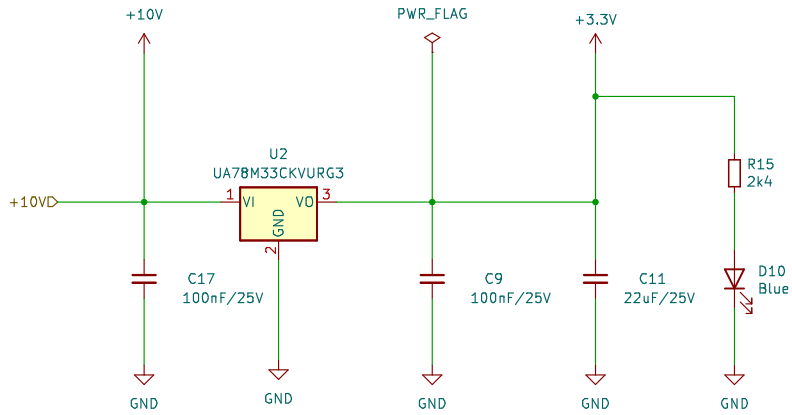


Upravy: Cboot kvalitní keramika
Cin na 100V
Cout 3x22uF
L 22uH

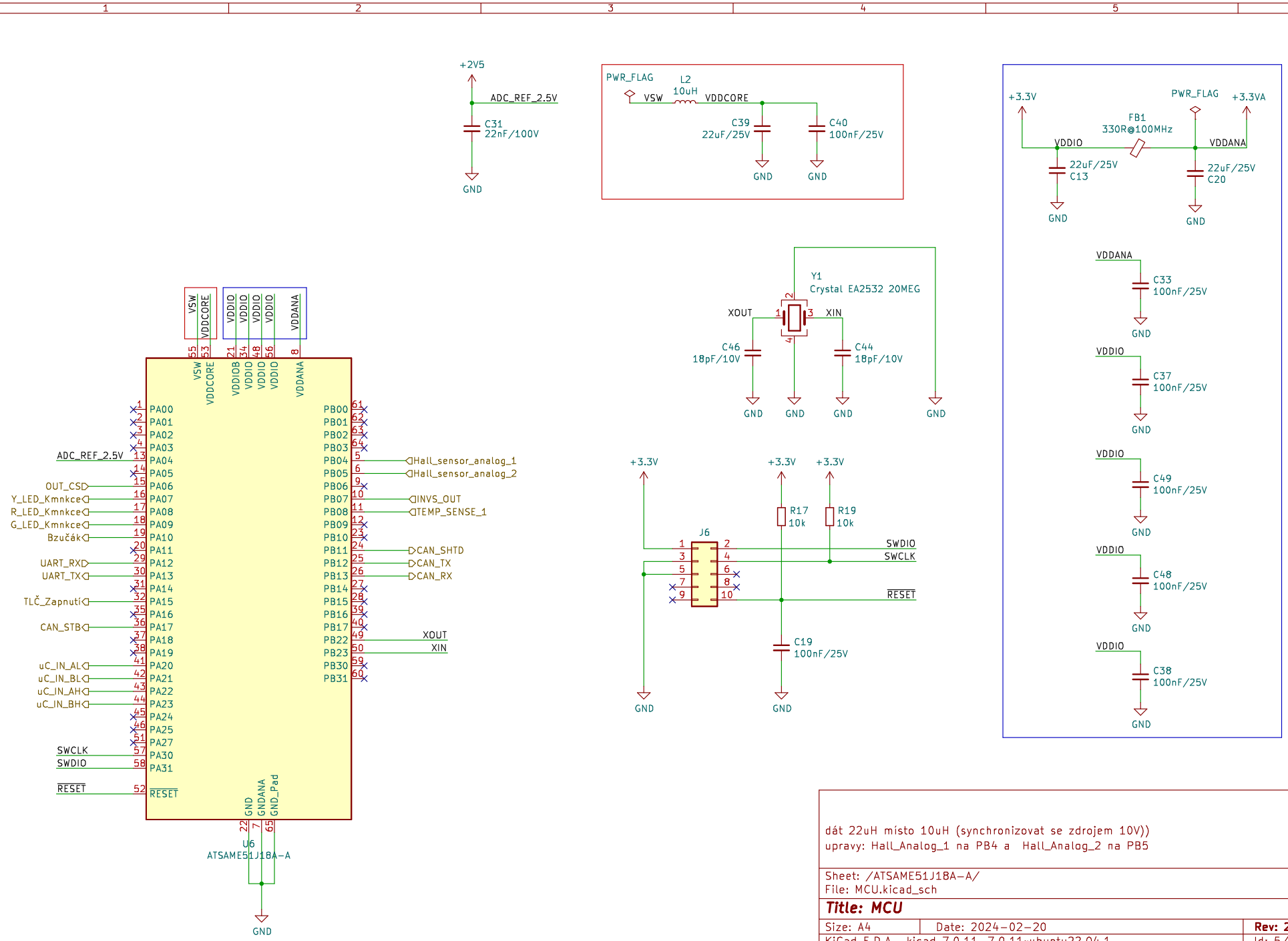
Sheet: /LMA38010 || 10 V/
File: 10V.kicad_sch

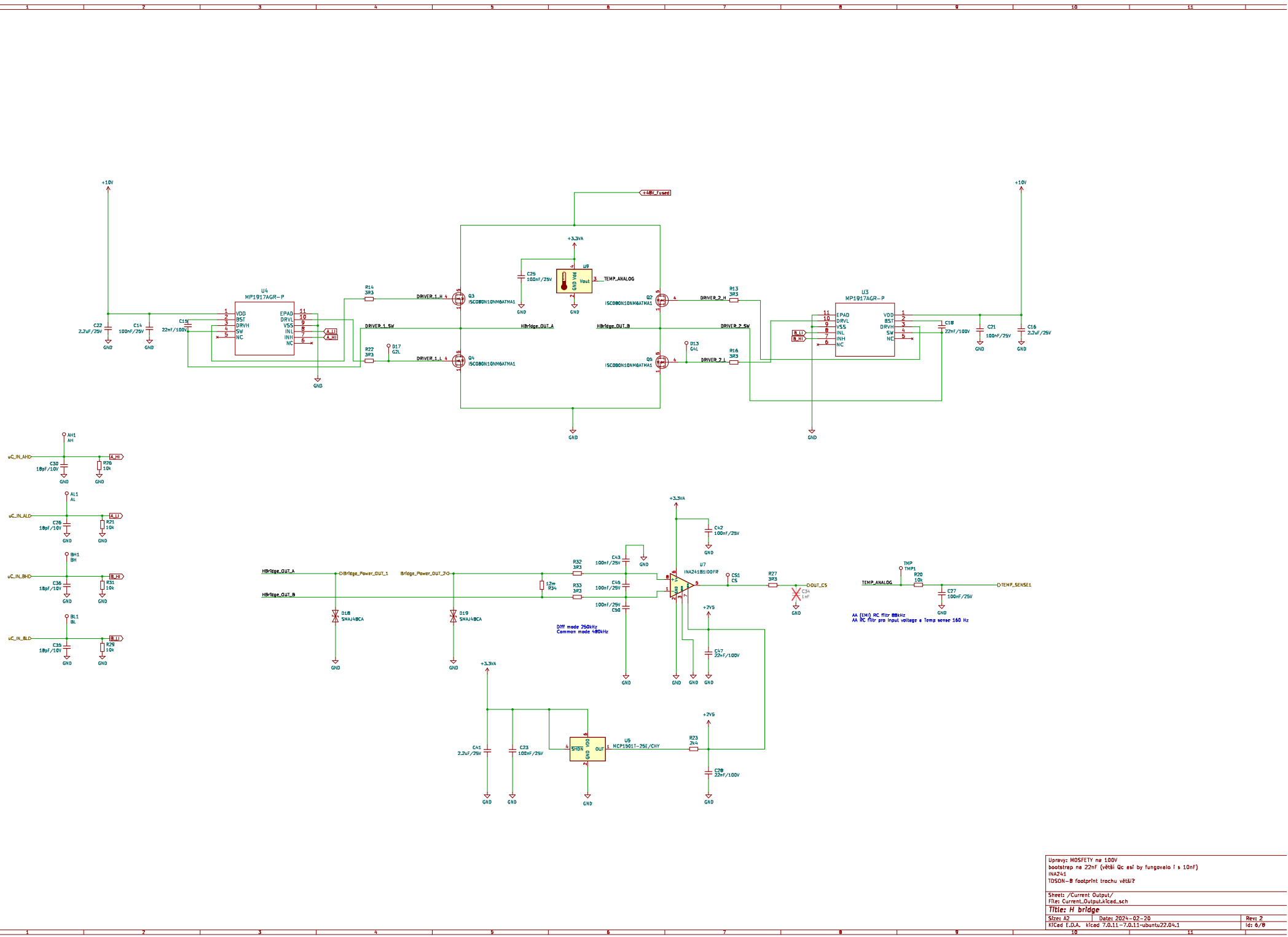
Title: 10V Supply

Size: A4	Date: 2024-02-20	**Rev: 2**
KiCad E.D.A. kicad 7.0.11-7.0.11-ubuntu22.04.1		Id: 3/8



Sheet: /LM78M33 || 3.3 V/		
File: 3.3V.kicad_sch		
Title: 3V3 Supply		
Size: A4	Date: 2024-02-20	**Rev: 2**
KiCad E.D.A. kicad 7.0.11-7.0.11-ubuntu22.04.1		Id: 4/8


+2V5
ADC_REF_2.5V
C31
22nF/100V
GND
PWR_FLAG
L2
10uH
VSW
VDDCORE
C39
22uF/25V
C40
100nF/25V
GND
GND
+3.3V
PWR_FLAG
+3.3VA
FB1
330R@100MHz
VDDIO
VDDANA
22uF/25V
C13
22uF/25V
C20
GND
GND
VDDANA
C33
100nF/25V
GND
VDDIO
C37
100nF/25V
GND
VDDIO
C49
100nF/25V
GND
VDDIO
C48
100nF/25V
GND
VDDIO
C38
100nF/25V
GND
Y1
Crystal EA2532 20MEG
XOUT
XIN
C46
18pF/10V
C44
18pF/10V
GND
GND
GND
GND
+3.3V
+3.3V
+3.3V
R17
10k
R19
10k
J6
SWDIO
SWCLK
RESET
C19
100nF/25V
GND
GND
VSW
VDDCORE
VDDIO
VDDIO
VDDIO
VDDIO
VDDANA
VSW
VDDCORE
VDDIOB
VDDIO
VDDIO
VDDIO
VDDANA
55
53
21
34
48
56
8
PA00
PA01
PA02
PA03
PA04
PA05
PA06
PA07
PA08
PA09
PA10
PA11
PA12
PA13
PA14
PA15
PA16
PA17
PA18
PA19
PA20
PA21
PA22
PA23
PA24
PA25
PA27
PA30
PA31
RESET
1
2
3
4
13
14
15
16
17
18
19
20
29
30
31
32
35
36
37
38
41
42
43
44
45
46
51
57
58
52
ADC_REF_2.5V
OUT_CS
Y_LED_Kmnkce
R_LED_Kmnkce
G_LED_Kmnkce
Bzučák
UART_RX
UART_TX
TLČ_Zapnutí
CAN_STB
uC_IN_AL
uC_IN_BL
uC_IN_AH
uC_IN_BH
SWCLK
SWDIO
RESET
PB00
PB01
PB02
PB03
PB04
PB05
PB06
PB07
PB08
PB09
PB10
PB11
PB12
PB13
PB14
PB15
PB16
PB17
PB22
PB23
PB30
PB31
61
62
63
64
5
6
9
10
11
12
23
24
25
26
27
28
39
40
49
50
59
60
Hall_sensor_analog_1
Hall_sensor_analog_2
INVS_OUT
TEMP_SENSE_1
CAN_SHTD
CAN_TX
CAN_RX
XOUT
XIN
GND
GNDANA
GND_Pad
22
7
65
U6
ATSAME51J18A-A
GND
dát 22uH místo 10uH (synchronizovat se zdrojem 10V))
upravy: Hall_Analog_1 na PB4 a Hall_Analog_2 na PB5
Sheet: /ATSAME51J18A-A/
File: MCU.kicad_sch
Title: MCU
Size: A4
Date: 2024-02-20
Rev: 2
KiCad E.D.A. kicad 7.0.11-7.0.11-ubuntu22.04.1
Id: 5/8

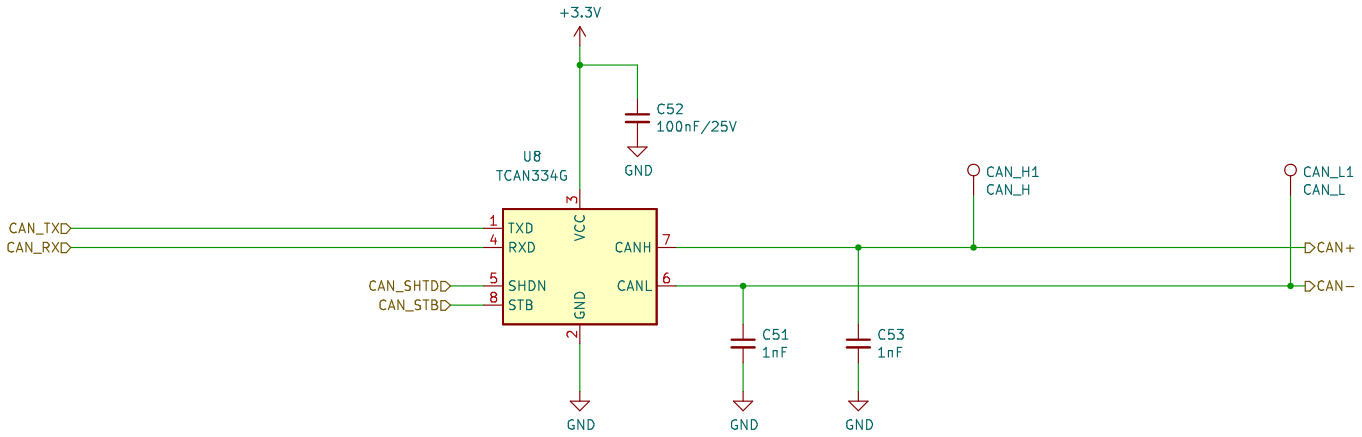


Upravy: MOSFETY na 100V
bootstrap na 22nF (větší Qc asi by fungovalo i s 10nF)
INA241
TDSON-8 footprint trochu větší?

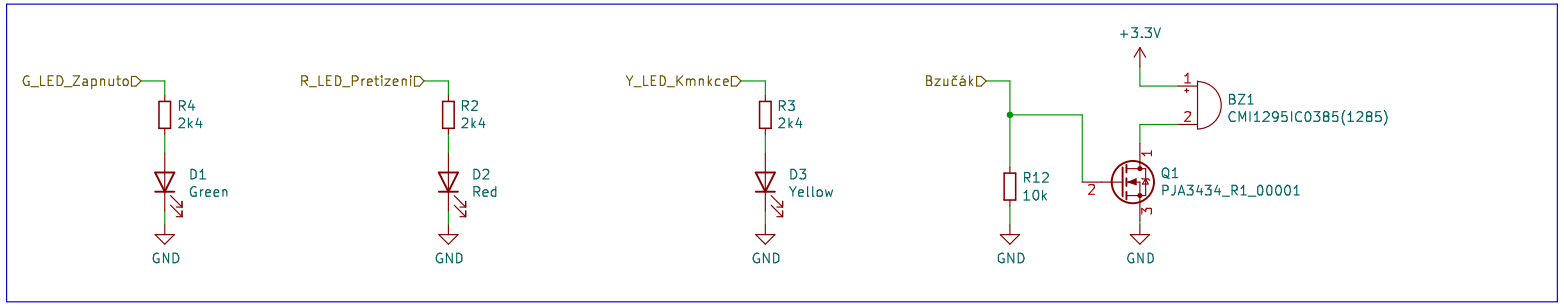
Sheet: /Current Output/
File: Current_Output.kicad_sch

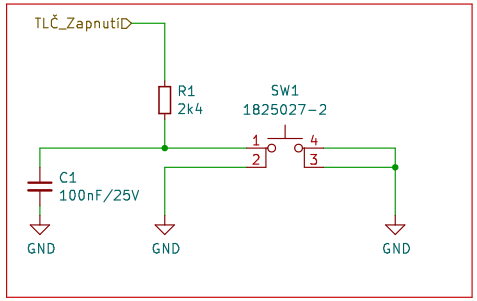
Title: H bridge

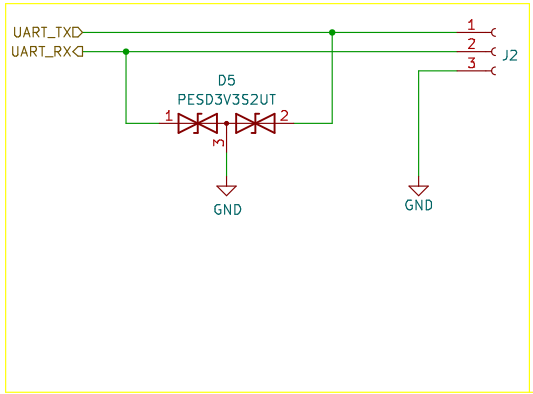
Size: A2	Date: 2024-02-20	Rev: 2
KiCad E.D.A. kicad 7.0.11-7.0.11~ubuntu22.04.1		Id: 6/8

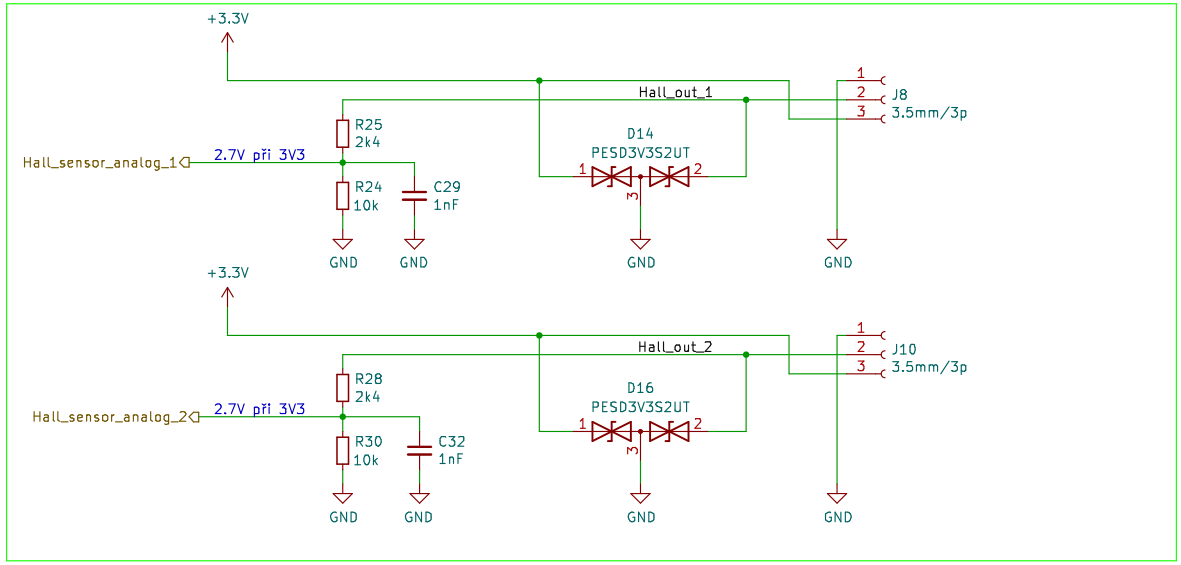


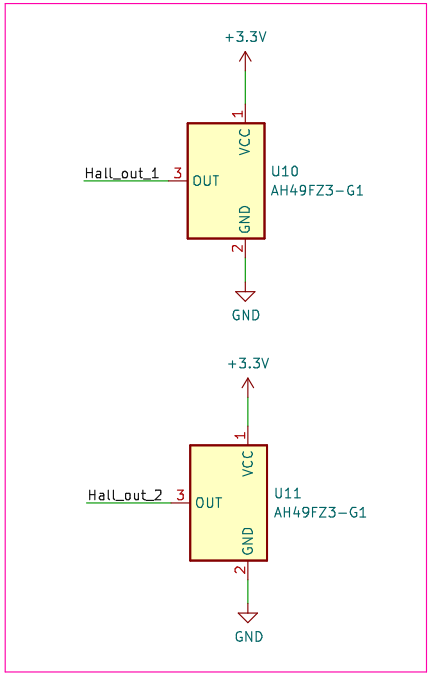
Sheet: /CAN Bus Driver/		
File: CAN_Bus_Driver.kicad_sch		
Title: CAN Bus Driver		
Size: A4	Date: 2021-12-19	**Rev: 1**
KiCad E.D.A. kicad 7.0.11-7.0.11-ubuntu22.04.1		Id: 7/8











ESD
Upravy: Hall sensor konektor

Sheet: /Interface/
File: Interface.kicad_sch

Title: Interface

Size: A4	Date: 2024-02-20	**Rev: 2**
KiCad E.D.A. kicad 7.0.11-7.0.11~ubuntu22.04.1		Id: 8/8