Band data

File: band_data.kicad_sch

SWR

File: SWR.kicad_sch

Current_meas

File: Current_meas.kicad_sch

cpu

File: cpu.kicad_sch

FAN_CNTRL

File: fancntrl.kicad_sch

POWER

File: power.kicad_sch

PTT

File: ptt.kicad_sch

CONNECTORS

File: connectors.kicad_sch

RRIO OPAMP "MCP6241U"

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Sheet: /

File: LDMOS_control_v5.2CAT.kicad_sch

Title: LDMOS control unit

Size: A4	Date: 2024-04-28	**Rev: v5.1**
KiCad E.D.A. 10.0.1		Id: 1/9

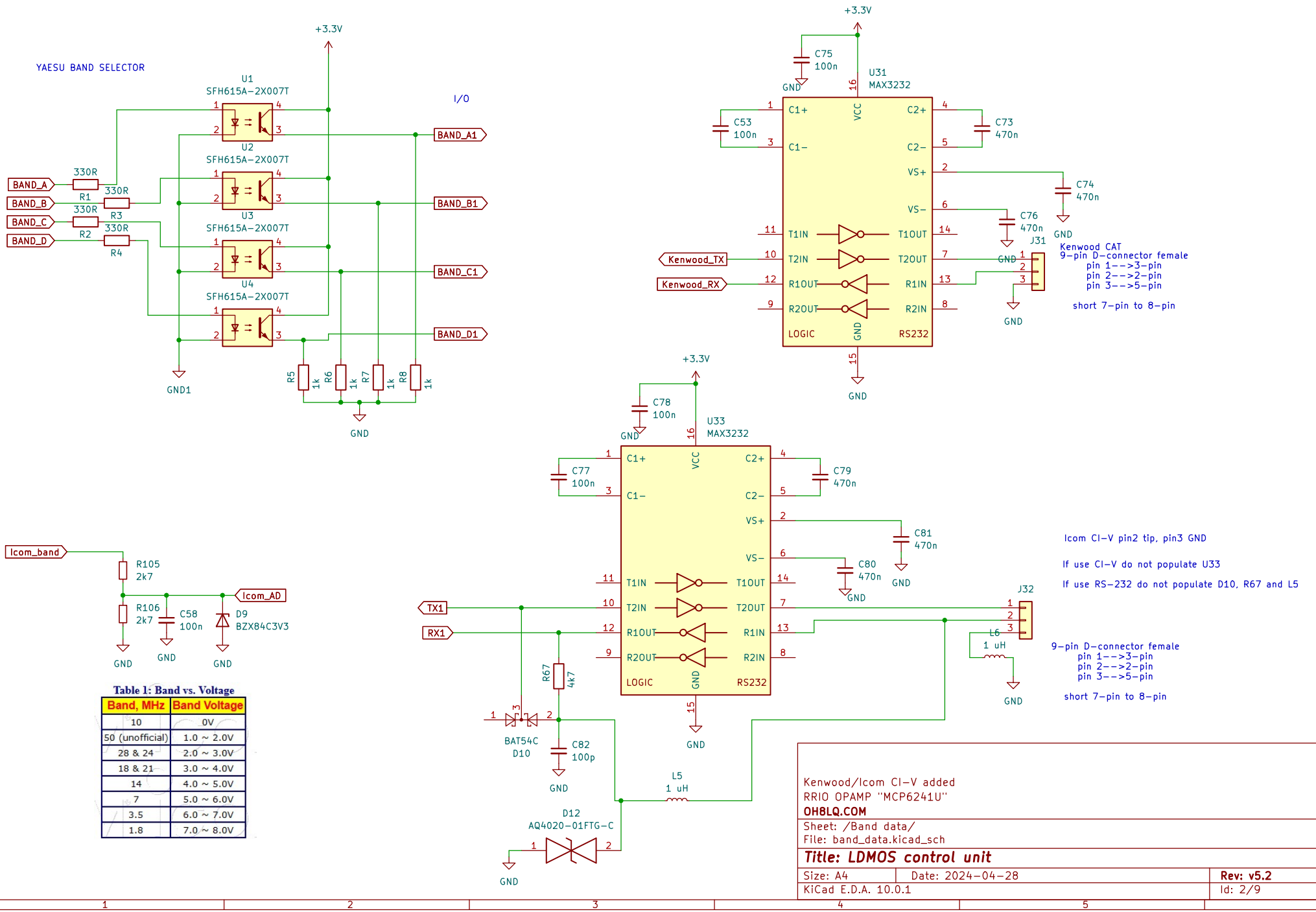

Table 1: Band vs. Voltage

Band, MHz	Band Voltage
10	0V
50 (unofficial)	1.0 ~ 2.0V
28 & 24	2.0 ~ 3.0V
18 & 21	3.0 ~ 4.0V
14	4.0 ~ 5.0V
7	5.0 ~ 6.0V
3.5	6.0 ~ 7.0V
1.8	7.0 ~ 8.0V

Kenwood/Icom CI−V added
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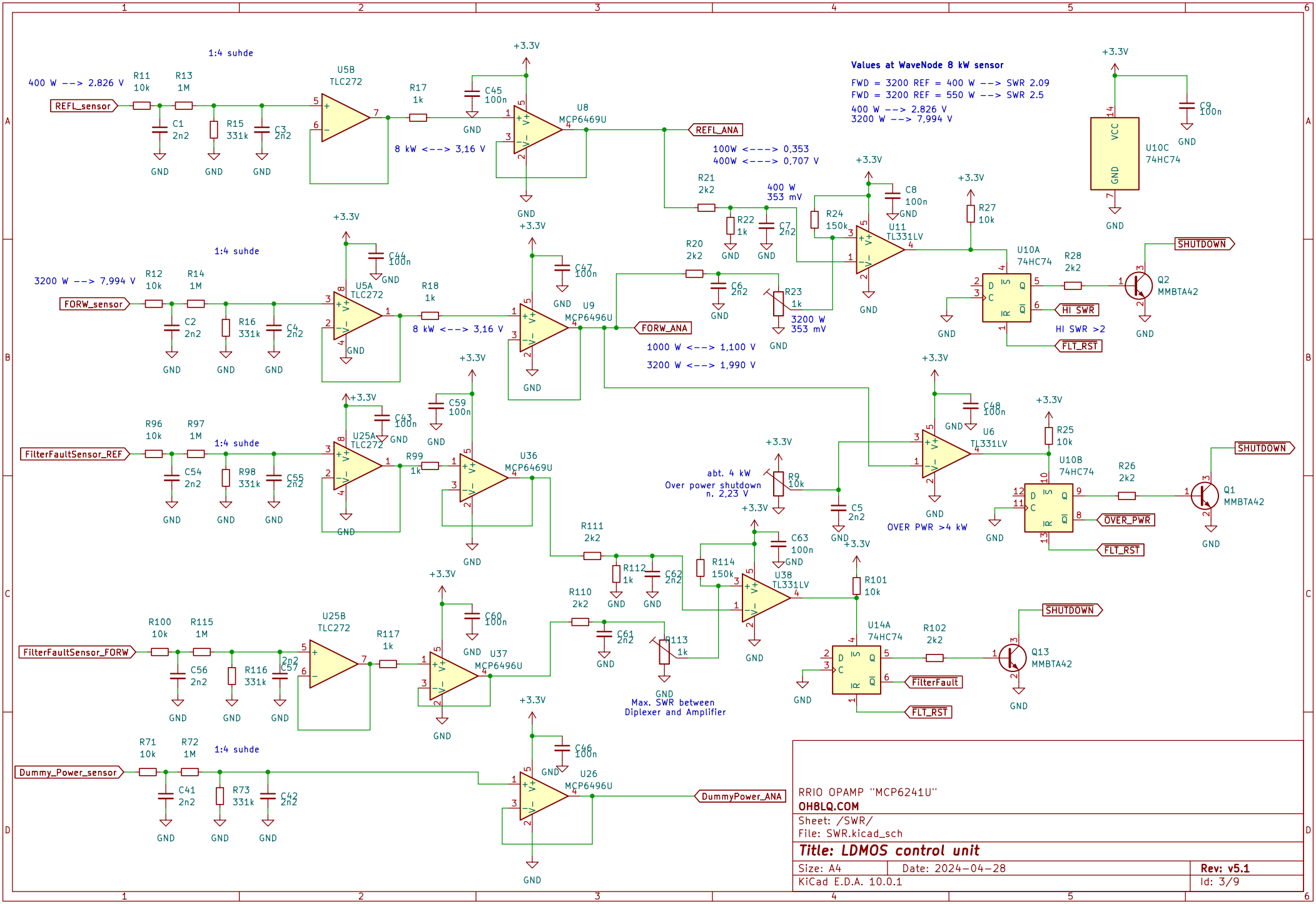
Sheet: /Band data/
File: band_data.kicad_sch

Title: LDMOS control unit

Size: A4	Date: 2024−04−28	**Rev: v5.2**
KiCad E.D.A. 10.0.1		Id: 2/9


1:4 suhde
400 W --> 2.826 V
REFL_sensor
R11 10k
R13 1M
C1 2n2
R15 331k
C3 2n2
U5B TLC272
R17 1k
C45 100n
U8 MCP6469U
REFL_ANA
8 kW <--> 3,16 V
Values at WaveNode 8 kW sensor
FWD = 3200 REF = 400 W --> SWR 2.09
FWD = 3200 REF = 550 W --> SWR 2.5
400 W --> 2.826 V
3200 W --> 7,994 V
100W <---> 0,353
400W <---> 0,707 V
R21 2k2
R22 1k
C7 2n2
400 W 353 mV
R24 150k
C8 100n
U11 TL331LV
R27 10k
U10C 74HC74
C9 100n
1:4 suhde
3200 W --> 7,994 V
FORW_sensor
R12 10k
R14 1M
C2 2n2
R16 331k
C4 2n2
U5A TLC272
C44 100n
R18 1k
C47 100n
U9 MCP6496U
FORW_ANA
8 kW <--> 3,16 V
R20 2k2
C6 2n2
R23 1k
3200 W 353 mV
1000 W <--> 1,100 V
3200 W <--> 1,990 V
U10A 74HC74
R28 2k2
Q2 MMBTA42
SHUTDOWN
HI SWR
HI SWR >2
FLT_RST
1:4 suhde
FilterFaultSensor_REF
R96 10k
R97 1M
C54 2n2
R98 331k
C55 2n2
U25A TLC272
C43 100n
R99 1k
C59 100n
U36 MCP6469U
C48 100n
U6 TL331LV
R25 10k
U10B 74HC74
R26 2k2
Q1 MMBTA42
SHUTDOWN
OVER_PWR
FLT_RST
OVER PWR >4 kW
abt. 4 kW
Over power shutdown
n. 2,23 V
R9 10k
C5 2n2
R111 2k2
R112 1k
C62 2n2
R114 150k
C63 100n
U38 TL331LV
R101 10k
R110 2k2
C61 2n2
R113 1k
Max. SWR between
Diplexer and Amplifier
FilterFaultSensor_FORW
R100 10k
R115 1M
C56 2n2
R116 331k
2n2 C57
U25B TLC272
R117 1k
C60 100n
U37 MCP6496U
U14A 74HC74
R102 2k2
Q13 MMBTA42
SHUTDOWN
FilterFault
FLT_RST
1:4 suhde
Dummy_Power_sensor
R71 10k
R72 1M
C41 2n2
R73 331k
C42 2n2
C46 100n
U26 MCP6496U
DummyPower_ANA
GND
+3.3V
RRIO OPAMP "MCP6241U"
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Sheet: /SWR/
File: SWR.kicad_sch
Title: LDMOS control unit
Size: A4
Date: 2024-04-28
Rev: v5.1
KiCad E.D.A. 10.0.1
Id: 3/9

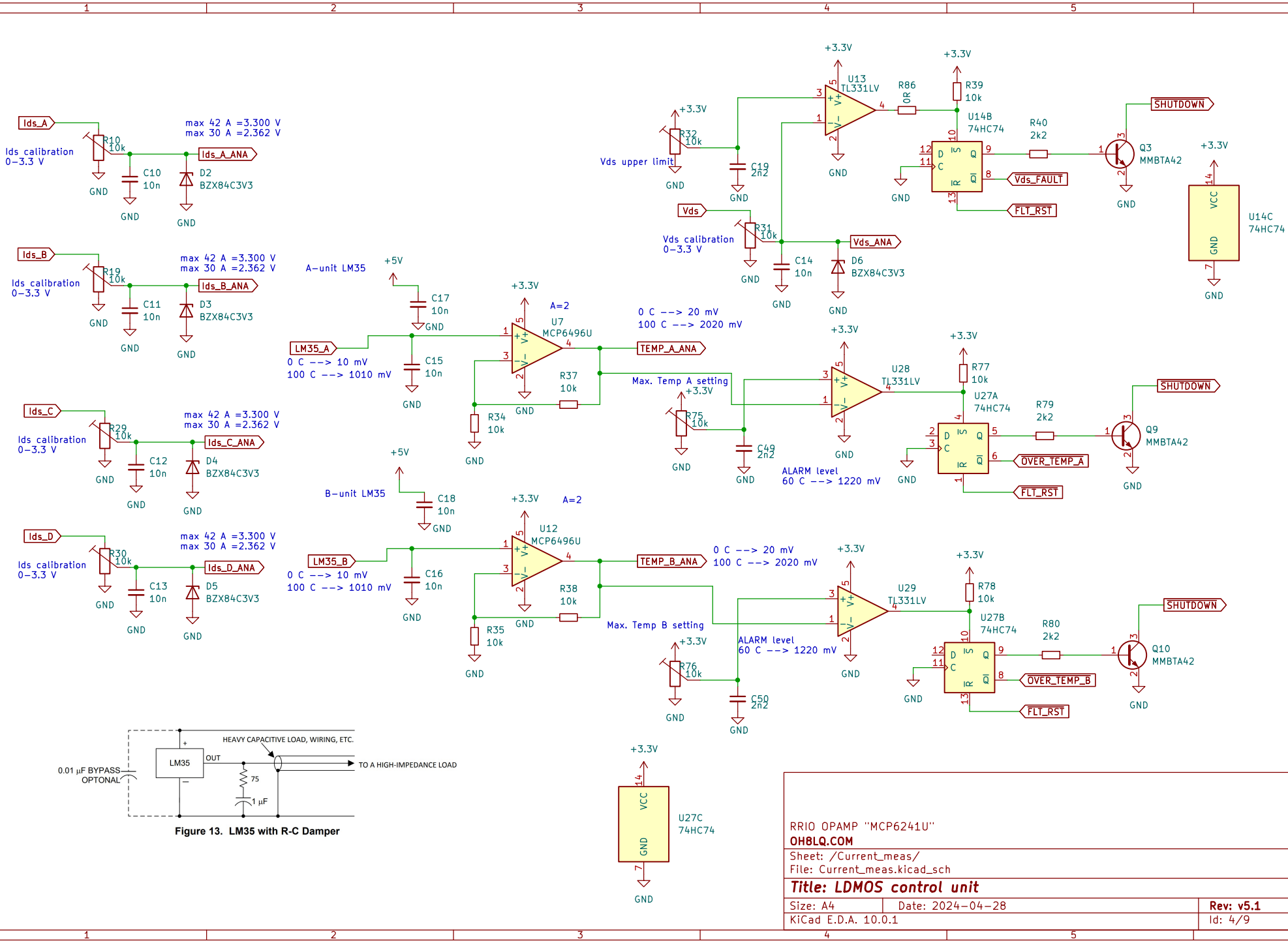

Figure 13. LM35 with R-C Damper

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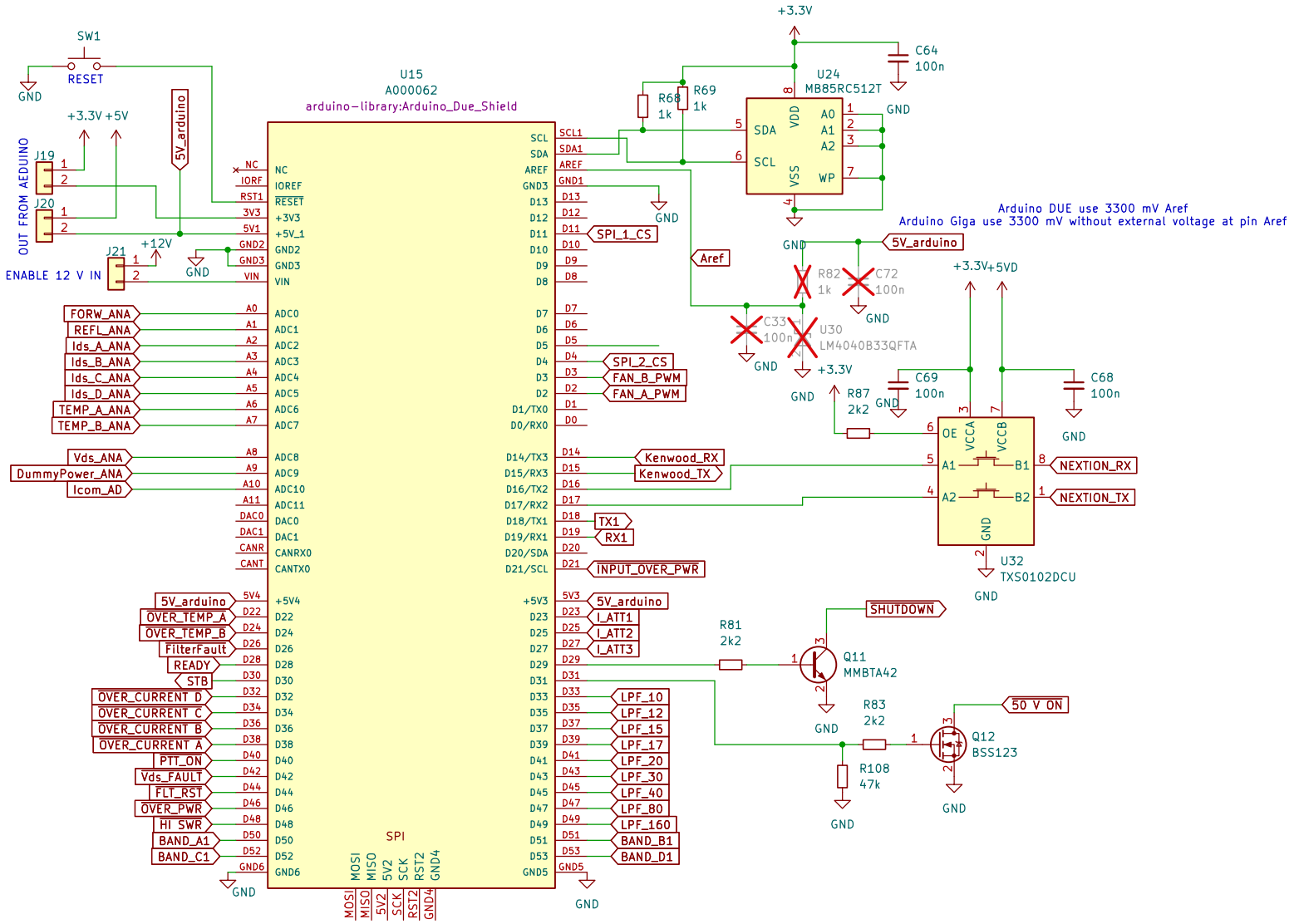
Sheet: /Current_meas/

File: Current_meas.kicad_sch

Title: LDMOS control unit

Size: A4	Date: 2024-04-28	**Rev: v5.1**
KiCad E.D.A. 10.0.1		Id: 4/9



v5.2 Reset buttom and Bias open drain added
U30 type changed LM4040B33QFTA
v5.0-->v5.1 R87 is routed like pull-up
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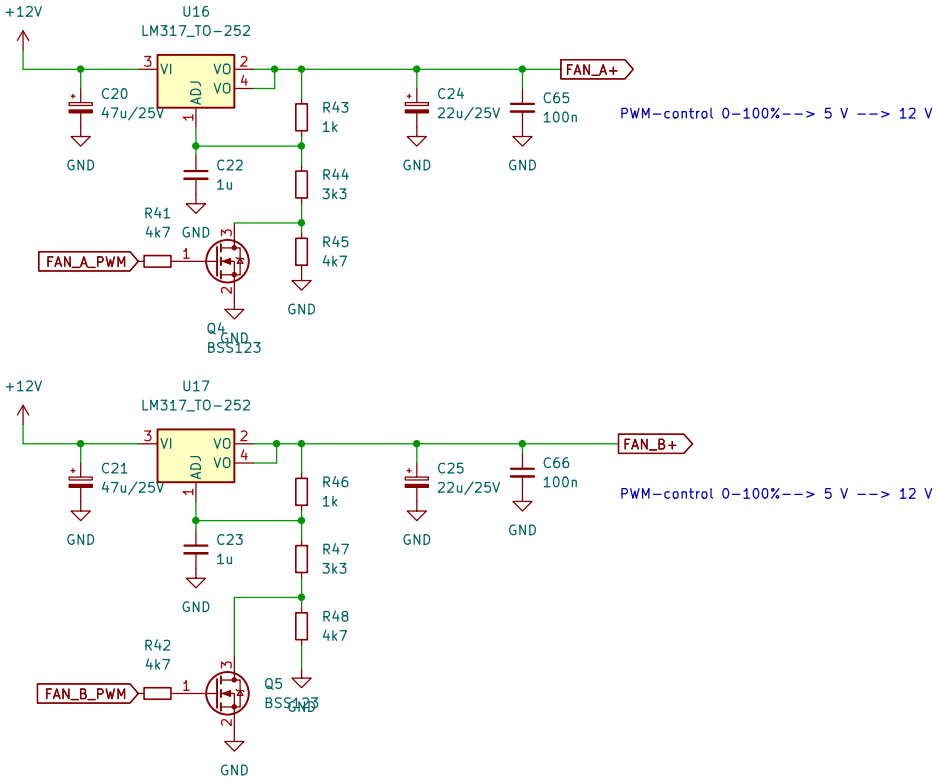
Sheet: /cpu/
File: cpu.kicad_sch

Title: LDMOS control unit

Size: A4	Date: 2024-04-28	**Rev: v5.2**
KiCad E.D.A. 10.0.1		Id: 5/9



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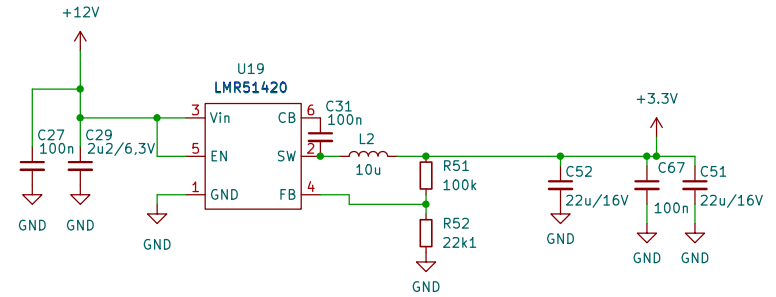
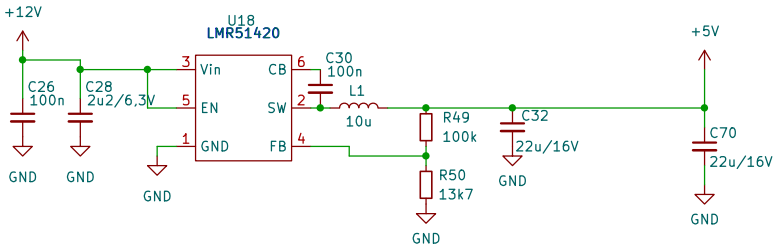
Sheet: /FAN_CNTRL/

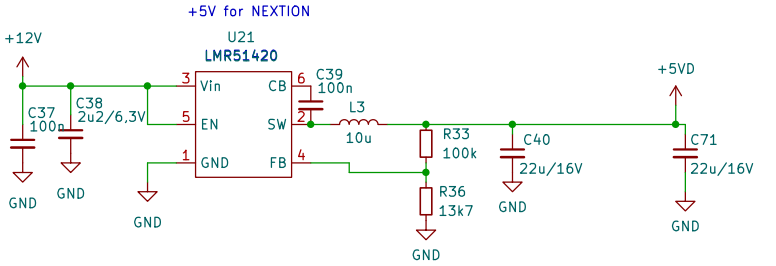
File: fancntrl.kicad_sch

Title: LDMOS control unit

Size: A4	Date: 2024-04-28	**Rev: v5.1**
KiCad E.D.A. 10.0.1		Id: 6/9







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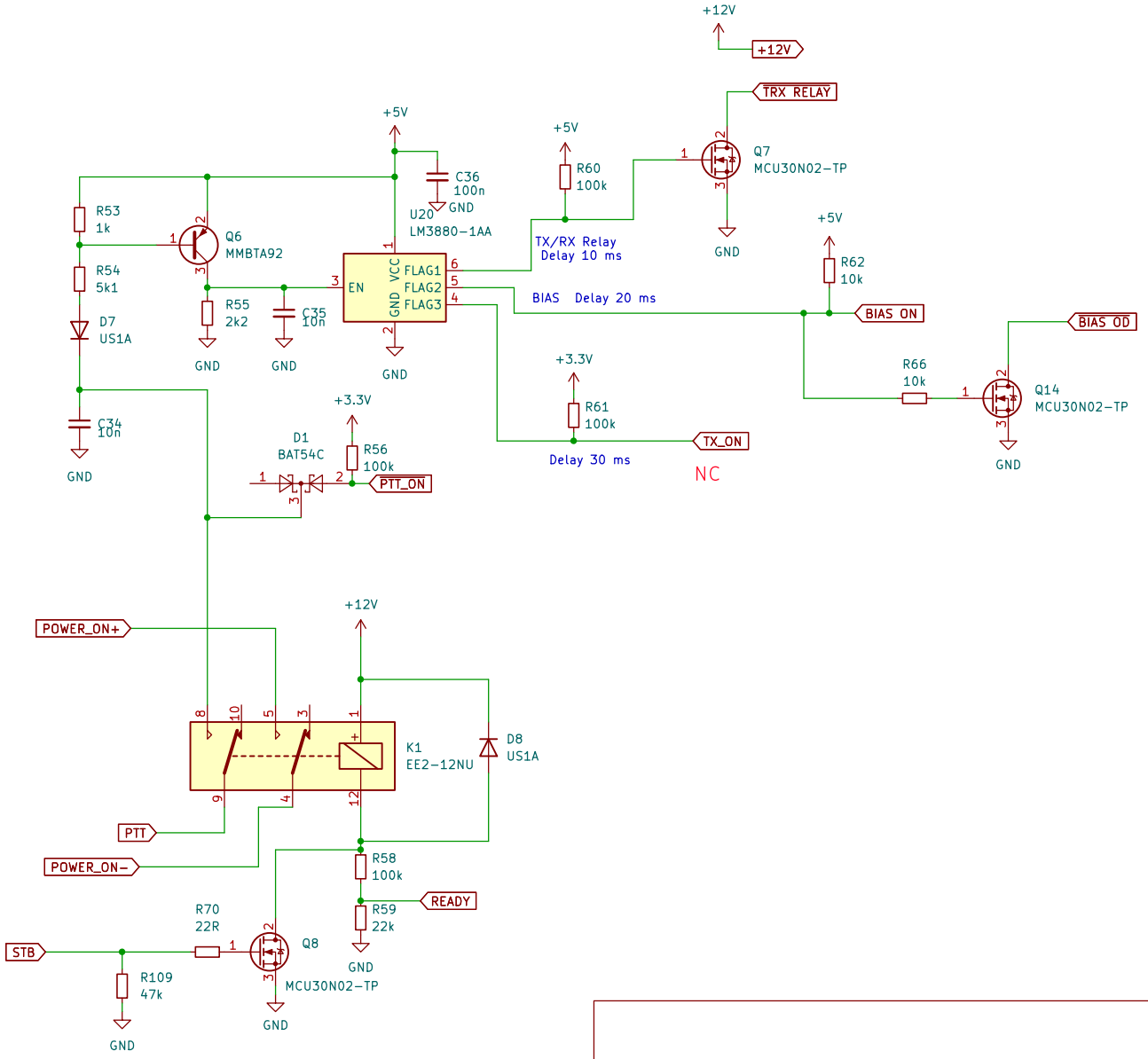
Sheet: /POWER/

File: power.kicad_sch

Title: LDMOS control unit

Size: A4	Date: 2024-04-28	**Rev: v5.1**
KiCad E.D.A. 10.0.1		Id: 7/9



RRIO OPAMP "MCP6241U"

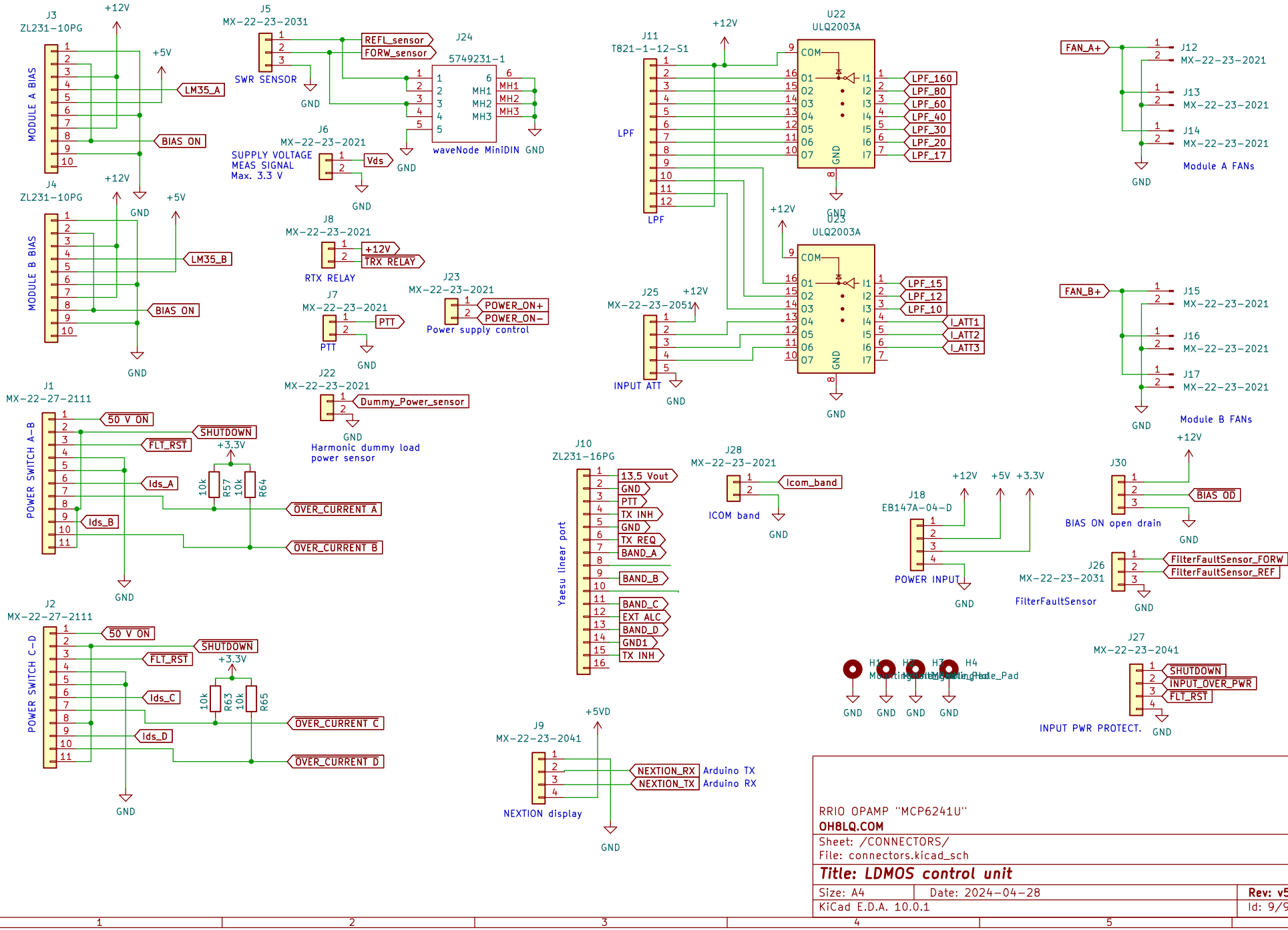
OH8LQ.COM

Sheet: /PTT/

File: ptt.kicad_sch

Title: LDMOS control unit

Size: A4	Date: 2024-04-28	**Rev: v5.1**
KiCad E.D.A. 10.0.1		Id: 8/9



RRIO OPAMP "MCP6241U"

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Sheet: /CONNECTORS/

File: connectors.kicad_sch

Title: LDMOS control unit

Size: A4	Date: 2024-04-28	**Rev: v5.1**
KiCad E.D.A. 10.0.1		Id: 9/9