Power

File: Power.kicad_sch

Connectors

File: Connectors.kicad_sch

I2C

File: I2C.kicad_sch

DigitalInputs

File: DigIn.kicad_sch

HighCurrentDrivers

File: HighCurrentDrivers.kicad_sch

MedCurrentDrivers

File: MedCurrentDrivers.kicad_sch

MCU

I2C1_SDA
I2C1_SCL
IN_1
IN_2
PF_IS1
PF_IS2
PF_IS3_4
PF_IS5_6
PF_IS7_8
USB_D+
USB_D−
USB_VBUS
BATT_SENSE
CAN_H
CAN_L
PF_IN1
PF_DEN1
PF_IN2
PF_DEN2
PF_IN3
PF_IN4
PF_DEN3_4
PF_DSEL3_4
PF_IN5
PF_IN6
PF_DEN5_6
PF_DSEL5_6
PF_IN7
PF_IN8
PF_DEN7_8
PF_DSEL7_8

File: MCU.kicad_sch

Microcontroller

+12V
R1 47K
R2 10K
C1 100nF
D1 3.3V
GND
GND
GND

V7.2
−Added schottky to VXO7805 output to prevent backfeed from USB
−Can't use PB13 (STM32 VBUS issue), shifted pins over
−Fixed USB VBUS resistor divider values

V7.1
−Fixed FRAM SCL/SDA backwards
−Changed top copper fill from solid to thermal reliefs to make soldering easier
−Added 2x status LEDs
−Fixed silkscreen

V7
−Changed to STM32F446RET6
−Added USB again, for DFU and easy settings change
−Switched BTS724 to 2x BTS7008−2EPA
−Added another op−amp for IS
−Added boot selector again to enable DFU

G1
DRT_Logo

G2
DingoFace

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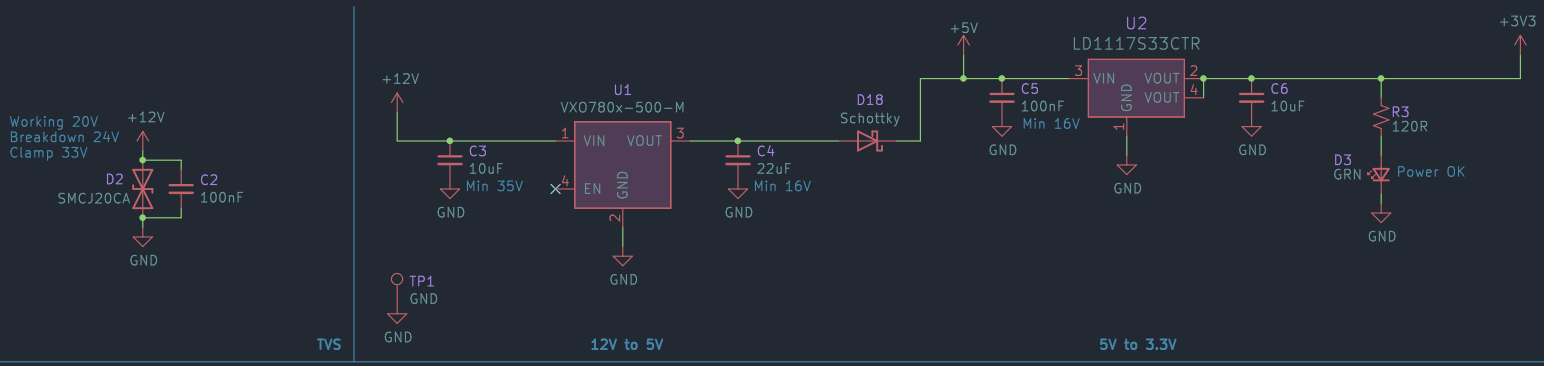
Sheet: /
File: DingoPDM.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11 | Rev: v7.2
KiCad E.D.A. kicad 7.0.0 | Id: 1/13



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Sheet: /Power/
File: Power.kicad_sch

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Size: USLetter | Date: 2021-09-11 | **Rev: v7.2**

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+12V

J1

J2

RedCubeTerminal

RedCubeTerminal

GND

Battery Lug

Mounting Holes

H1 M3

H2 M3

H3 M3

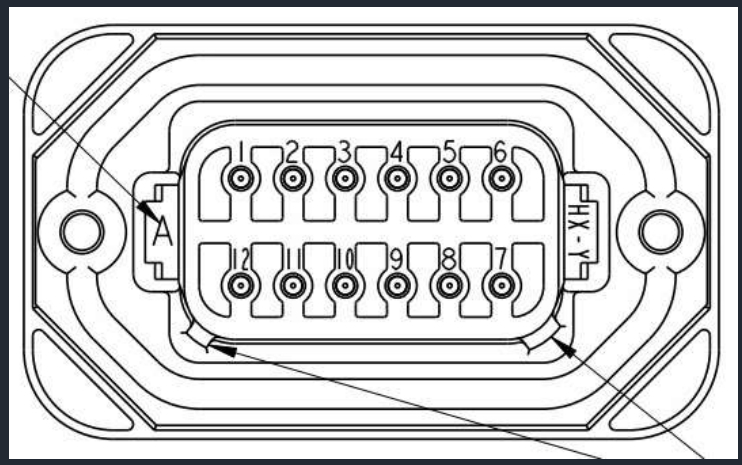
H4 M3

CAN_L 1
CAN_H 2
PF_OUT8 3
PF_OUT7 4
PF_OUT6 5
PF_OUT5 6
PF_OUT1 7
INPUT1 8
PF_OUT4 9
PF_OUT3 10
INPUT2 11
PF_OUT2 12

J3
Conn_01x12

1-HIGH
2-HIGH
3-MED
4-MED
5-MED
6-MED
7-MED
8-MED

Deutsch DT



R56
4.7K

USB_VBUS

R57
10K

GND

+5V

D15
Schottky

J5
USB_C_Receptacle_USB2.0

VBUS A4
CC1 A5
CC2 B5
D- A7
D- B7
D+ A6
D+ B6
SBU1 A8
SBU2 B8
SHIELD
GND
S1
A1

USB_D-

USB_D+

GND

GND

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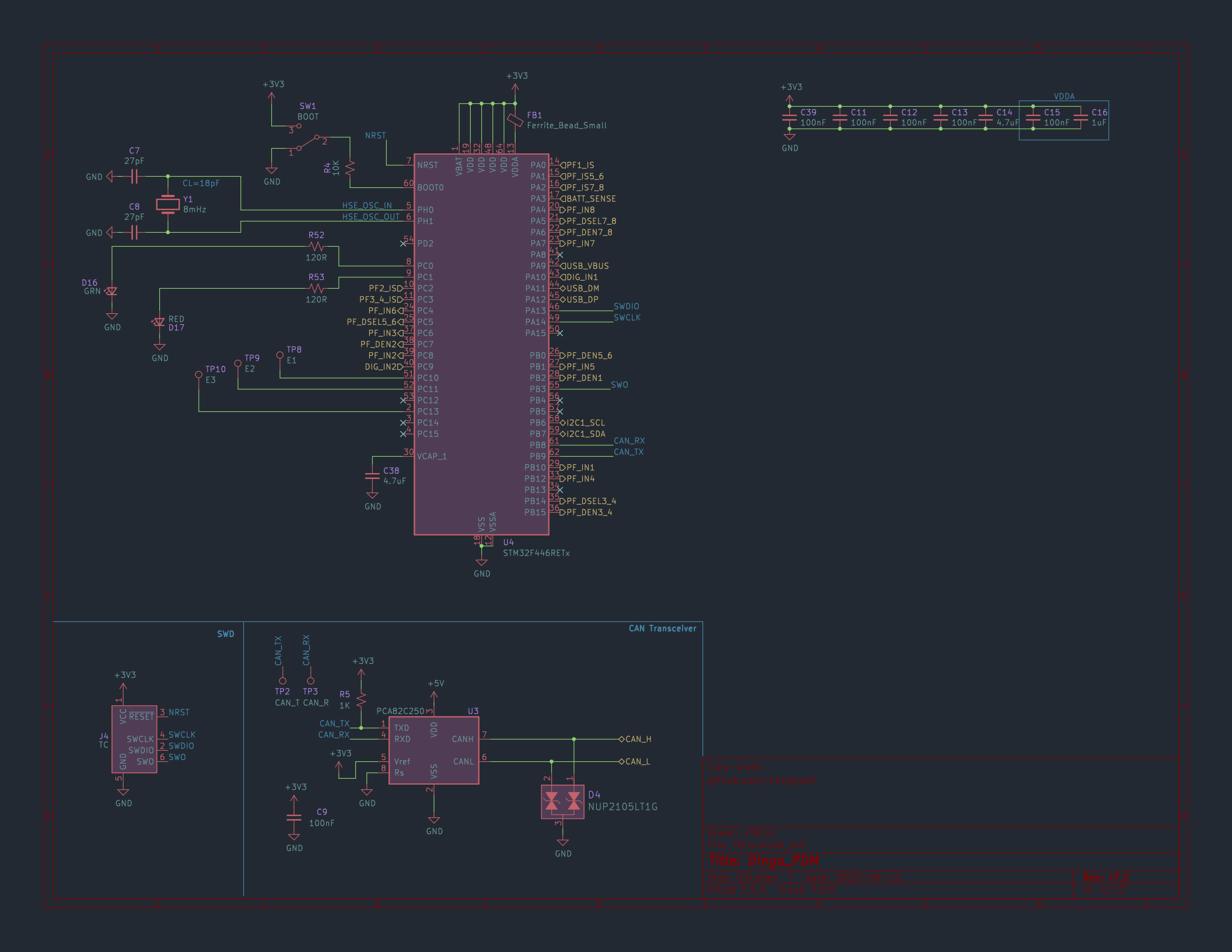
Sheet: /Connectors/
File: Connectors.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11 | Rev: v7.2

KiCad E.D.A. kicad 7.0.0 | Id: 3/13



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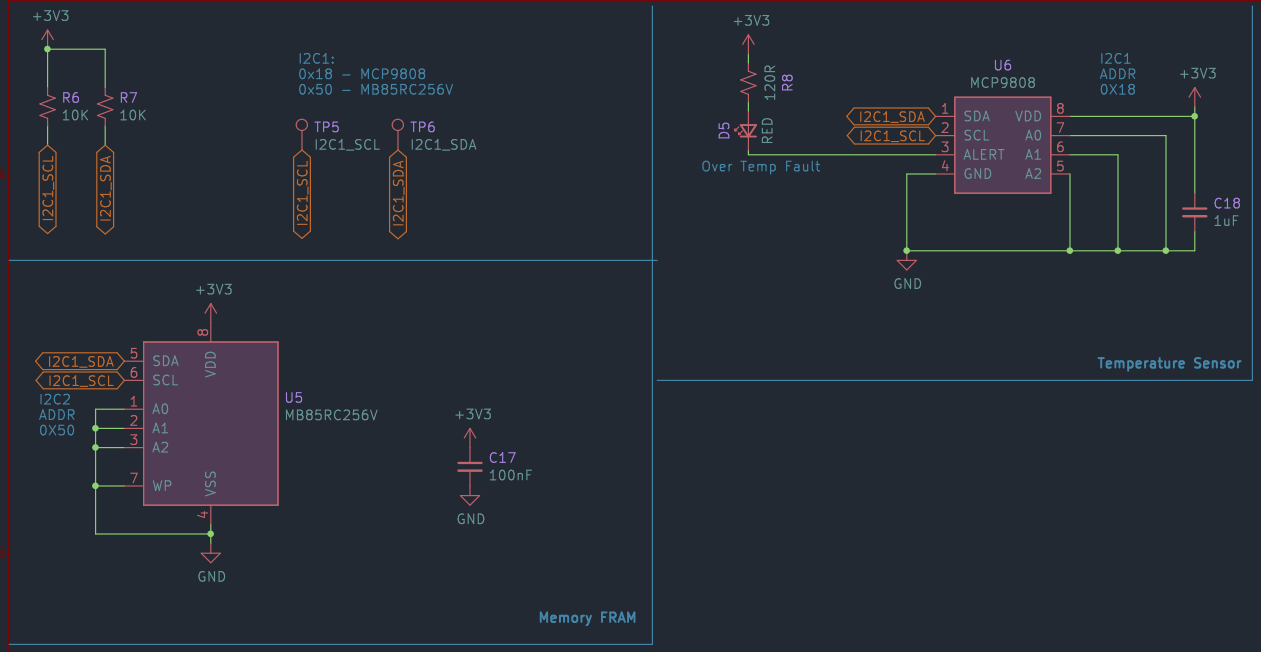
Sheet: /MCU/
File: MCU.kicad_sch

Title: Dingo_PDM

Size: USLetter	Date: 2021-09-11	Rev: v7.2
KiCad E.D.A. kicad 7.0.0		Id: 4/13



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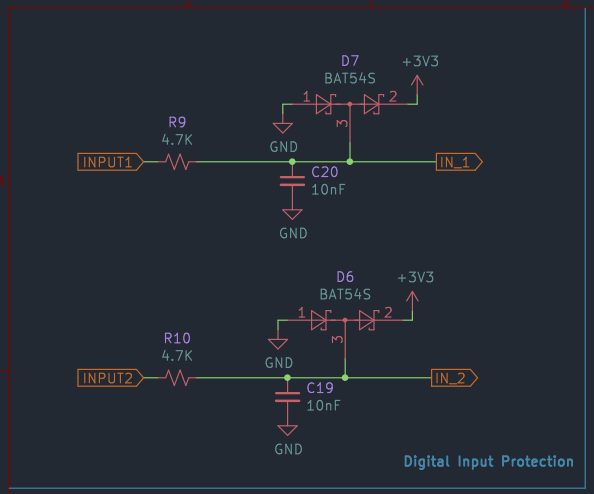
Sheet: /I2C/
File: I2C.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11	Rev: v7.2
KiCad E.D.A. kicad 7.0.0	Id: 5/13



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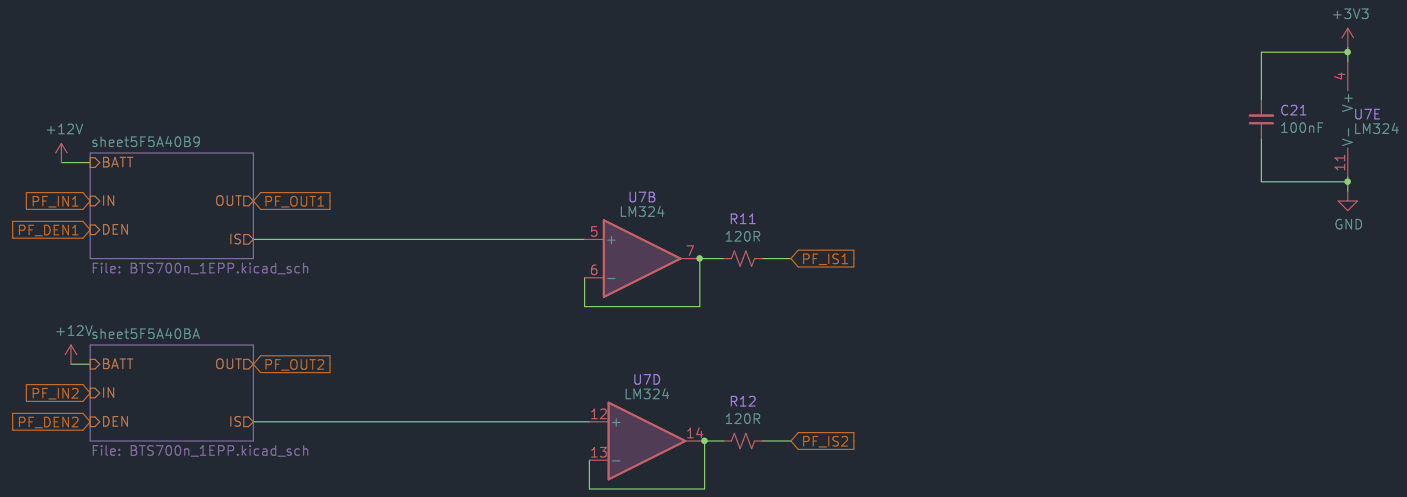
Sheet: /DigitalInputs/
File: DigIn.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11 | **Rev: v7.2**

KiCad E.D.A. kicad 7.0.0 | Id: 6/13



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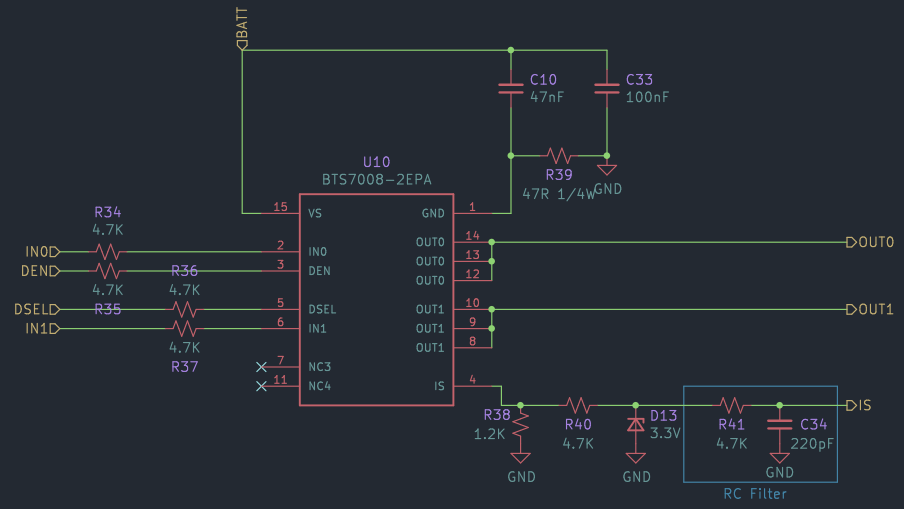
Sheet: /HighCurrentDrivers/
File: HighCurrentDrivers.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11	Rev: v7.2
KiCad E.D.A. kicad 7.0.0	Id: 7/13



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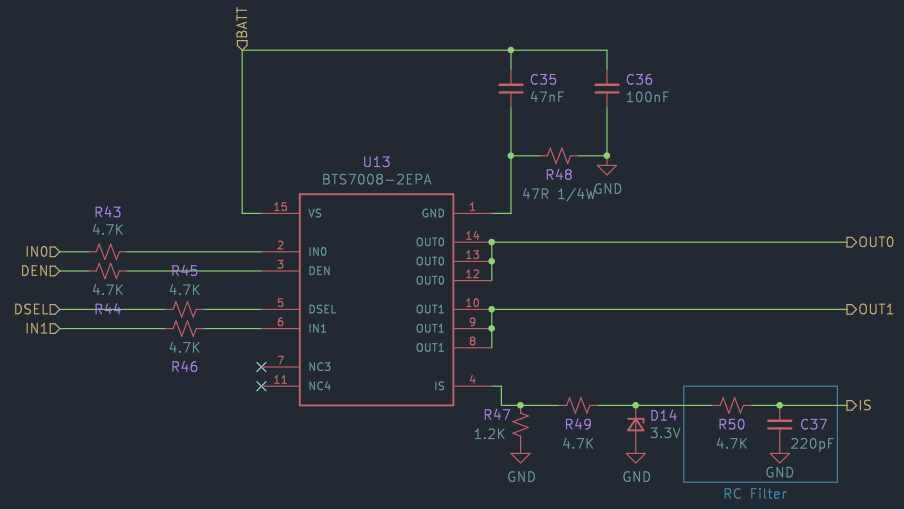
Sheet: /MedCurrentDrivers/Sheet5F9A9075/
File: BTS7008_2EPA.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11	Rev: v7.2
KiCad E.D.A. kicad 7.0.0	Id: 8/13



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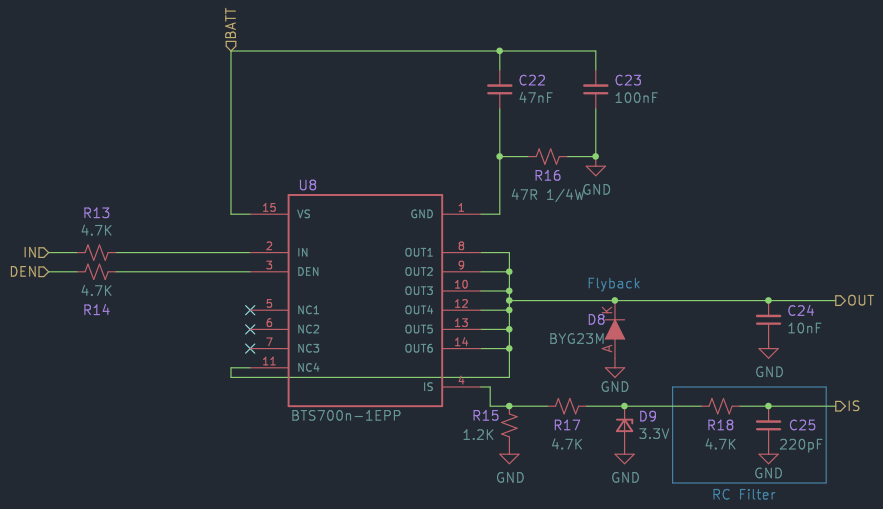
Sheet: /MedCurrentDrivers/Sheet5F5A9C7B/
File: BTS7008_2EPA.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11	Rev: v7.2
KiCad E.D.A. kicad 7.0.0	Id: 9/13



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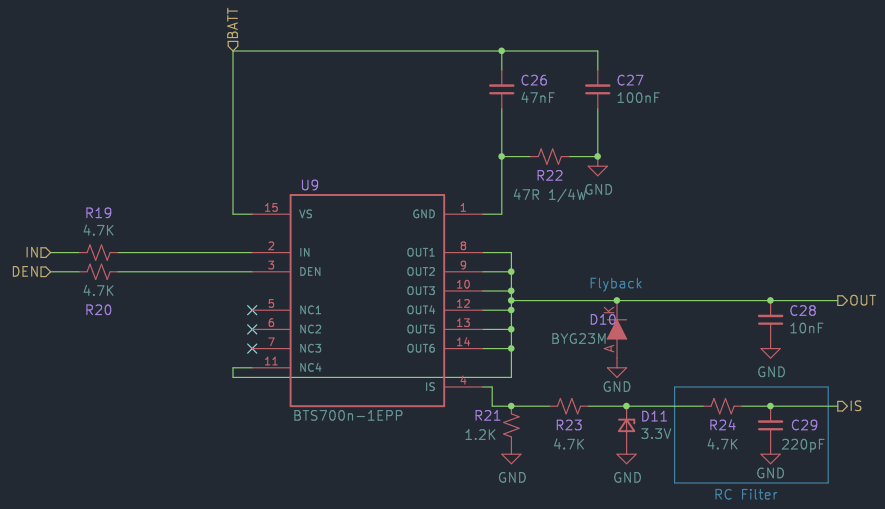
Sheet: /HighCurrentDrivers/sheet5F5A4089/
File: BTS700n_1EPP.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11	Rev: v7.2
KiCad E.D.A. kicad 7.0.0	Id: 10/13



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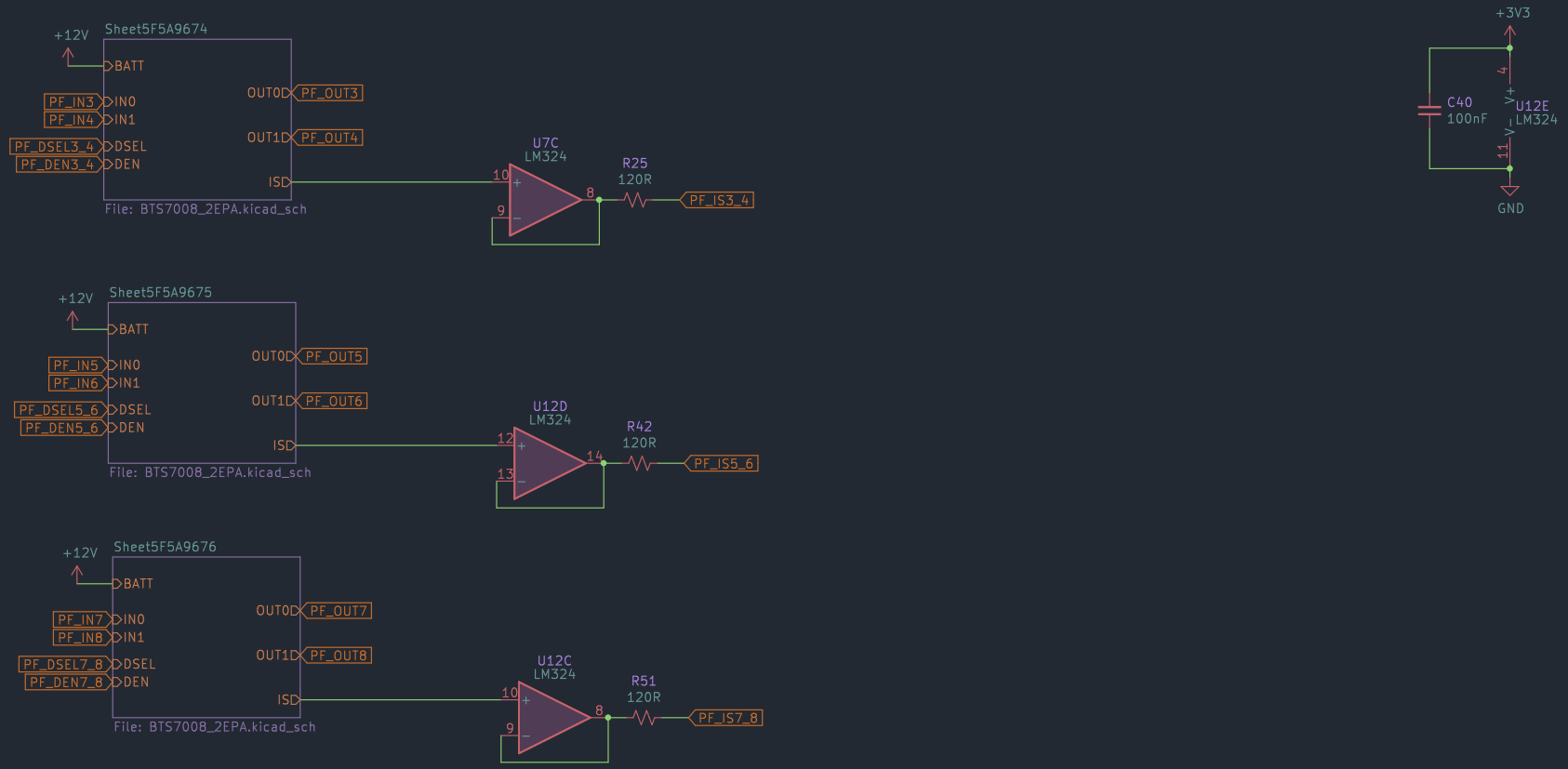
Sheet: /HighCurrentDrivers/sheet5F5A4DBA/
File: BTS700n_1EPP.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11	Rev: v7.2
KiCad E.D.A. kicad 7.0.0	Id: 11/13



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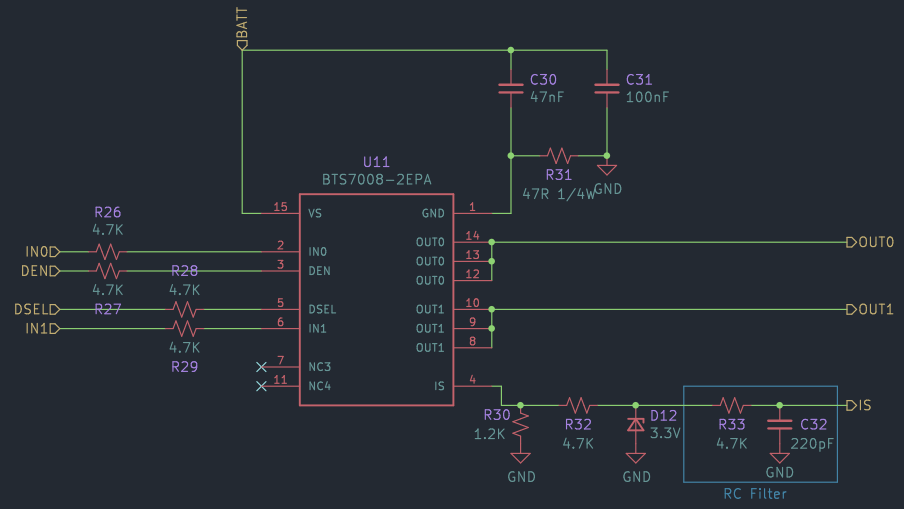
Sheet: /MedCurrentDrivers/
File: MedCurrentDrivers.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11	Rev: v7.2
KiCad E.D.A. kicad 7.0.0	Id: 12/13



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Sheet: /MedCurrentDrivers/Sheet5F5A9074/
File: BTS7008_2EPA.kicad_sch

Title: Dingo_PDM

Size: USLetter | Date: 2021-09-11	Rev: v7.2
KiCad E.D.A. kicad 7.0.0	Id: 13/13