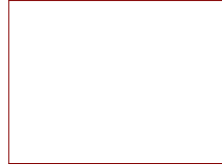


Powersupply



Datel: Powersupply.sch

Launchpad



Datel: Launchpad.sch

- H100 MountingHole
- H102 MountingHole
- H101 MountingHole
- H103 MountingHole

Drehmoment



Datel: Drehmoment.sch

Temperatur



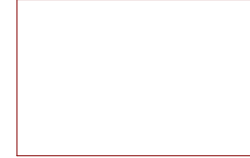
Datel: Temperatur.sch

Encoder



Datel: Encoder.sch

Brücke1



Datel: Brücke1.sch

Brücke2



Datel: Brücke2.sch

HTWG

Sheet: /

File: dcdc_v04.sch

Title: Motorprüfstand

Size: A3 Date: 2021-08-01

KiCad E.D.A. kicad (6.0.1)

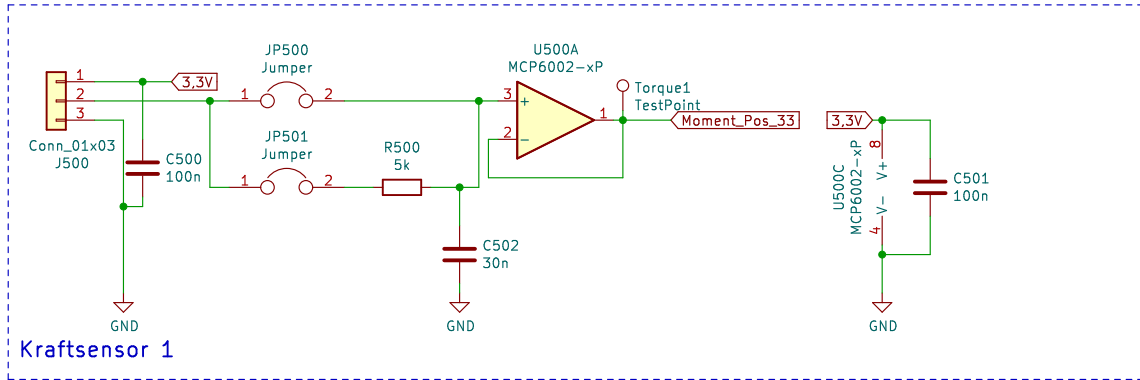
Rev: V04
Id: 1/8

Max Drehmoment pro Motor: 250Ncm = 2,5Nm
Hebelarm ca. 5cm ergibt eine maximale Kraft von 50N

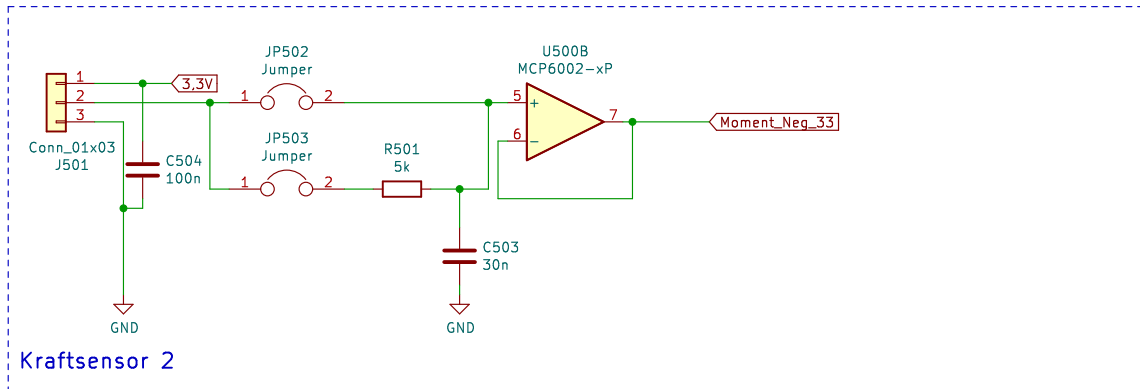
TE-Connectivity
FX293X-100A-0010-L

Range: 50N

Digi-Key Teilenummer 223-FX293X-100A-0010-L-ND
24,44€



Kraftsensor 1



Kraftsensor 2

HTWG

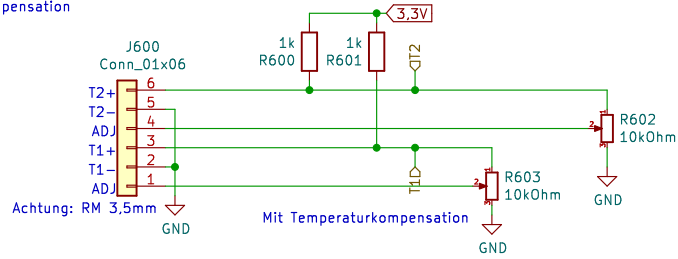
Sheet: /Drehmoment/
File: Drehmoment.sch

Title: Motorprüfstand

Size: A4 Date: 2021-08-01
KiCad E.D.A. kicad (6.0.1)

Rev: V04
Id: 2/8

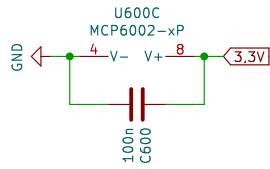
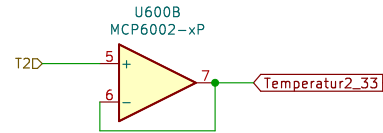
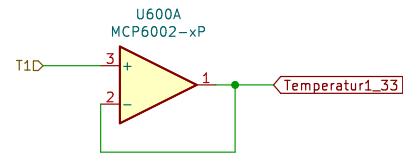
Temperatursensor LM335A
Reichelt: TEX LM335AZ/NOPB
Ohne Temperaturkompensation



Achtung: RM 3,5mm

Mit Temperaturkompensation

Impedanzwandler



Temperaturmessung

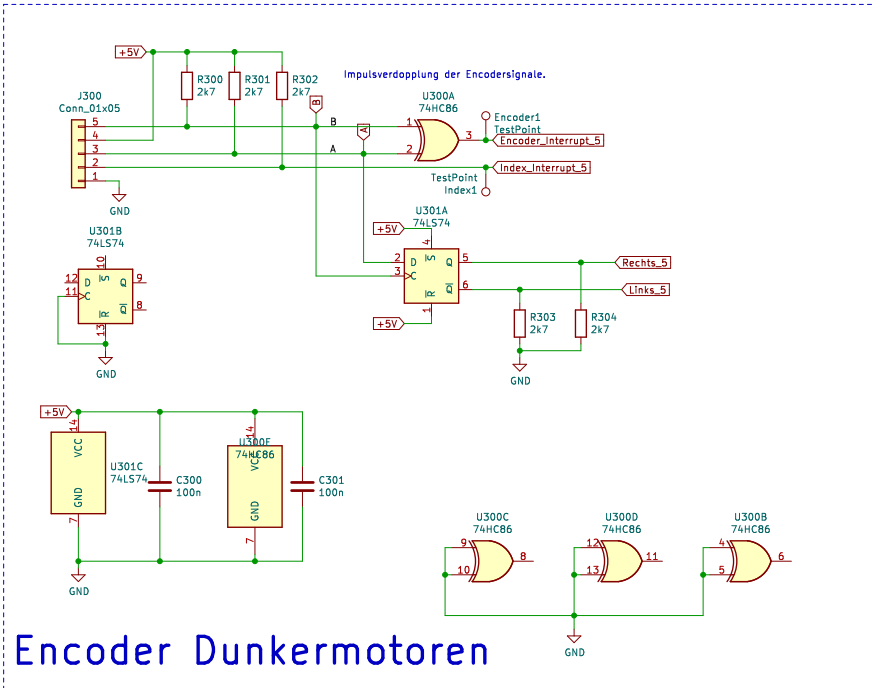
HTWG

Sheet: /Temperatur/
File: Temperatur.sch

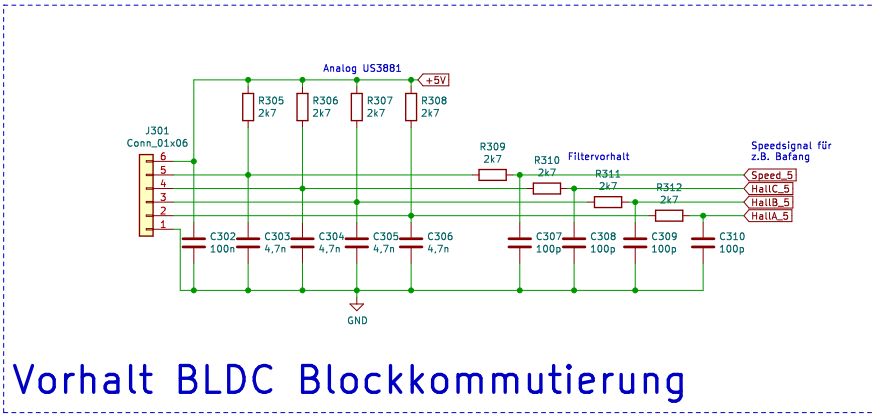
Title: Motorprüfstand

Size: A4 Date: 2021-08-01
KiCad E.D.A. kicad (6.0.1)

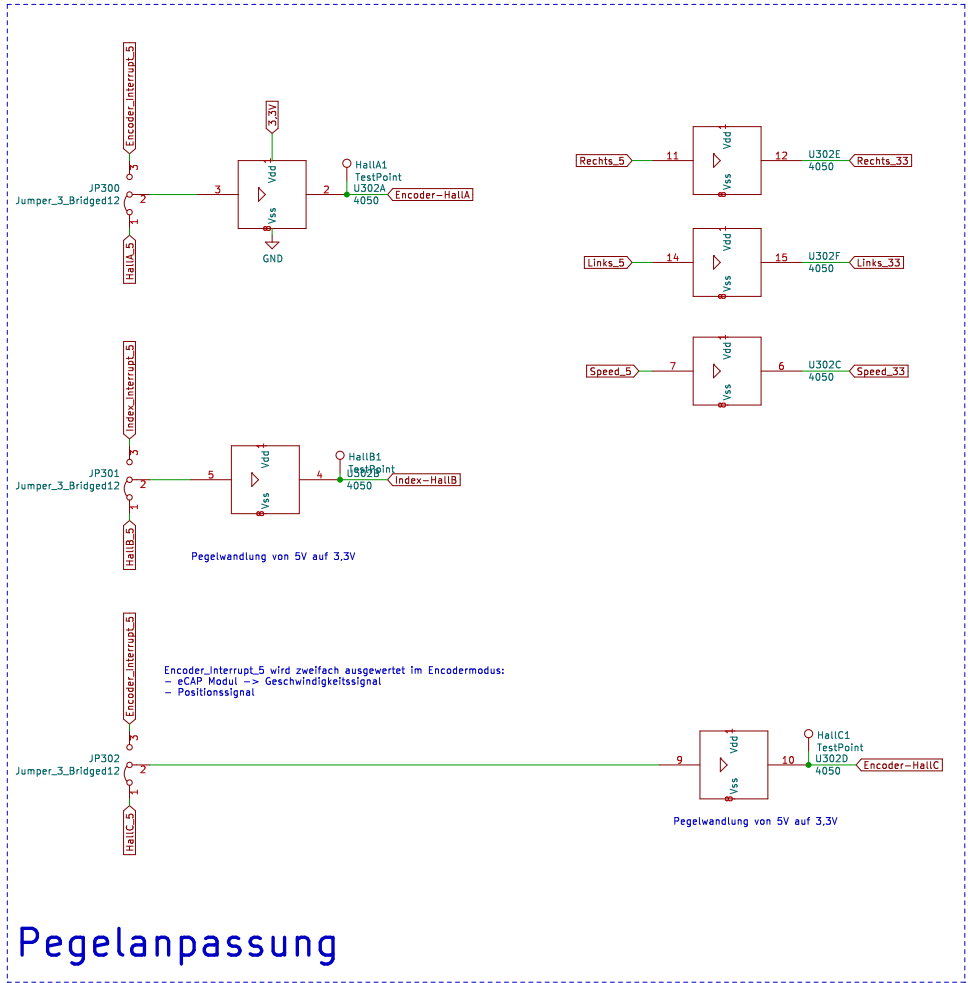
Rev: V04
Id: 3/8



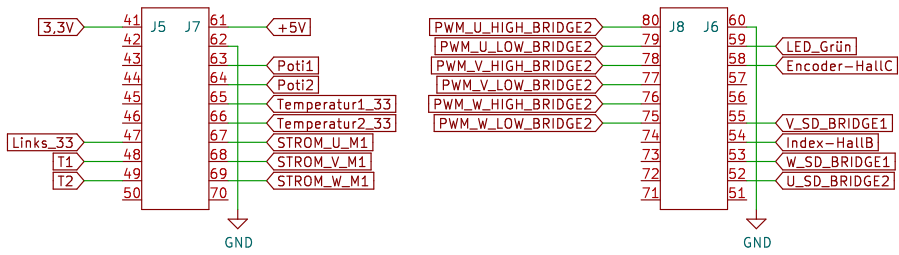
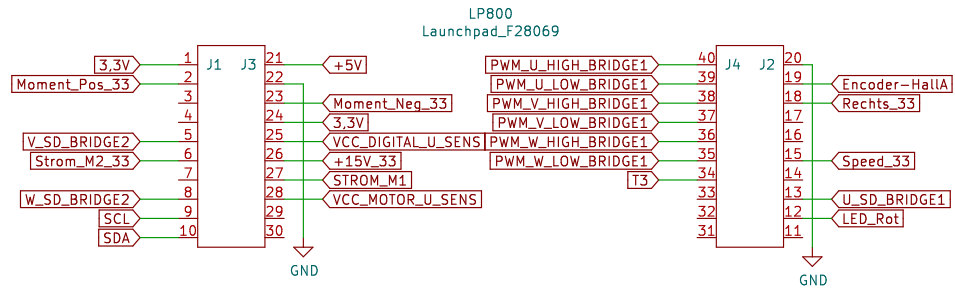
Encoder Dunkermotoren



Vorhalt BLDC Blockkommutierung

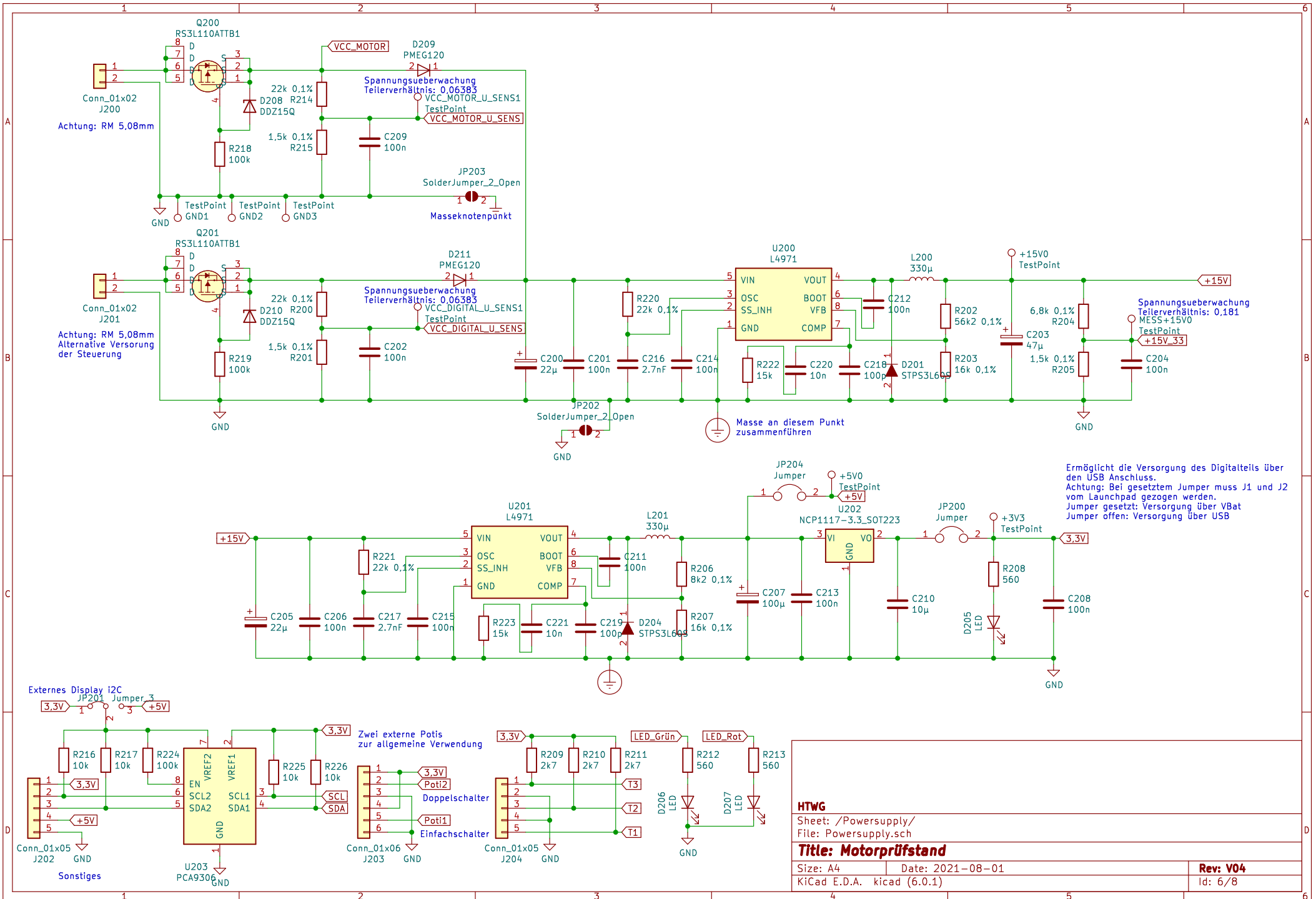


Pegelanpassung



Binbelegung geändert!
T1 & T2 auf GPIO P21 & P23
VCC_MOTOR_U_SENS auf Analog IN ADCINB0

HTWG	
Sheet: /Launchpad/ File: Launchpad.sch	
Title: Motorprüfstand	
Size: A4	Date: 2021-08-01
KiCad E.D.A. kicad (6.0.1)	Rev: V04 Id: 5/8



Achtung: RM 5,08mm

Achtung: RM 5,08mm
Alternative Versorgung
der Steuerung

Ermöglicht die Versorgung des Digitalteils über den USB Anschluss.
Achtung: Bei gesetztem Jumper muss J1 und J2 vom Launchpad gezogen werden.
Jumper gesetzt: Versorgung über VBat
Jumper offen: Versorgung über USB

Externes Display i2C
JP201 Jumper_3

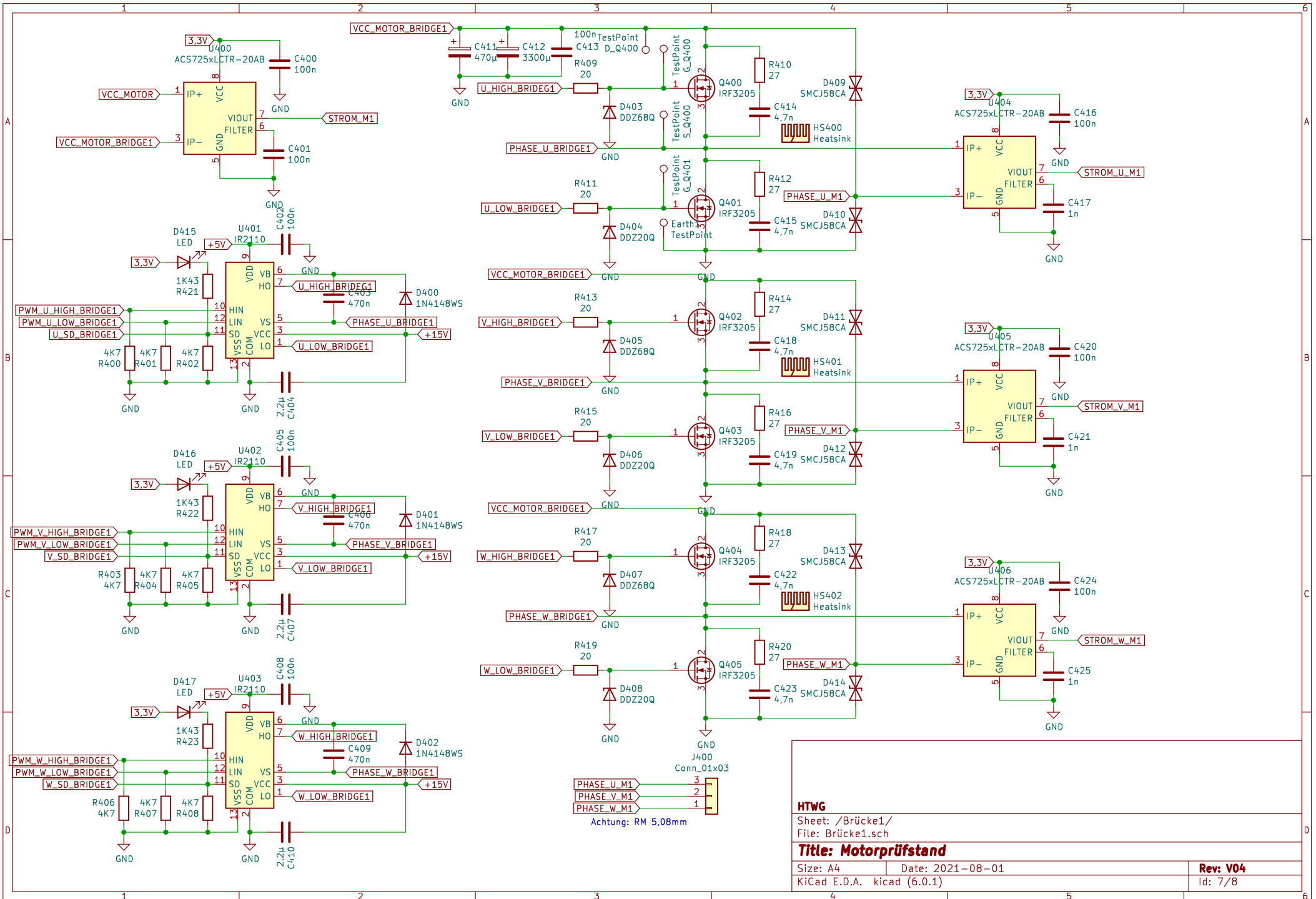
Zwei externe Potts zur allgemeine Verwendung

Doppelschalter

Einfachscharter

Sonstiges

HTWG	
Sheet: /Powersupply/ File: Powersupply.sch	
Title: Motorprüfstand	
Size: A4	Date: 2021-08-01
KiCad E.D.A. kicad (6.0.1)	Rev: V04 Id: 6/8



PHASE_U_M1 3
 PHASE_V_M1 2
 PHASE_W_M1 1
 Achtung: RM 5,08mm

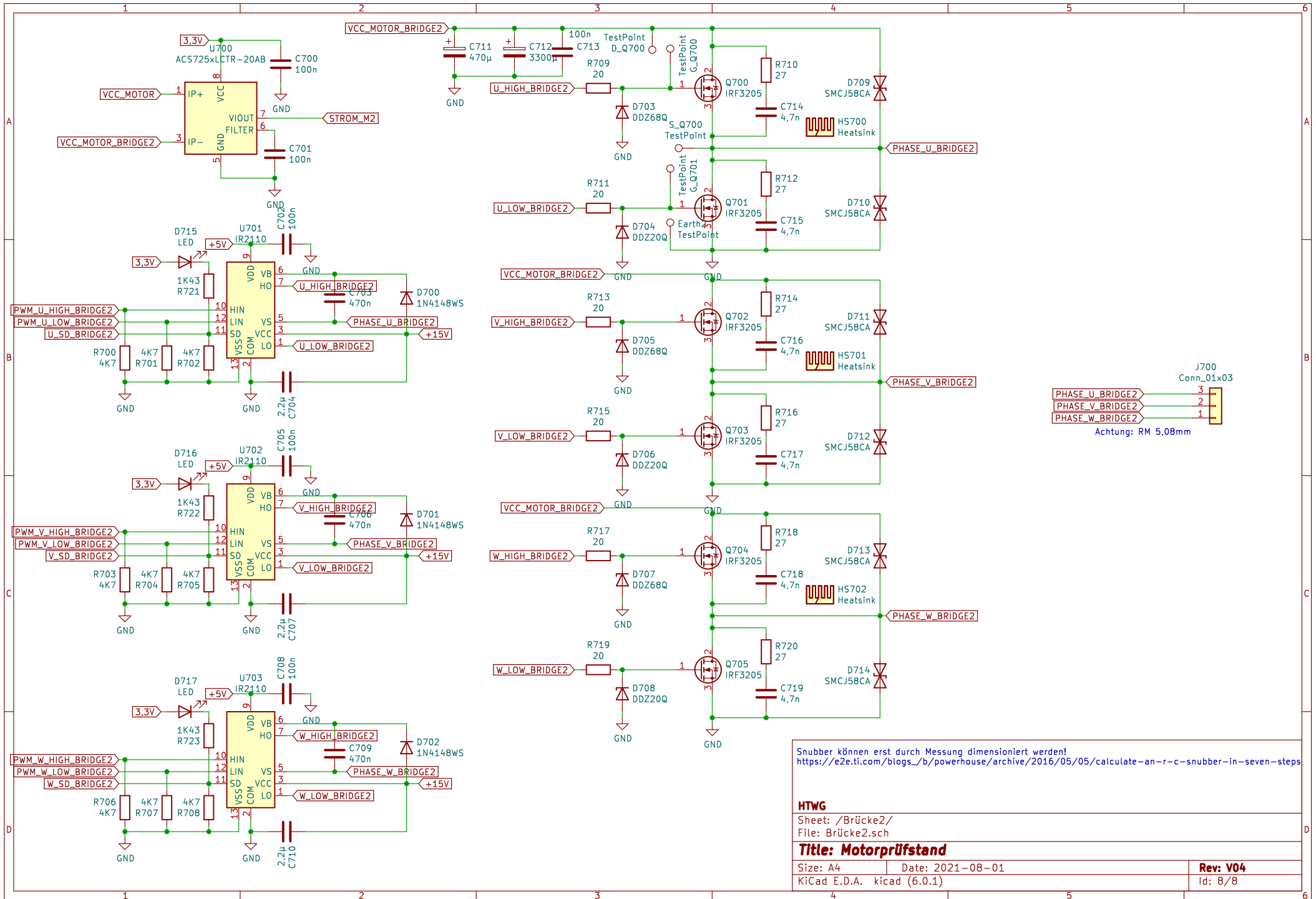
HTWG

Sheet: /Brücke1/
 File: Brücke1.sch

Title: Motorprüfstand

Size: A4 Date: 2021-08-01
 KiCad E.D.A. kicad (6.0.1)

Rev: V04
 Id: 7/8



Snubber können erst durch Messung dimensioniert werden!
https://e2e.ti.com/blogs_/b/powerhouse/archive/2016/05/05/calculate-an-r-c-snubber-in-seven-steps

HTWG	
Sheet: /Brücke2/ File: Brücke2.sch	
Title: Motorprüfstand	
Size: A4	Date: 2021-08-01
KiCad E.D.A. kicad (6.0.1)	Rev: V04 Id: 8/8