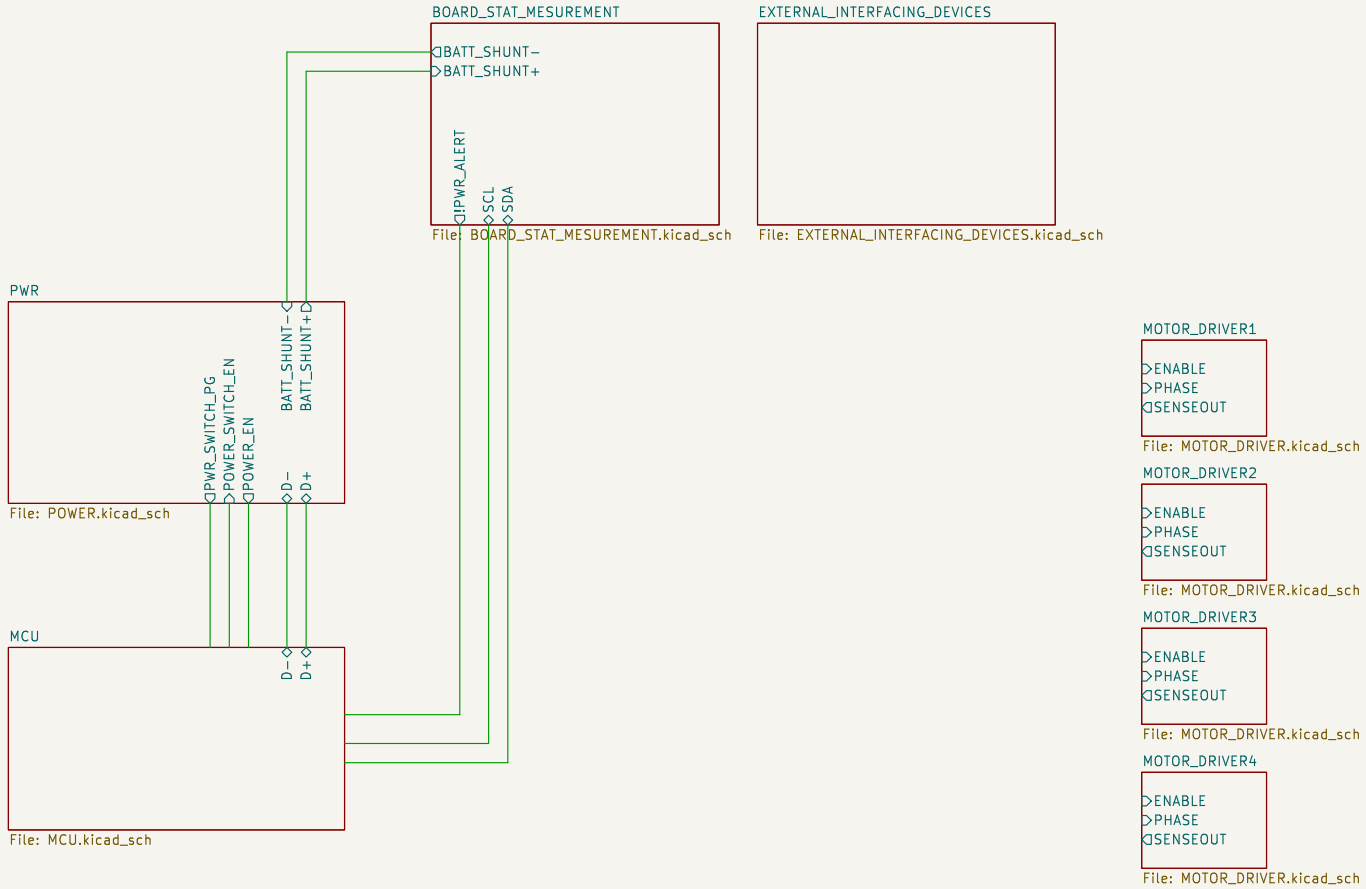

Sheet: /
File: esp32-racer.kicad_sch

Title:

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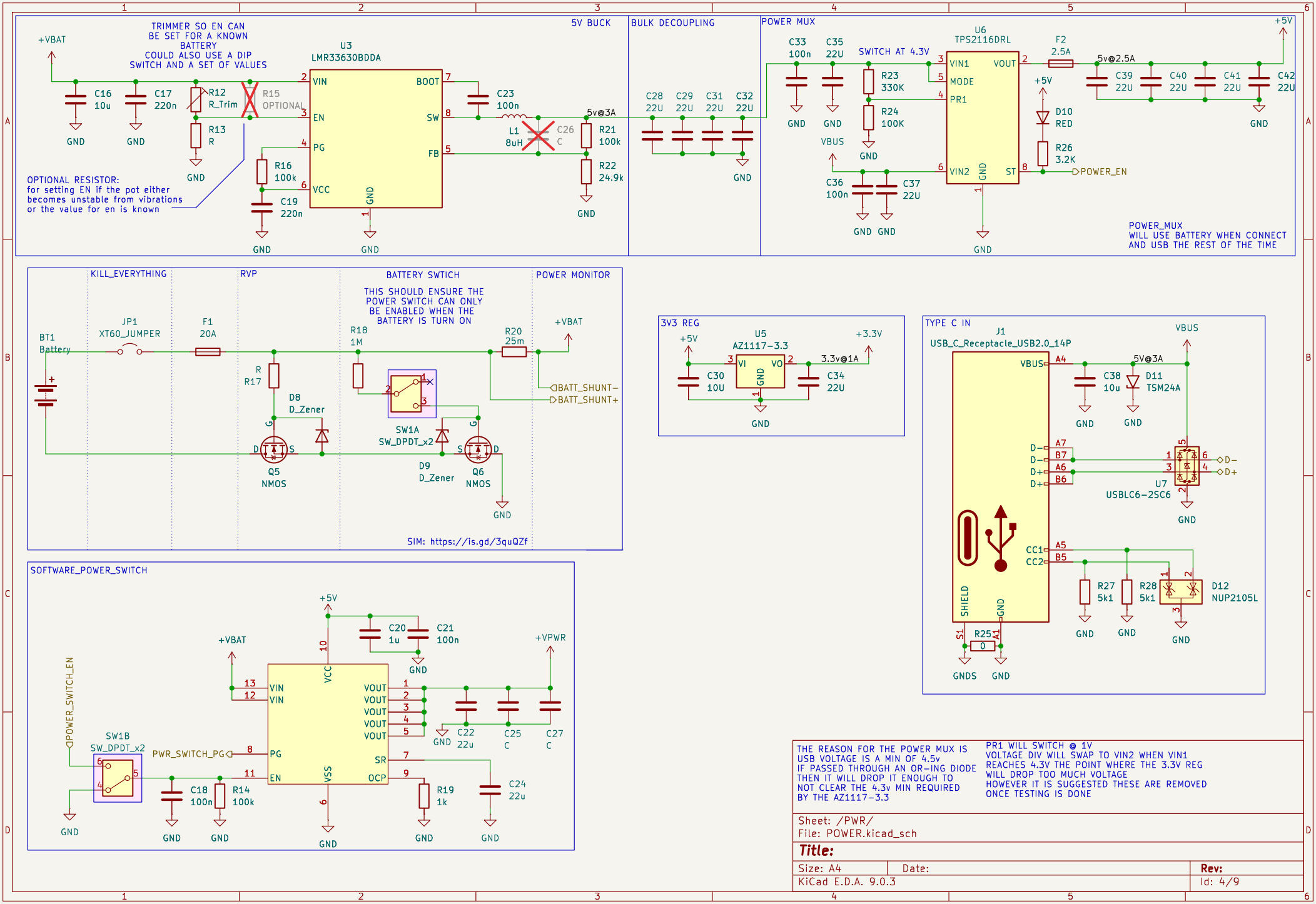
5V BUCK
TRIMMER SO EN CAN BE SET FOR A KNOWN BATTERY COULD ALSO USE A DIP SWITCH AND A SET OF VALUES
+VBAT
U3
LMR33630BDDA
C16 10u
C17 220n
R12 R_Trim
R15 OPTIONAL
R13 R
R16 100k
C19 220n
VIN
EN
PG
VCC
BOOT
SW
FB
GND
C23 100n
L1 8uH
C26 C
R21 100k
R22 24.9k
5v@3A
OPTIONAL RESISTOR:
for setting EN if the pot either becomes unstable from vibrations or the value for en is known
BULK DECOUPLING
C28 22U
C29 22U
C31 22U
C32 22U
POWER MUX
U6
TPS2116DRL
C33 100n
C35 22U
SWITCH AT 4.3V
R23 330K
R24 100K
VIN1
MODE
PR1
VIN2
VOUT
ST
F2 2.5A
5v@2.5A
+5V
D10 RED
R26 3.2K
POWER_EN
C39 22U
C40 22U
C41 22U
C42 22U
C36 100n
C37 22U
VBUS
POWER_MUX
WILL USE BATTERY WHEN CONNECT AND USB THE REST OF THE TIME
KILL_EVERYTHING
RVP
BATTERY SWTICH
THIS SHOULD ENSURE THE POWER SWITCH CAN ONLY BE ENABLED WHEN THE BATTERY IS TURN ON
POWER MONITOR
BT1 Battery
JP1 XT60_JUMPER
F1 20A
R17
D8 D_Zener
R18 1M
R20 25m
SW1A SW_DPDT_x2
D9 D_Zener
Q5 NMOS
Q6 NMOS
BATT_SHUNT-
BATT_SHUNT+
SIM: https://is.gd/3quQZf
3V3 REG
U5
AZ1117-3.3
C30 10U
C34 22U
3.3v@1A
TYPE C IN
J1
USB_C_Receptacle_USB2.0_14P
C38 10u
D11 TSM24A
U7
USBLC6-2SC6
R25 0
R27 5k1
R28 5k1
D12 NUP2105L
SHIELD
SOFTWARE_POWER_SWITCH
SW1B SW_DPDT_x2
POWER_SWITCH_EN
PWR_SWITCH_PG
C18 100n
R14 100k
C20 1u
C21 100n
C22 22u
C25 C
C27 C
R19 1k
C24 22u
+VPWR
THE REASON FOR THE POWER MUX IS USB VOLTAGE IS A MIN OF 4.5v IF PASSED THROUGH AN OR-ING DIODE THEN IT WILL DROP IT ENOUGH TO NOT CLEAR THE 4.3v MIN REQUIRED BY THE AZ1117-3.3
PR1 WILL SWITCH @ 1V VOLTAGE DIV WILL SWAP TO VIN2 WHEN VIN1 REACHES 4.3V THE POINT WHERE THE 3.3V REG WILL DROP TOO MUCH VOLTAGE HOWEVER IT IS SUGGESTED THESE ARE REMOVED ONCE TESTING IS DONE
Sheet: /PWR/
File: POWER.kicad_sch
Title:
Size: A4
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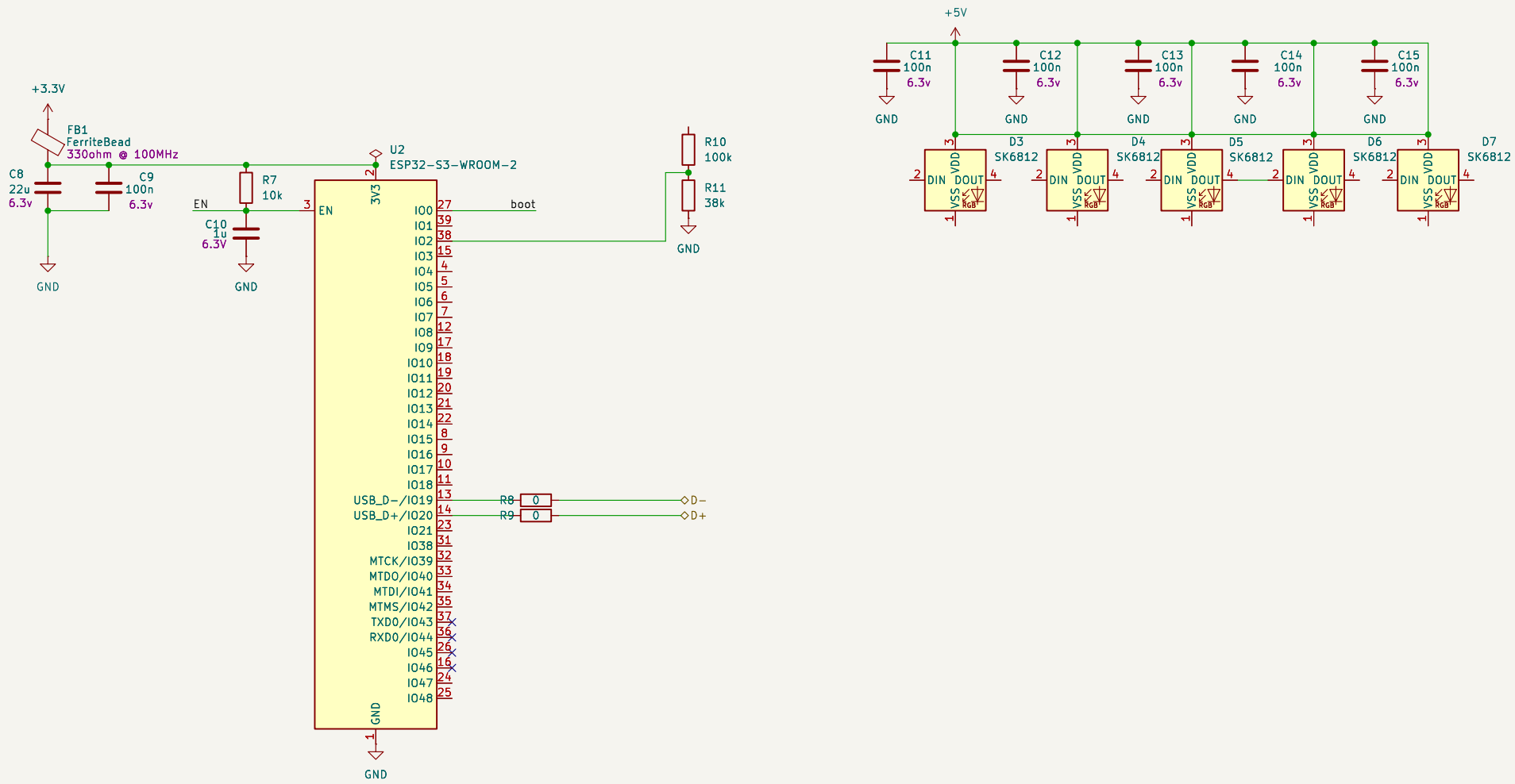

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Title:		
Size: A4	Date:	**Rev:**
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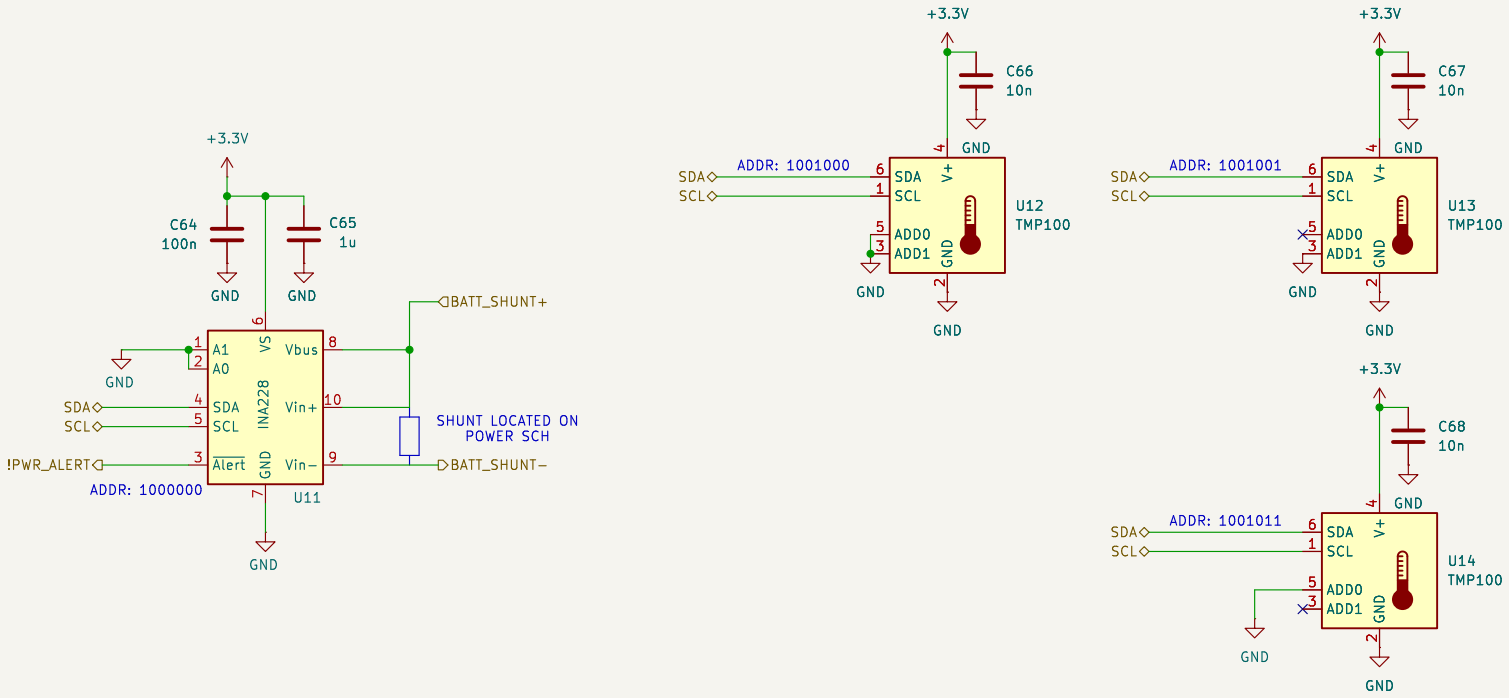

points to measure temp:
software controlled power switch
power mux
motor drivers

Sheet: /BOARD_STAT_MESUREMENT/
File: BOARD_STAT_MESUREMENT.kicad_sch

Title:

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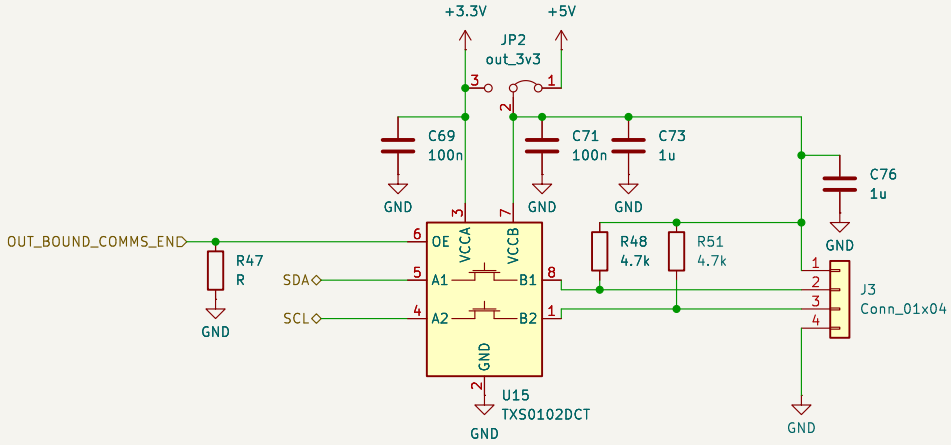

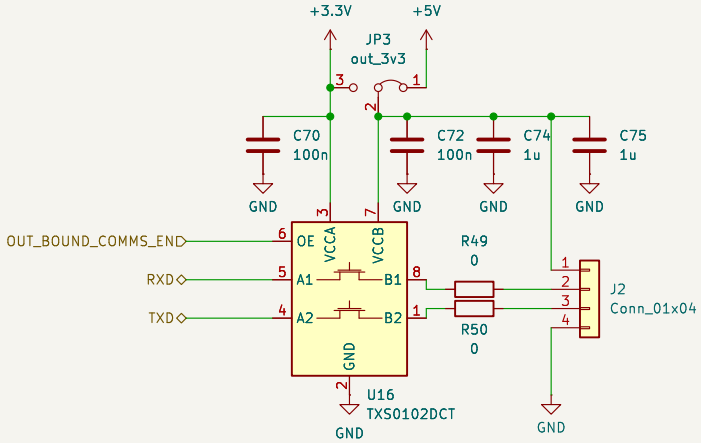

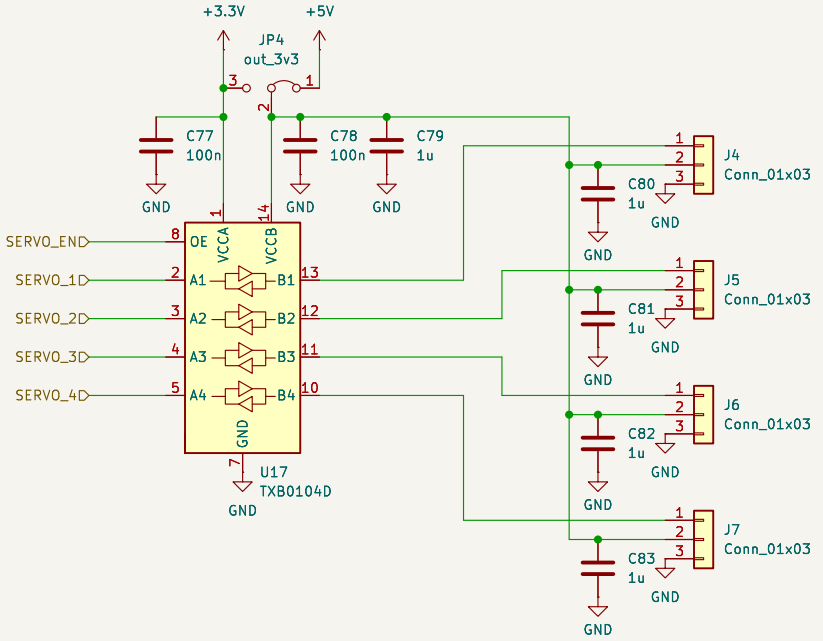

Sheet: /EXTERNAL_INTERFACING_DEVICES/
File: EXTERNAL_INTERFACING_DEVICES.kicad_sch

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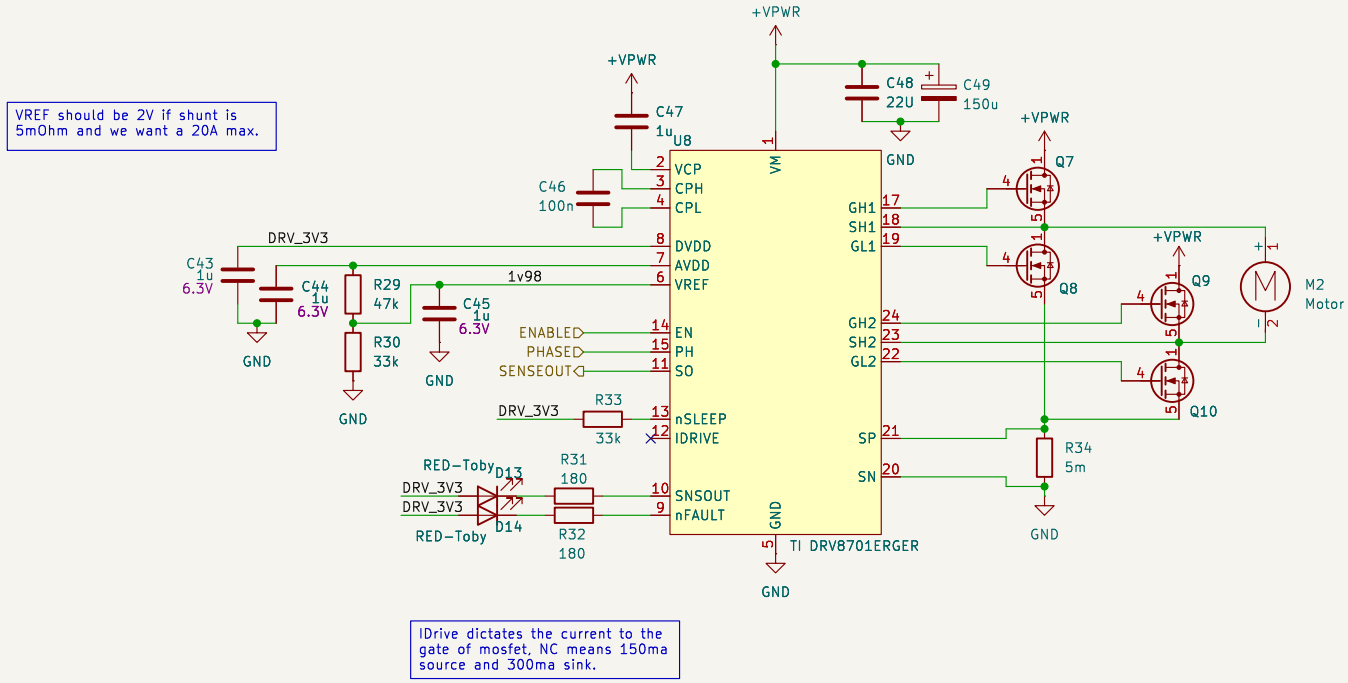

Sheet: /MOTOR_DRIVER1/		
File: MOTOR_DRIVER.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
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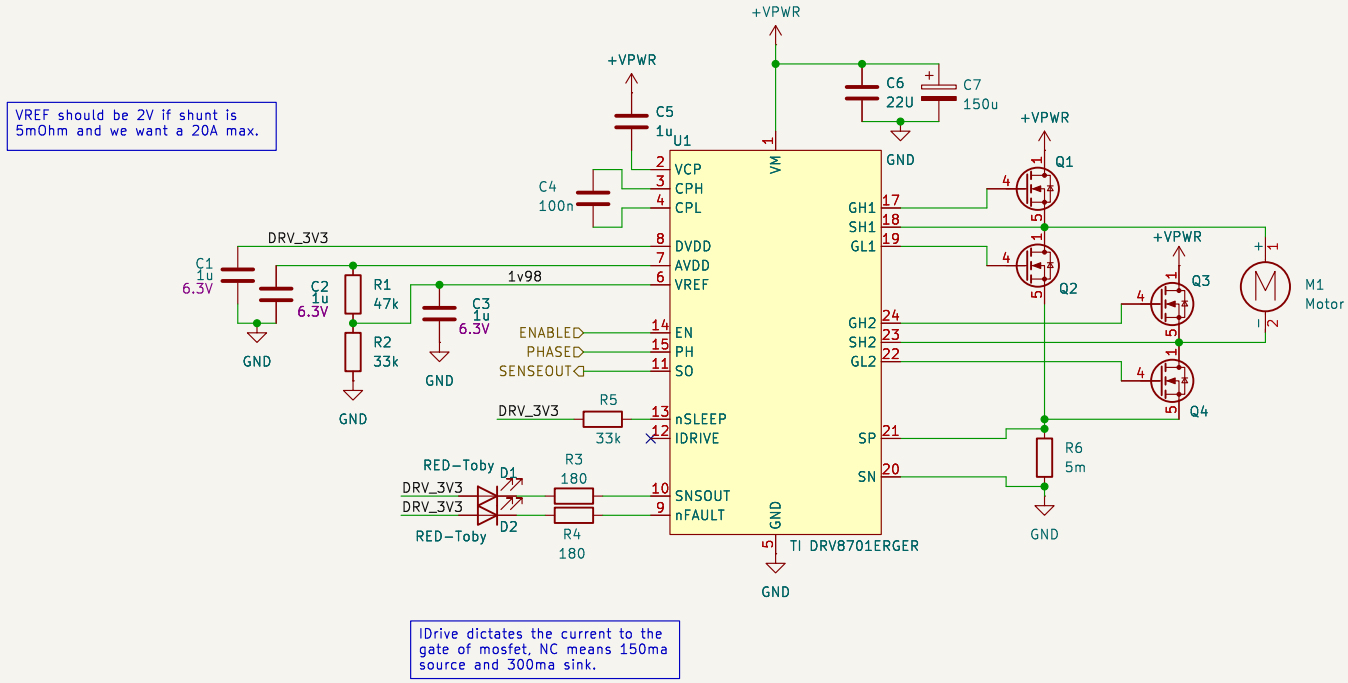

IDrive dictates the current to the gate of mosfet, NC means 150ma source and 300ma sink.

Sheet: /MOTOR_DRIVER2/
File: MOTOR_DRIVER.kicad_sch

Title:

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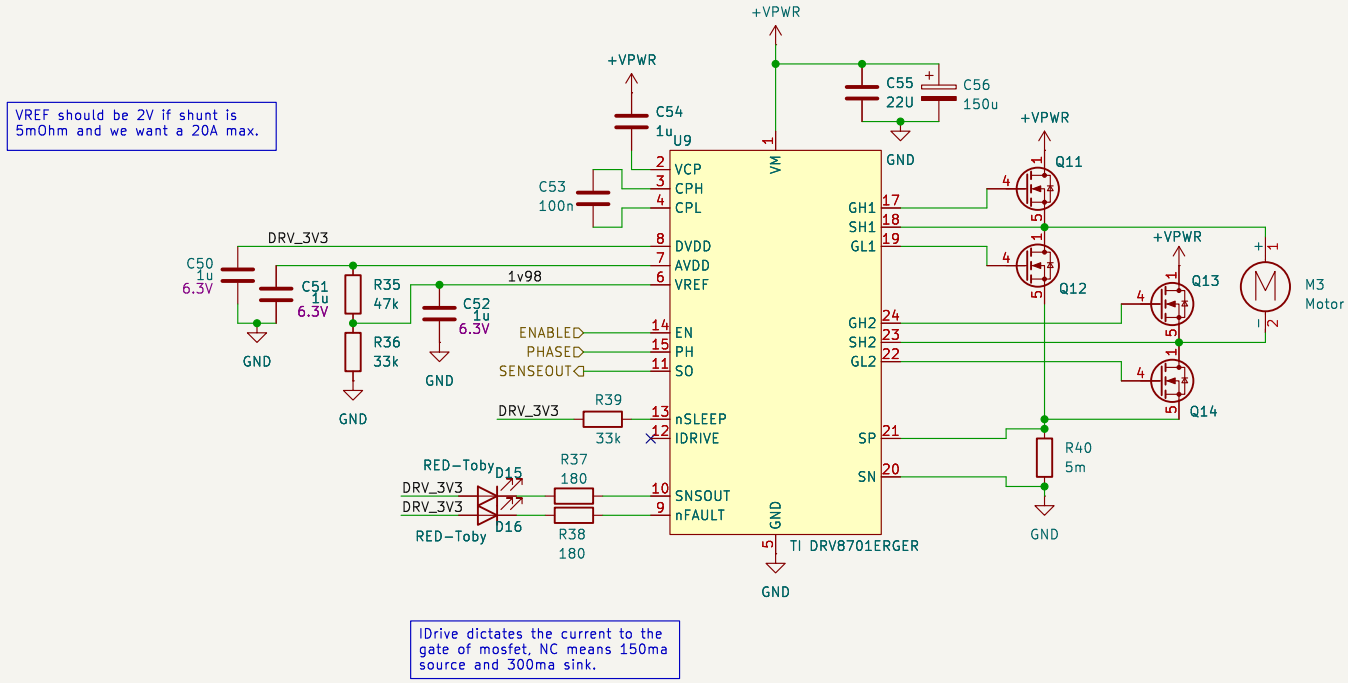

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Size: A4	Date:	**Rev:**
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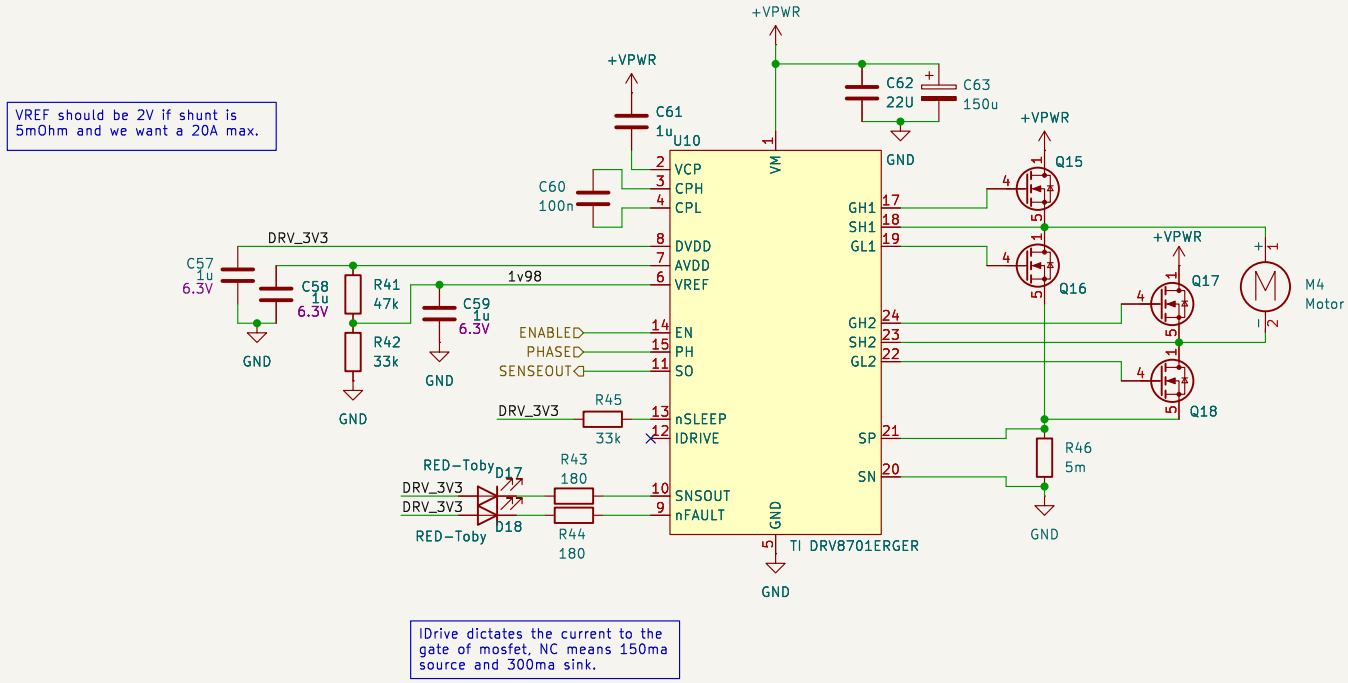

Sheet: /MOTOR_DRIVER4/		
File: MOTOR_DRIVER.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.3		Id: 7/9