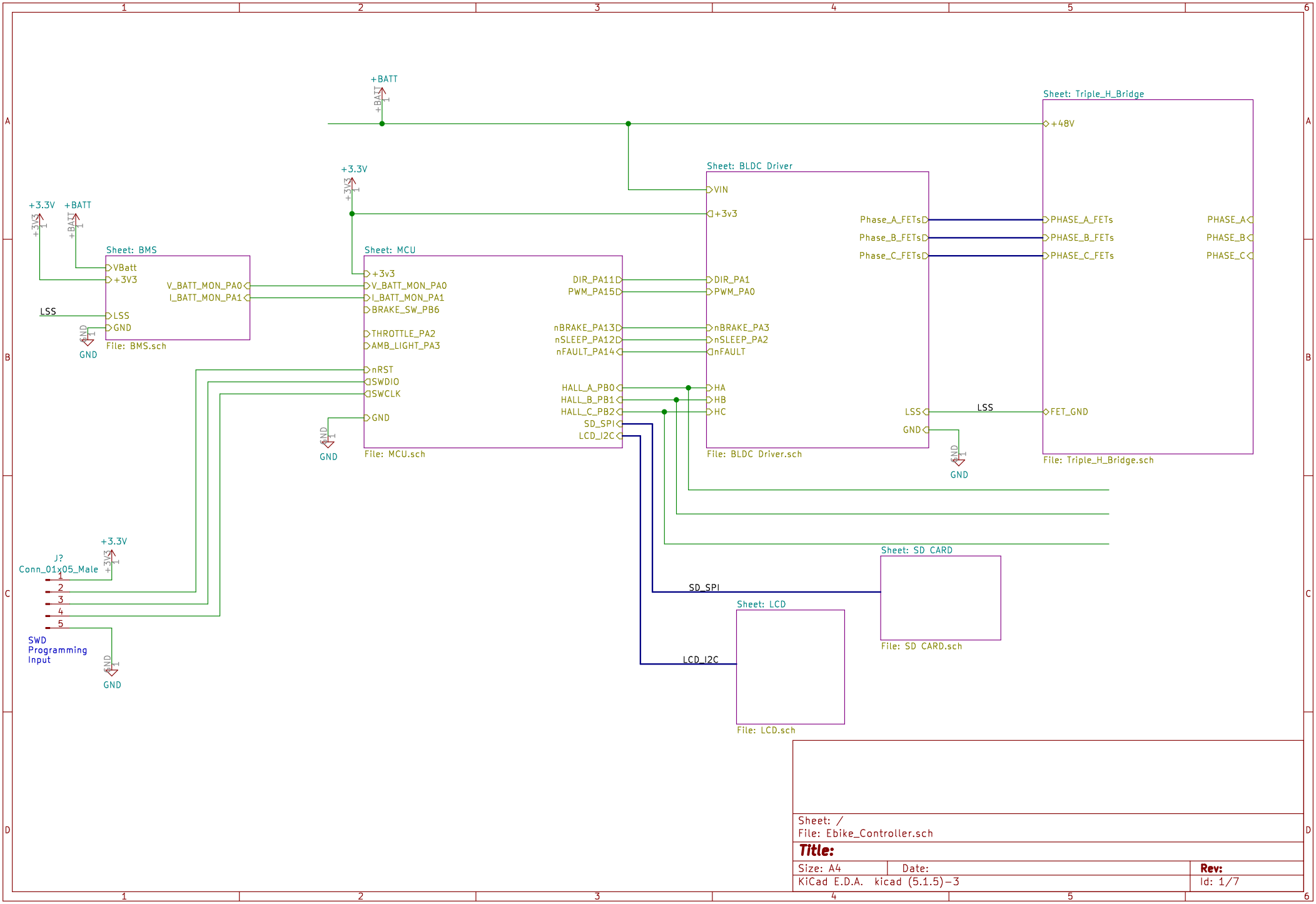
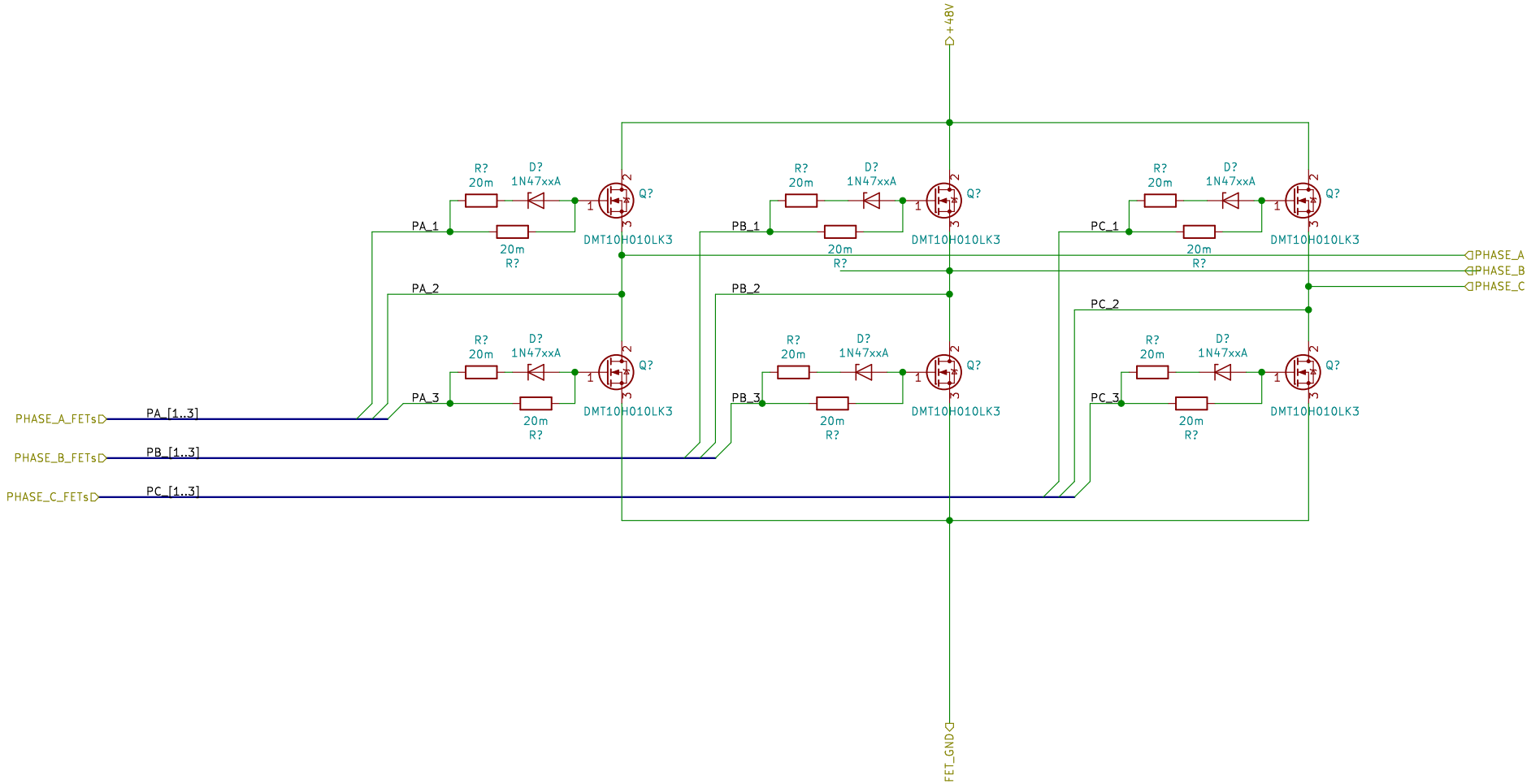
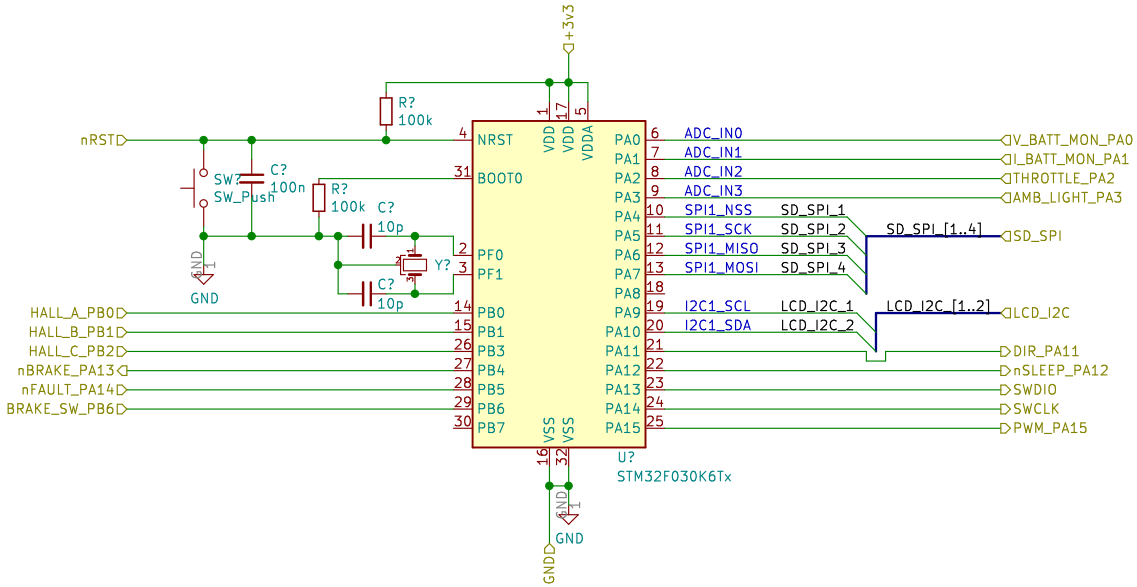
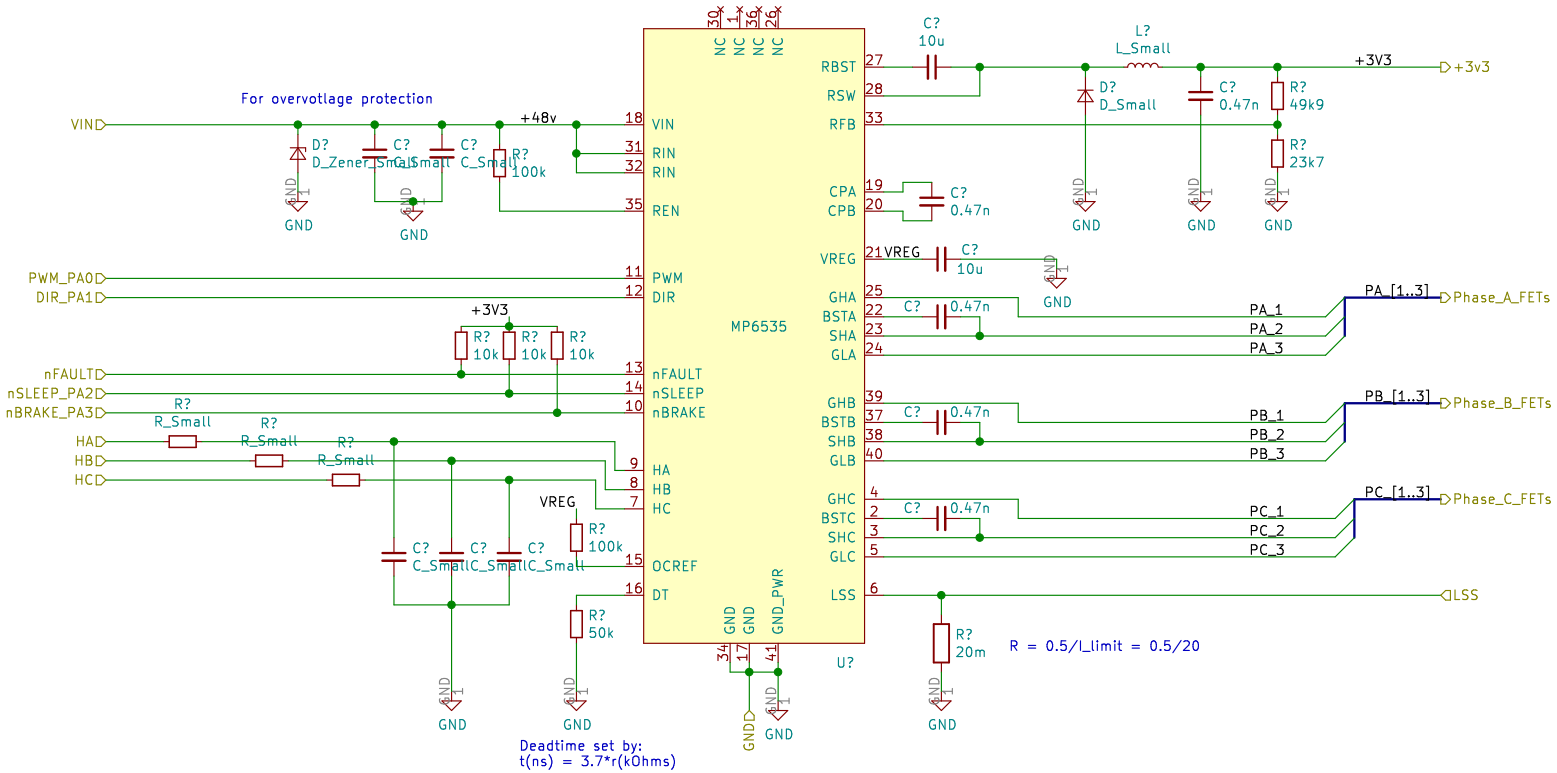

+BATT
+3.3V
+BATT
+3.3V
LSS
GND
Sheet: BMS
VBatt
+3V3
LSS
GND
V_BATT_MON_PA0
I_BATT_MON_PA1
File: BMS.sch
Sheet: MCU
+3v3
V_BATT_MON_PA0
I_BATT_MON_PA1
BRAKE_SW_PB6
THROTTLE_PA2
AMB_LIGHT_PA3
nRST
SWDIO
SWCLK
GND
DIR_PA11
PWM_PA15
nBRAKE_PA13
nSLEEP_PA12
nFAULT_PA14
HALL_A_PB0
HALL_B_PB1
HALL_C_PB2
SD_SPI
LCD_I2C
File: MCU.sch
Sheet: BLDC Driver
VIN
+3v3
DIR_PA1
PWM_PA0
nBRAKE_PA3
nSLEEP_PA2
nFAULT
HA
HB
HC
Phase_A_FETs
Phase_B_FETs
Phase_C_FETs
LSS
GND
File: BLDC Driver.sch
Sheet: Triple_H_Bridge
+48V
PHASE_A_FETs
PHASE_B_FETs
PHASE_C_FETs
PHASE_A
PHASE_B
PHASE_C
LSS
FET_GND
File: Triple_H_Bridge.sch
+3.3V
J?
Conn_01x05_Male
1
2
3
4
5
SWD
Programming
Input
GND
Sheet: SD CARD
SD_SPI
File: SD CARD.sch
Sheet: LCD
LCD_I2C
File: LCD.sch
Sheet: /
File: Ebike_Controller.sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad (5.1.5)-3
Id: 1/7



Sheet: /Triple_H_Bridge/		
File: Triple_H_Bridge.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 2/7



Sheet: /MCU/ File: MCU.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 3/7



Sheet: /BLDC Driver/ File: BLDC Driver.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 4/7

Sheet: /SD CARD/
File: SD CARD.sch

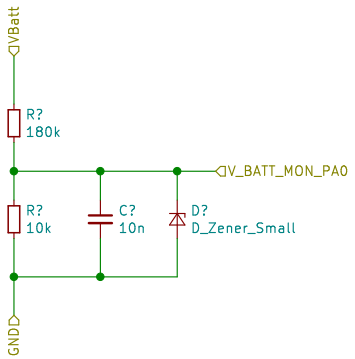
Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 5/7

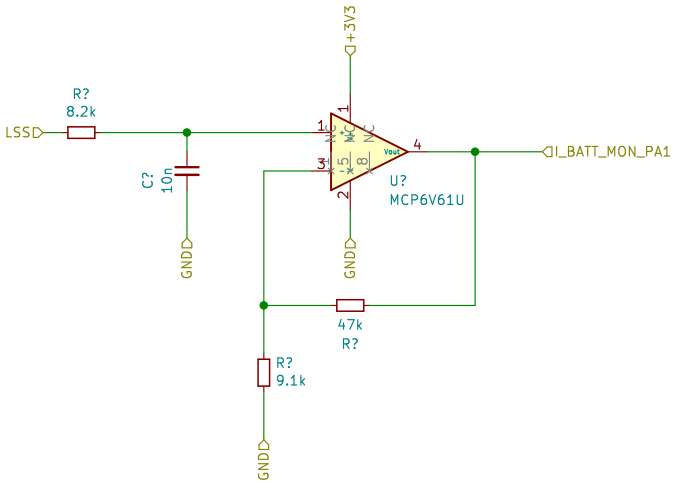
Sheet: /LCD/
File: LCD.sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 6/7



fc = 1.5KHz (about a decade below the switching frequency (20KHz)
Av = 18.3, hence worst case Vin = 55, then Vout = 3V



fc = 2KHz (a decade below the switching frequency (20KHz)
Av = 6.1, hence worst case Vin = 0.5R * 25A * 6.1 V/V = 3.1V

Sheet: /BMS/ File: BMS.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 7/7