

NOTES:

1. THIS SCHEMATIC REFERENCES PCB VERSION: G

CHANGE LOG:

REV G04

1. RESISTORS R148 AND R168 CHANGED TO DNI.

REV G03

- 1. RESISTORS R67 AND R68 CHANGED 0.22 -> 0 OHM 2512 PART.
- 2. RESISTOR R222 CHANGED 165 -> 49.9 OHM 0805 PART.

REV G02

- 1. RESISTOR R75 CHANGED 22.1K -> 19.6K.

REV G01

- 1. MOVED Q29 UP BY 0.4MM FROM BOARD EDGE.
- 2. GREW LEFT, RIGHT, AND TOP EDGES BY 0.5MM EACH.

REV F

- 1. CHANGED FUSE CLIPS FC1 AND FC2 FOOTPRINT TO USE SLOTS INSTEAD OF HOLES PER AML FEEDBACK.
- 2. CHANGED MOLEX PICOBLADE J5 DRILL HOLE SIZE PER AML FEEDBACK.
- 3. ADDED ELECTONIC LATCHING OF MOTOR ENABLE SIGNAL FOR FLAME PROTECTION.
- 4. ADDED SERIES PTC FUSES TO MOTOR FOR FLAME PROTECTION.
- 5. ADDED SERIES RESISTORS AND FUSES FOR ALL POWER OUTPUTS LEAVING BOARD THROUGH HARNESSSES.
- 6. MAJOR LAYOUT REVISION FOR EMI AND ADDITION OF CURRENT PROTECTION DEVICES.

REV E

- 1. INCREASED ALL TEST POINTS TO >=0.8MM.
- 2. CORRECTED DF5A6.8 ESD DIODE FOOTPRINTS.
- 3. CHANGED MOUNTING HOLES TO PLATED THRU.

REV D

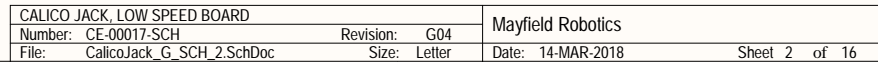
- 1. DFM FIXES.

REV C

- 1. CHANGED L3 TO TRI-TRON PART.

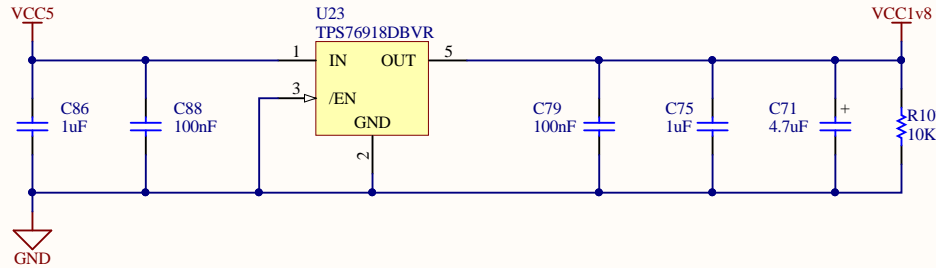
REV B

- 1. DIODES 35, 52, 57 CHANGED TO FEC SMBJ14CA
- 2. REPURPOSED ESD DIODES TO FACILITATE DFM CHANGES TO FAB

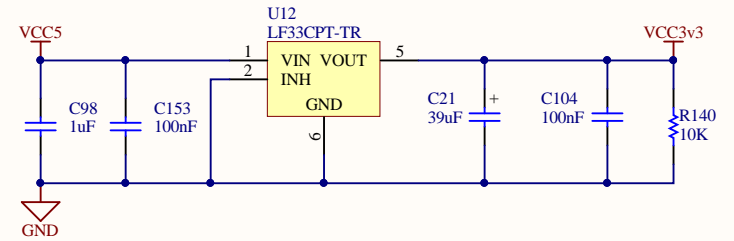


# POWER MANAGEMENT AND STATUS LEDs

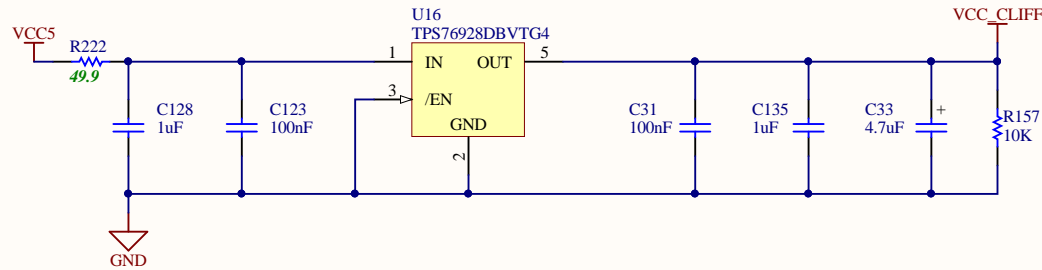
## ADC REFERENCE VOLTAGE REGULATOR



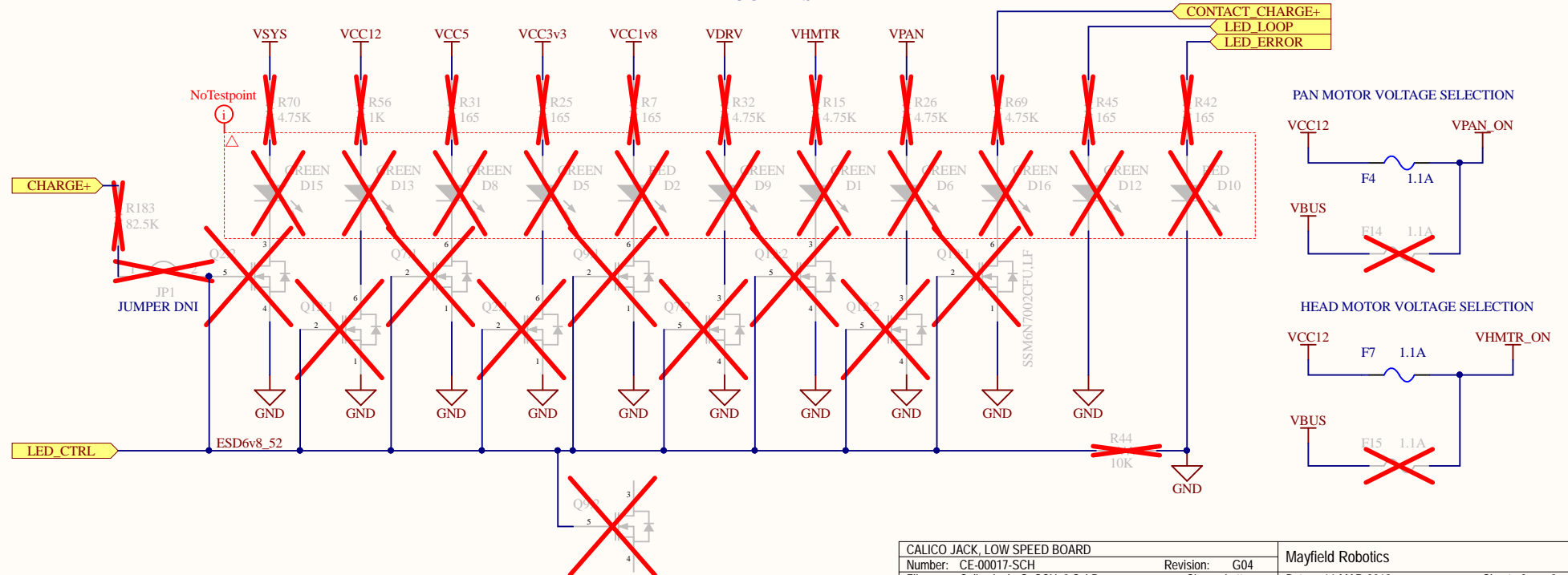
## 3.3V LDO FOR XMEGA AND PERIPHERALS



## CLIFF SENSOR VOLTAGE REGULATOR



## DEBUG LEDs



CALICO JACK, LOW SPEED BOARD

Number: CE-00017-SCH

File: CalicoJack\_G\_SCH\_3.SchDoc

Revision: G04

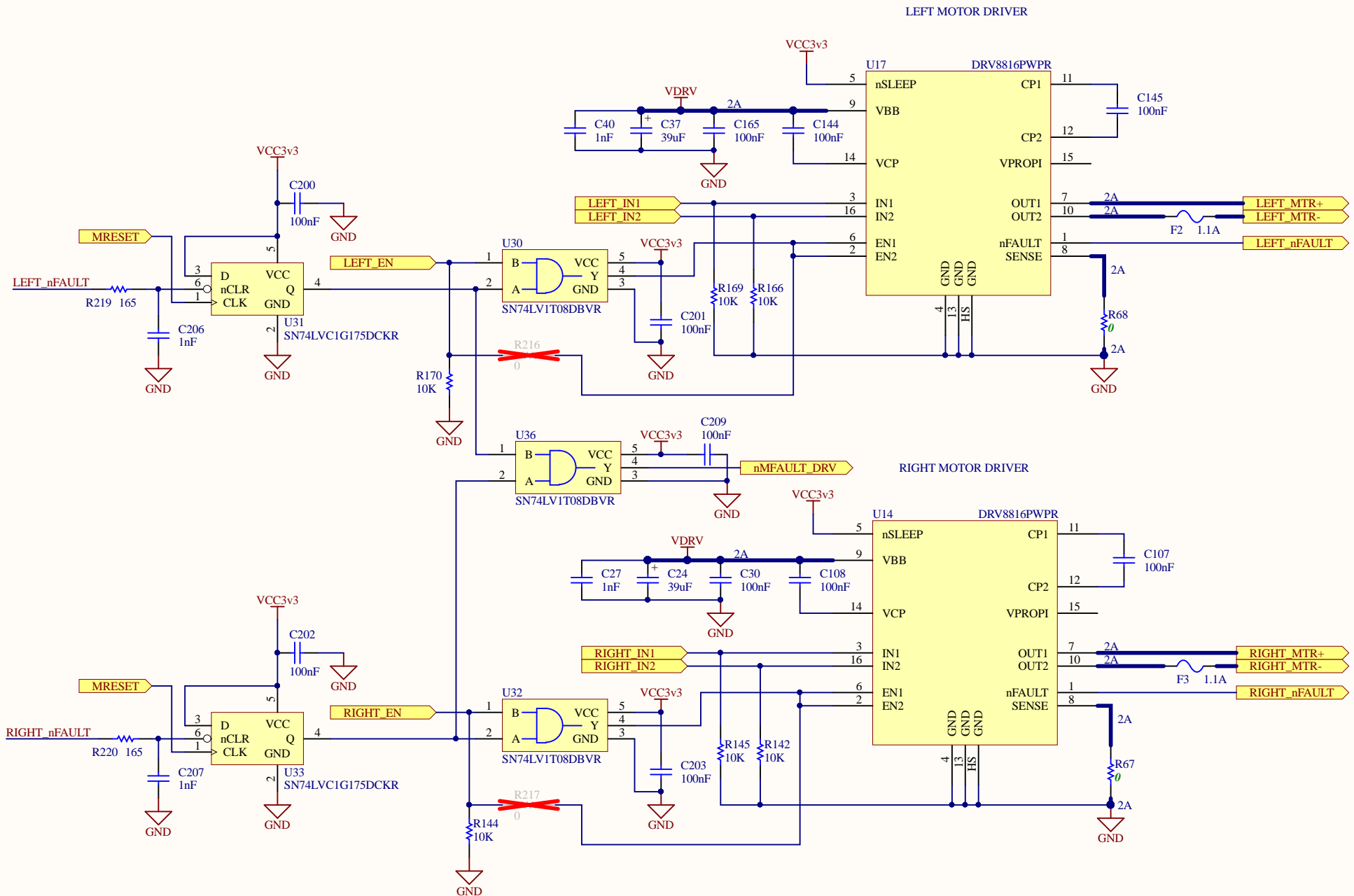
Size: Letter

Mayfield Robotics

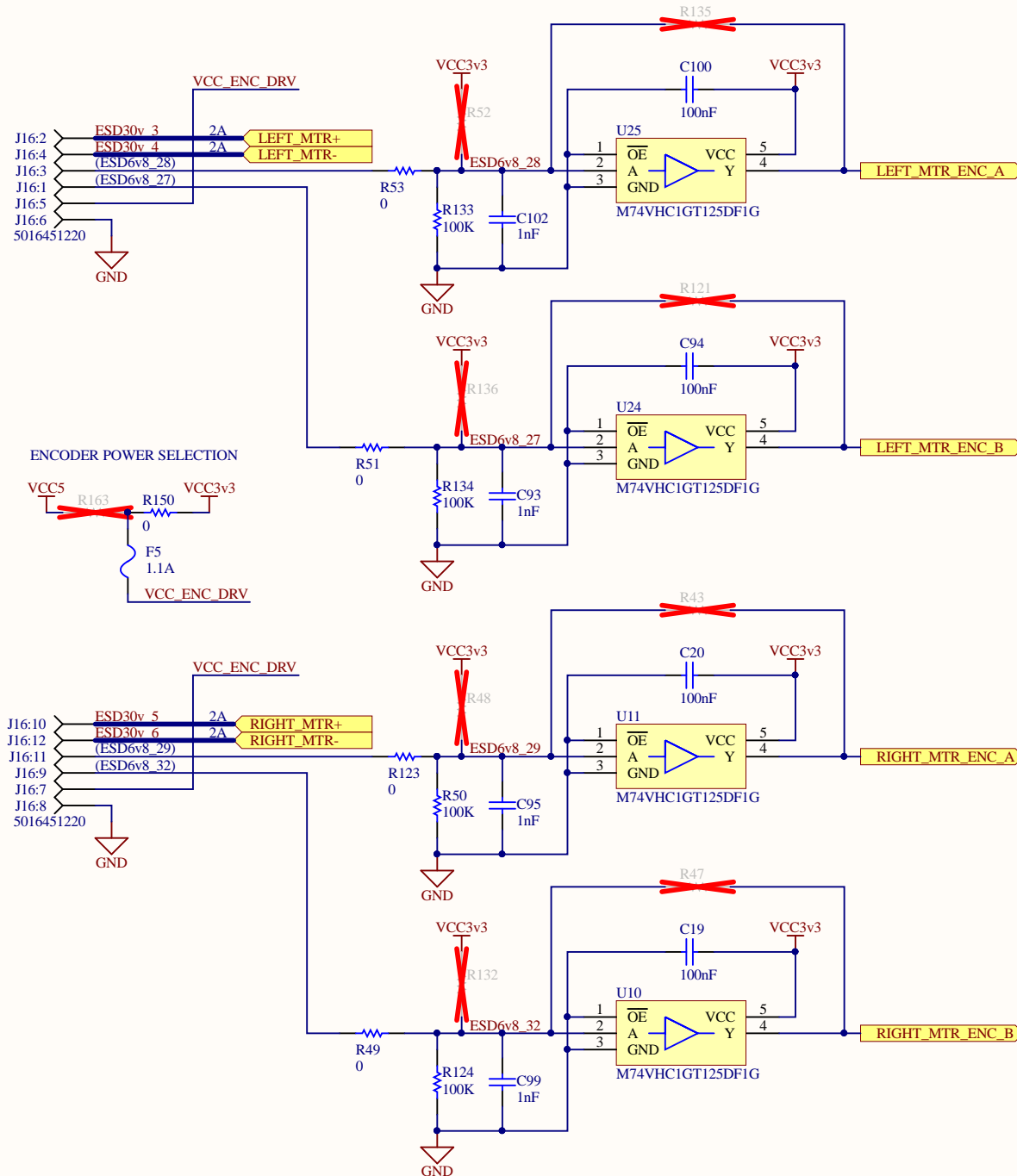
Date: 14-MAR-2018

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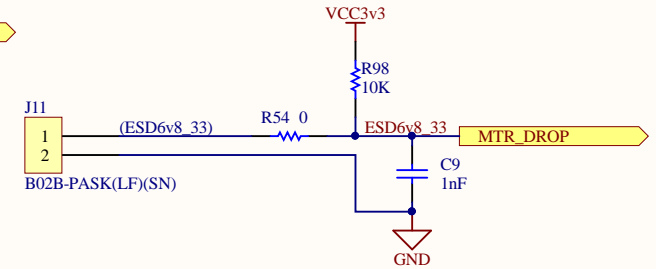
# DRIVE MOTORS



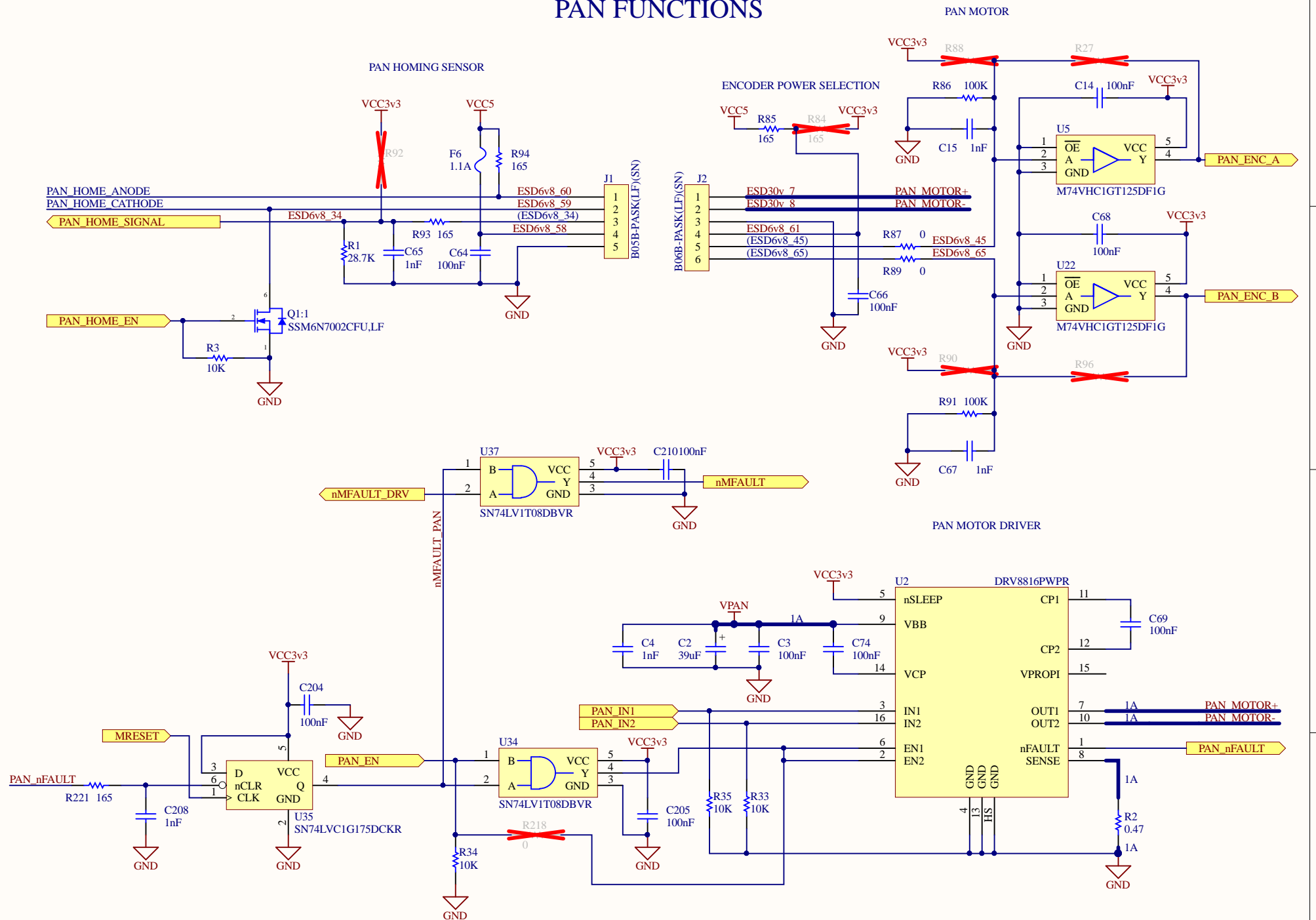
## DRIVE WHEEL ENCODERS



## WHEEL DROP SENSOR FOR USE WITH NORMALLY CLOSED SWITCH

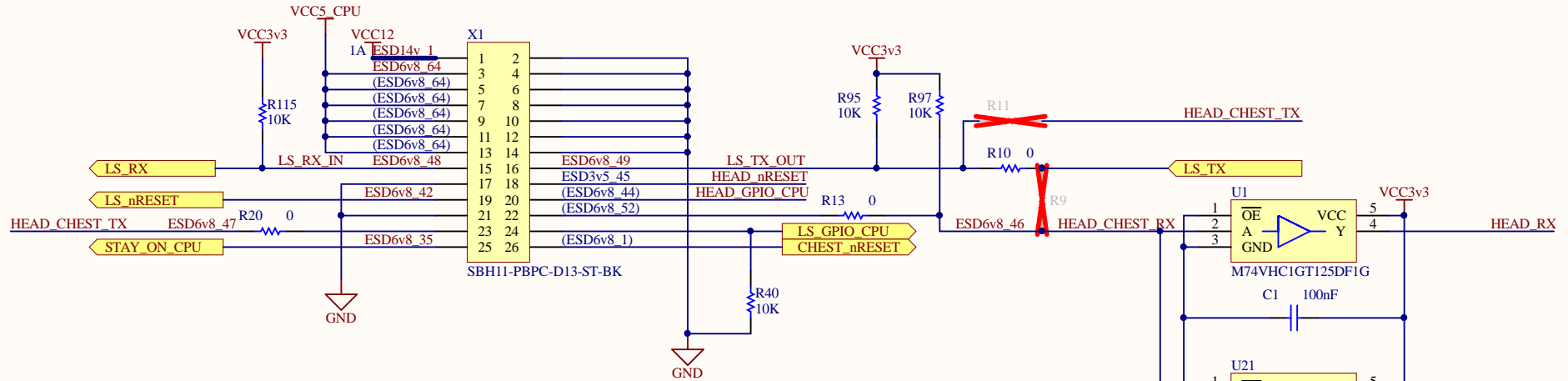


## PAN FUNCTIONS

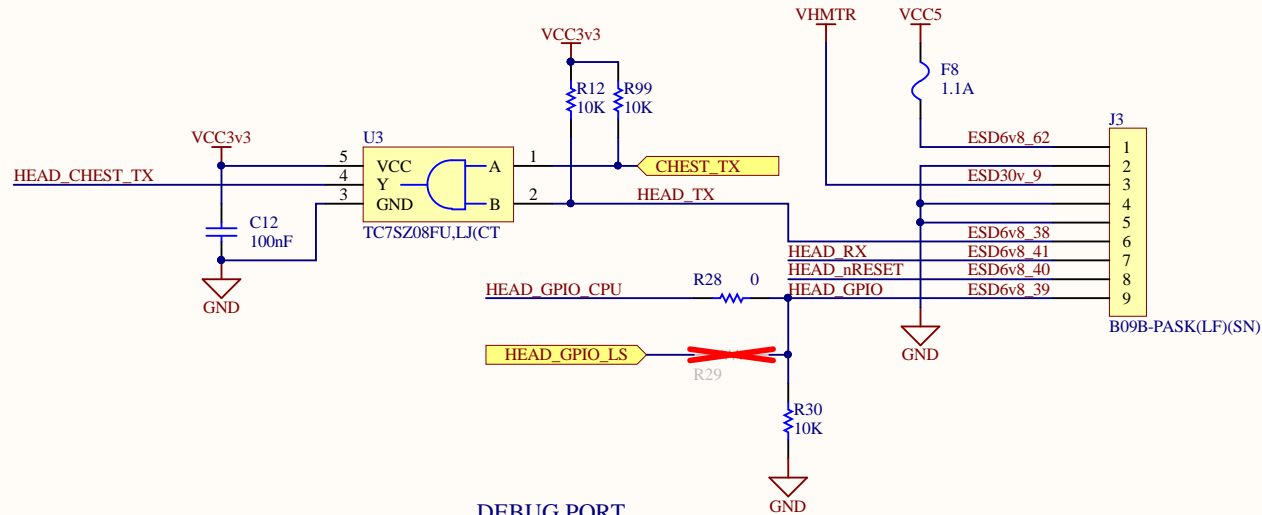


# INTERBOARD COMMUNICATIONS

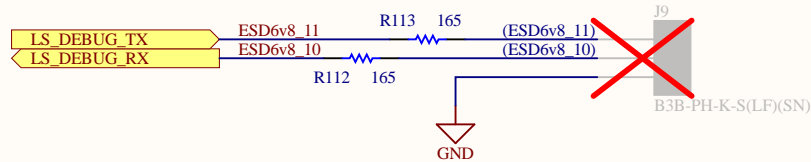
## LOW SPEED BOARD TO CPU BOARD



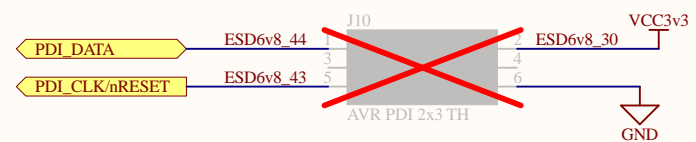
## LOW SPEED BOARD TO HEAD BOARD



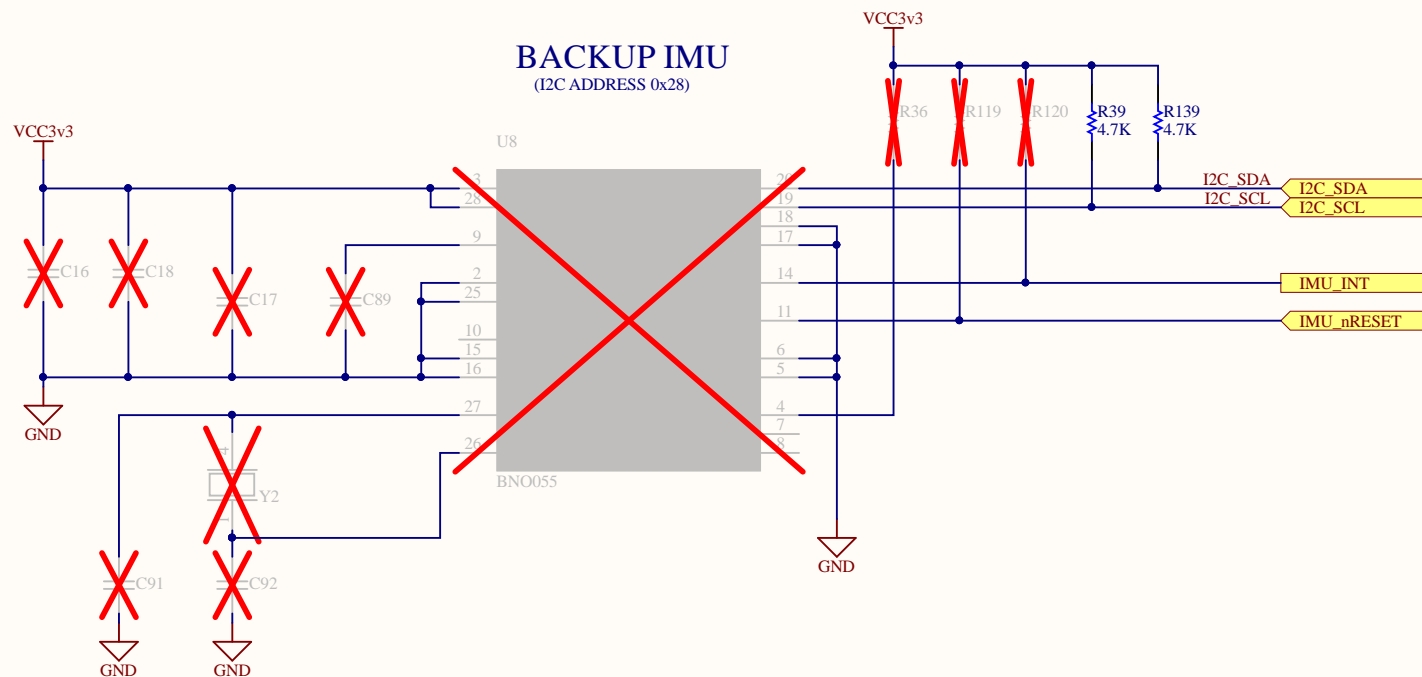
## DEBUG PORT



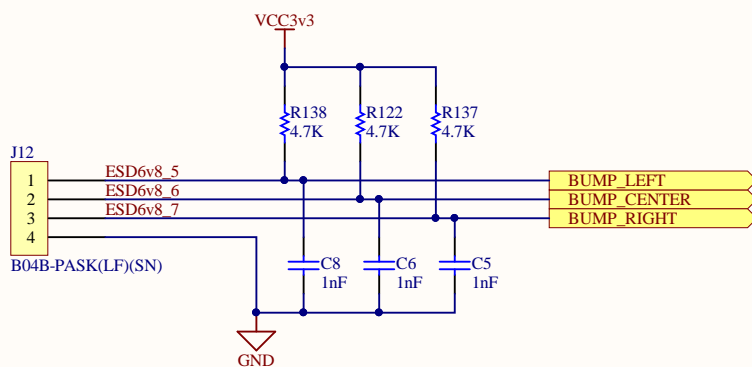
## PROGRAMMING PORT



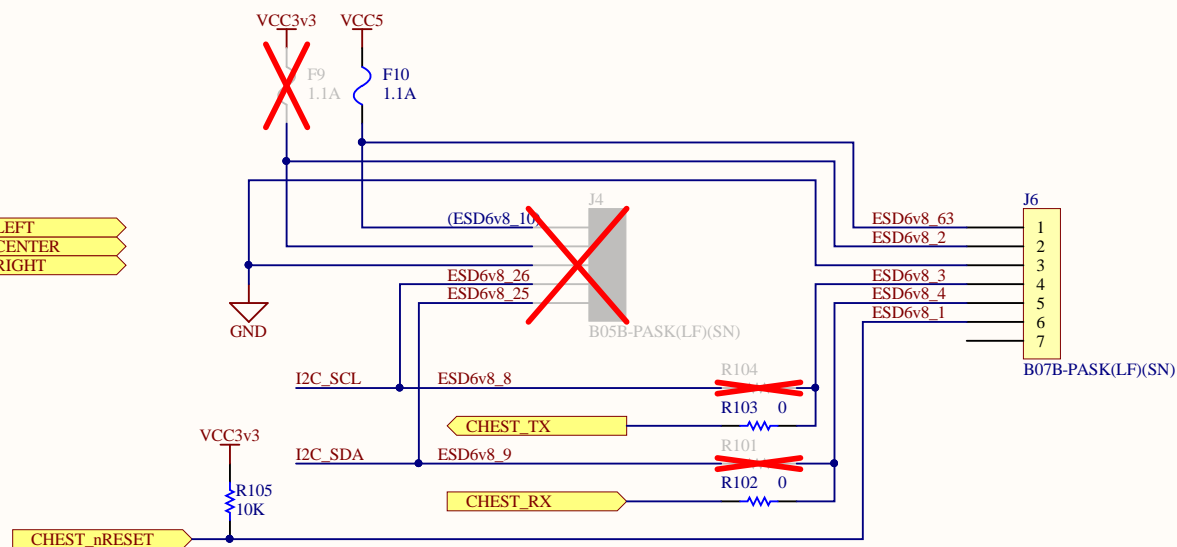
## BACKUP IMU (I2C ADDRESS 0x28)



## BUMP SENSORS



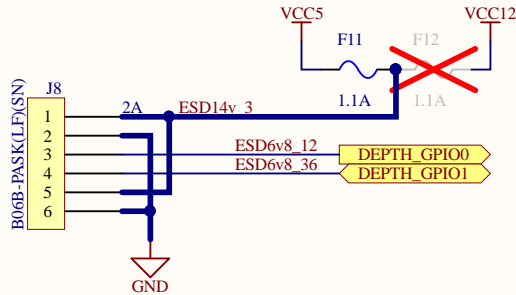
## OFFBOARD I2C EXPANSION AND CHEST LED



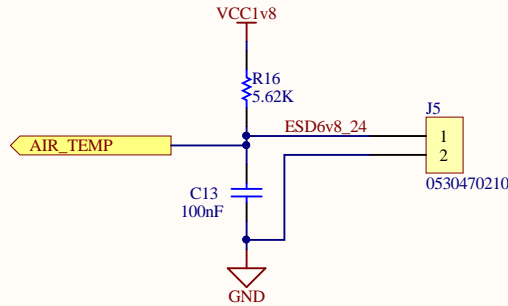


# SENSOR CONNECTIONS

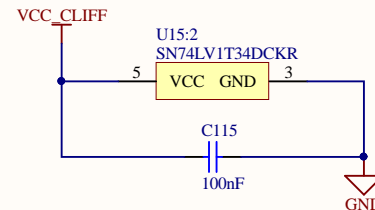
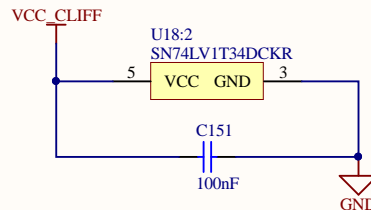
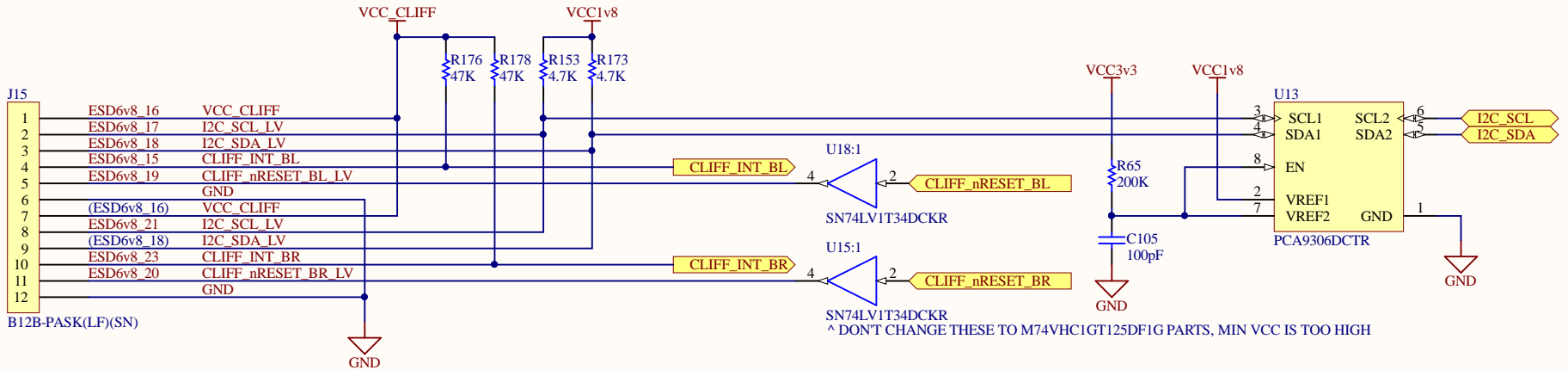
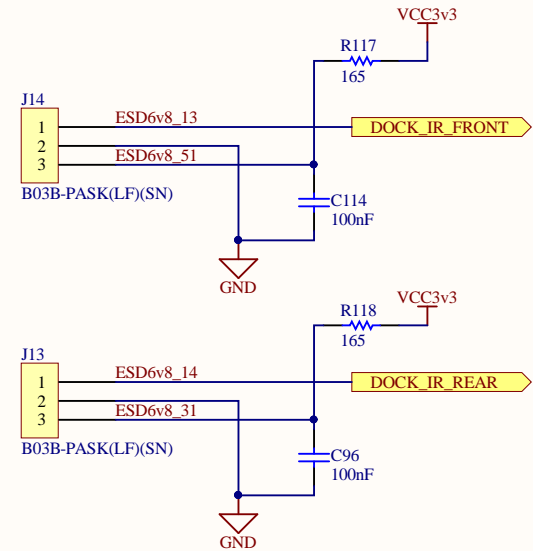
## DEPTH SENSOR POWER AND GPIO



## AMBIENT TEMPERATURE SENSOR (CONNECTS TO 10k NTC THERMISTOR)

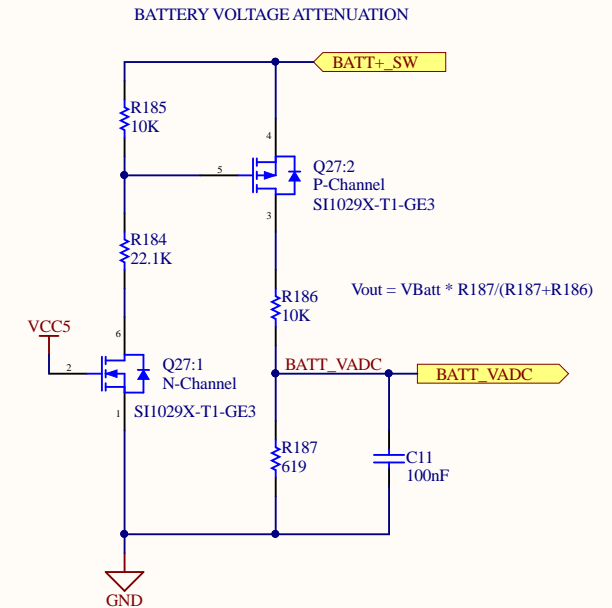
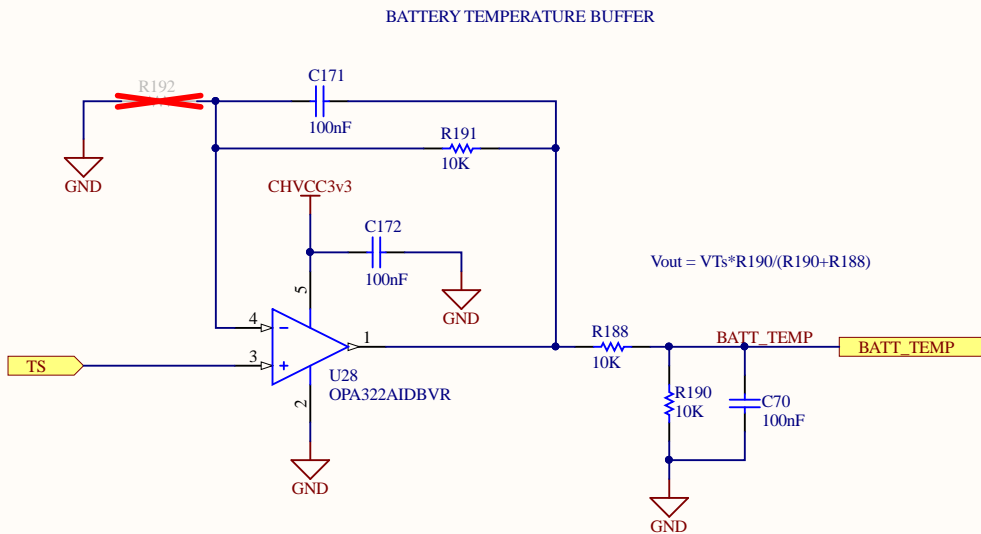
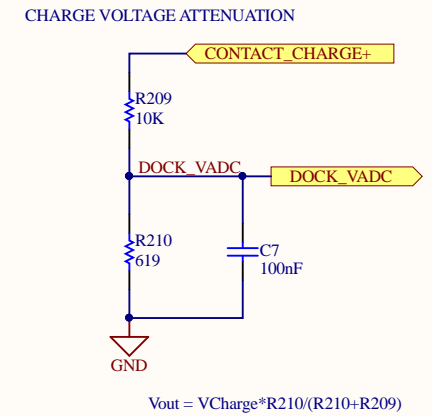
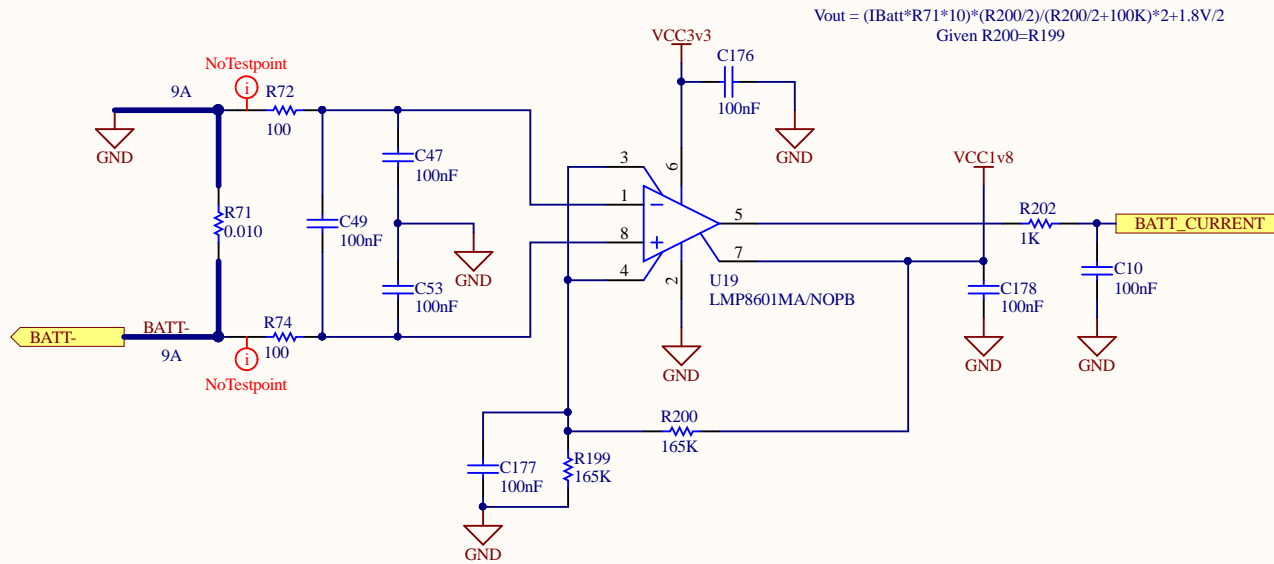


## IR DOCKING RECEIVERS (CONNECT TO TSOP38238)

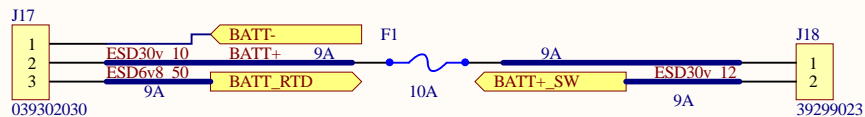
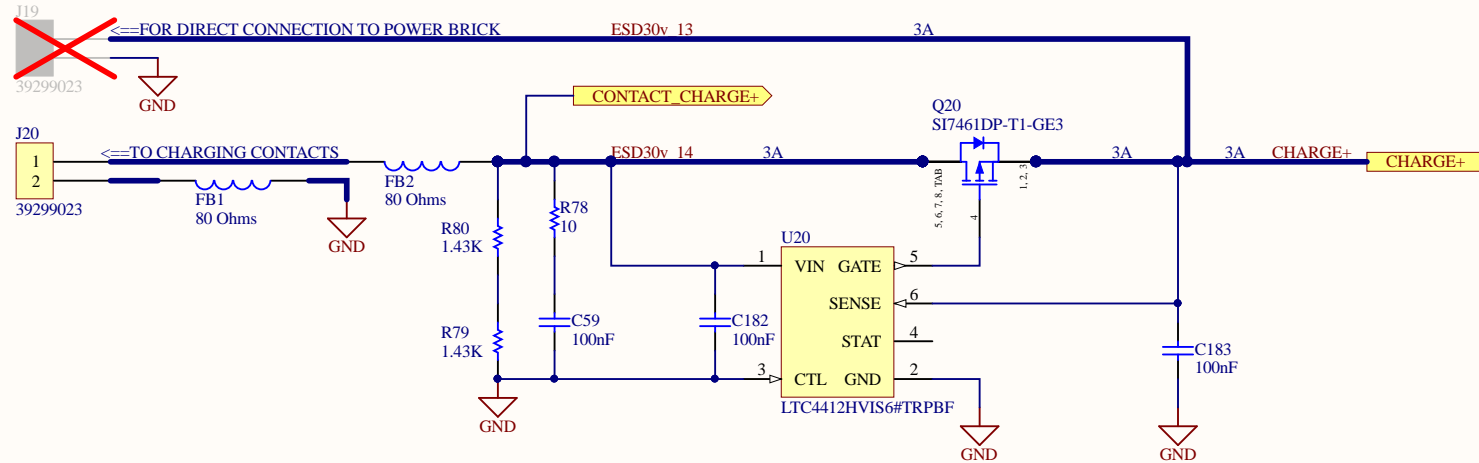
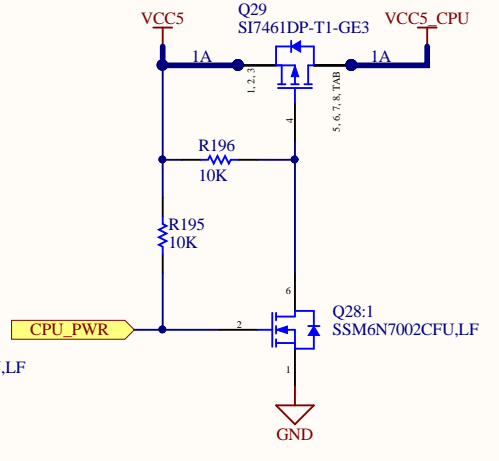




# BATTERY MONITORING SIGNAL CONDITIONING



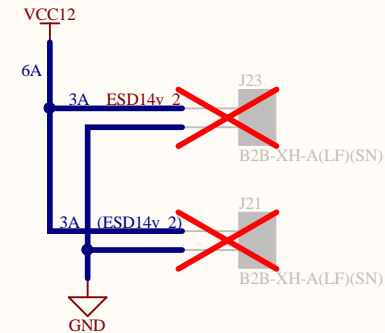
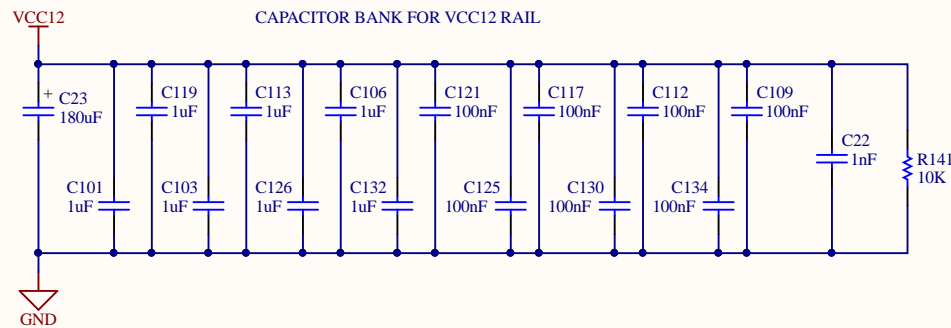
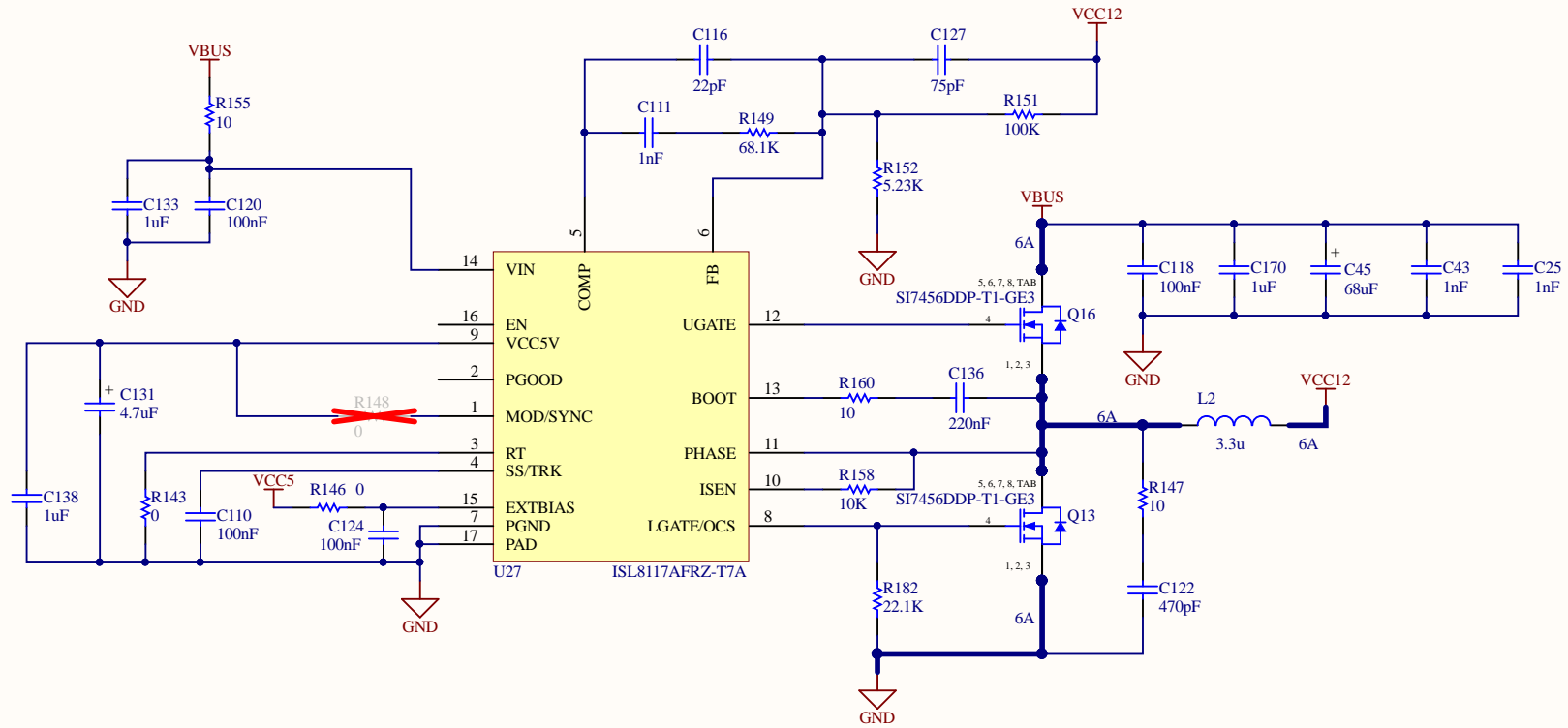
## 4



## 4

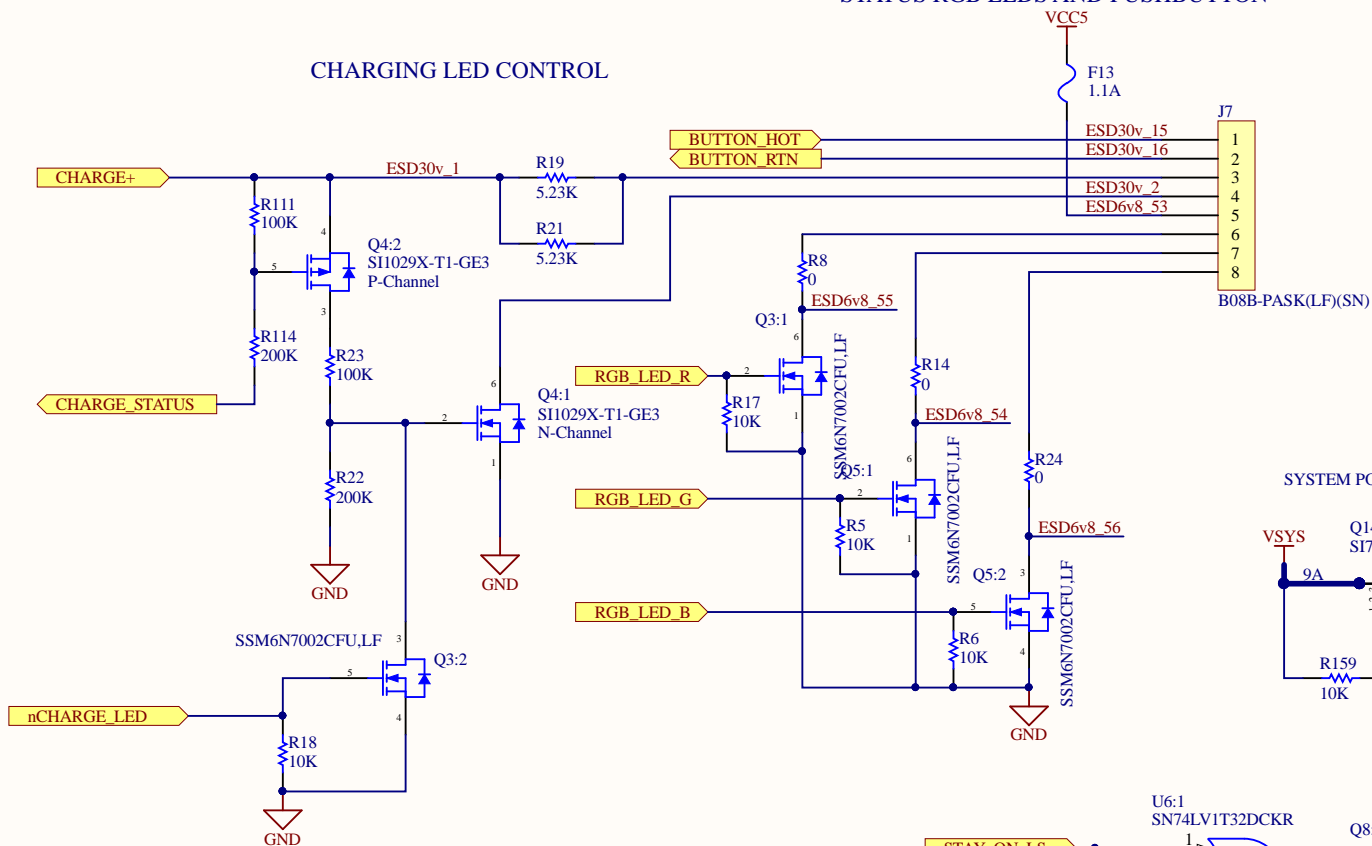


# BUCK CONVERTER: 12V

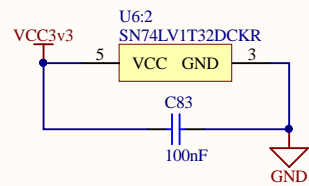
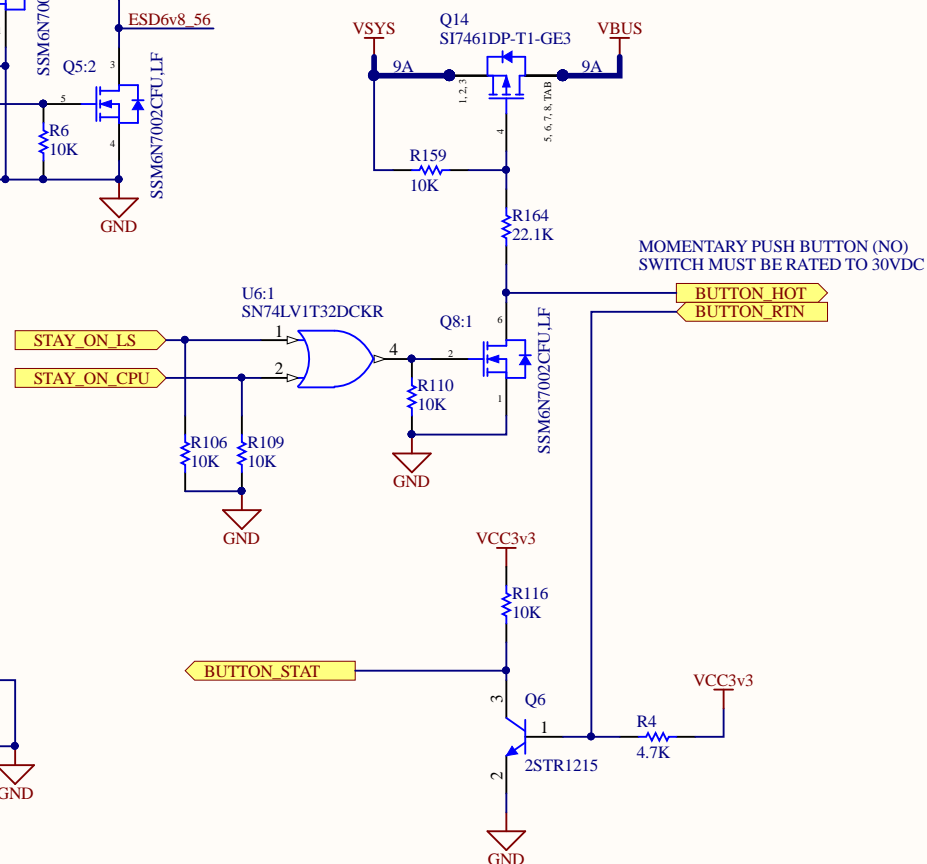


## STATUS RGB LEDS AND PUSHBUTTON

## CHARGING LED CONTROL



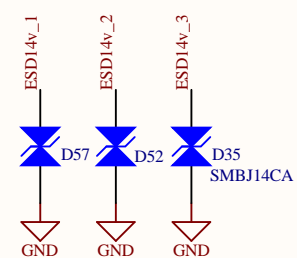
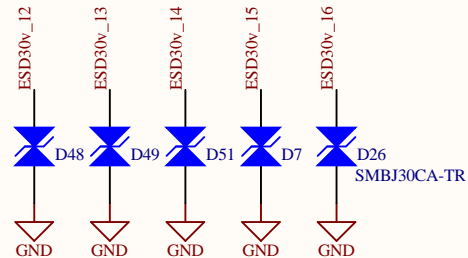
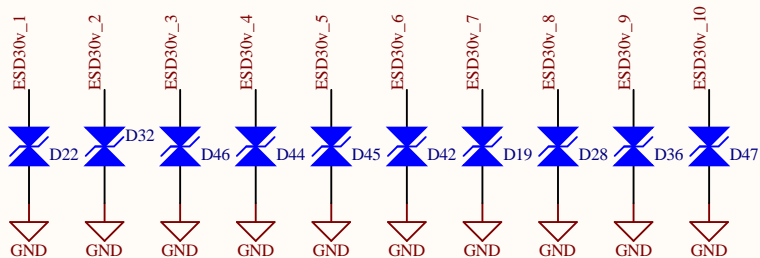
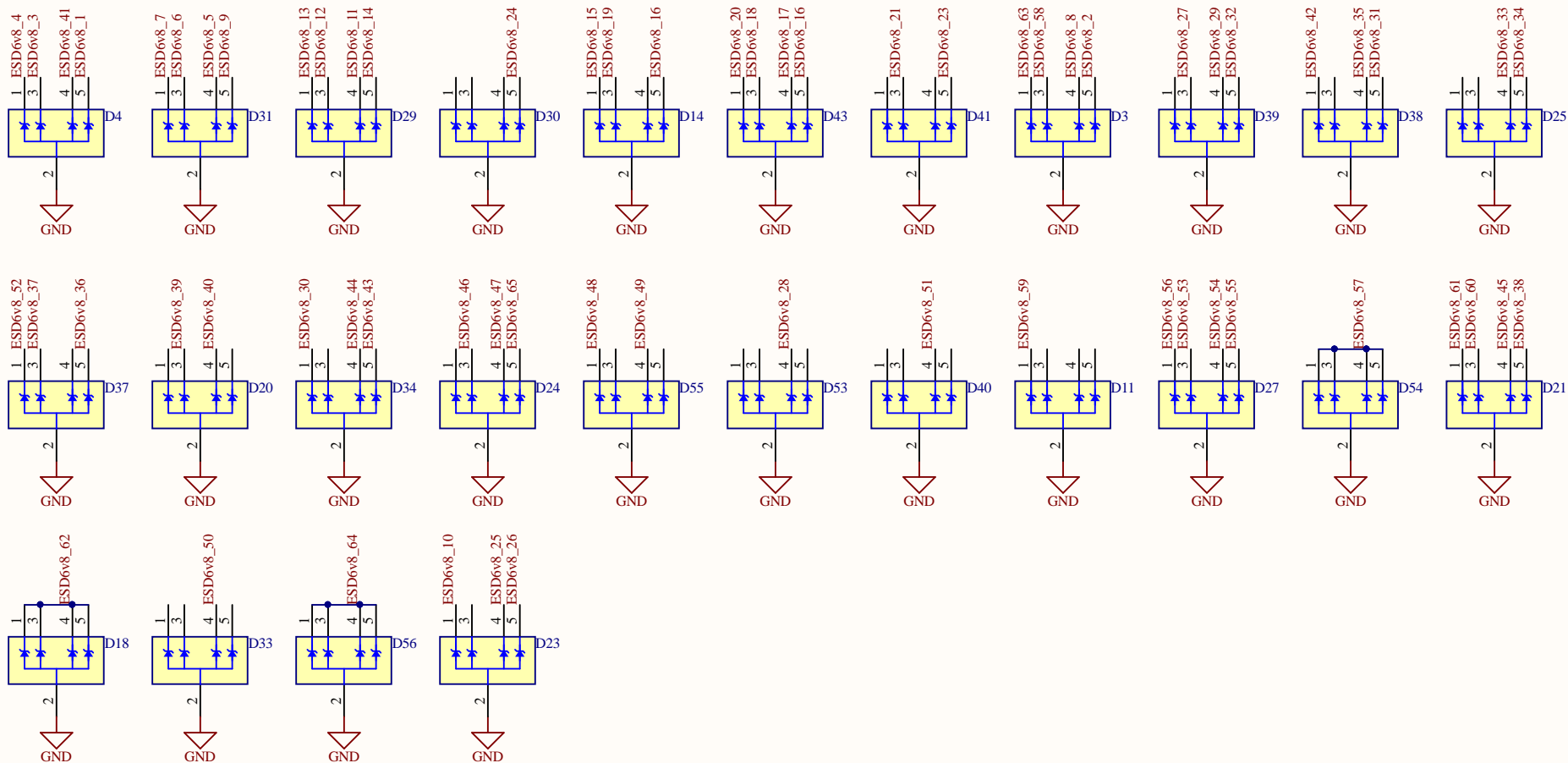
## SYSTEM POWER BUS CONTROL



NetClass

## ESD PROTECTION DIODES

ESD 6.8V PROTECTION DIODES PN: DF5A6.8JE,LM



CALICO JACK, LOW SPEED BOARD

Number: CE-00017-SCH

Revision: G04

Mayfield Robotics

File: CalicoJack\_G\_SCH\_16.SchDoc

Size: Letter

Date: 14-MAR-2018

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