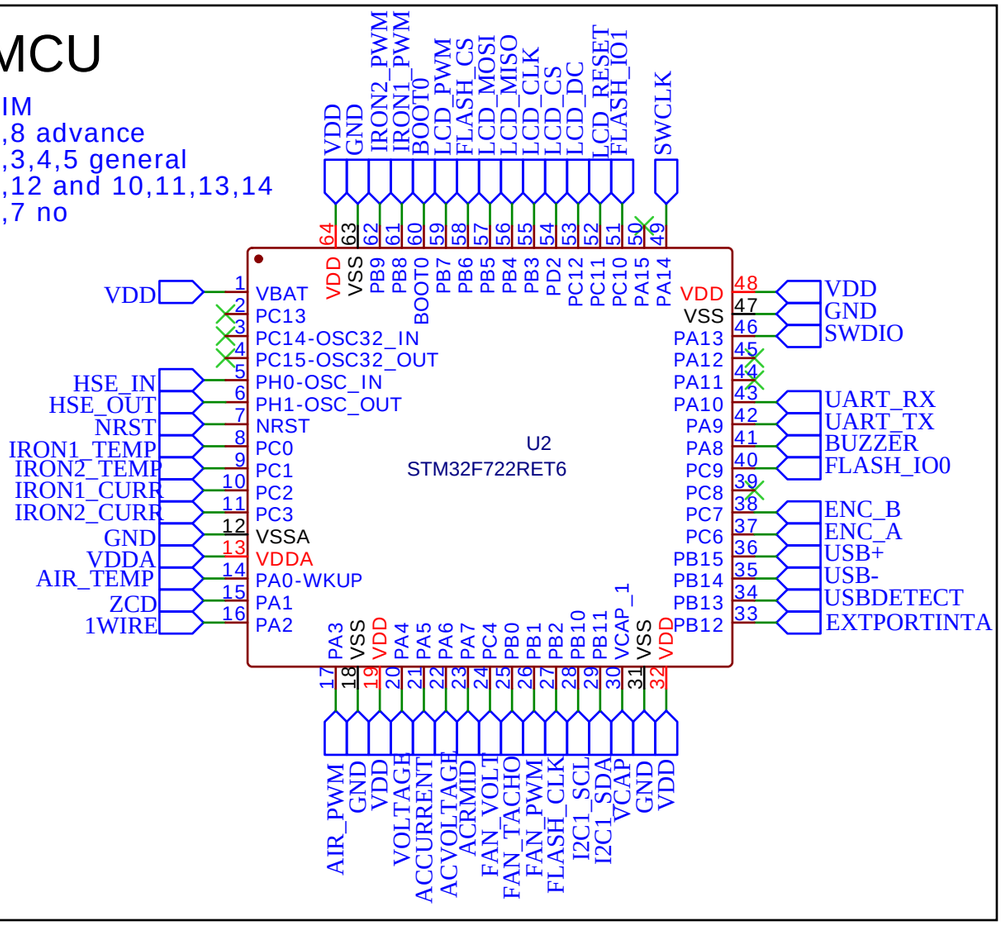
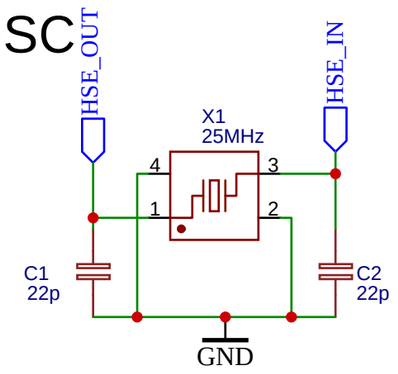
## MCU

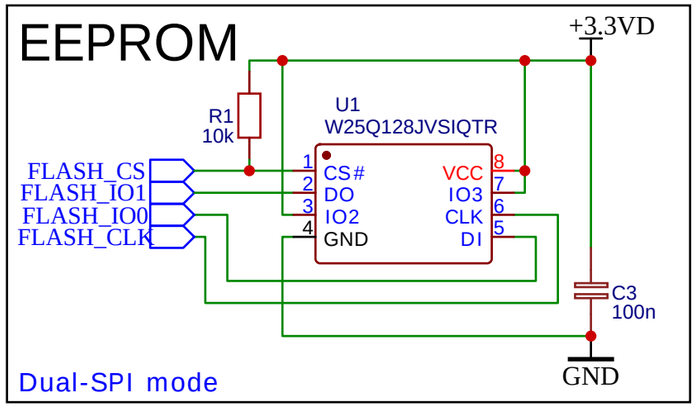
TIM
1,8 advance
2,3,4,5 general
9,12 and 10,11,13,14
6,7 no



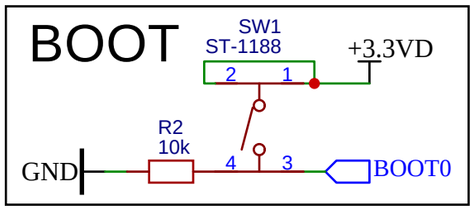

## OSC



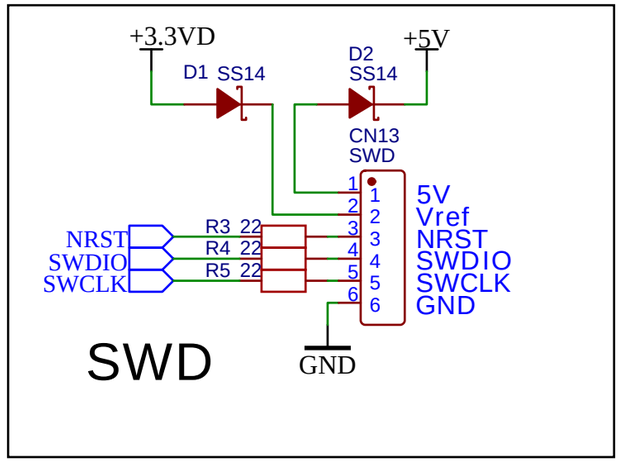

## EEPROM



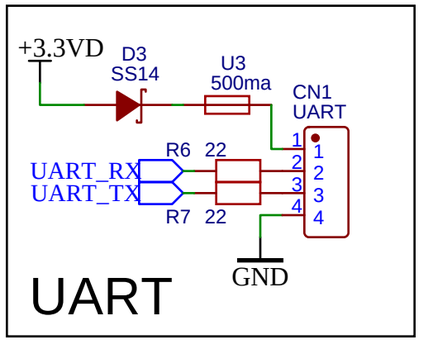

## BOOT



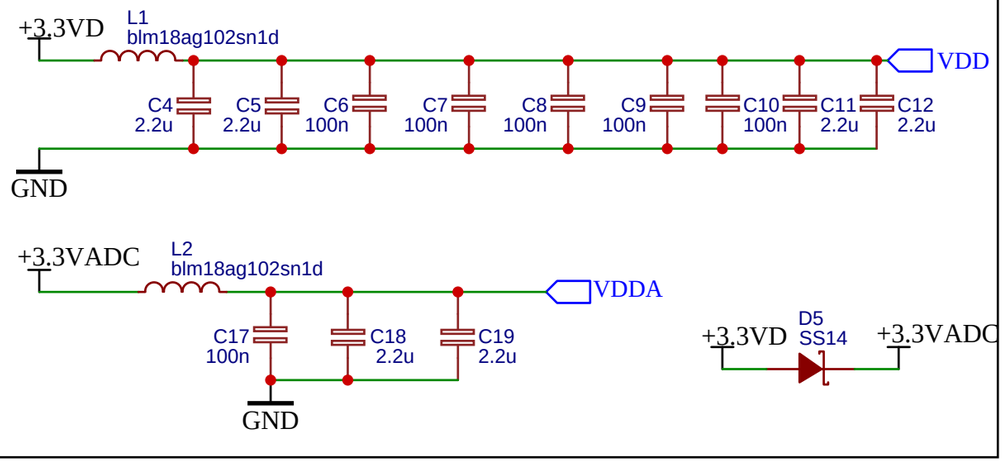

## SWD



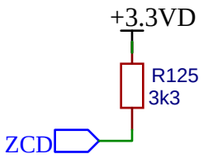

## UART

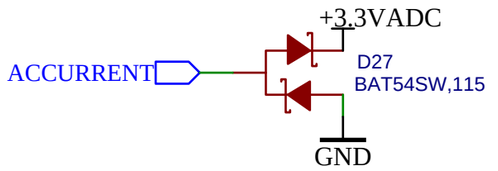


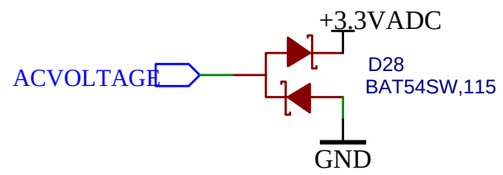

## DECOUPLING

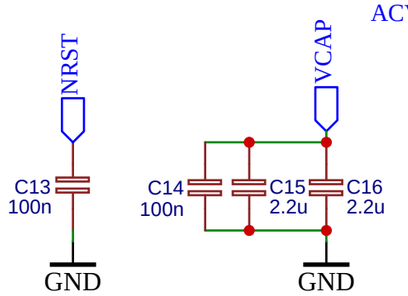



NTC-10K-B3950 need ?

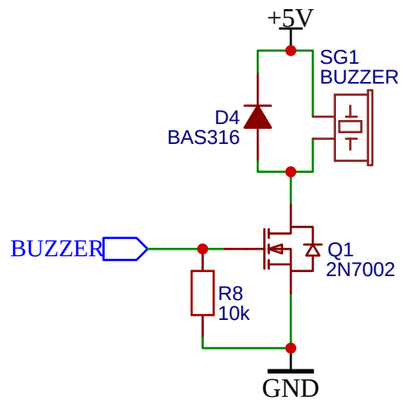


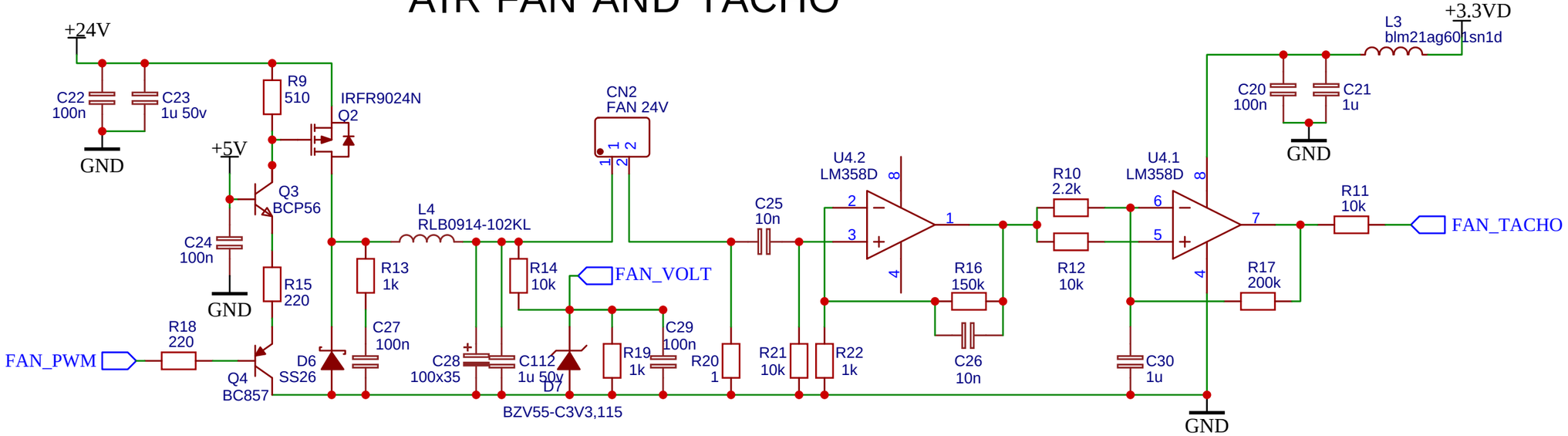




## BUZZER

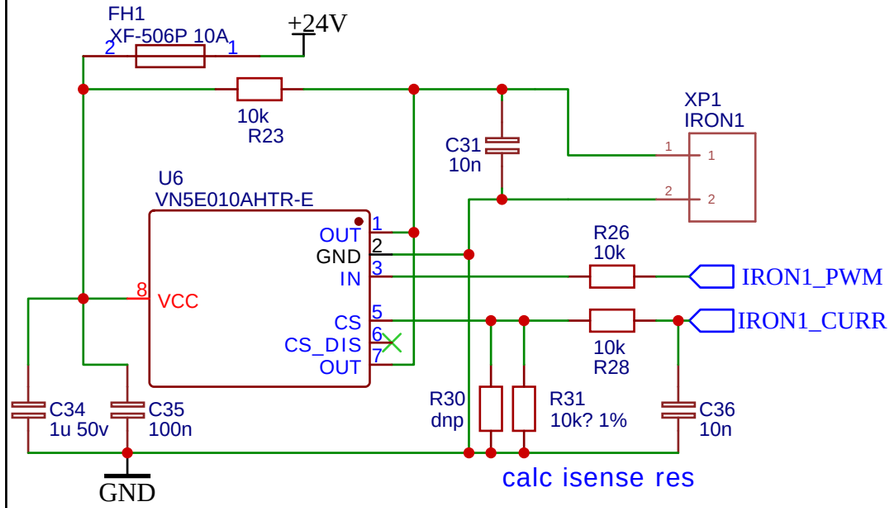



| | | |
|---|---|---|
| TITLE: stm32 | | REV: 1.0 |
| EasyEDA | Company: none | Sheet: 1/1 |
| | Date: 2021-08-06 Drawn By: xseregax | |

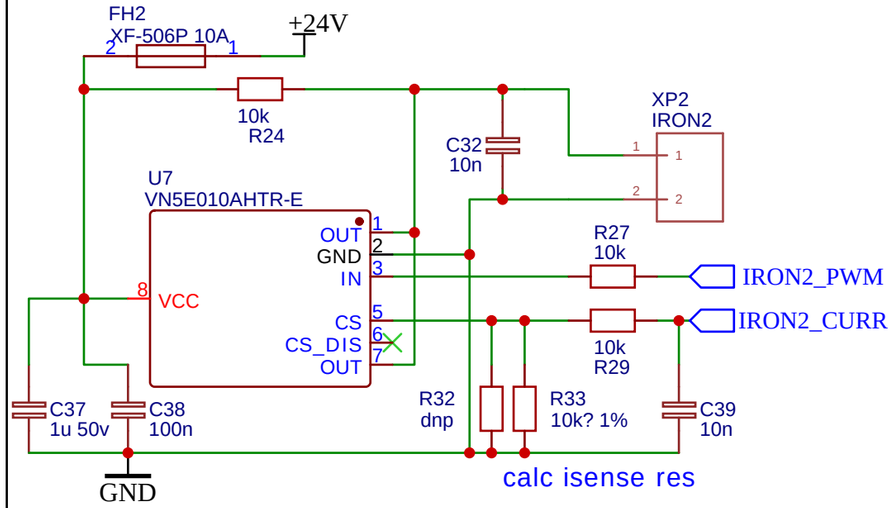
# AIR FAN AND TACHO

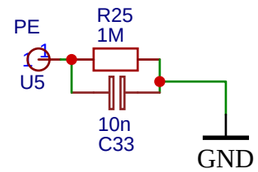



# IRON1 HEATER

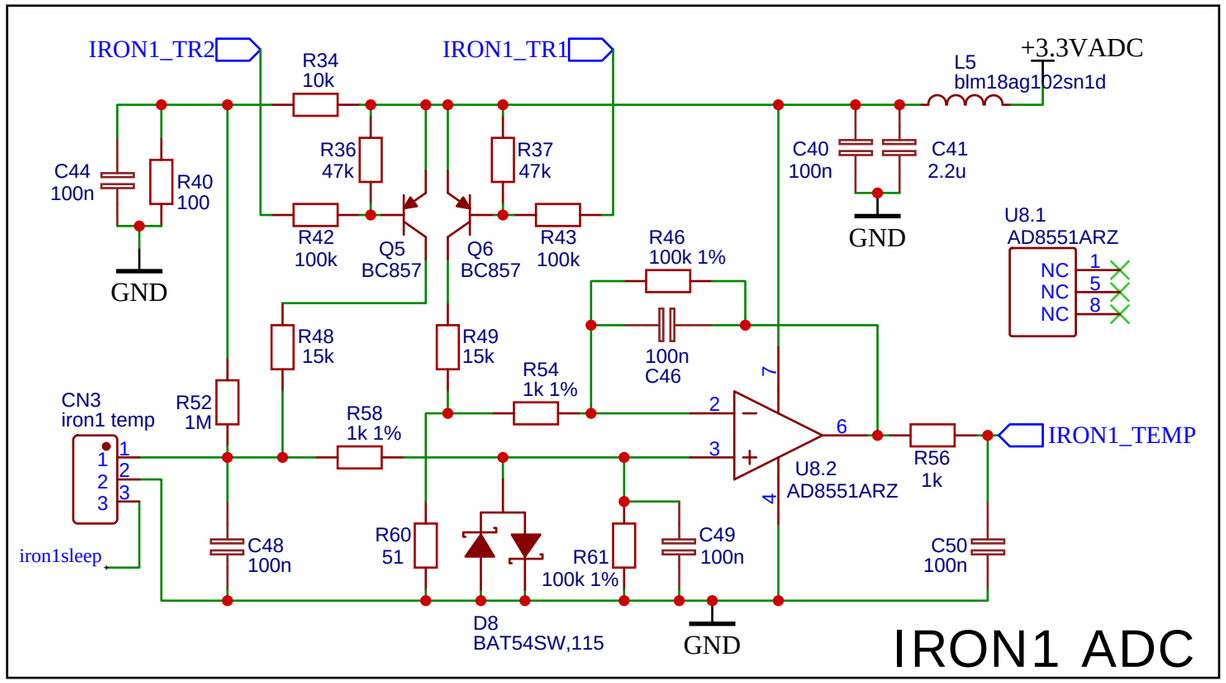


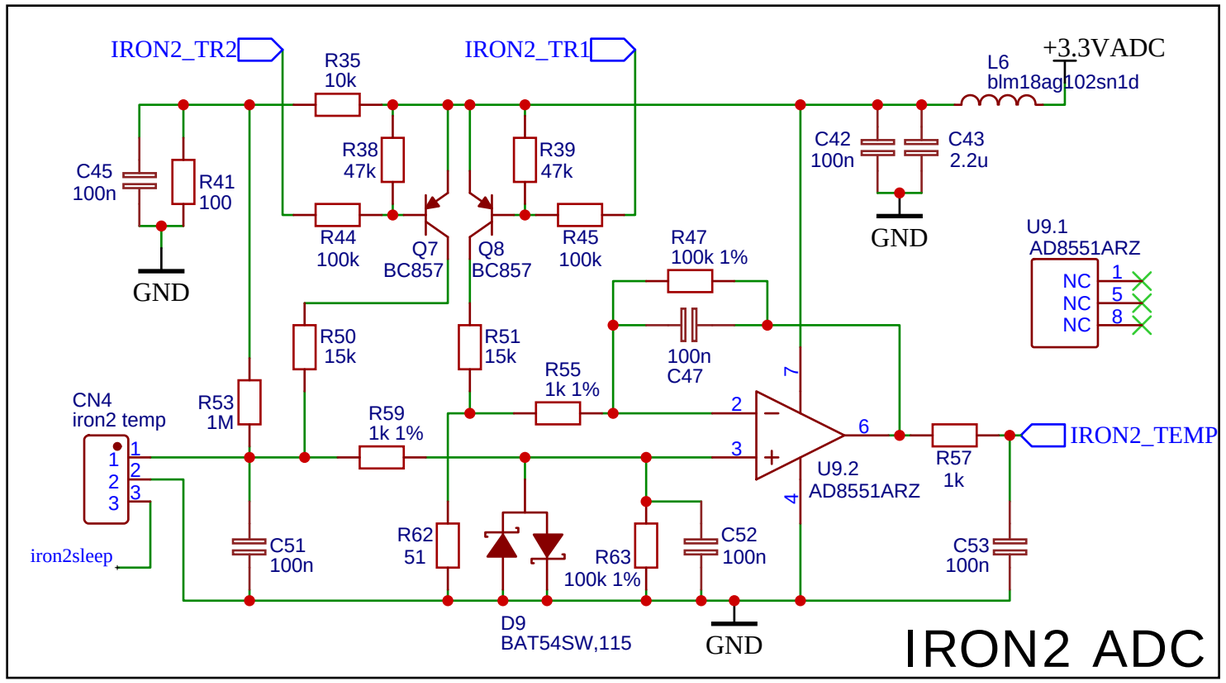

# IRON2 HEATER

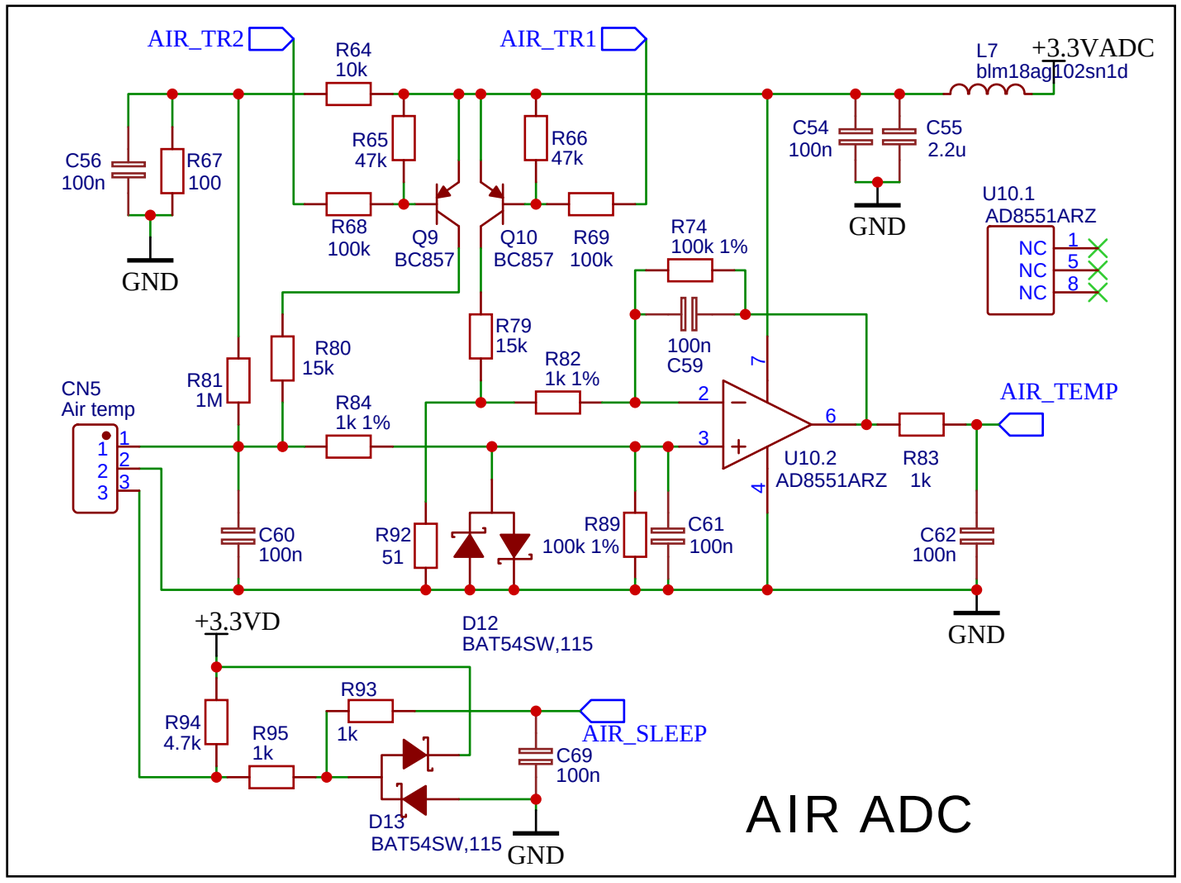


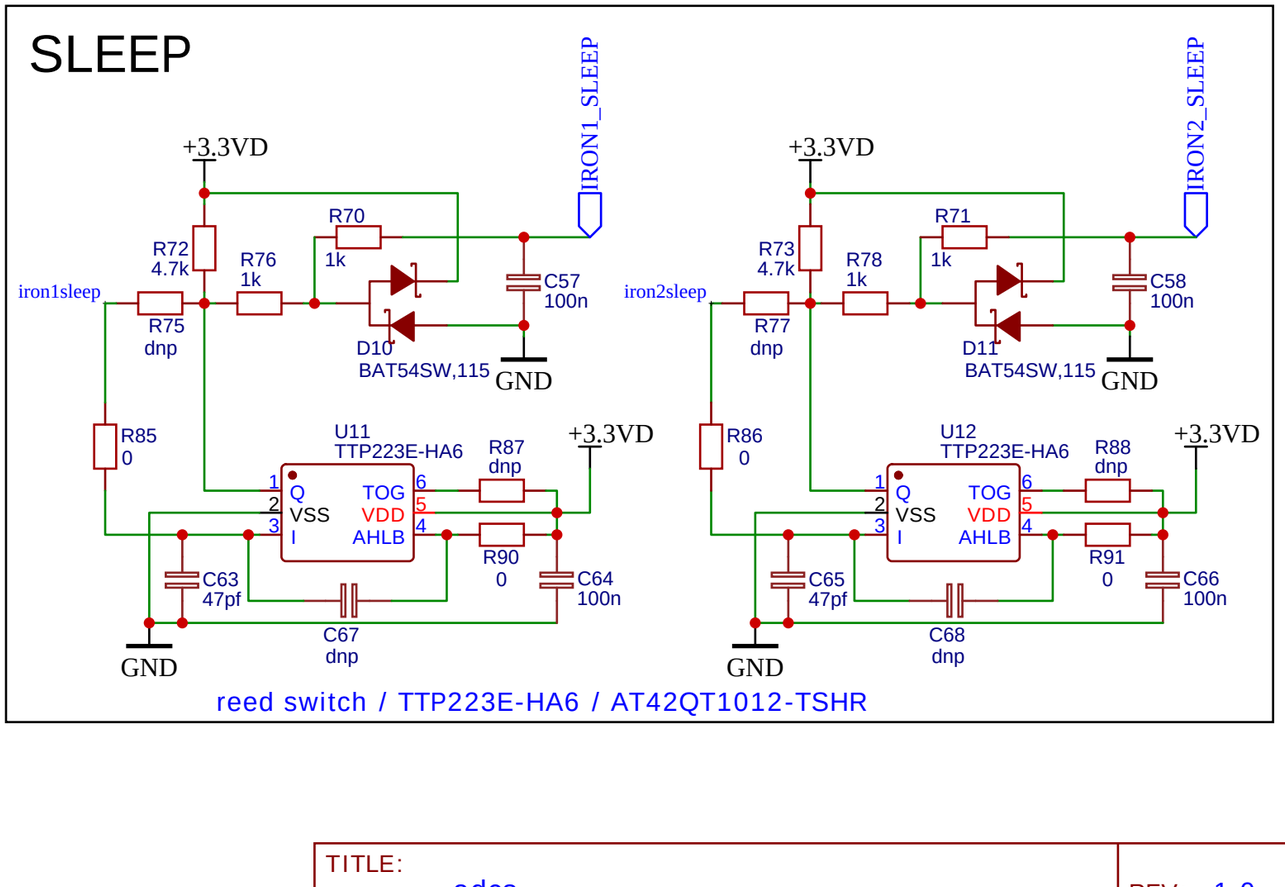




| | | |
|---|---|---|
| TITLE: power irons, tacho | | REV: 1.0 |
| EasyEDA | Company: none | Sheet: 1/1 |
| | Date: 2021-08-06 Drawn By: xseregax | |



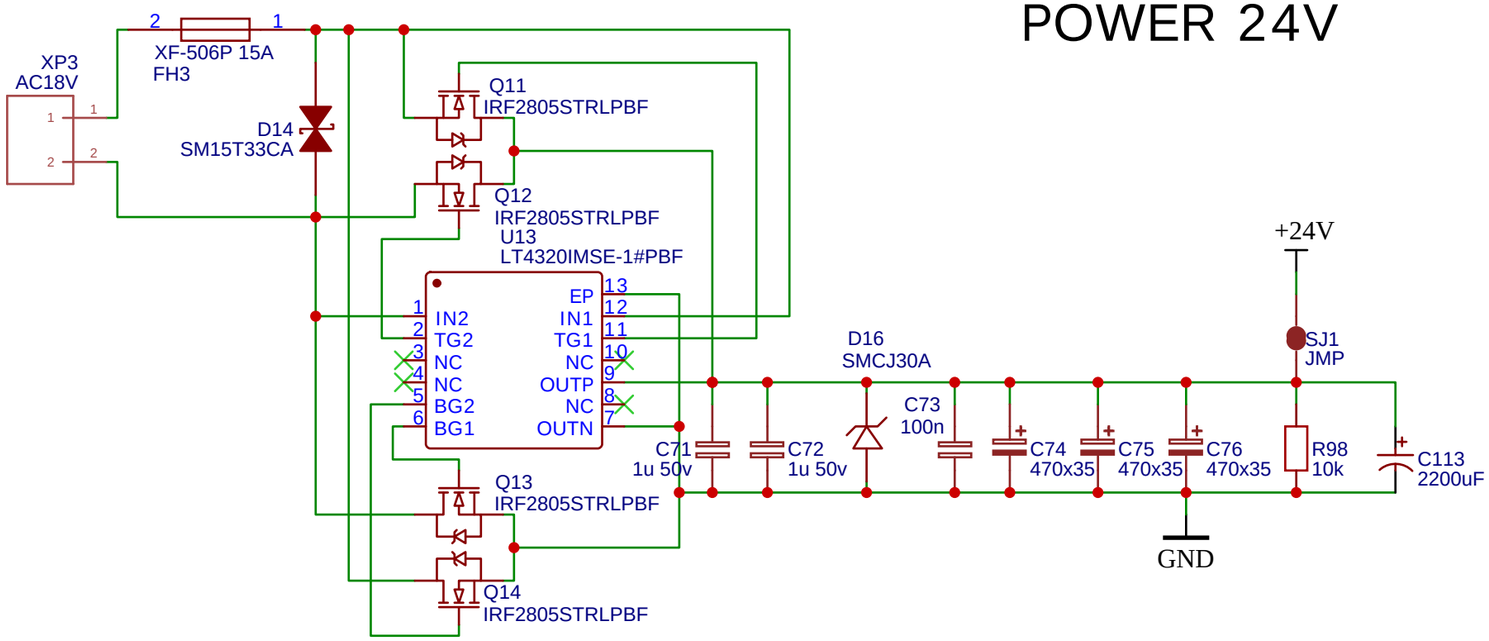



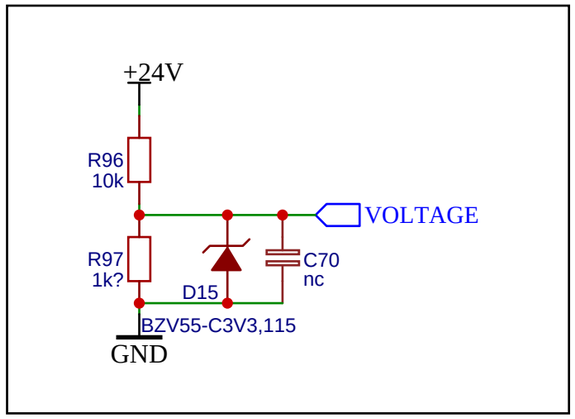



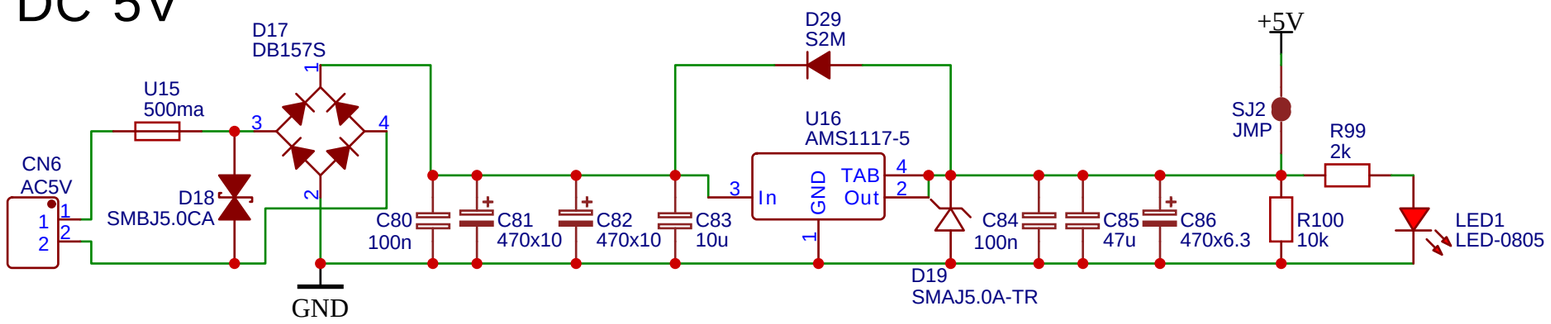

| | | |
|---|---|---|
| TITLE: adcs | | REV: 1.0 |
| EasyEDA | Company: none | Sheet: 1/1 |
| | Date: 2021-08-06 Drawn By: xseregax | |

# POWER 24V

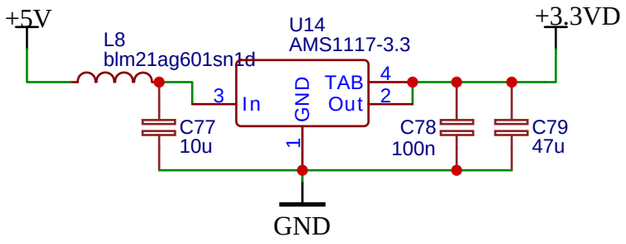


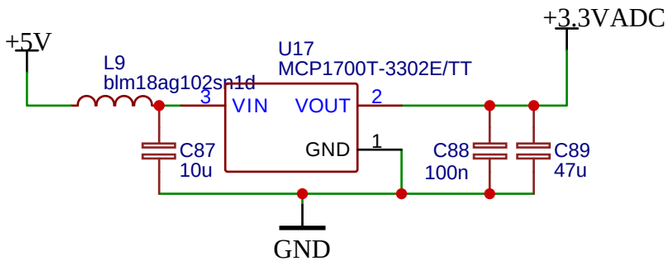




# DC 5V

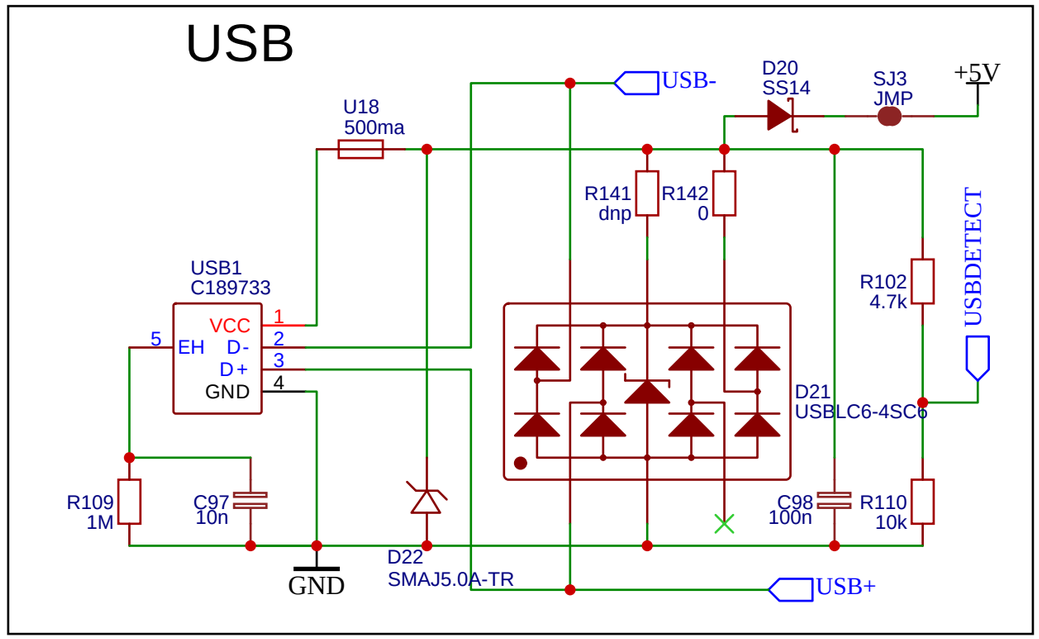


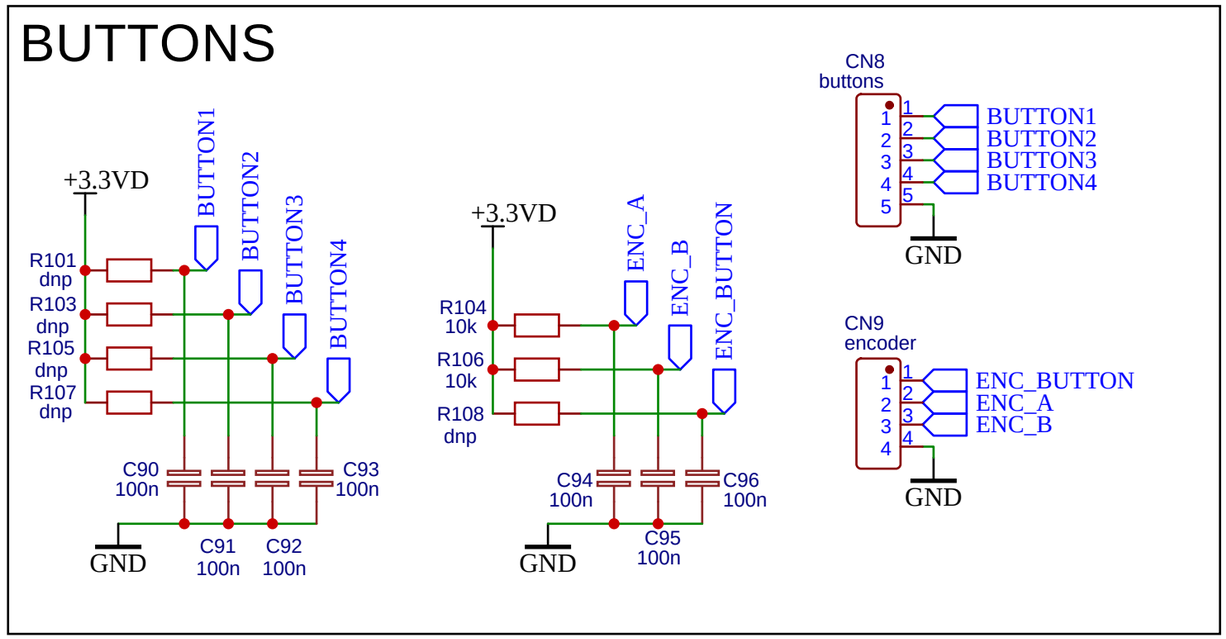

# DC 3.3V

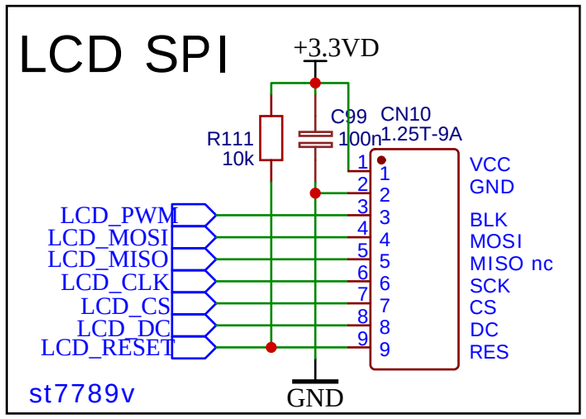


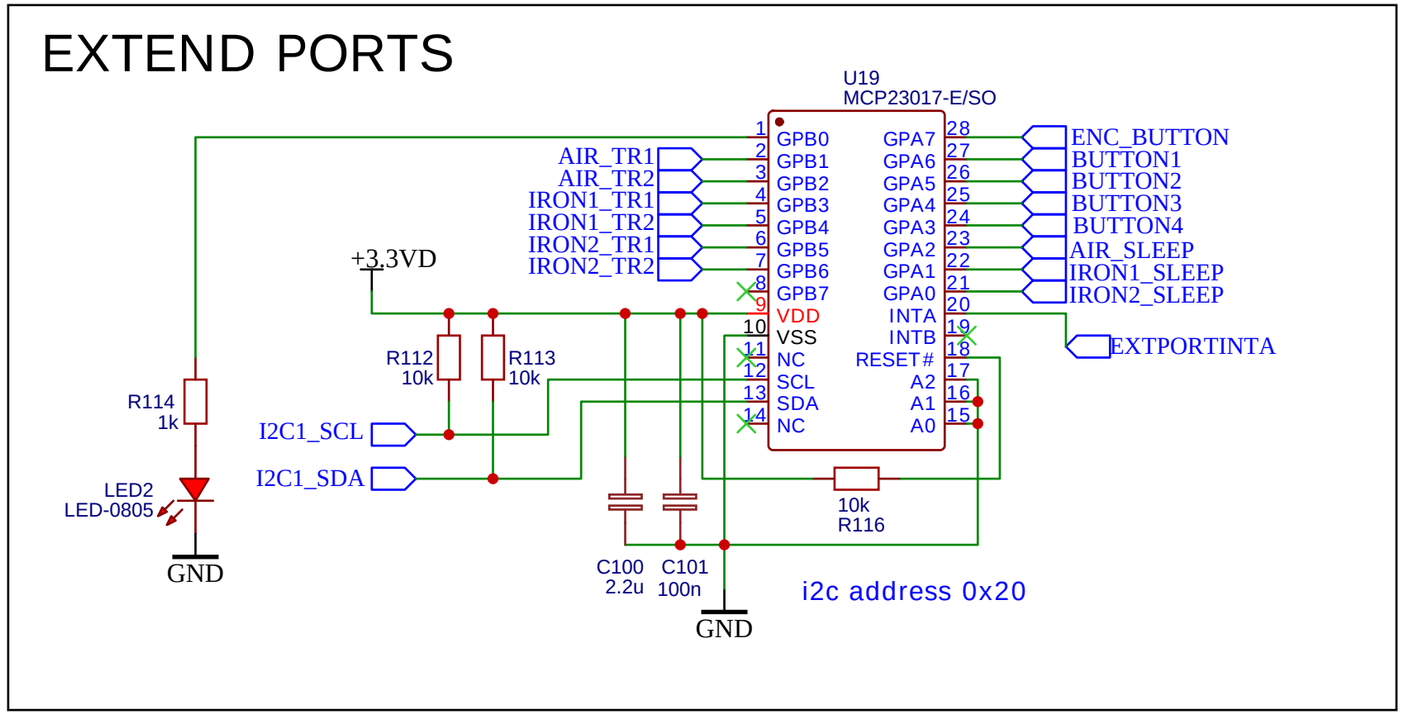



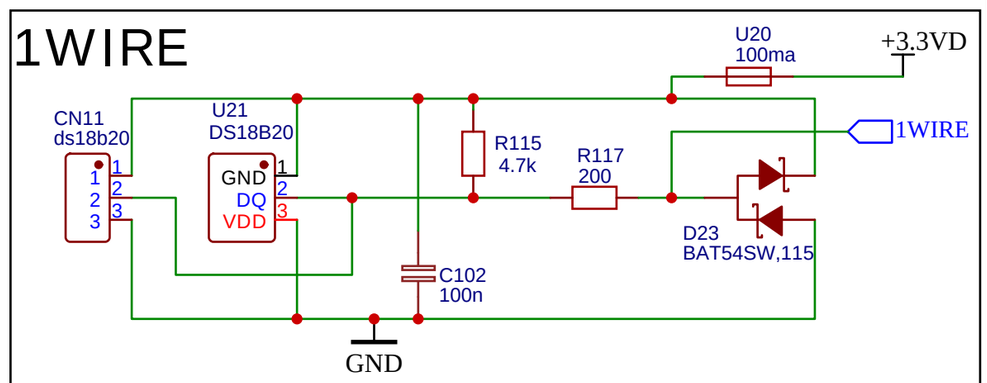

| | | |
|---|---|---|
| TITLE: dc power | | REV: 1.0 |
| EasyEDA | Company: none | Sheet: 1/1 |
| | Date: 2021-08-07 Drawn By: xseregax | |



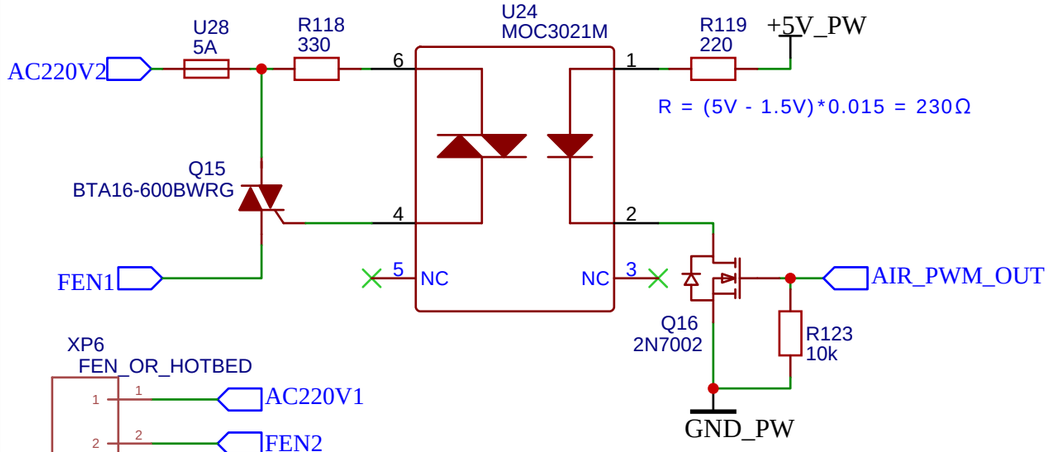



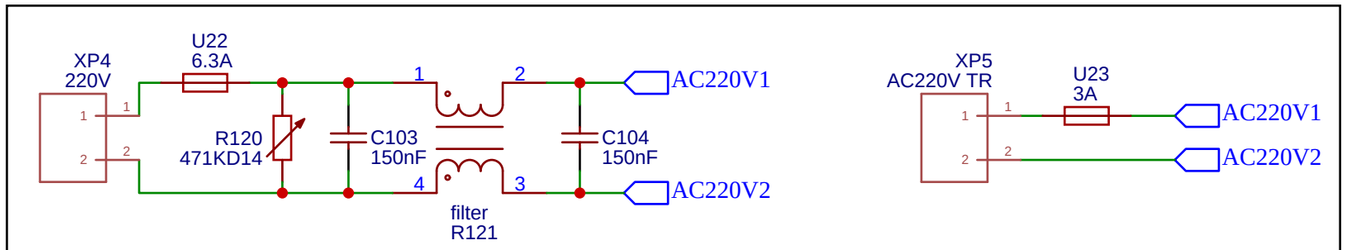




| | | |
|---|---|---|
| TITLE: buttons | | REV: 1.0 |
| EasyEDA | Company: none | Sheet: 1/1 |
| | Date: 2021-08-13 Drawn By: xseregax | |

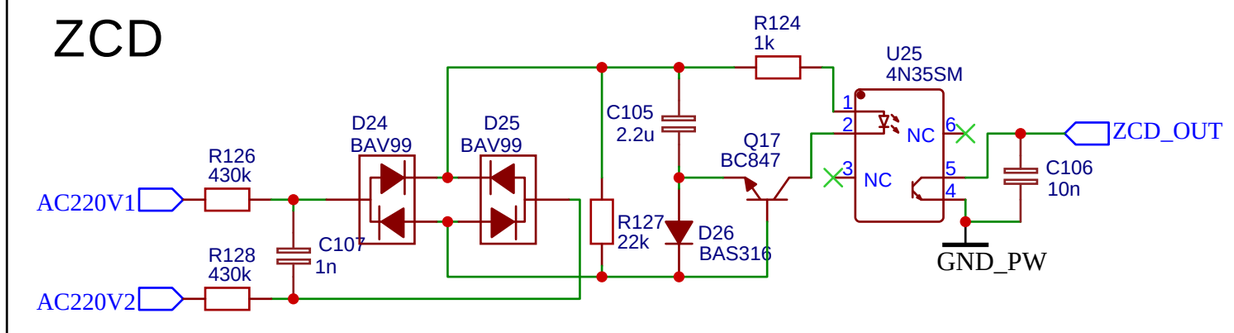
# FEN 220V PWM

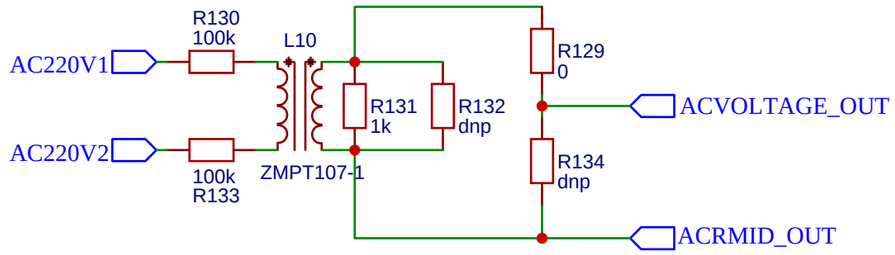
R = 230V x 1.414 / 1 A = 325Ω
Vmin = RxIGT+VGT+VTM=330*0.05A+1.3V+3V=20.8V



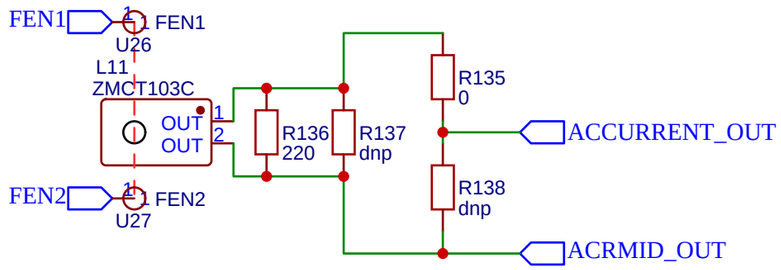

# ZCD



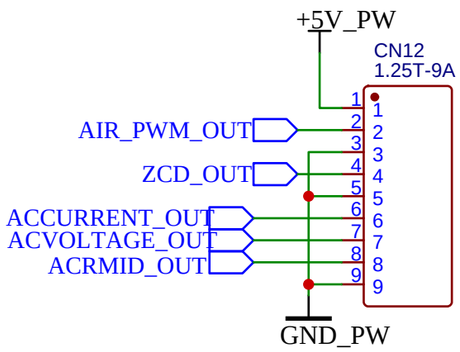

ZMPT107
1000:1000, 2mA:2mA, 50Ω
VOutmax=(Peak Voltage)/(2√2)=3.3V/(2√2)=1.167V
Rin=Vin/I=230V/1.15mA=200kΩ
Rburden=(VOutmax/Vin)×Rin=(1.167V/230V)×200kΩ=1014Ω
1kΩ: Vout=1.15V

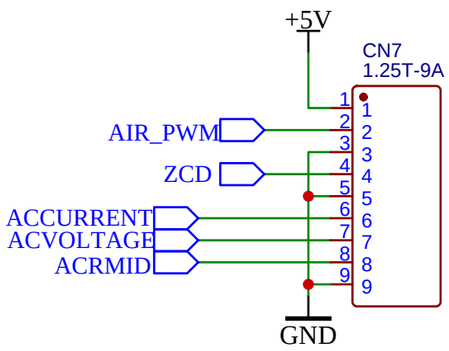
Vout=230/2=115k
Rbud=580

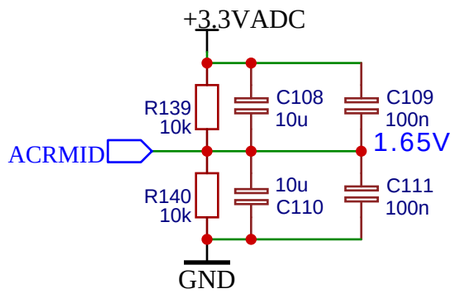



ZMCT103C
1000:1, max 5A:5mA, 50Ω

https://learn.openenergymonitor.org/electricity-monitoring/ct-sensors/interface-with-arduino
https://tyler.anairo.com/projects/open-energy-monitor-calculator
burden_resistor = (system_voltage / 2.0) / ((I_RMS * √2) / ct_turns) = 233Ω




| | | |
|---|---|---|
| TITLE: ac | | REV: 1.0 |
| EasyEDA | Company: none | Sheet: 1/1 |
| | Date: 2021-08-27 Drawn By: xseregax | |