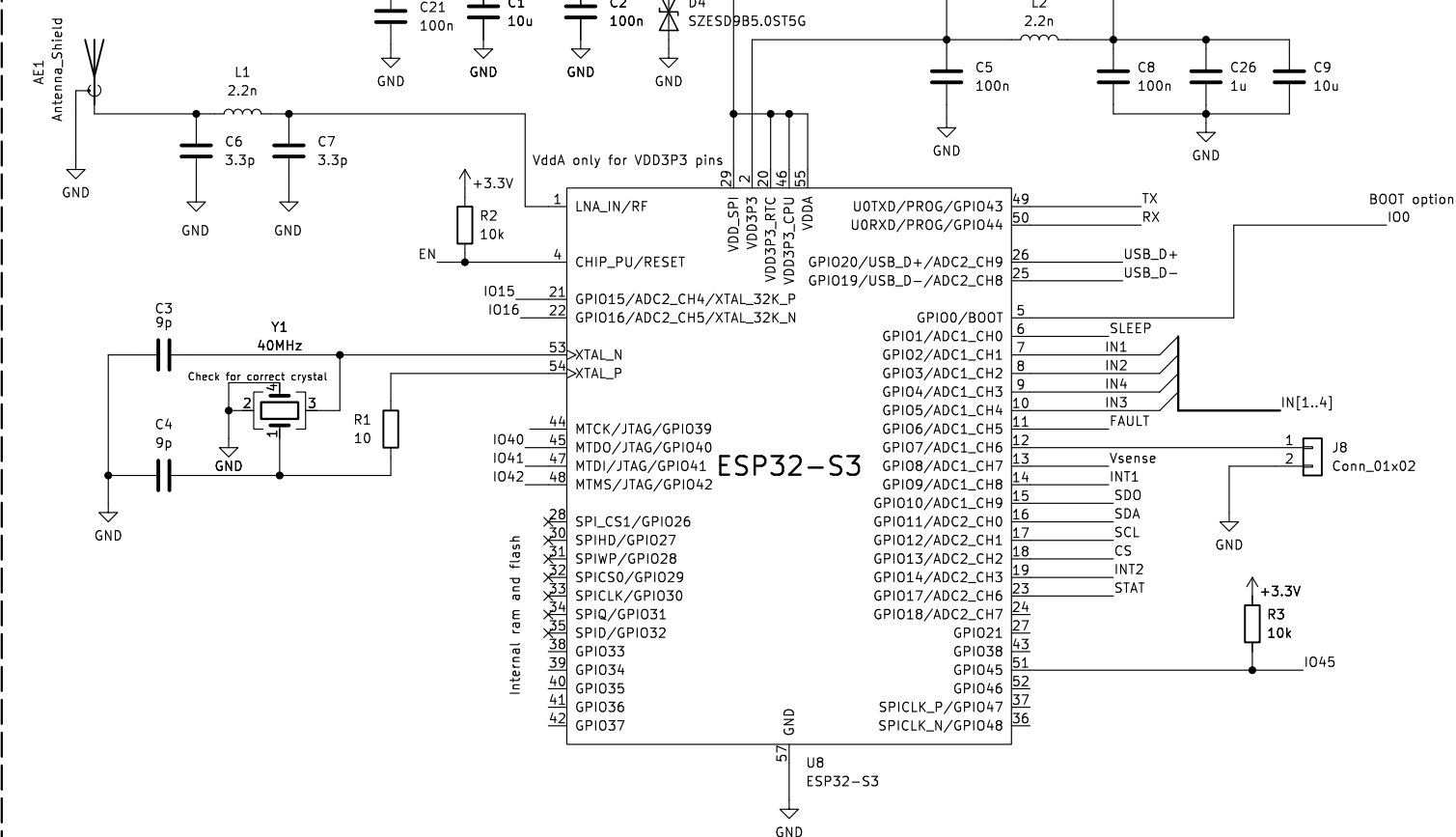


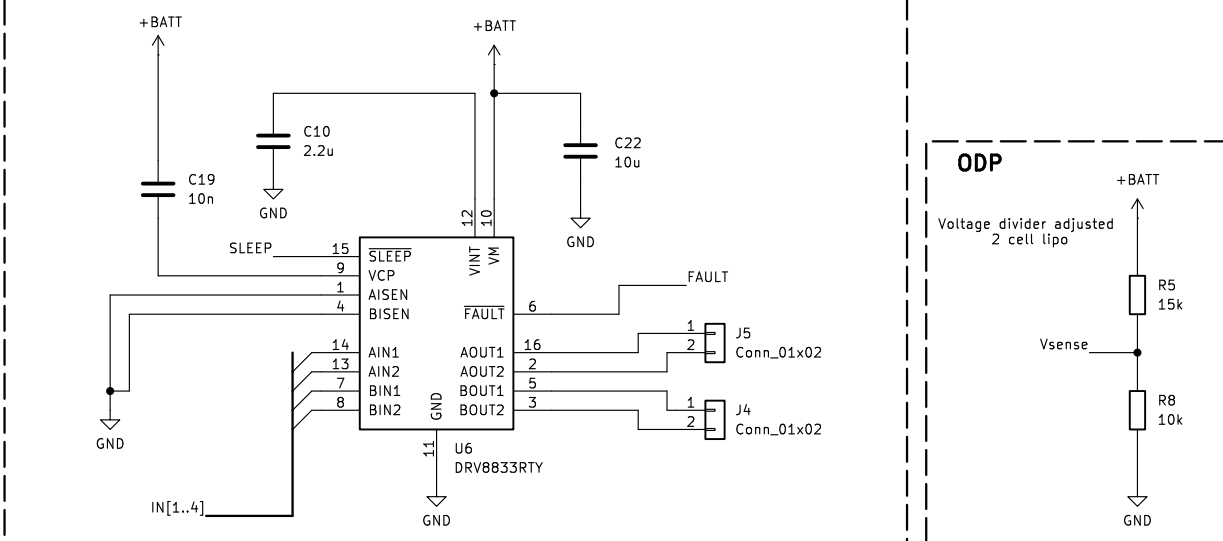
## MCU – ESP32

wifi/bluetooth antenna  
AN043: 50 Ohm impedance  
Matching network should match antenna impedance

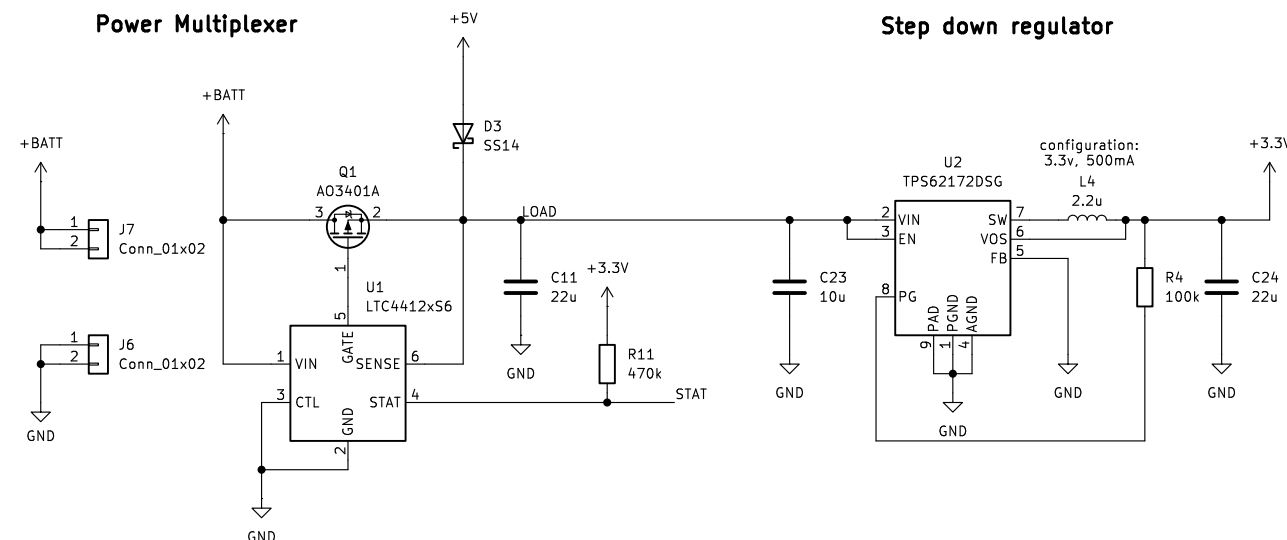


## DC-Motor Driver

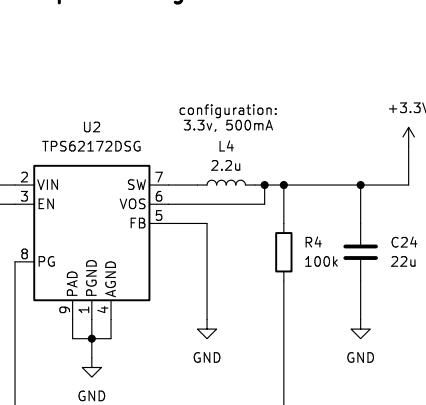
AISEN and BISEN shunt resistor power rating (if used)  
1W minimum. Calculated from max IC current (1.5A RMS) through 0.2Ω:  
 $P = I^2 R = (1.5A)^2 \times 0.2\Omega = 0.45W$  continuous  
With peak current (2A):  $P = (2A)^2 \times 0.2\Omega = 0.8W$  peak  
1W rating is safe margin over both continuous and peak dissipation



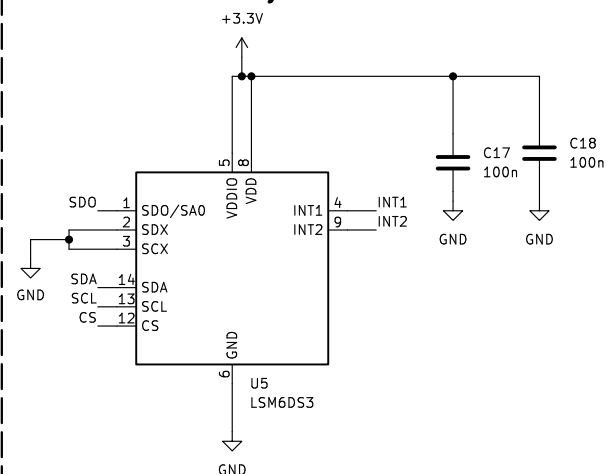
## Power Multiplexer



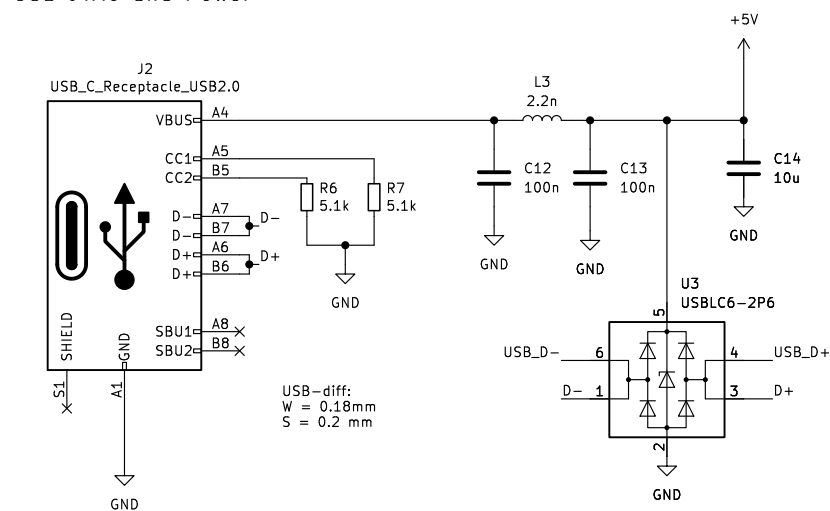
## Step down regulator



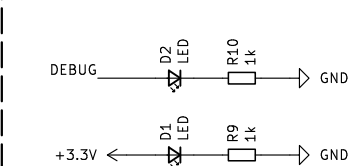
## Accelerometer and Gyro



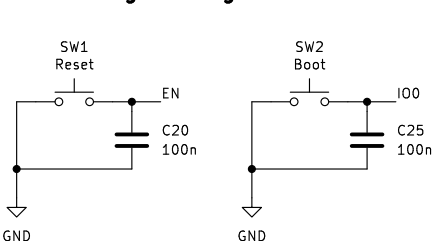
## USB JTAG and Power



## LEDs



## Programming switches



## Debug connector

