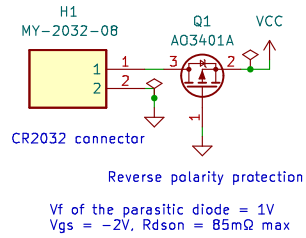
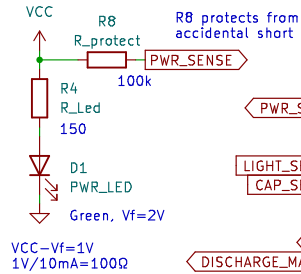


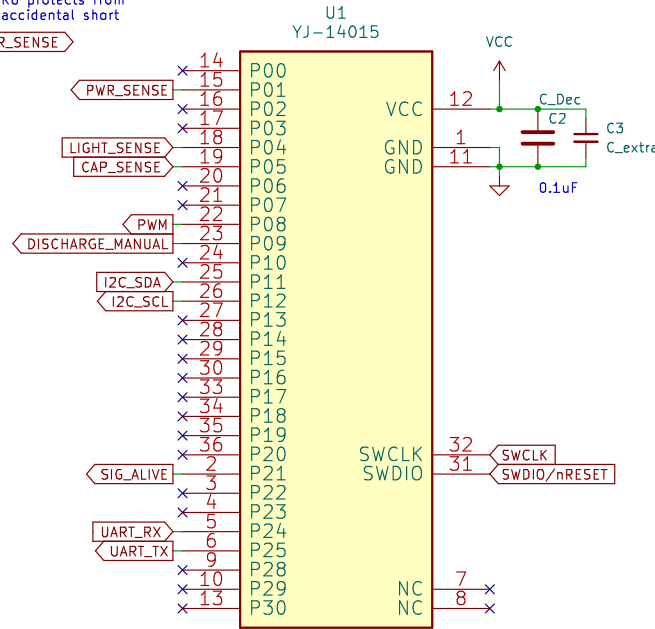
## Power



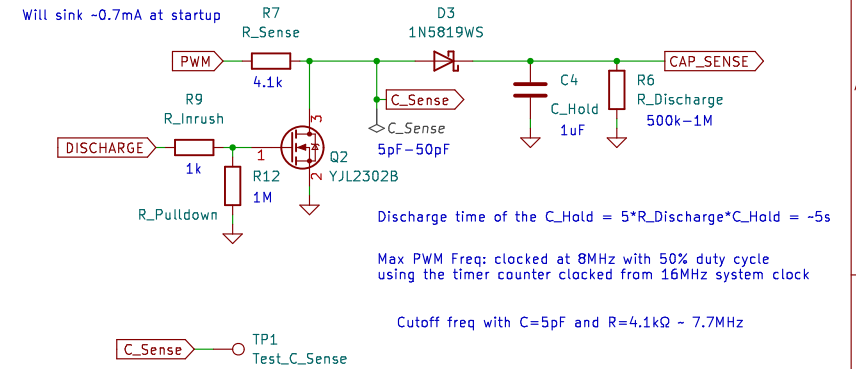
## Battery voltage monitoring



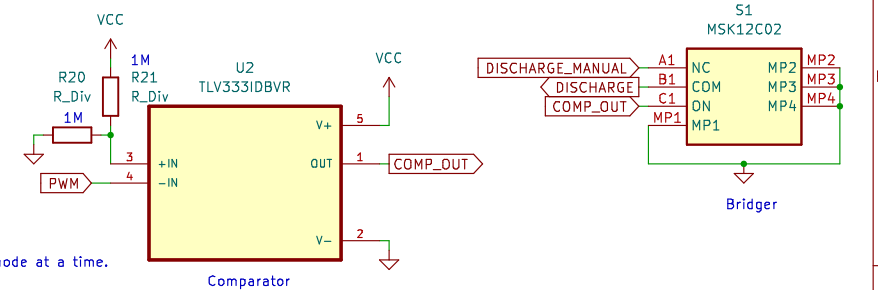
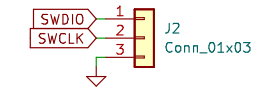
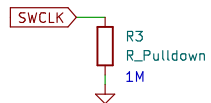
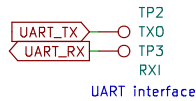
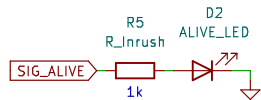
## MCU



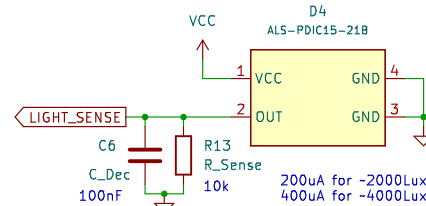
## Capacitive Moisture Sensing



## Signals and Interfacing



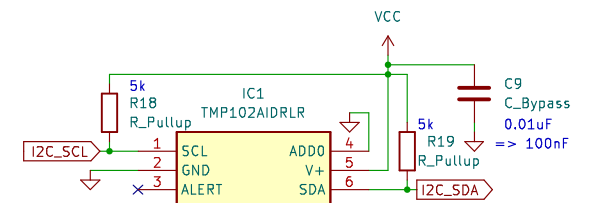
## Ambient Light Sensing



Calculation of  $R_{Sense}$  to meet the requirement of maximum light, and output saturation voltage:  
 $V_{out(max)} = I_{out(max)} \times R_L \leq V_{out(saturation)} = V_{CC} - 0.6V = 2.4V$   
 $I_{out(max)} = 200uA$ ,  $R_L = 10k \Rightarrow I_{out(max)} * R_L = 2V$

Simulation: <http://tinyurl.com/26kdolee>

## Temperature Sensing



The GPIOs used for each two-wire interface line can be chosen from any GPIO on the device and are independently configurable.

Programming options: <https://nrf52.jpconstantineau.com/docs/programmer/>  
 ESP32 Programmer: [https://github.com/atc1441/ESP32\\_nRF52\\_SWD](https://github.com/atc1441/ESP32_nRF52_SWD)

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