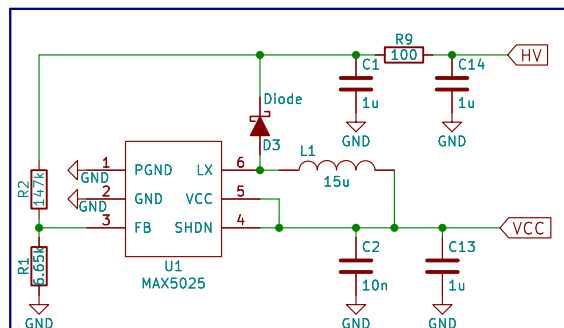


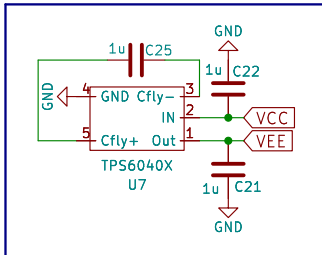
DC-DC Booster

This circuit takes the 5V DC VCC line, and increases the voltage to 28.6V.
This HV line is used to provide the reverse bias to the SiPM.

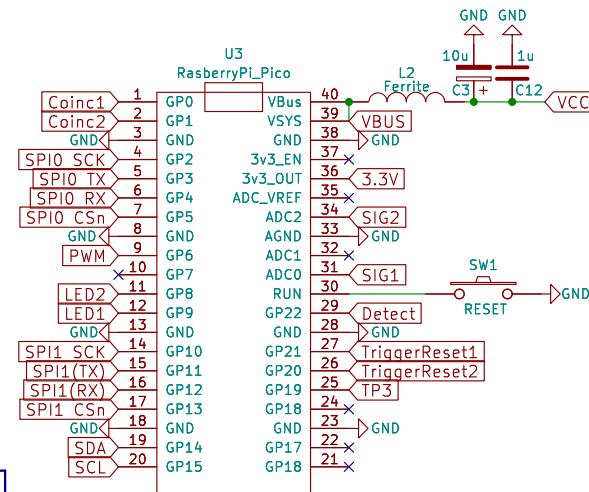
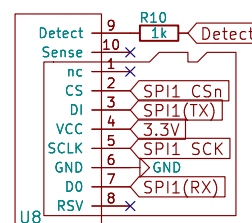


-5V Power

We need to bias the op amp below ground, in order to accurately see pulses near ground.

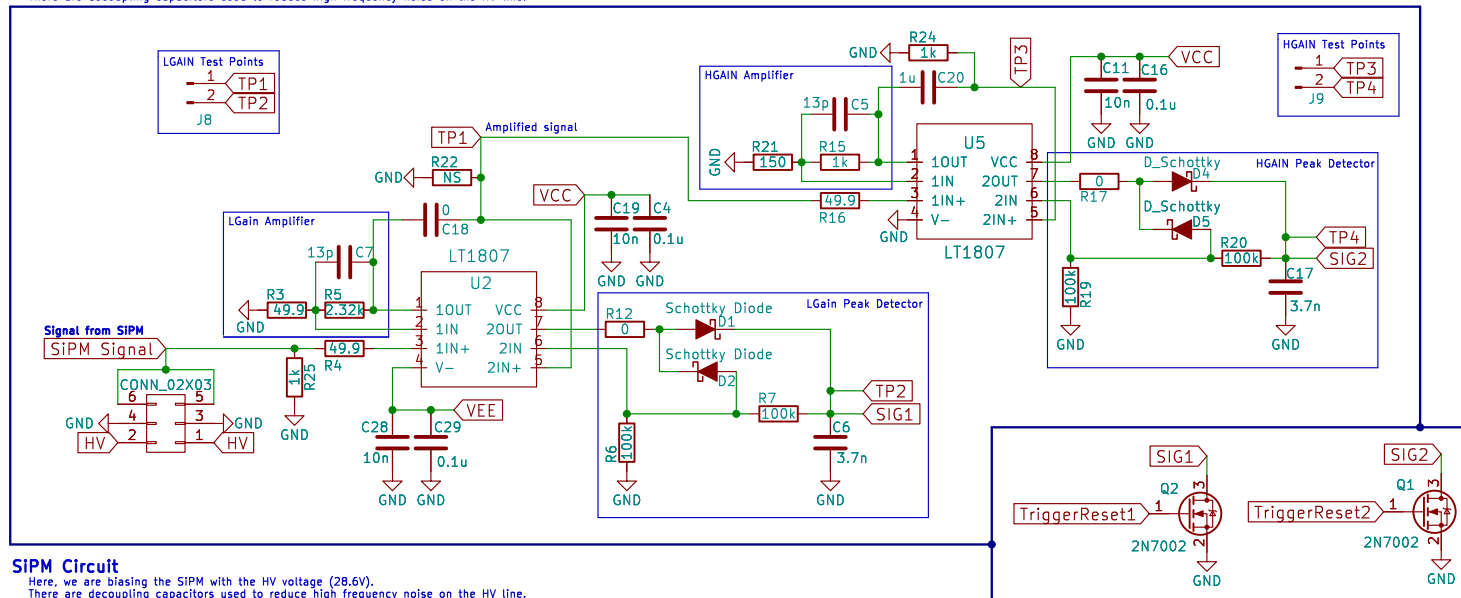


SD Card Socket



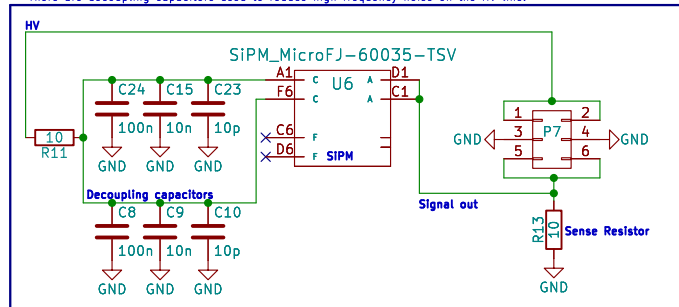
Amplifying and Peak detecting circuits

Here, we are biasing the SiPM with the HV voltage (28.6V).
There are decoupling capacitors used to reduce high frequency noise on the HV line.

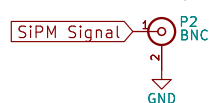


SiPM Circuit

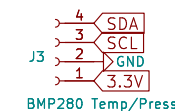
Here, we are biasing the SiPM with the HV voltage (28.6V).
There are decoupling capacitors used to reduce high frequency noise on the HV line.



BNC Output



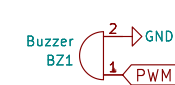
Temp/Press



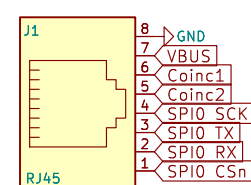
OLED



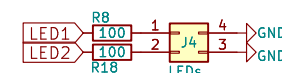
Buzzer



Coincidence Connection



LEDs



University of Delaware

Sheet: /

File: CosmicWatch.kicad_sch

Title: CosmicWatch: The Desktop Muon Detector

Size: A4 Date: March 2024

KiCad E.D.A. eeschema 7.0.9

Rev: v2.1

Id: 1/1