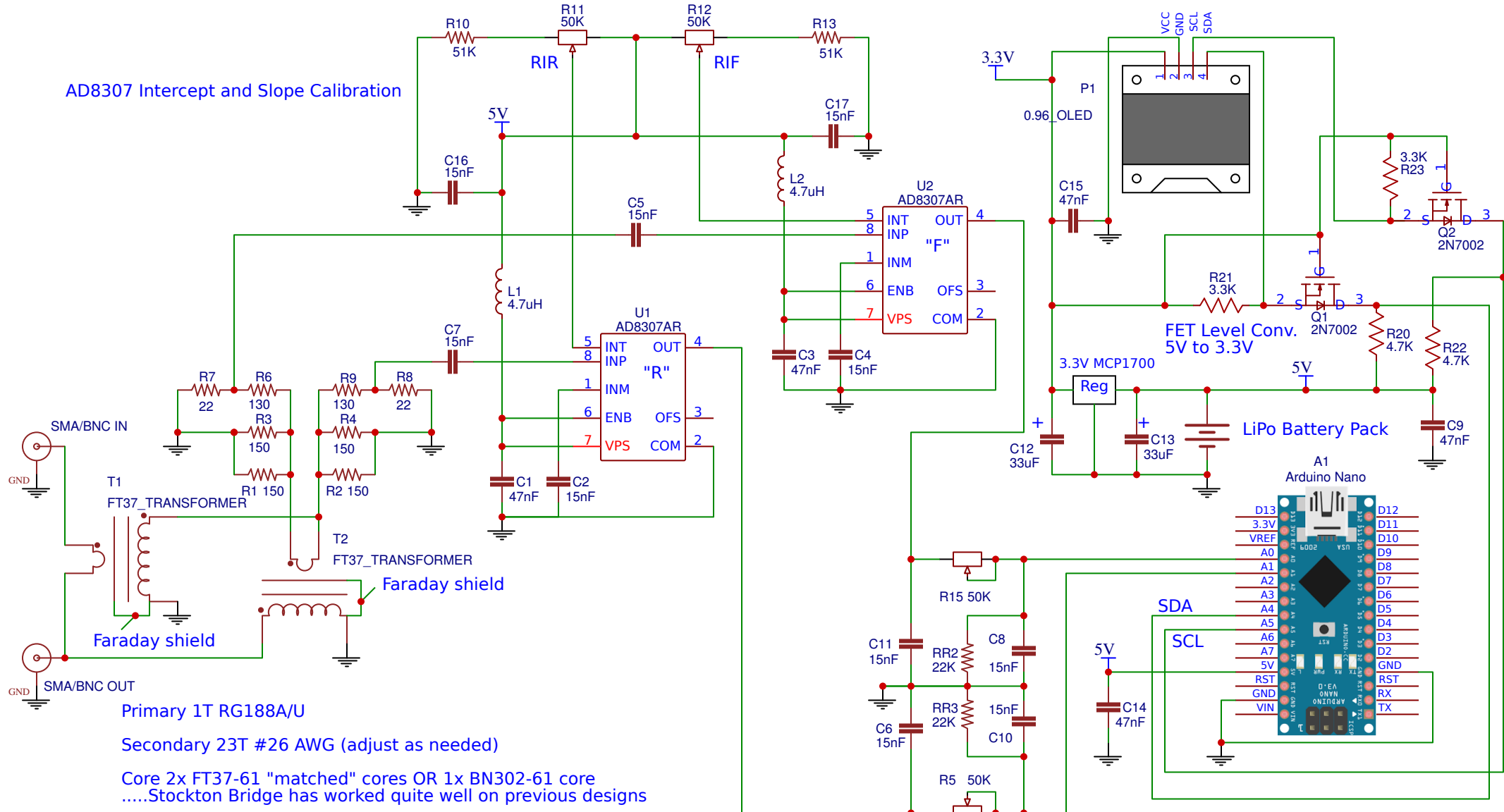


AD8307 Intercept and Slope Calibration



Primary 1T RG188A/U

Secondary 23T #26 AWG (adjust as needed)

Core 2x FT37-61 "matched" cores OR 1x BN302-61 core
Stockton Bridge has worked quite well on previous designs

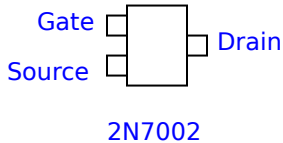
23t:1t gives a coupling ratio of 23/1, or $[20\log(1/23)]$ or -27.2dB

The voltage divider gives further attenuation of 22/152, or $[20\log(22/152)]$ or -16.8dB

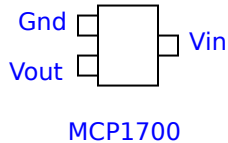
Combining -27.2dB and -16.8dB gives -44dB which reduces 25W (44dBm) to 1mW (0dBm).

Replace "matching" potentiometers with fixed "RR" resistors if that makes sense.

The signal is sampled by a directional coupler with 44 dB of attenuation which permits measurement from 10 microwatts to 25 watts. A voltage divider on the output of the detectors scales the range to take better advantage of the available resolution.



2N7002



MCP1700

Recommended power source is a 5V rechargeable LiPo "battery bank" but you can also connect Vin to a 9V batteryprobably won't last too long OR connect Vin to a 7.4V Radio Control LiPo. Put a switch in the power lead.

TITLE: 25W AD8307 POWER-SWR METER		REV: 1.6
Date: 2018-06-12	Sheet: 1/1	
EasyEDA V4.1.3	Drawn By: K5BCQ	