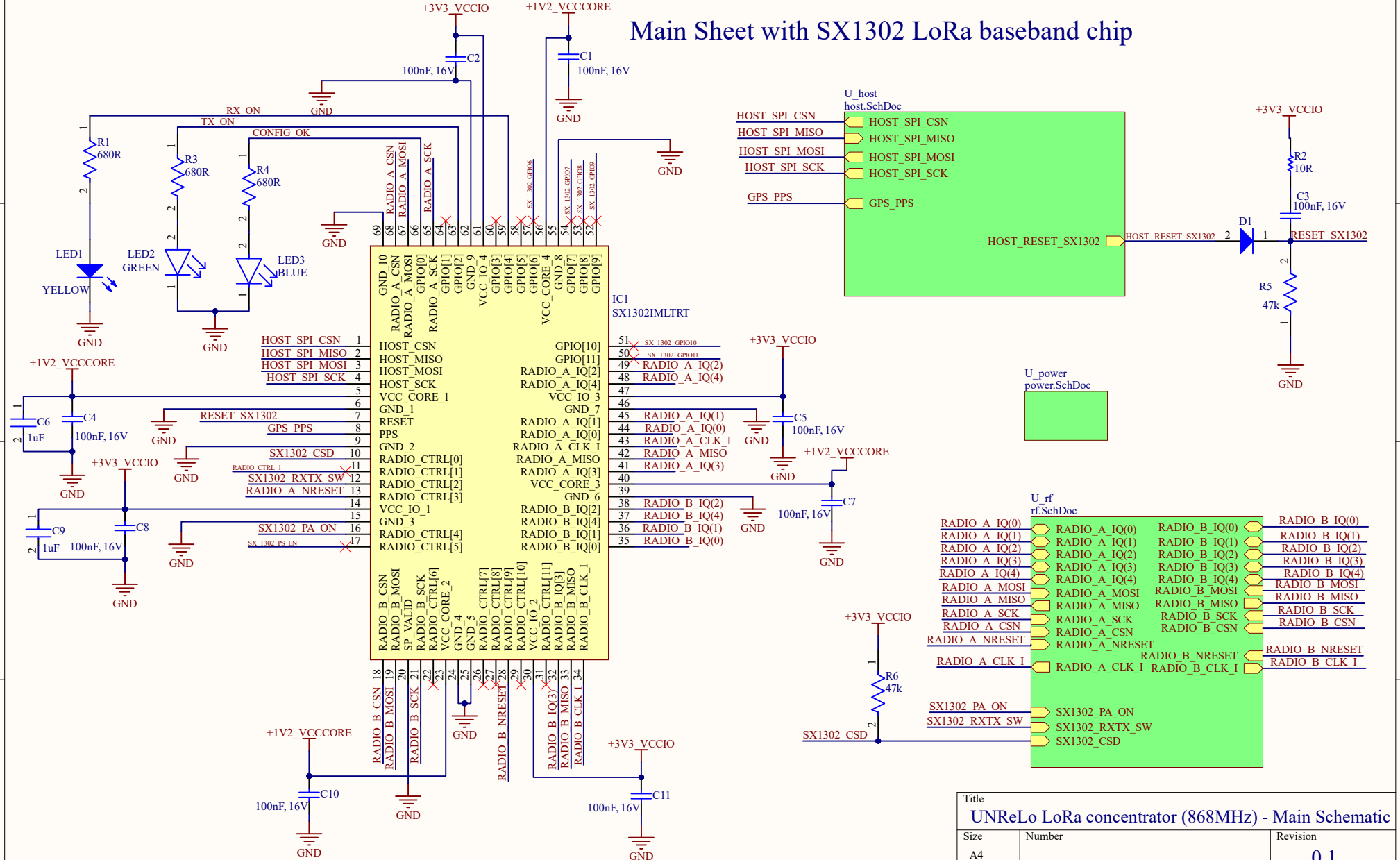
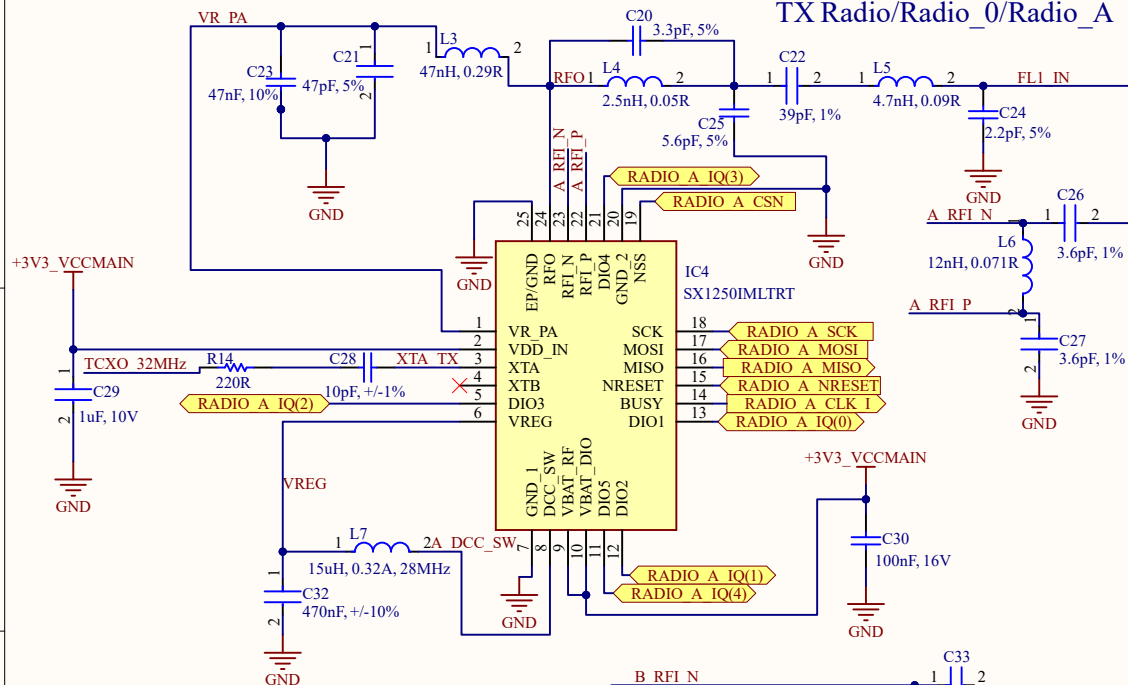


Main Sheet with SX1302 LoRa baseband chip

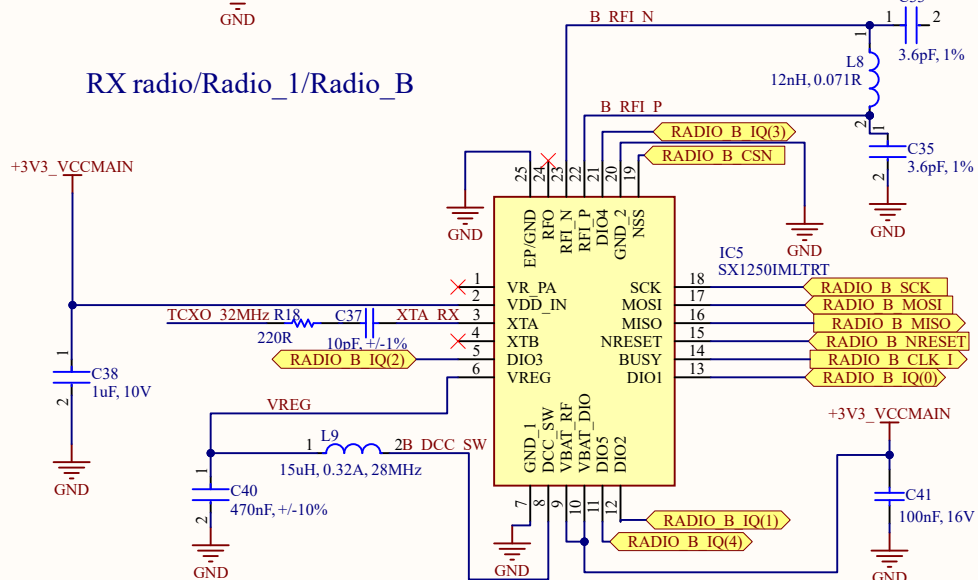


Title		
UNReLo LoRa concentrator (868MHz) - Main Schematic		
Size	Number	Revision
A4		0.1
Date:	10/10/2022	Sheet 1 of 5
File:	C:\Users\...main.SchDoc	Drawn By: Alex Gichamba

TX Radio/Radio_0/Radio_A



RX radio/Radio_1/Radio_B



U rf-fem

rf-fem.SchDoc

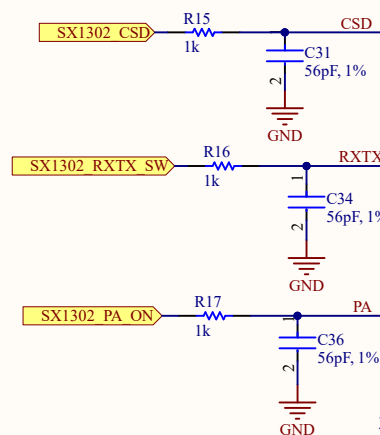
FL1_IN

FL2_OUT

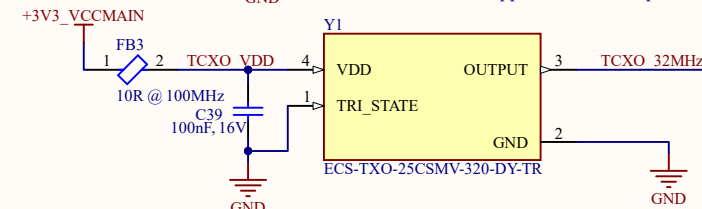
CSD

RXTX_SW

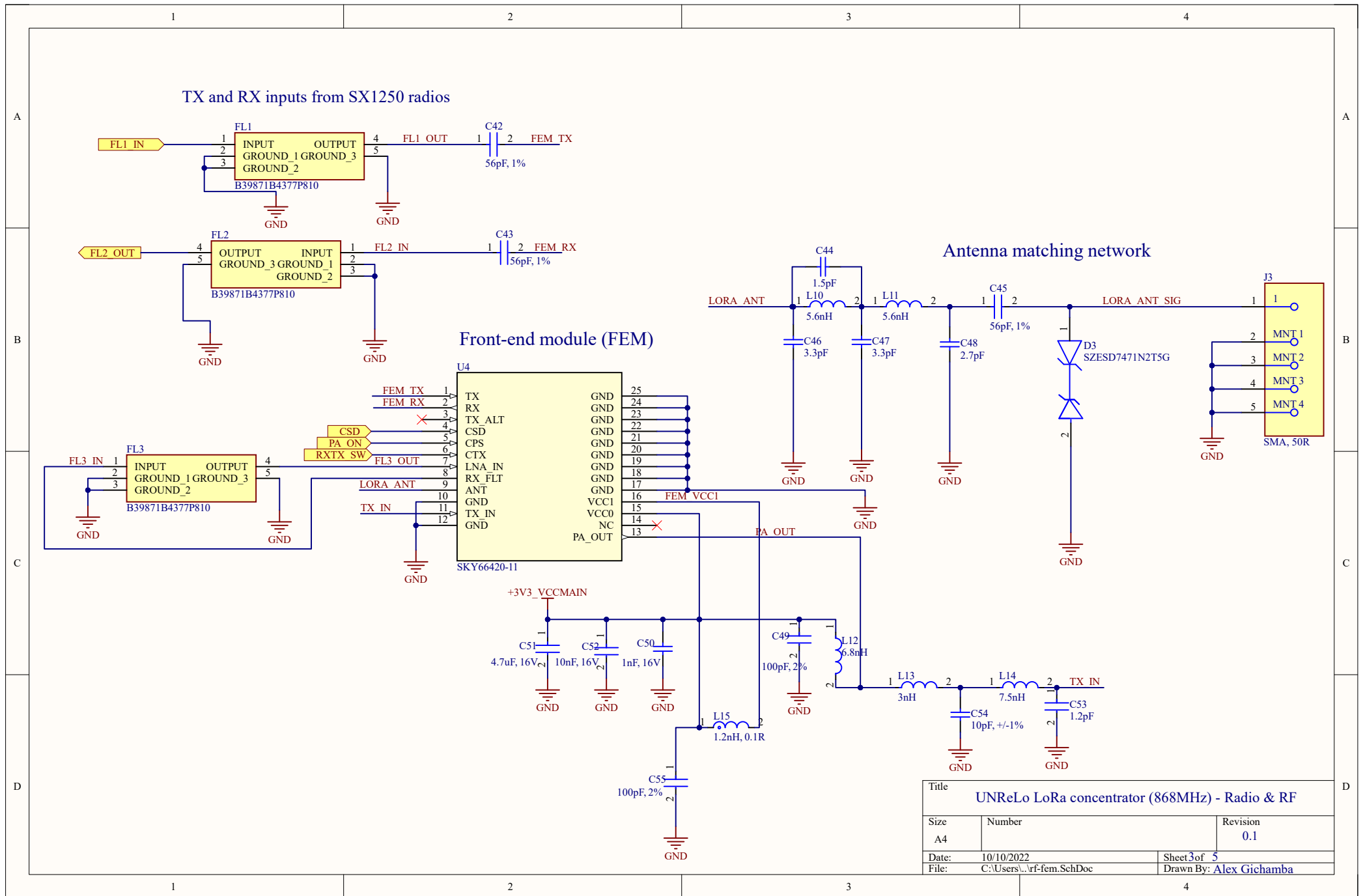
PA_ON



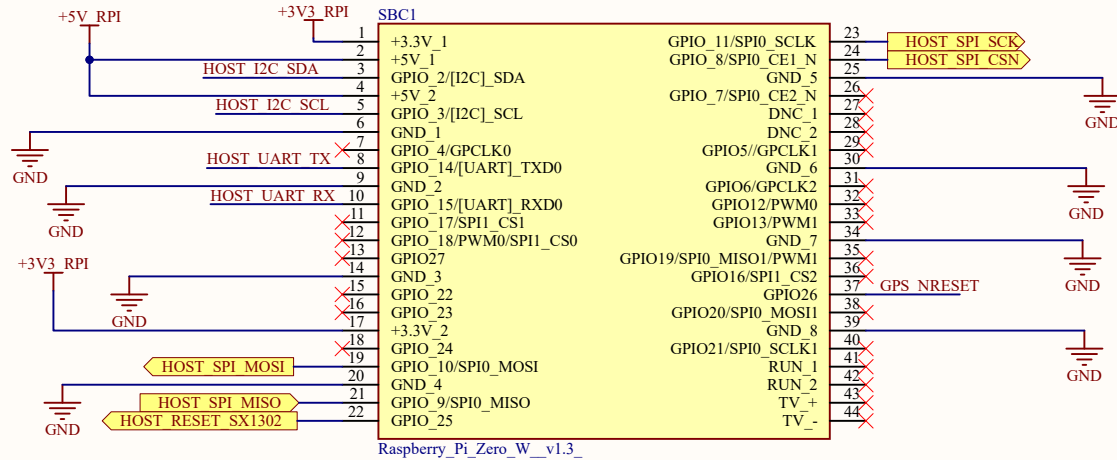
32MHz TCXO - Clipped sinewave output



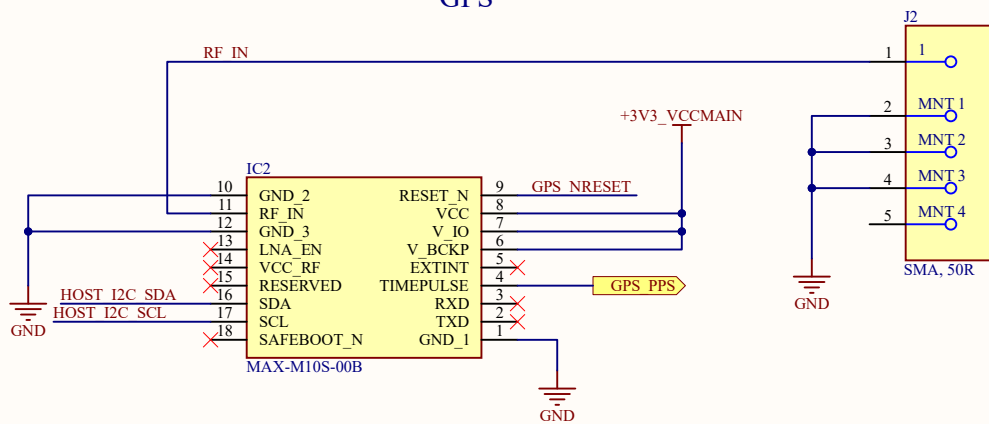
Title		
UNReLo LoRa concentrator (868MHz) - Radio & RF		
Size	Number	Revision
A4		0.1
Date:	10/10/2022	Sheet 2 of 5
File:	C:\Users\...rf.SchDoc	Drawn By: Alex Gichamba



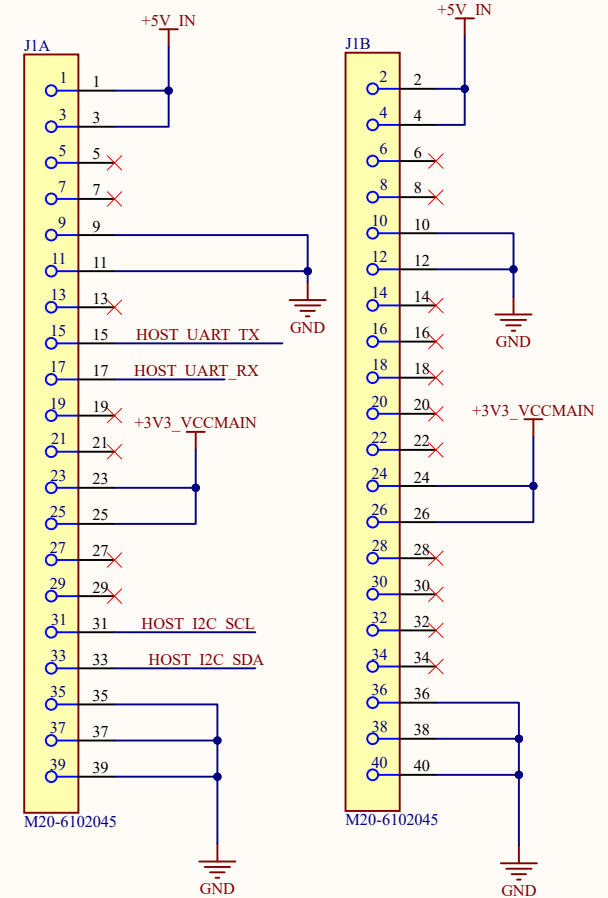
HOST - RPI Zero W



GPS

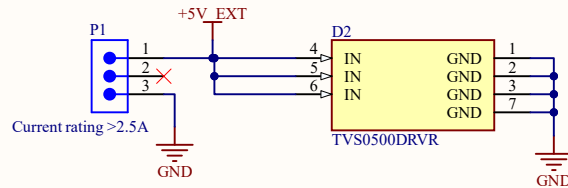


40 pin stacking conn

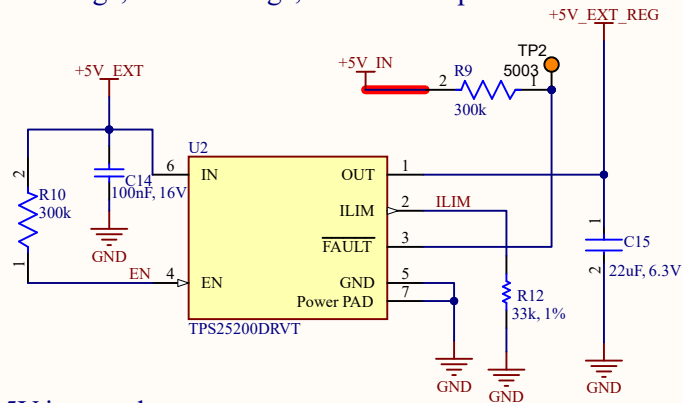


Title		
UNReLo LoRa concentrator (868MHz) - Host, GPS, Interface		
Size	Number	Revision
A4		0.1
Date:	10/10/2022	Sheet 4 of 5
File:	C:\Users\...host.SchDoc	Drawn By: Alex Gichamba

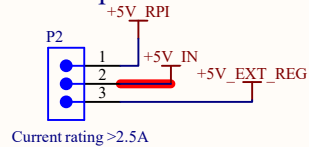
External +5V input port



Overvoltage, Undervoltage, Overcurrent protection



+5V input selector



1-2: RPI powered by USB, Everything else powered by RPI +5V port

1-2-3: Everything including RPI powered by external +5V port

Supply requirements

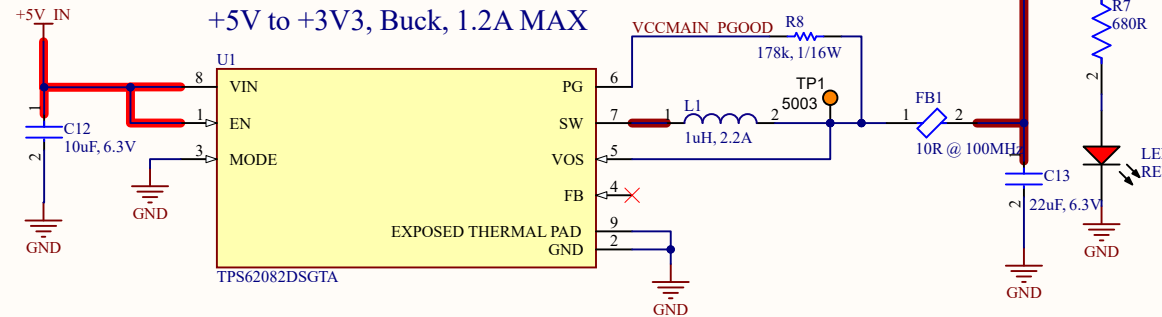
SKY66420-11: 280mA @ 3.3V

SX1250: 2*120mA @ 3.3V

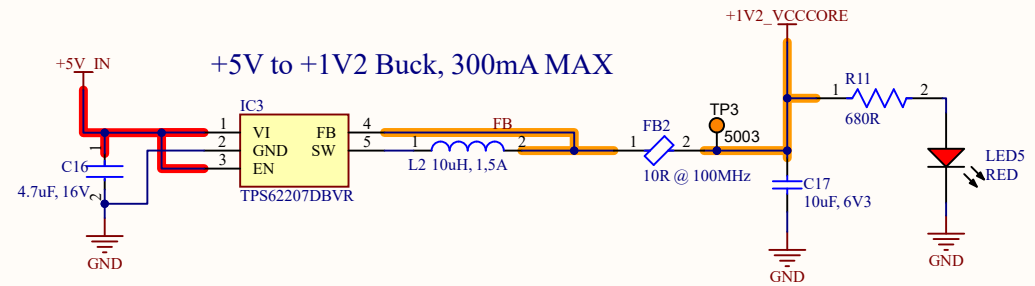
SX1302: 85mA @ 1.2V
<10mA @ 3.3V (Sequencing requirement)

GPS 100mA @ 3.3V

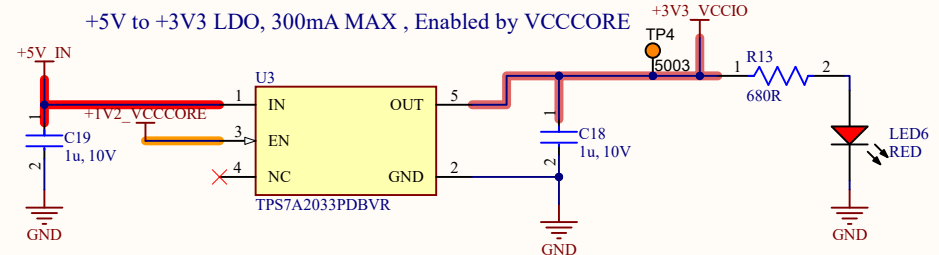
+5V to +3V3, Buck, 1.2A MAX



+5V to +1V2 Buck, 300mA MAX



+5V to +3V3 LDO, 300mA MAX, Enabled by VCCCORE



Title		
Size A4	Number	Revision
Date: 10/10/2022	Sheet of	
File: C:\Users\...power.SchDoc	Drawn By: Alex Gichamba	