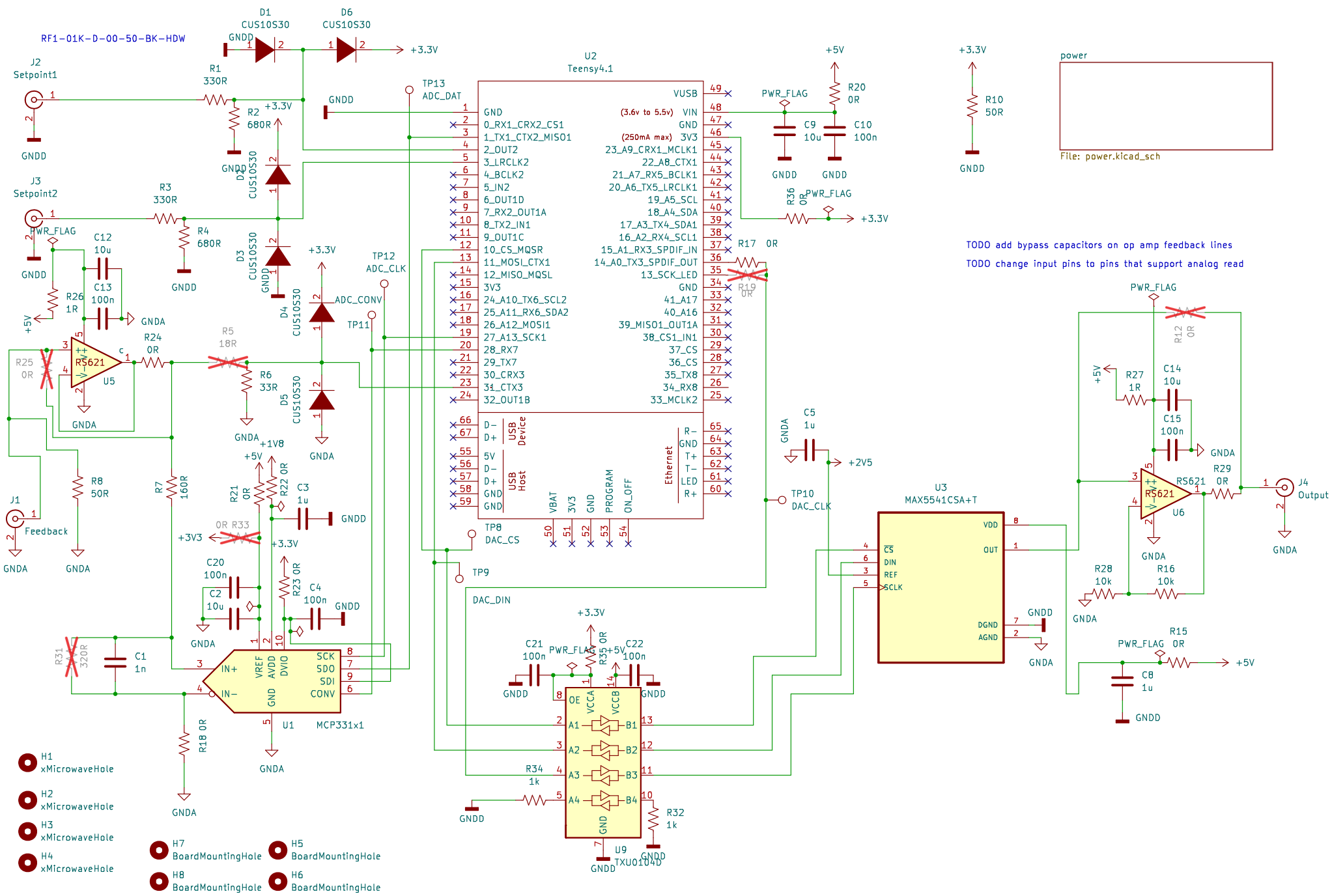
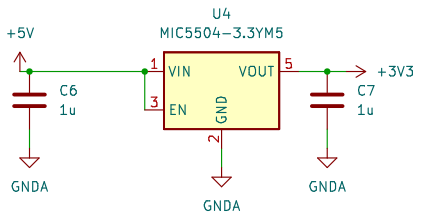
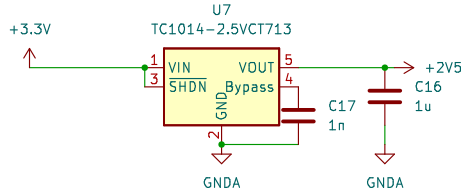
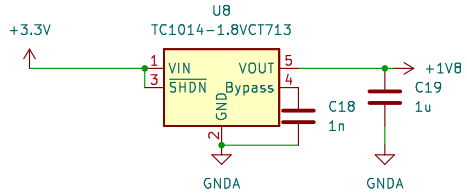
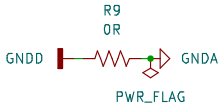
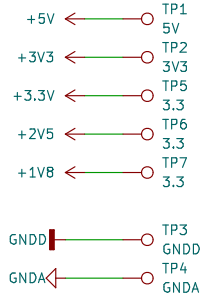

RF1-01K-D-00-50-BK-HDW
J2
Setpoint1
J3
Setpoint2
J1
Feedback
D1
CUS10S30
D6
CUS10S30
R1
330R
R2
680R
R3
330R
R4
680R
D2
CUS10S30
D3
CUS10S30
D4
CUS10S30
D5
CUS10S30
C12
10u
C13
100n
R26
1R
R25
0R
RS621
U5
R24
0R
R5
18R
R6
33R
R8
50R
R7
160R
R21
0R
R22 0R
C3
1u
0R R33
C20
100n
C2
10u
R23 0R
C4
100n
R31
320R
C1
1n
IN+
IN−
VREF
AVDD
DVIO
GND
SCK
SDO
SDI
CONV
U1
MCP331x1
R18 0R
TP13
ADC_DAT
TP12
ADC_CLK
ADC_CONV
TP11
U2
Teensy4.1
VUSB
(3.6v to 5.5v) VIN
(250mA max) 3V3
USB Device
USB Host
Ethernet
VBAT
3V3
GND
PROGRAM
ON_OFF
TP8
DAC_CS
TP9
DAC_DIN
TP10
DAC_CLK
R20
0R
C9
10u
C10
100n
R36 0R
R17 0R
R19 0R
C5
1u
+2V5
U3
MAX5541CSA+T
VDD
OUT
CS
DIN
REF
SCLK
DGND
AGND
C21
100n
C22
100n
R35 0R
OE
VCCA
VCCB
A1
A2
A3
A4
B1
B2
B3
B4
R34
1k
R32
1k
U9
TXU0104D
R10
50R
power
File: power.kicad_sch
TODO add bypass capacitors on op amp feedback lines
TODO change input pins to pins that support analog read
R12 0R
R27
1R
C14
10u
C15
100n
R29
0R
J4
Output
U6
R28
10k
R16
10k
R15
0R
C8
1u
H1
xMicrowaveHole
H2
xMicrowaveHole
H3
xMicrowaveHole
H4
xMicrowaveHole
H7
BoardMountingHole
H8
BoardMountingHole
H5
BoardMountingHole
H6
BoardMountingHole

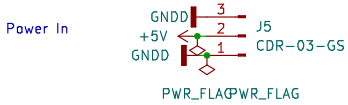

U4
MIC5504-3.3YM5
+5V
VIN
VOUT
EN
GND
+3V3
C6
1u
C7
1u
GNDA
GNDA
GNDA

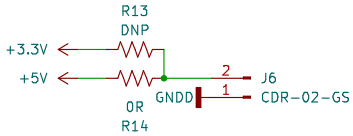

U7
TC1014-2.5VCT713
+3.3V
VIN
SHDN
VOUT
Bypass
GND
+2V5
C17
1n
C16
1u
GNDA
GNDA


U8
TC1014-1.8VCT713
+3.3V
VIN
SHDN
VOUT
Bypass
GND
+1V8
C18
1n
C19
1u
GNDA
GNDA


R9
0R
GNDD
GNDA
PWR_FLAG


+5V
TP1
5V
+3V3
TP2
3V3
+3.3V
TP5
3.3
+2V5
TP6
3.3
+1V8
TP7
3.3
GNDD
TP3
GNDD
GNDA
TP4
GNDA


Power In
GNDD
+5V
GNDD
J5
CDR-03-GS
PWR_FLAG
PWR_FLAG


R13
DNP
+3.3V
+5V
OR
R14
GNDD
J6
CDR-02-GS