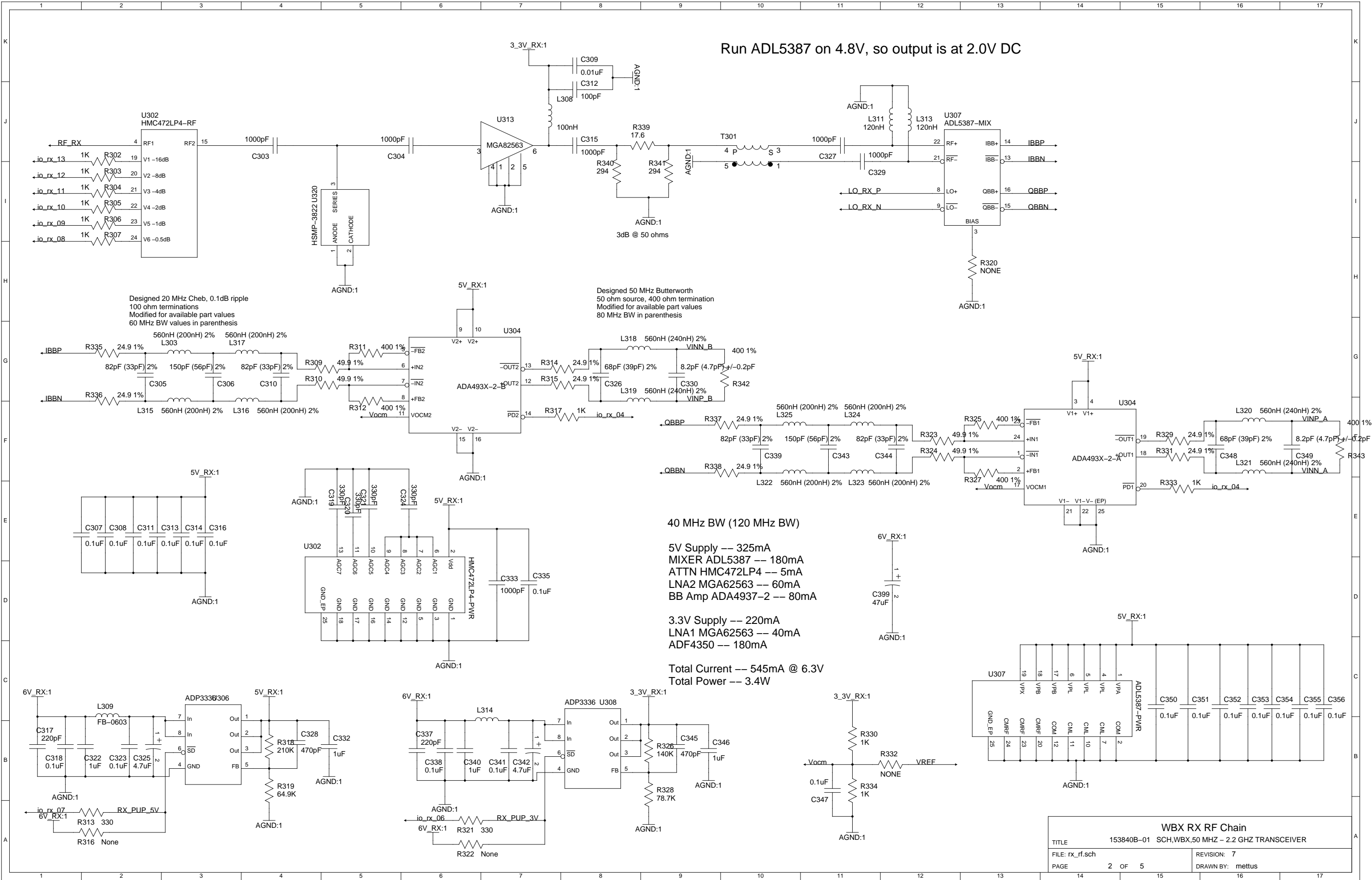


RX

WBX Common		
TITLE	153840B-01 SCH,WBX,50 MHZ - 2.2 GHZ TRANSCEIVER	
FILE: common_wbx.sch	REVISION: 7	
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Run ADL5387 on 4.8V, so output is at 2.0V DC



Designed 20 MHz Cheb, 0.1dB ripple
100 ohm terminations
Modified for available part values
60 MHz BW values in parenthesis

Designed 50 MHz Butterworth
50 ohm source, 400 ohm termination
Modified for available part values
80 MHz BW in parenthesis

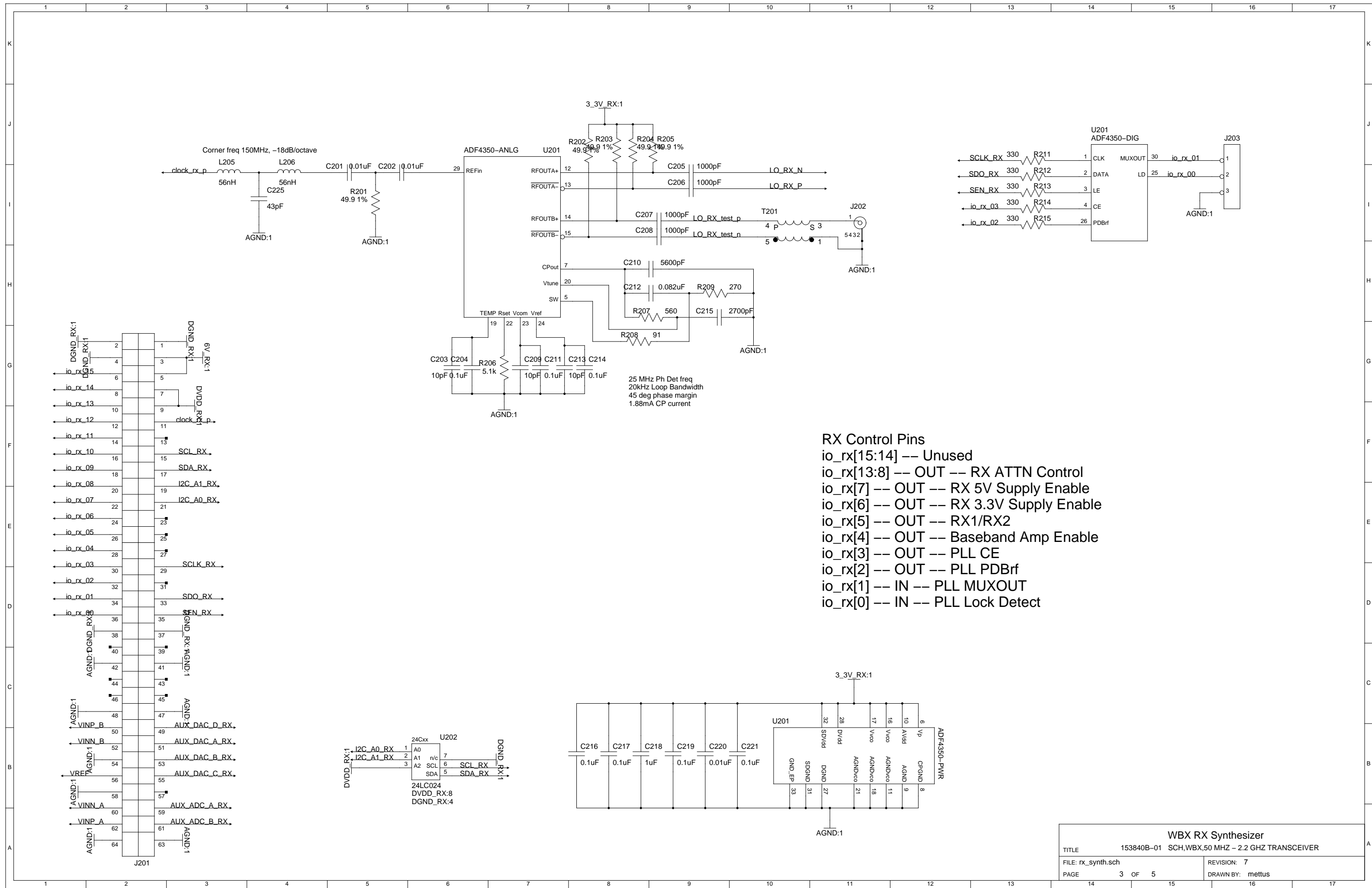
40 MHz BW (120 MHz BW)

5V Supply --- 325mA
MIXER ADL5387 --- 180mA
ATTN HMC472LP4 --- 5mA
LNA2 MGA62563 --- 60mA
BB Amp ADA4937-2 --- 80mA

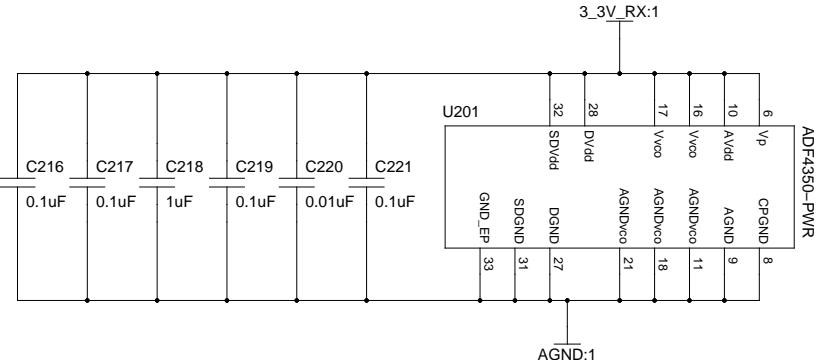
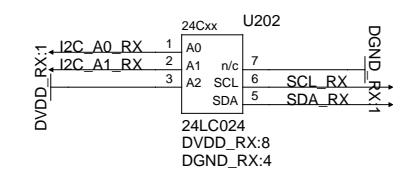
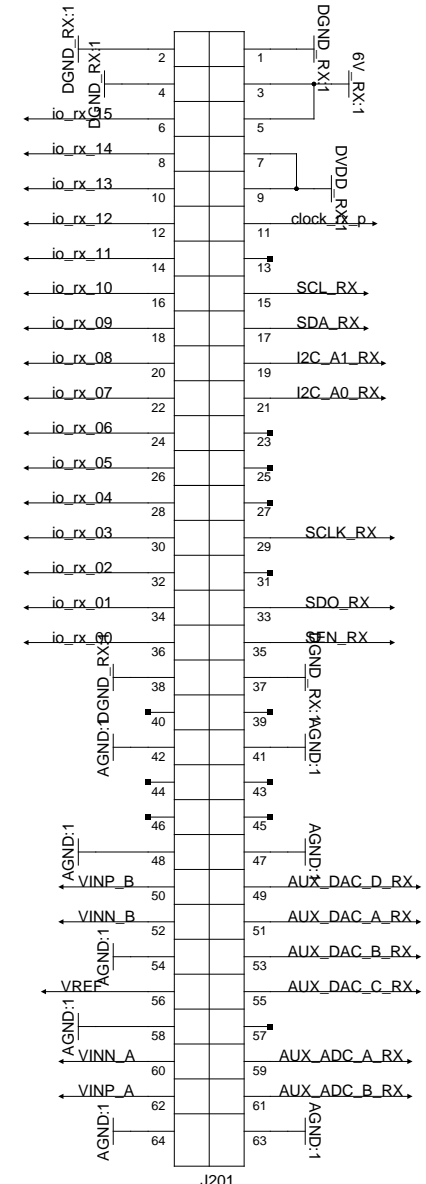
3.3V Supply --- 220mA
LNA1 MGA62563 --- 40mA
ADF4350 --- 180mA

Total Current --- 545mA @ 6.3V
Total Power --- 3.4W

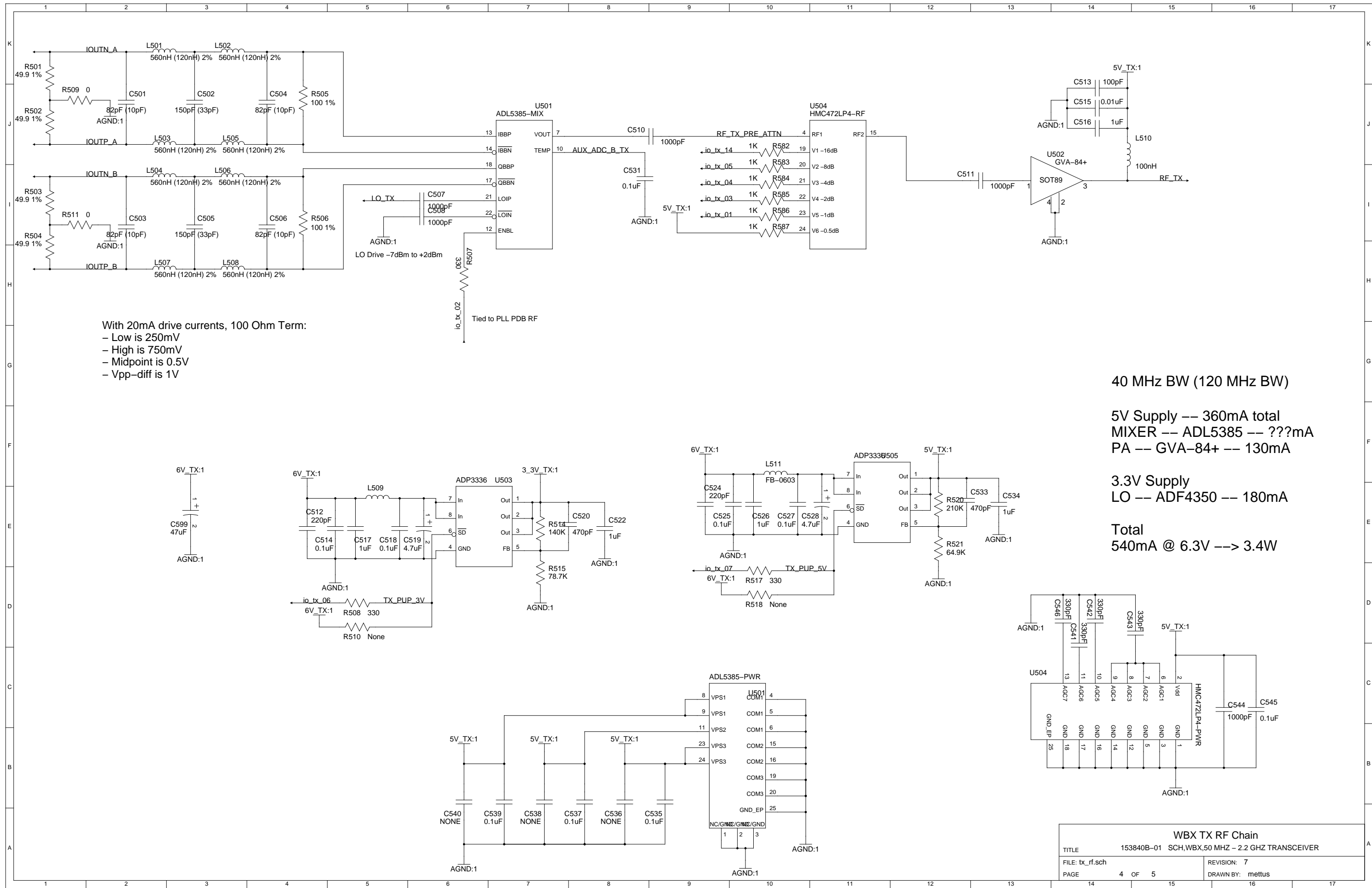
WBX RX RF Chain		
TITLE	153840B-01	SCH,WBX,50 MHz - 2.2 GHz TRANSCEIVER
FILE:	rx_rf.sch	REVISION: 7
PAGE	2 OF 5	DRAWN BY: mettus



RX Control Pins
 io_rx[15:14] -- Unused
 io_rx[13:8] -- OUT -- RX ATTN Control
 io_rx[7] -- OUT -- RX 5V Supply Enable
 io_rx[6] -- OUT -- RX 3.3V Supply Enable
 io_rx[5] -- OUT -- RX1/RX2
 io_rx[4] -- OUT -- Baseband Amp Enable
 io_rx[3] -- OUT -- PLL CE
 io_rx[2] -- OUT -- PLL PDBrf
 io_rx[1] -- IN -- PLL MUXOUT
 io_rx[0] -- IN -- PLL Lock Detect



WBX RX Synthesizer	
TITLE	153840B-01 SCH,WBX,50 MHZ - 2.2 GHZ TRANSCEIVER
FILE: rx_synth.sch	REVISION: 7
PAGE 3 OF 5	DRAWN BY: mettus



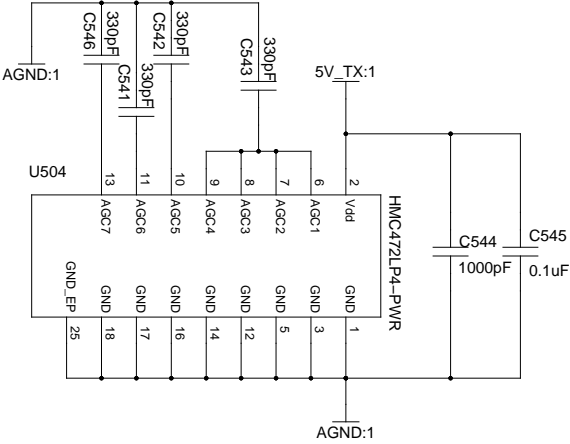
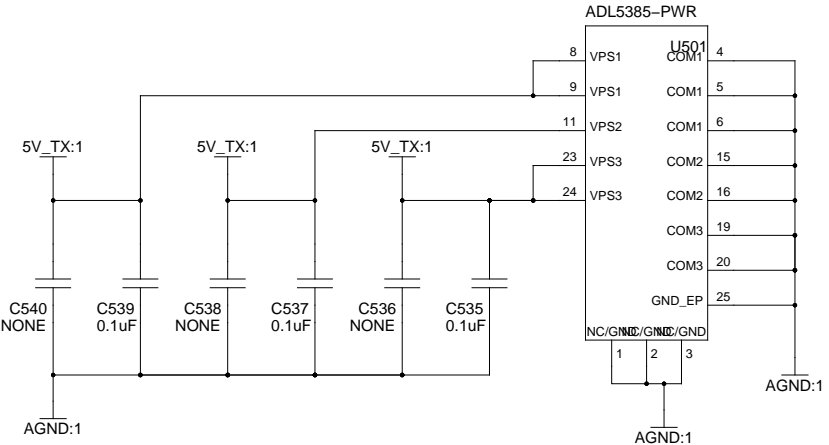
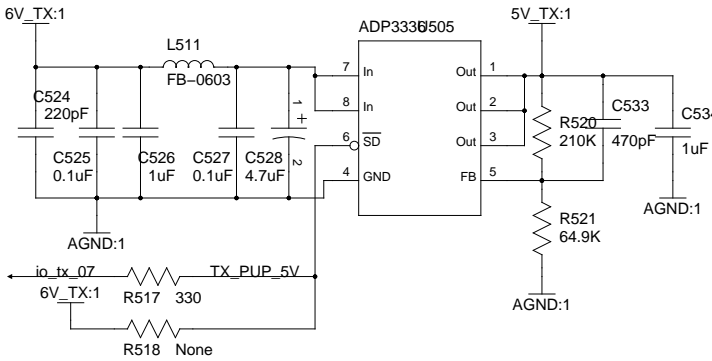
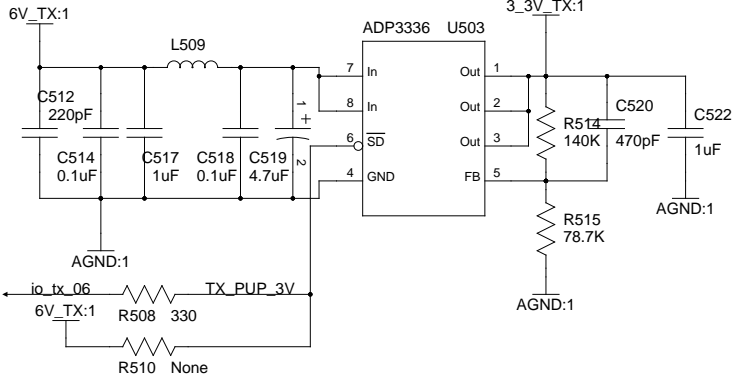
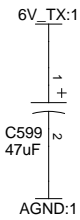
With 20mA drive currents, 100 Ohm Term:
 - Low is 250mV
 - High is 750mV
 - Midpoint is 0.5V
 - Vpp-diff is 1V

40 MHz BW (120 MHz BW)

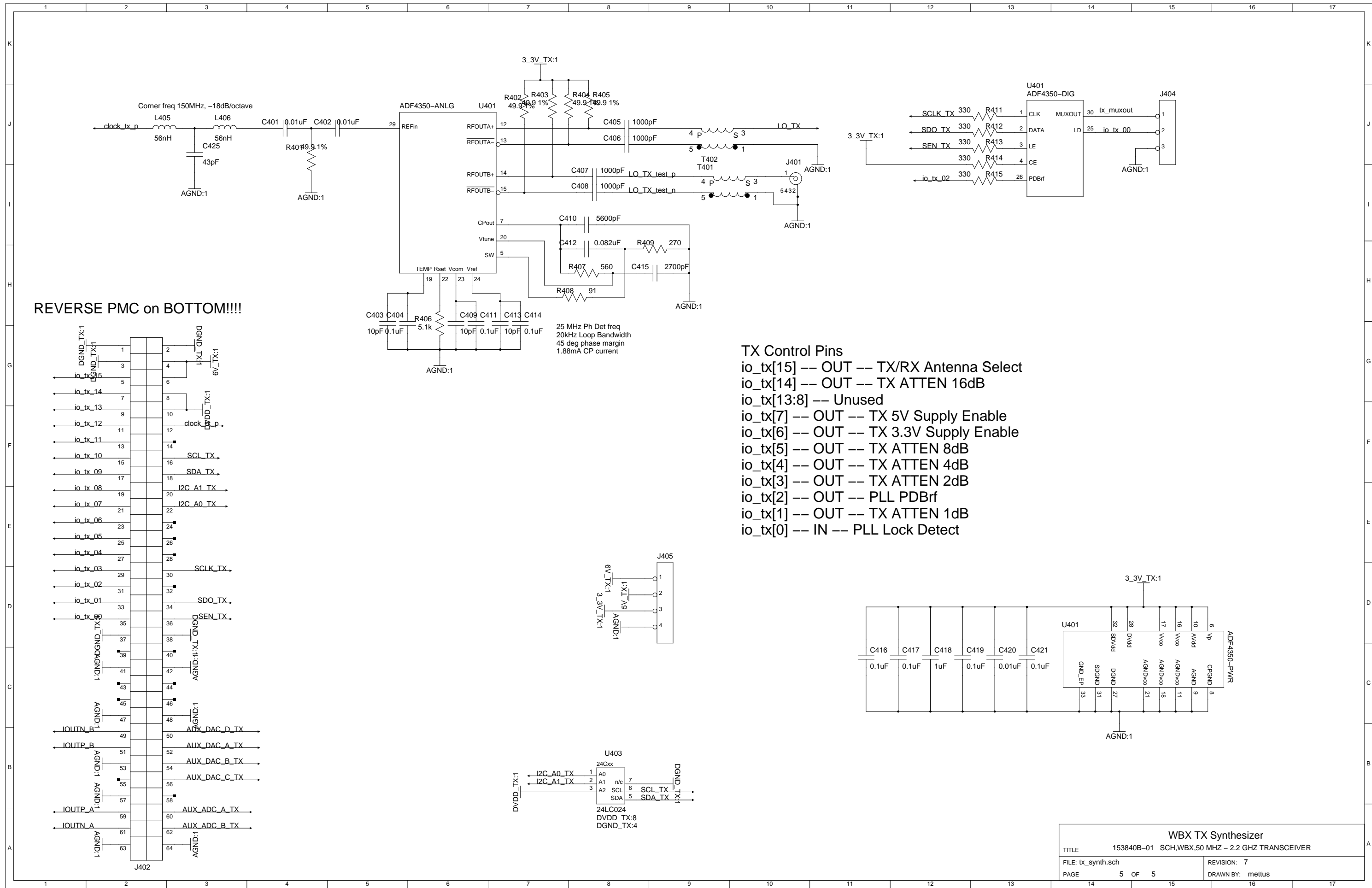
5V Supply --- 360mA total
 MIXER --- ADL5385 --- ???mA
 PA --- GVA-84+ --- 130mA

3.3V Supply
 LO --- ADF4350 --- 180mA

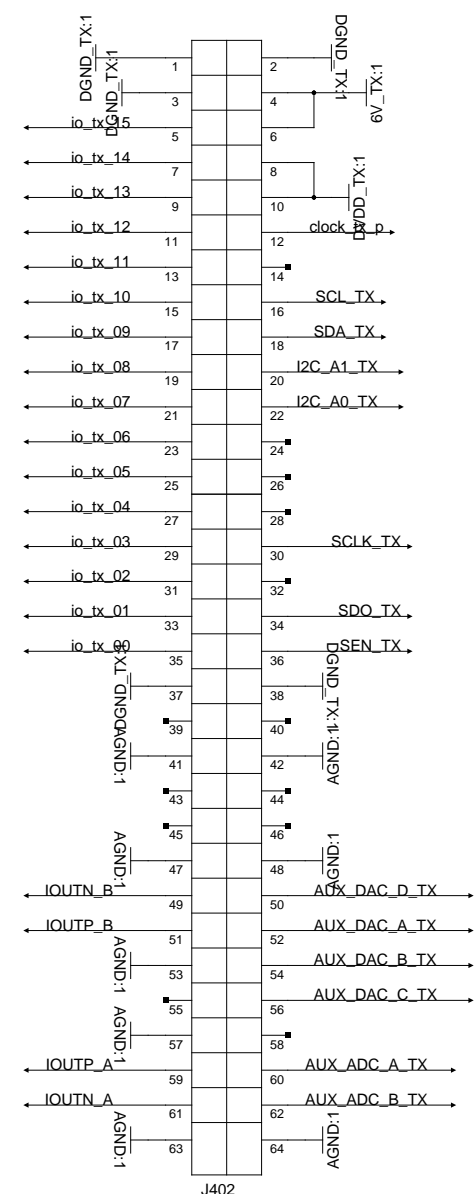
Total
 540mA @ 6.3V ---> 3.4W



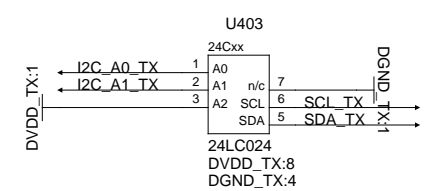
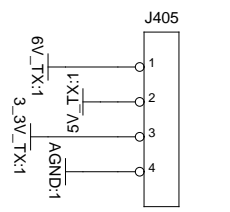
WBX TX RF Chain		
TITLE	153840B-01	SCH,WBX,50 MHz - 2.2 GHz TRANSCEIVER
FILE:	tx_rf.sch	REVISION: 7
PAGE	4 OF 5	DRAWN BY: mettus



REVERSE PMC on BOTTOM!!!!



- TX Control Pins
- io_tx[15] --- OUT --- TX/RX Antenna Select
 - io_tx[14] --- OUT --- TX ATTEN 16dB
 - io_tx[13:8] --- Unused
 - io_tx[7] --- OUT --- TX 5V Supply Enable
 - io_tx[6] --- OUT --- TX 3.3V Supply Enable
 - io_tx[5] --- OUT --- TX ATTEN 8dB
 - io_tx[4] --- OUT --- TX ATTEN 4dB
 - io_tx[3] --- OUT --- TX ATTEN 2dB
 - io_tx[2] --- OUT --- PLL PDBrf
 - io_tx[1] --- OUT --- TX ATTEN 1dB
 - io_tx[0] --- IN --- PLL Lock Detect



WBX TX Synthesizer	
TITLE	153840B-01 SCH,WBX,50 MHZ - 2.2 GHZ TRANSCEIVER
FILE: tx_synth.sch	REVISION: 7
PAGE 5 OF 5	DRAWN BY: mettus