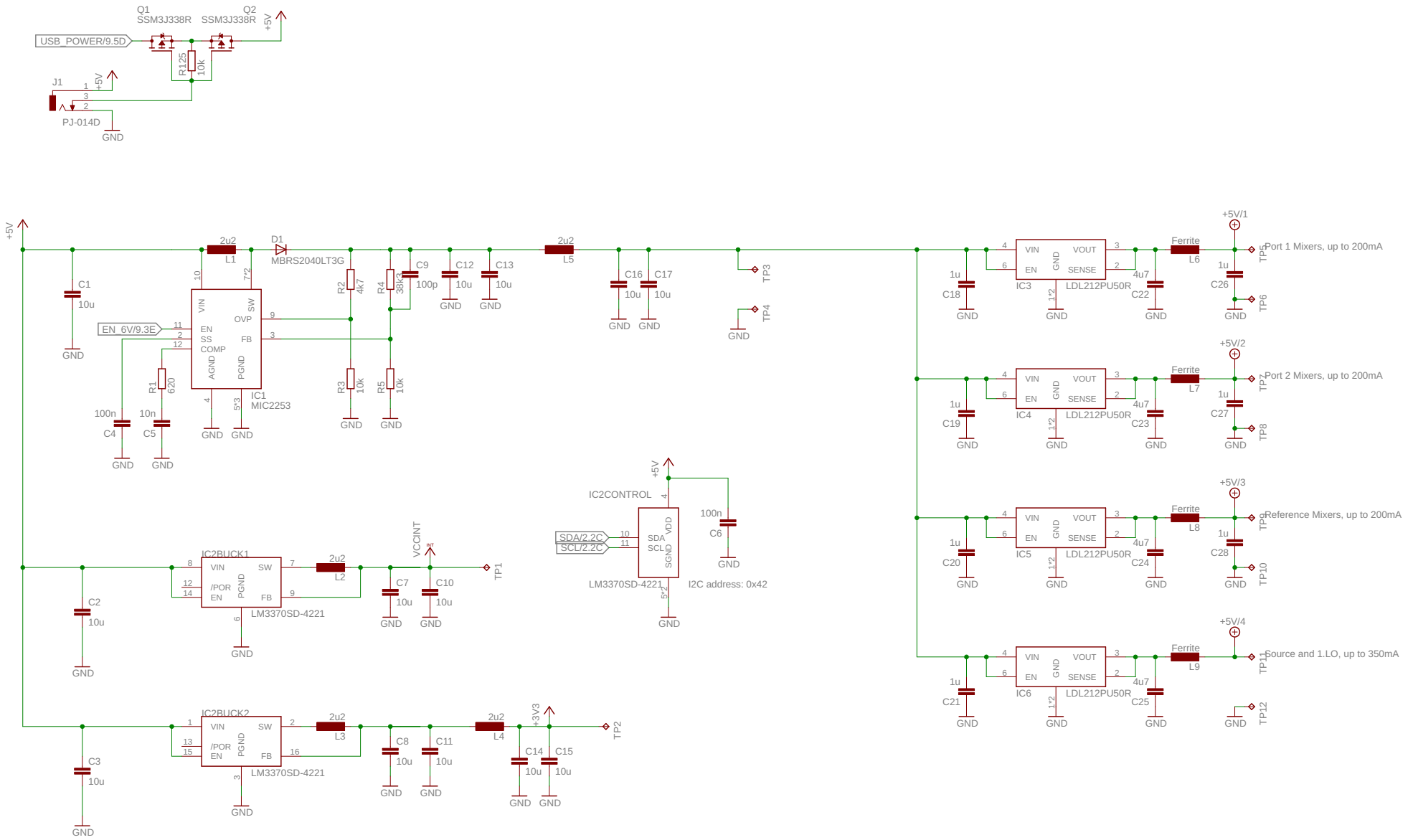
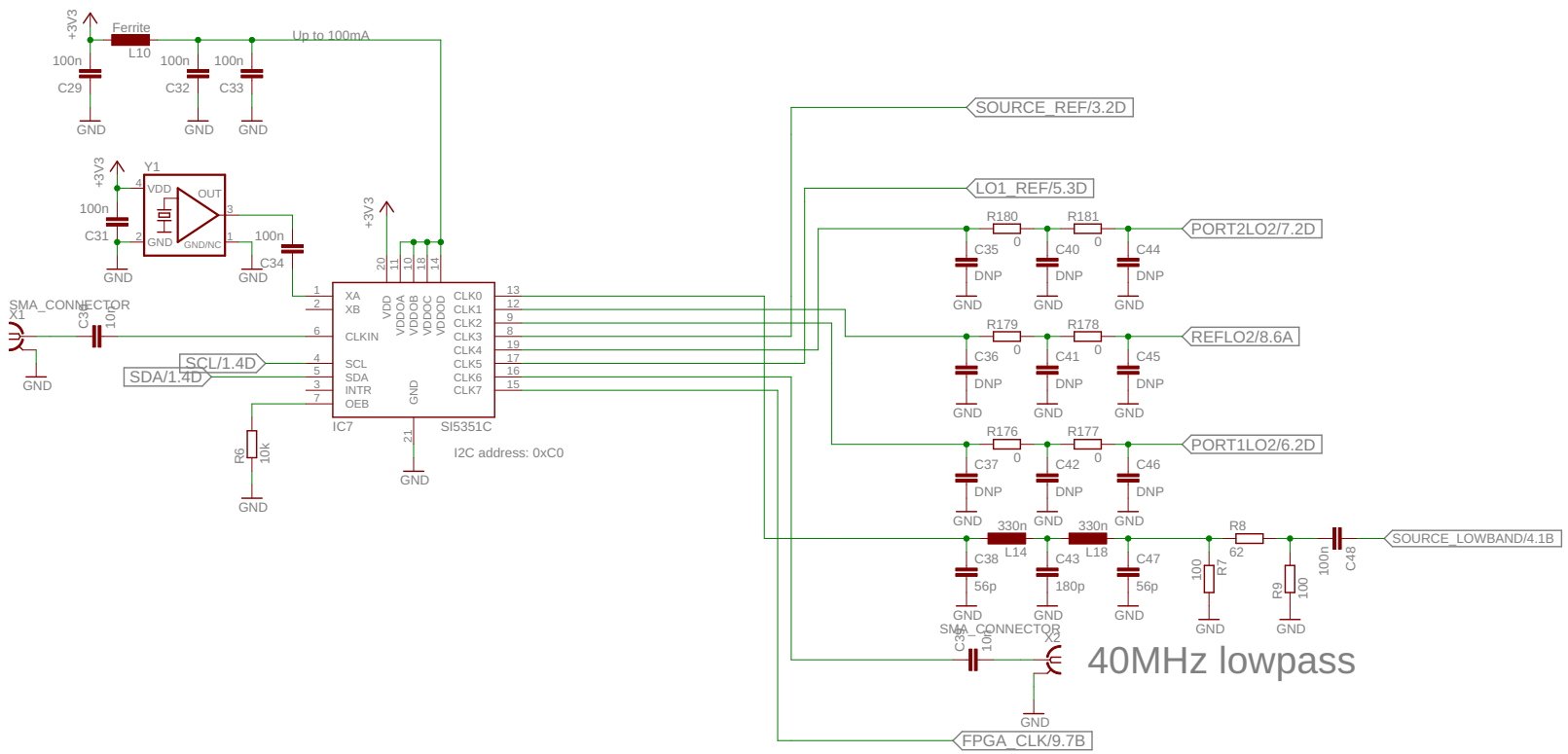
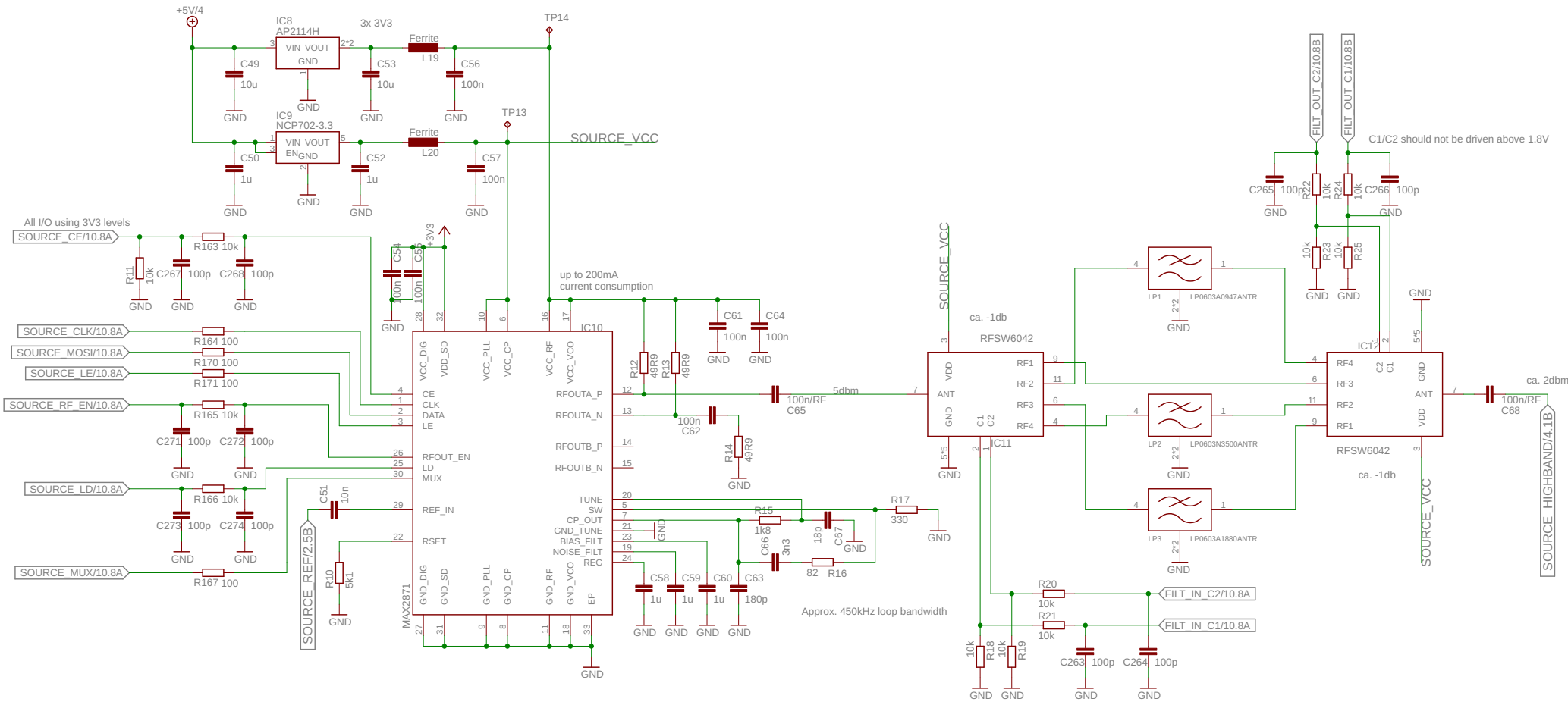
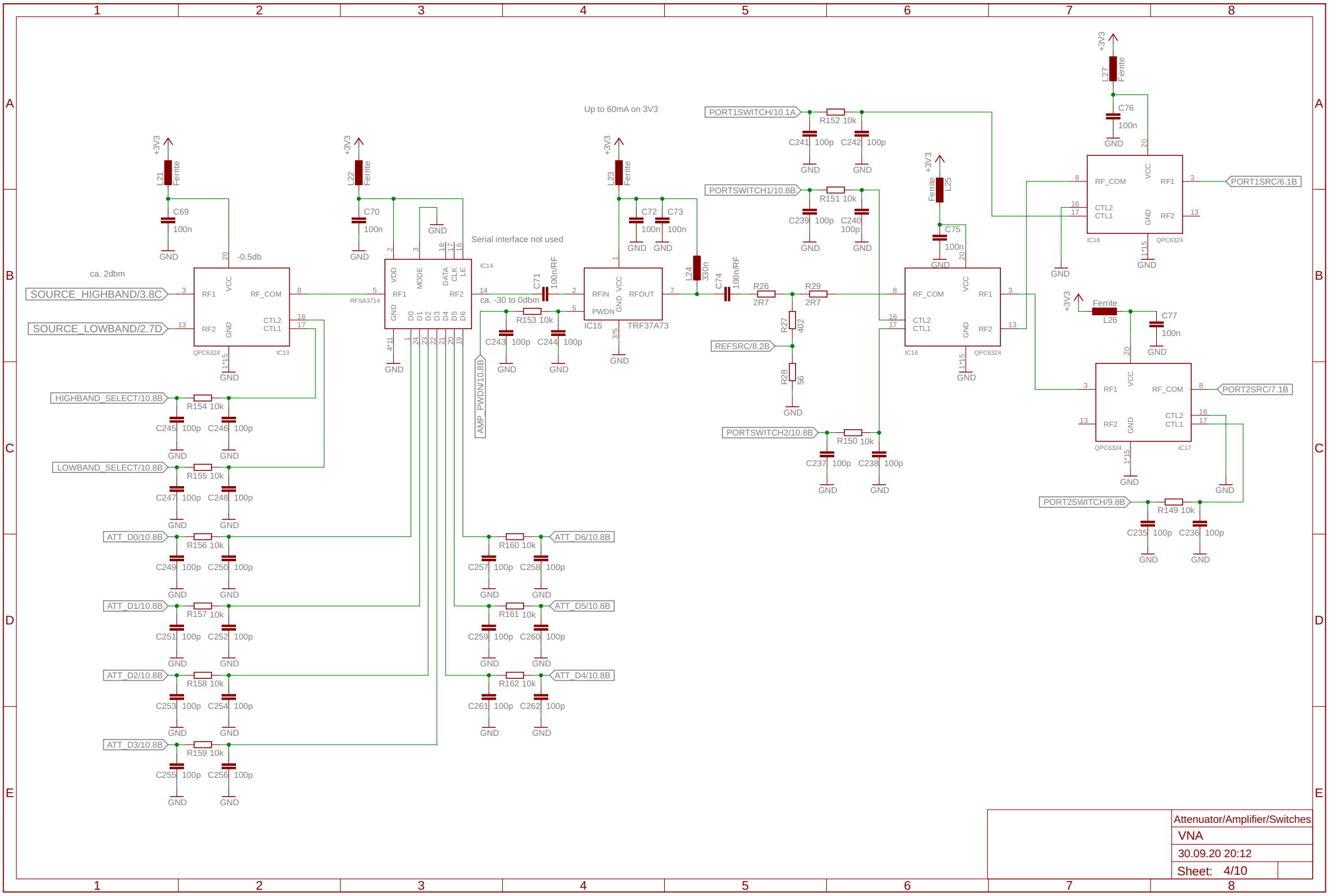

Q1 SSM3J338R
Q2 SSM3J338R
+5V
USB_POWER/9.5D
R125 10k
J1
PJ-014D
GND
IC1 MIC2253
EN_6V/9.3E
IC2BUCK1
IC2BUCK2
LM3370SD-4221
IC2CONTROL
SDA/2.2C
SCL/2.2C
LM3370SD-4221
I2C address: 0x42
IC3 LDL212PU50R
IC4 LDL212PU50R
IC5 LDL212PU50R
IC6 LDL212PU50R
+5V/1
+5V/2
+5V/3
+5V/4
Port 1 Mixers, up to 200mA
Port 2 Mixers, up to 200mA
Reference Mixers, up to 200mA
Source and 1.LO, up to 350mA
Power Supply
VNA
30.09.20 20:12
Sheet: 1/10

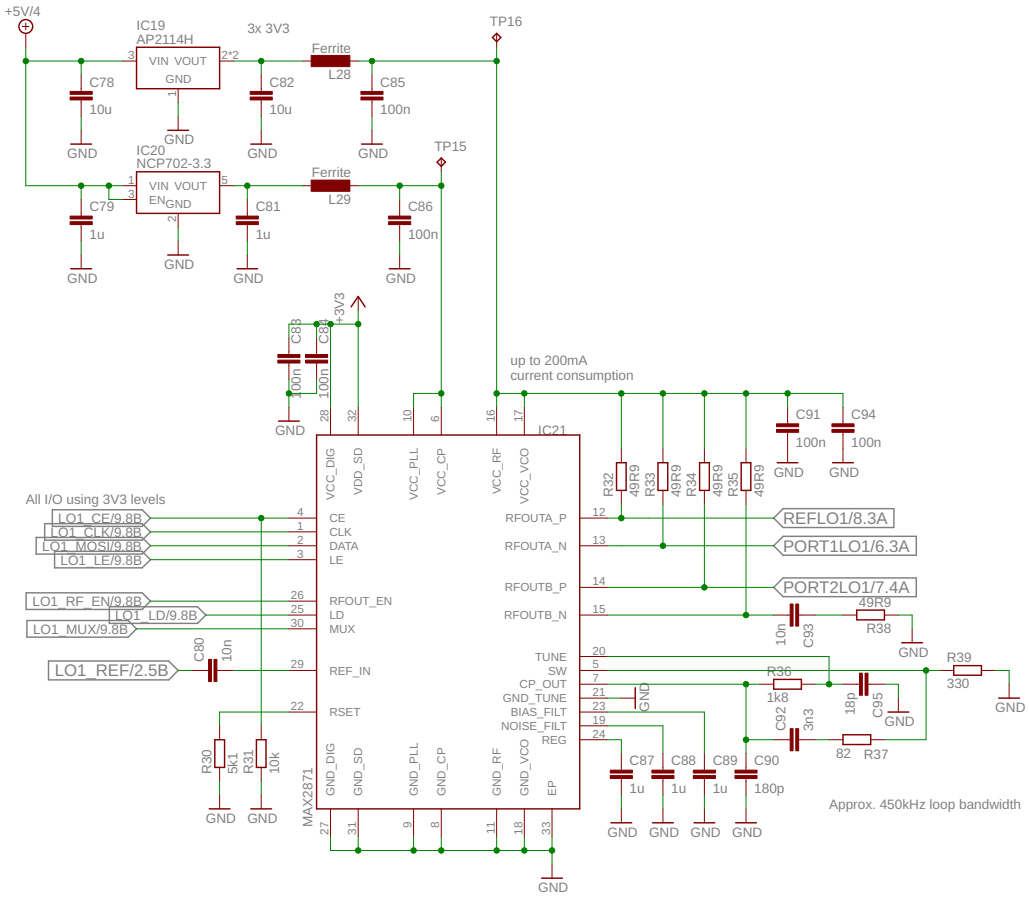


	Reference CLK and 2.LO
	VNA
	30.09.20 20:12
	Sheet: 2/10

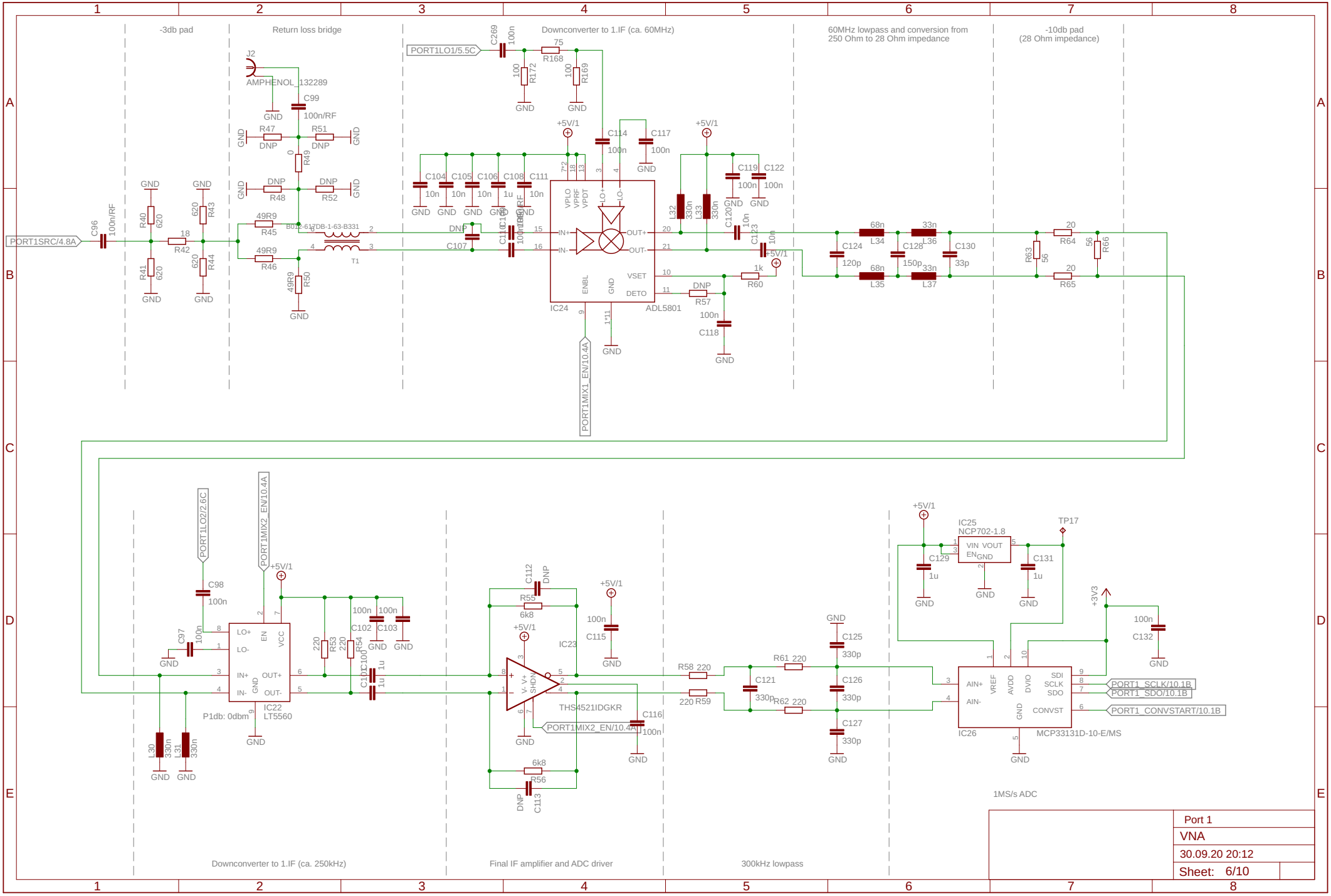


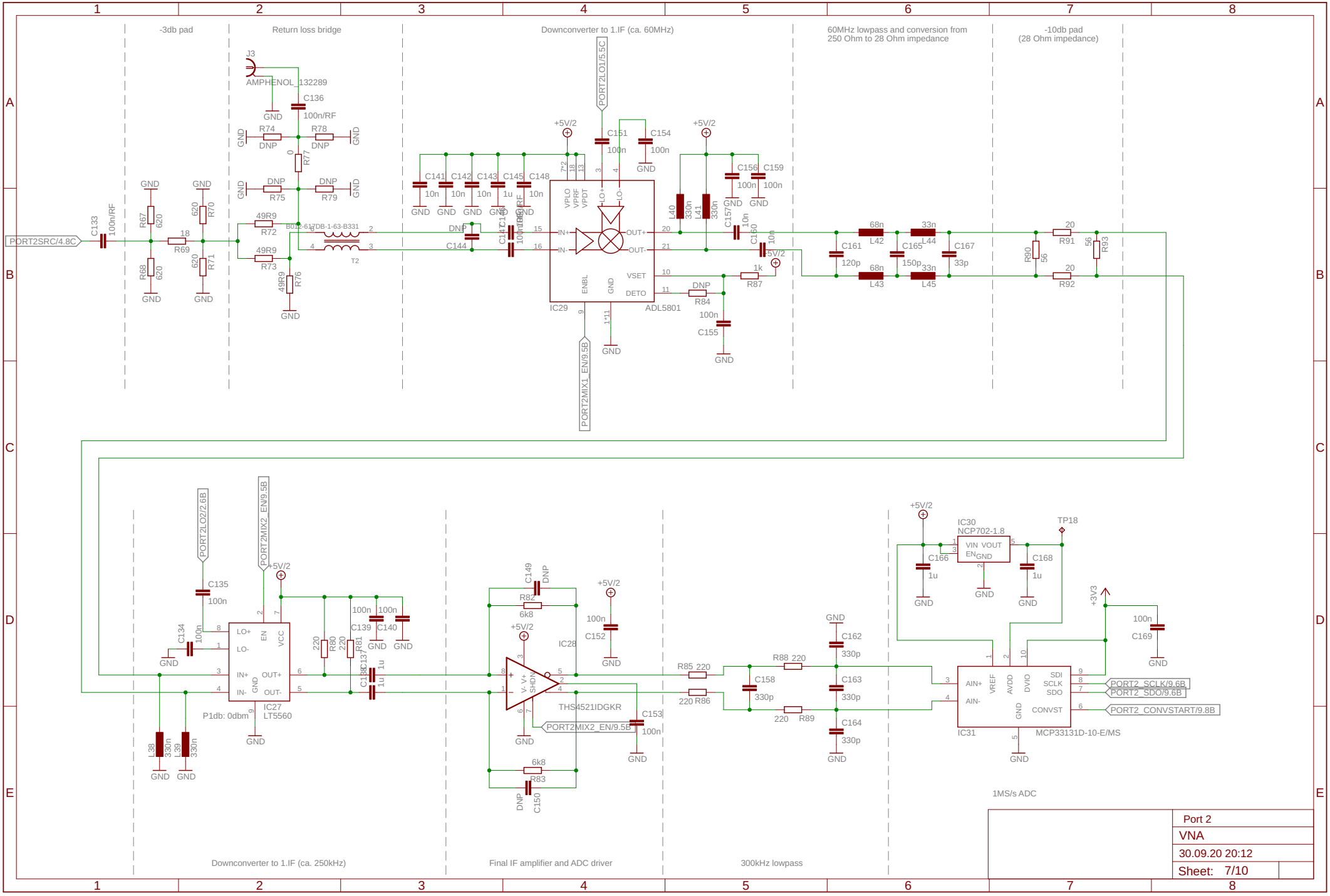
	HF Source
	VNA
	30.09.20 20:12
	Sheet: 3/10

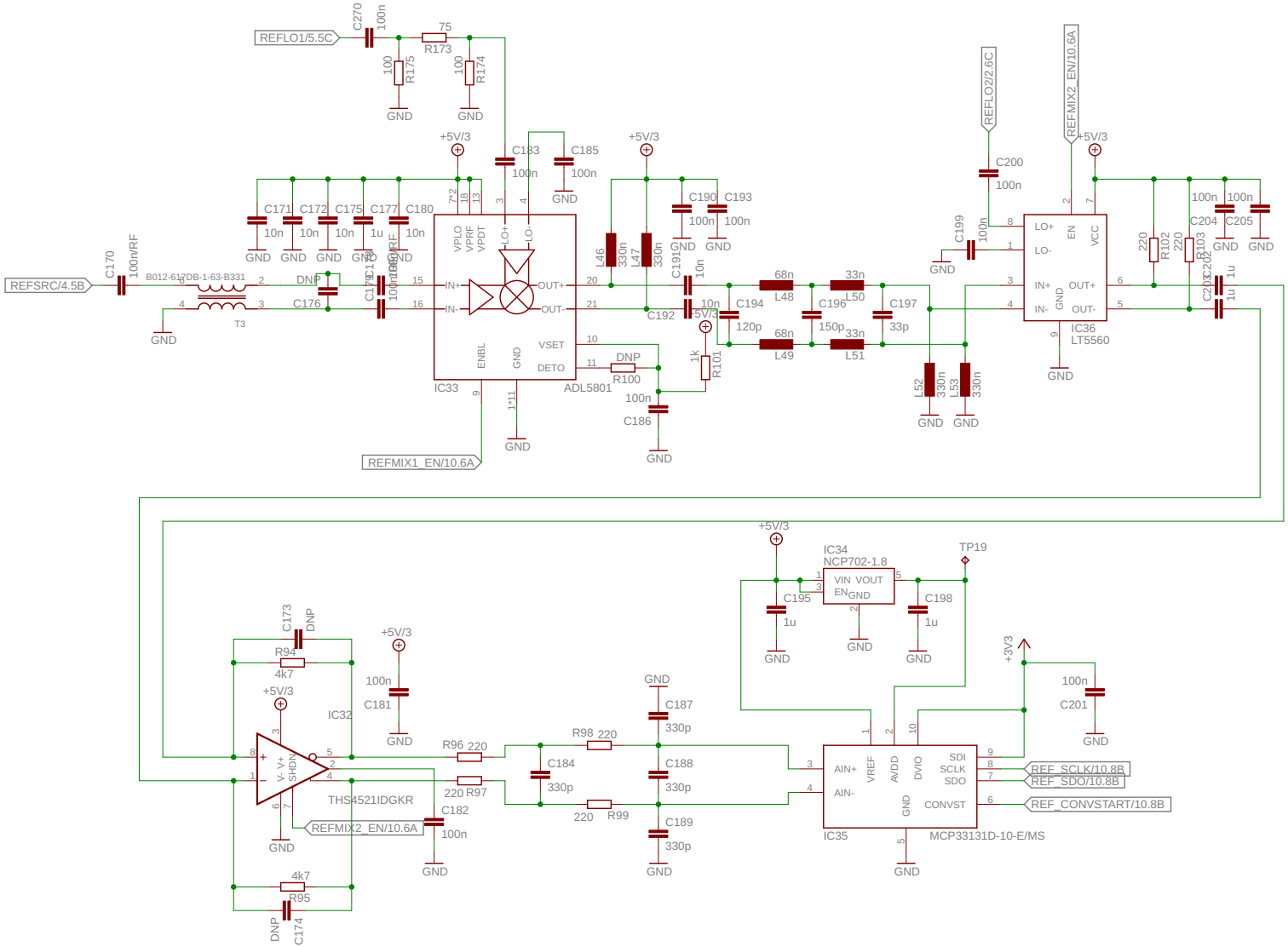

Up to 60mA on 3V3
Serial interface not used
ca. 2dbm
ca. -30 to 0dbm
-0.5db
SOURCE_HIGHBAND/3.8C
SOURCE_LOWBAND/2.7D
HIGHBAND_SELECT/10.8B
LOWBAND_SELECT/10.8B
ATT_D0/10.8B
ATT_D1/10.8B
ATT_D2/10.8B
ATT_D3/10.8B
ATT_D4/10.8B
ATT_D5/10.8B
ATT_D6/10.8B
AMP_PWDN/10.8B
REFSRC/8.2B
PORT1SWITCH/10.1A
PORTSWITCH1/10.8B
PORTSWITCH2/10.8B
PORT1SRC/6.1B
PORT2SRC/7.1B
PORT2SWITCH/9.8B
+3V3
GND
Ferrite
QPC6324
TRF37A73
RFSA3714
Attenuator/Amplifier/Switches
VNA
30.09.20 20:12
Sheet: 4/10



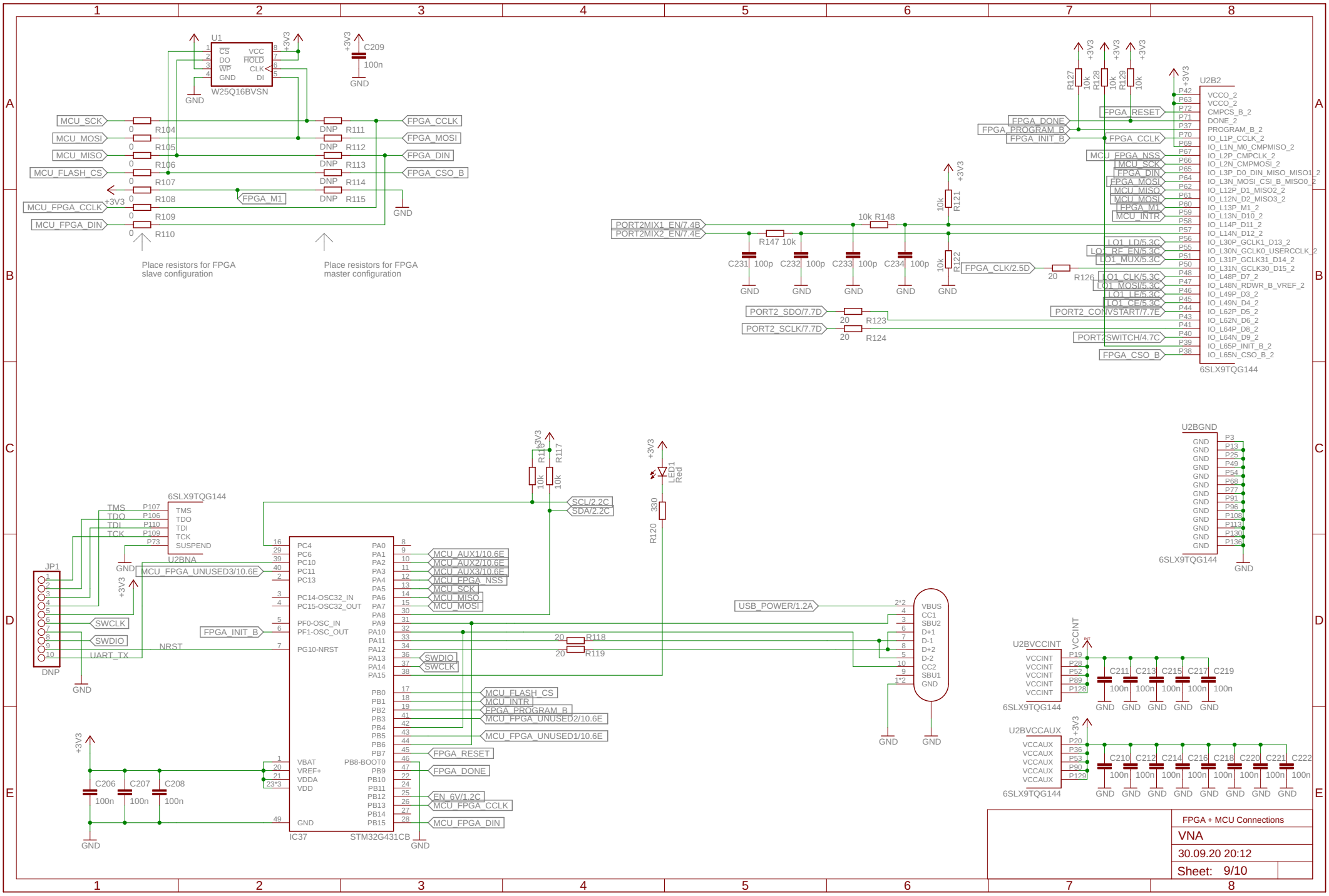
	1.LO
	VNA
	30.09.20 20:12
	Sheet: 5/10

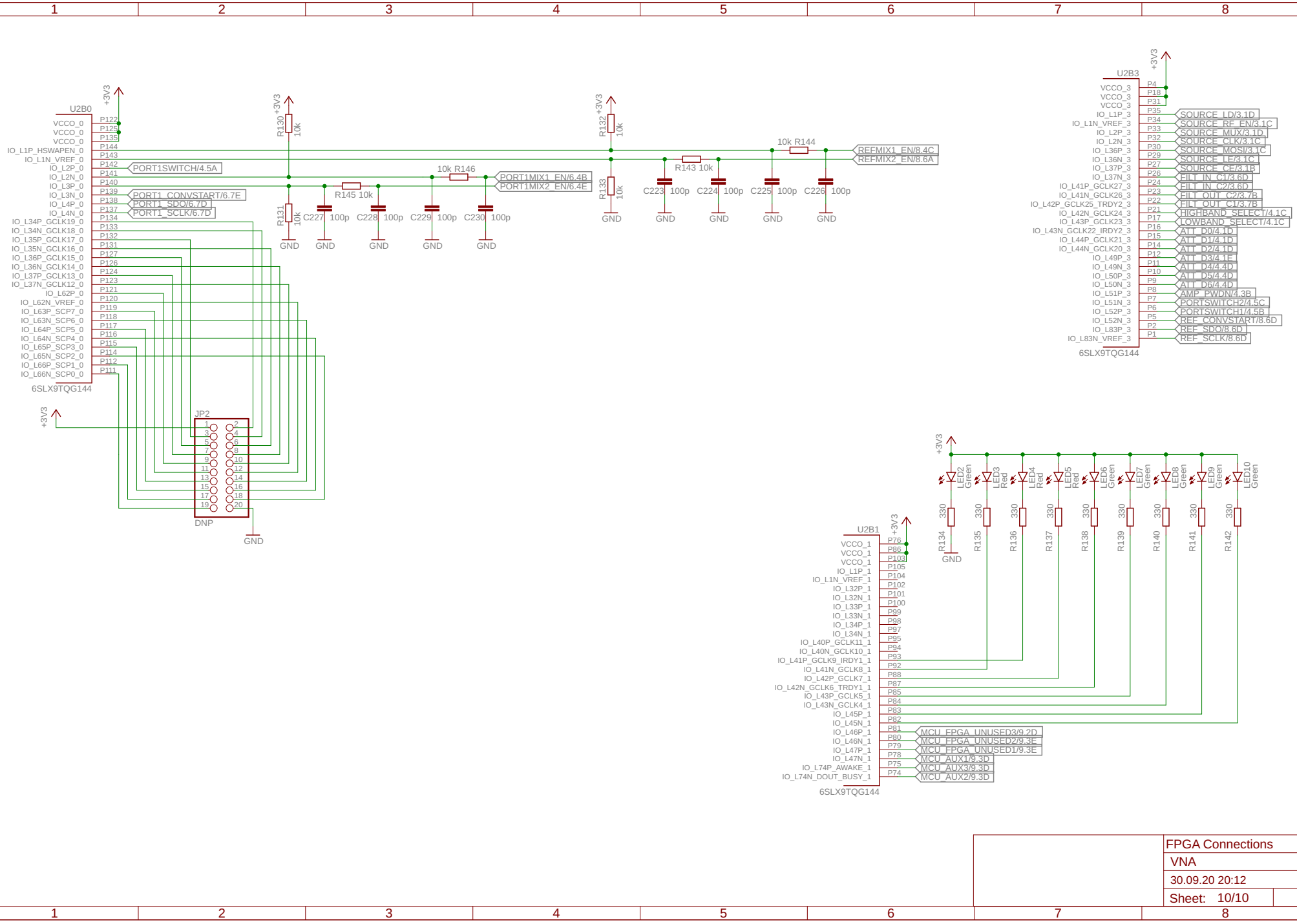

-3db pad
Return loss bridge
Downconverter to 1.IF (ca. 60MHz)
60MHz lowpass and conversion from 250 Ohm to 28 Ohm impedance
-10db pad (28 Ohm impedance)
PORT1SRC/4.8A
PORT1LO1/5.5C
AMPHENOL_132289
B0J2-617DB-1-63-B331
IC24
ADL5801
PORT1MIX1_EN/10.4A
PORT1LO2/2.6C
PORT1MIX2_EN/10.4A
IC22
LT5560
P1db: 0dbm
IC23
THS4521IDGKR
IC25
NCP702-1.8
IC26
MCP33131D-10-E/MS
TP17
PORT1_SCLK/10.1B
PORT1_SDO/10.1B
PORT1_CONVSTART/10.1B
Downconverter to 1.IF (ca. 250kHz)
Final IF amplifier and ADC driver
300kHz lowpass
1MS/s ADC
Port 1
VNA
30.09.20 20:12
Sheet: 6/10


-3db pad
Return loss bridge
Downconverter to 1.IF (ca. 60MHz)
60MHz lowpass and conversion from 250 Ohm to 28 Ohm impedance
-10db pad (28 Ohm impedance)
PORT2SRC/4.8C
AMPHENOL_132289
B012-617DB-1-63-B331
IC29
ADL5801
PORT2LO1/5.5C
PORT2MIX1_EN/9.5B
Downconverter to 1.IF (ca. 250kHz)
Final IF amplifier and ADC driver
300kHz lowpass
1MS/s ADC
IC27
LT5560
P1db: 0dbm
IC28
THS4521IDGKR
IC30
NCP702-1.8
IC31
MCP33131D-10-E/MS
PORT2_SCLK/9.6B
PORT2_SDO/9.6B
PORT2_CONVSTART/9.8B
Port 2
VNA
30.09.20 20:12
Sheet: 7/10



	Reference Signal
	VNA
	30.09.20 20:12
	Sheet: 8/10


U1
W25Q16BVSN
C209
100n
MCU_SCK
MCU_MOSI
MCU_MISO
MCU_FLASH_CS
MCU_FPGA_CCLK
MCU_FPGA_DIN
FPGA_CCLK
FPGA_MOSI
FPGA_DIN
FPGA_CSO_B
FPGA_M1
Place resistors for FPGA slave configuration
Place resistors for FPGA master configuration
U2B2
6SLX9TQG144
PORT2MIX1_EN/7.4B
PORT2MIX2_EN/7.4E
PORT2_SDO/7.7D
PORT2_SCLK/7.7D
FPGA_CLK/2.5D
PORT2_CONVSTART/7.7E
PORT2SWITCH/4.7C
FPGA_RESET
FPGA_DONE
FPGA_PROGRAM_B
FPGA_INIT_B
FPGA_CSO_B
LO1_LD/5.3C
LO1_RF_EN/5.3C
LO1_MUX/5.3C
LO1_CLK/5.3C
LO1_MOSI/5.3C
LO1_LE/5.3C
LO1_CE/5.3C
JP1
SWCLK
SWDIO
UART_TX
NRST
SCL/2.2C
SDA/2.2C
LED1
Red
USB_POWER/1.2A
U2BGND
U2BVCCINT
U2BVCCAUX
IC37
STM32G431CB
MCU_AUX1/10.6E
MCU_AUX2/10.6E
MCU_AUX3/10.6E
MCU_FPGA_NSS
MCU_FLASH_CS
MCU_INTR
MCU_FPGA_UNUSED2/10.6E
MCU_FPGA_UNUSED1/10.6E
EN_6V/1.2C
MCU_FPGA_UNUSED3/10.6E
FPGA + MCU Connections
VNA
30.09.20 20:12
Sheet: 9/10


U2B0
6SLX9TQG144
PORT1SWITCH/4.5A
PORT1_CONVSTART/6.7E
PORT1_SDO/6.7D
PORT1_SCLK/6.7D
PORT1MIX1_EN/6.4B
PORT1MIX2_EN/6.4E
REFMIX1_EN/8.4C
REFMIX2_EN/8.6A
R130 10k
R131 10k
R132 10k
R133 10k
R143 10k
10k R144
10k R146
R145 10k
C223 100p
C224 100p
C225 100p
C226 100p
C227 100p
C228 100p
C229 100p
C230 100p
+3V3
GND
JP2
DNP
U2B3
SOURCE_LD/3.1D
SOURCE_RF_EN/3.1C
SOURCE_MUX/3.1D
SOURCE_CLK/3.1C
SOURCE_MOSI/3.1C
SOURCE_LE/3.1C
SOURCE_CE/3.1B
FILT_IN_C1/3.6D
FILT_IN_C2/3.6D
FILT_OUT_C2/3.7B
FILT_OUT_C1/3.7B
HIGHBAND_SELECT/4.1C
LOWBAND_SELECT/4.1C
ATT_D0/4.1D
ATT_D1/4.1D
ATT_D2/4.1D
ATT_D3/4.1E
ATT_D4/4.4D
ATT_D5/4.4D
ATT_D6/4.4D
AMP_PWDN/4.3B
PORTSWITCH2/4.5C
PORTSWITCH1/4.5B
REF_CONVSTART/8.6D
REF_SDO/8.6D
REF_SCLK/8.6D
U2B1
MCU_FPGA_UNUSED3/9.2D
MCU_FPGA_UNUSED2/9.3E
MCU_FPGA_UNUSED1/9.3E
MCU_AUX1/9.3D
MCU_AUX3/9.3D
MCU_AUX2/9.3D
LED2 Green
LED3 Red
LED4 Red
LED5 Red
LED6 Green
LED7 Green
LED8 Green
LED9 Green
LED10 Green
330
R134
R135
R136
R137
R138
R139
R140
R141
R142
FPGA Connections
VNA
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