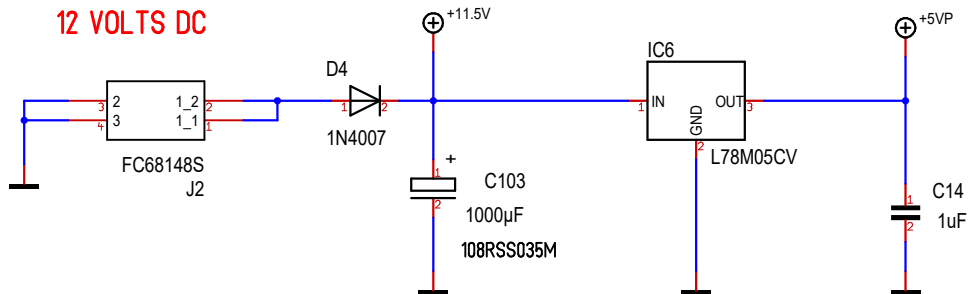
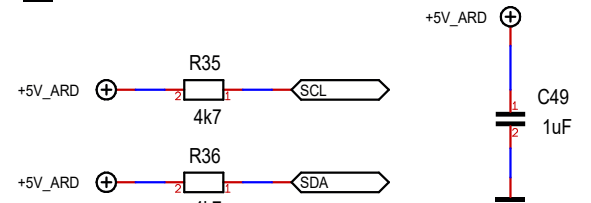
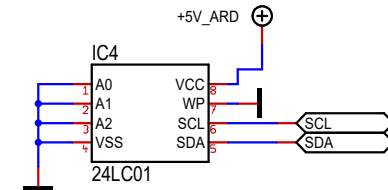
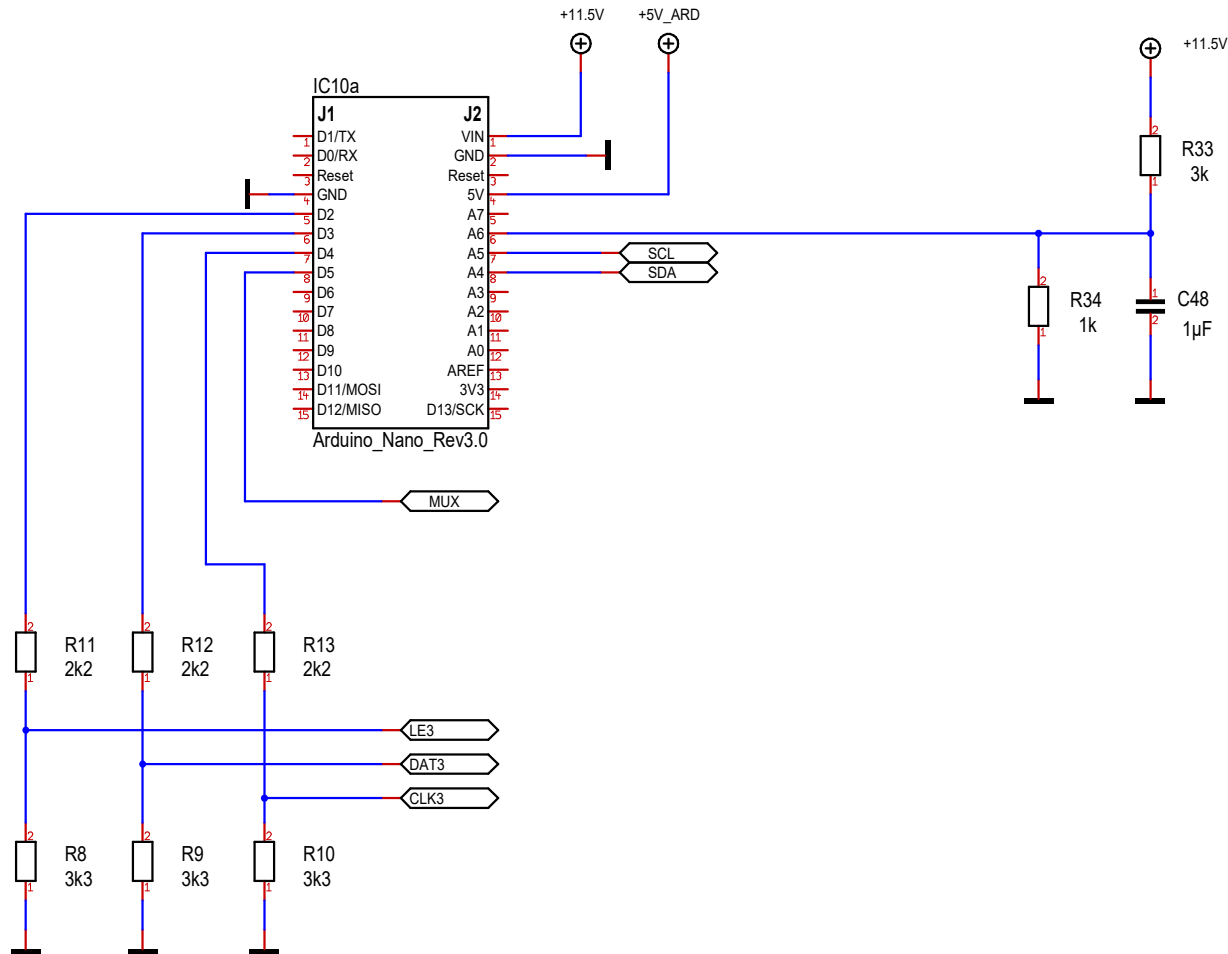
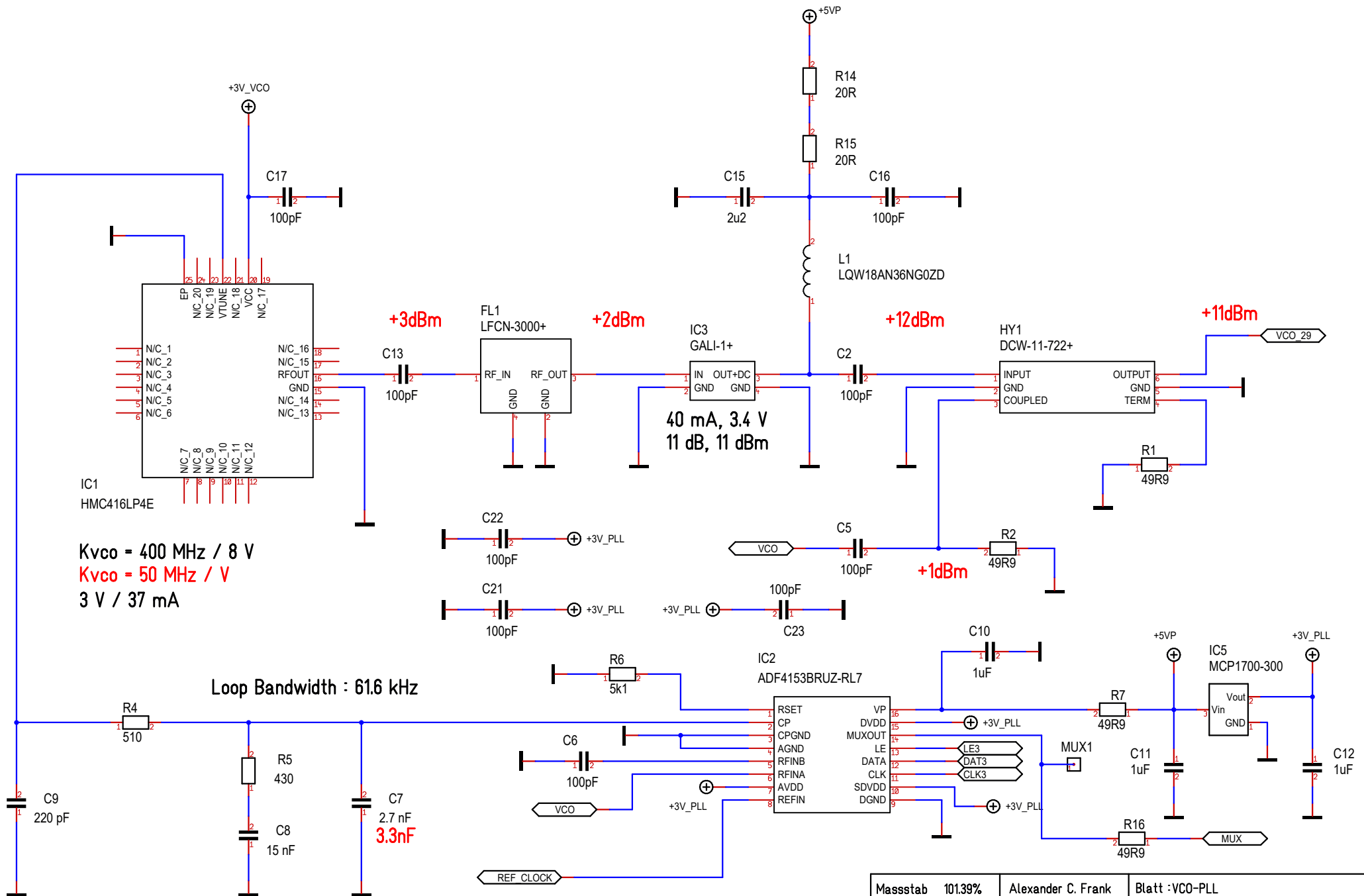


| | | | |
|----------|----------------------|--------------------|--------------------------|
| Massstab | 101.39% | Alexander C. Frank | Blatt : REFCLK_100MHz |
| Änderung | 11.12.2023 | 13:33 | ETH QUANTUMOPTICS |
| Ausgabe | 11.12.2023 | 13:33 | |
| Datei | Transmod-568-1.T3001 | | |



| | | | |
|----------|----------------------|--------------------|--------------------------|
| Massstab | 101.39% | Alexander C. Frank | Blatt : ARDUINO |
| Änderung | 11.12.2023 | 13:33 | ETH QUANTUMOPTICS |
| Ausgabe | 11.12.2023 | 13:33 | |
| Datei | Transmod-568-1.T3001 | | |

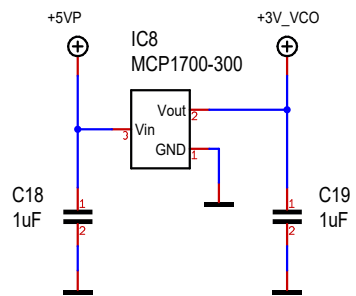
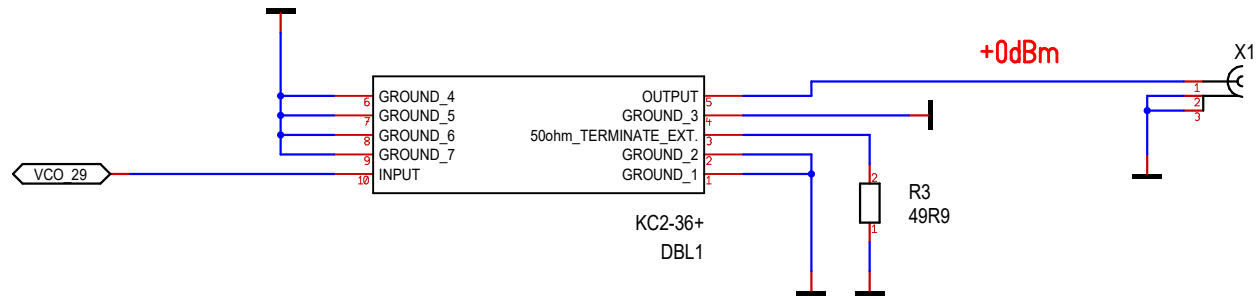


$K_{vco} = 400 \text{ MHz} / 8 \text{ V}$
 $K_{vco} = 50 \text{ MHz} / \text{V}$
 $3 \text{ V} / 37 \text{ mA}$

Loop Bandwidth : 61.6 kHz

$K_{cp} = 2.5 \text{ mA}$
 25 MHz PFD frequency

| | | | |
|----------|----------------------|--------------------------|----------------|
| Massstab | 101.39% | Alexander C. Frank | Blatt :VCO-PLL |
| Änderung | 11.12.2023 13:33 | ETH QUANTUMOPTICS | |
| Ausgabe | 11.12.2023 13:33 | | |
| Datei | Transmod-568-1.T3001 | | |



| | | | |
|----------|----------------------|--------------------|--------------------------|
| Massstab | 101.39% | Alexander C. Frank | Blatt :DOUBLER |
| Änderung | 11.12.2023 | 13:33 | ETH QUANTUMOPTICS |
| Ausgabe | 11.12.2023 | 13:33 | |
| Datei | Transmod-568-1.T3001 | | |

RF Settings

RF VCO Output Frequency: MHz

Channel spacing: kHz

Reference Frequency: MHz

R counter: :Ref Doubler

PFD Frequency: MHz

Prescaler:

$$\left(\text{INT} + \frac{\text{FRAC}}{\text{MOD}} \right) \times \text{PFD (MHz)} = \text{RFout (MHz)}$$

N = 116

(116 + $\frac{0}{25}$) x 25 = 2900

Settings

Charge Pump Setting: mA

Counter Reset:

Charge Pump Tri-State:

Phase Detector Polarity:

Lock Detect Precision:

Power Down:

Noise/spur mode:

Muxout:

FastLock:

Resync delay:

Load Control:

Resync:

Latches/Registers

Device in use:
ADF4153

0x **1D0000** 0x **110065** 0x **17C2** 0x **3C7**

Write R0 Write R1 Write R2 Write R3

Write All Latches

Application started.
13:27:51: Writing R3...
13:27:51: Writing failed.
13:27:51: Writing R2...
13:27:51: Writing failed

No device connected



| | | | |
|----------|----------------------|--------------------|------------------------|
| Massstab | 101.39% | Alexander C. Frank | Blatt :PLL Caculations |
| Änderung | 11.12.2023 | 13:33 | |
| Ausgabe | 11.12.2023 | 13:33 | |
| Datei | Transmod-568-1.T3001 | | |

SEQUENCE : R3 - R2 - R1 - R0

