



Images kindly provided by Sebastian, DL3YC.

Design Files

The design files are hosted here: <https://git.loetlabor-jena.de/thasti/lofourx>

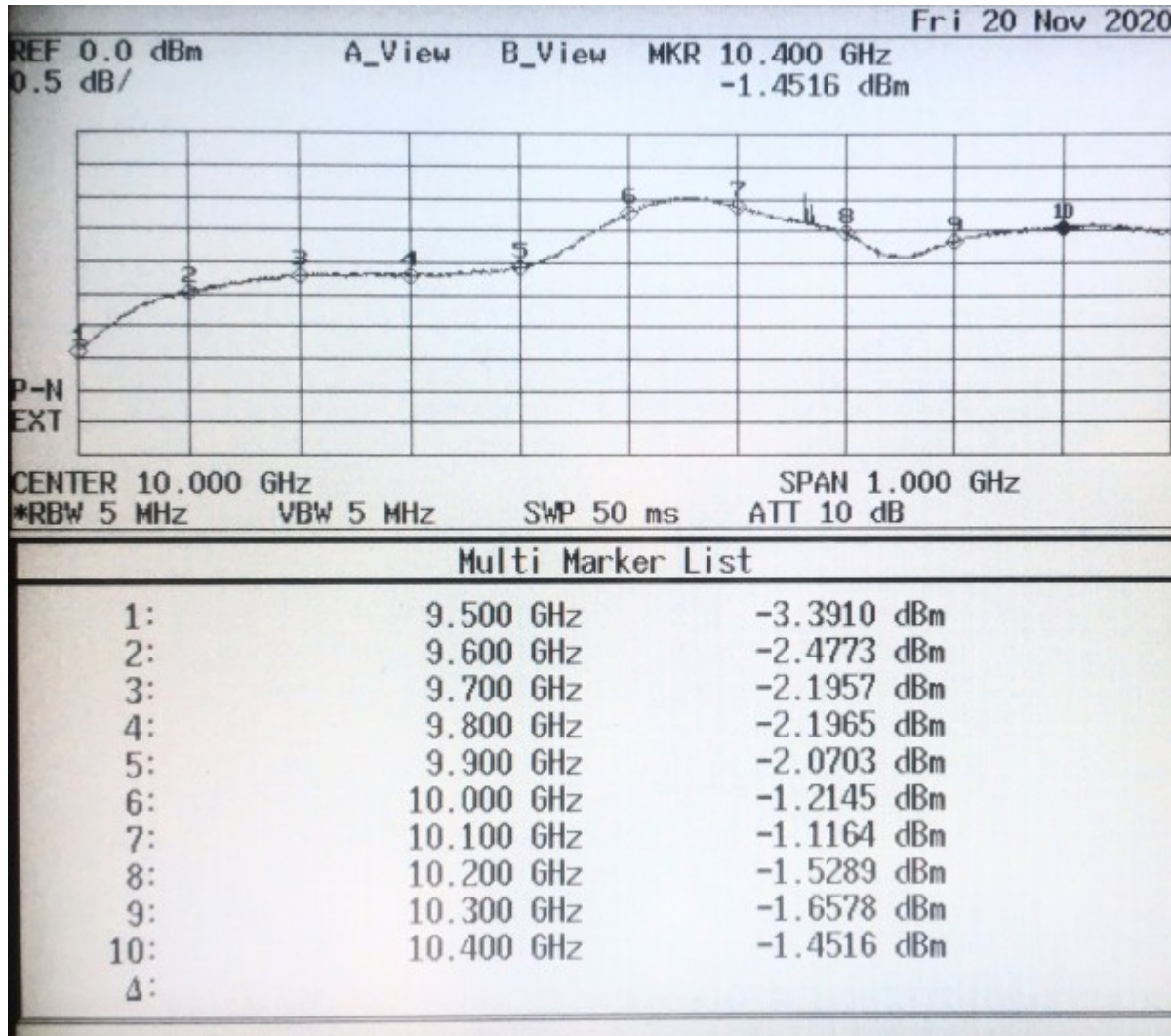
This repository contains both schematics and layouts, as well as manufacturing data and measurements results.

Measurements

The PCB was built as designed and the PCB fitted with a 7 dB pad on its output. Cable and connector losses were minimized by directly connecting the PCB output to a spectrum analyzer input. A -10 dBm input signal was swept over the whole anticipated input range while the output power was measured.

Output return loss in this configuration was not measured, but should be better than 20 dB, extrapolating from VNA measurements on the multiplier IC.

In this configuration, the output amplitude is about -2 dBm and varies only about ± 1 dB over the whole frequency range. This is sufficient drive level for many applications in a lab. External attenuation can always be easily (and comparably cheaply) added by means of SMA inline attenuators.



Spectral content was verified at 10.368 GHz to be in line with the datasheet typical values:

- **Fundamental:** -60.5 dBc (2.592 GHz)
- **2nd harmonic:** -26.3 dBc
- **3rd harmonic:** -50.4 dBc
- 4th harmonic: 0 dBc (wanted output signal)
- **5th harmonic:** -46.8 dBc
- **6th harmonic:** -39.4 dBc

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