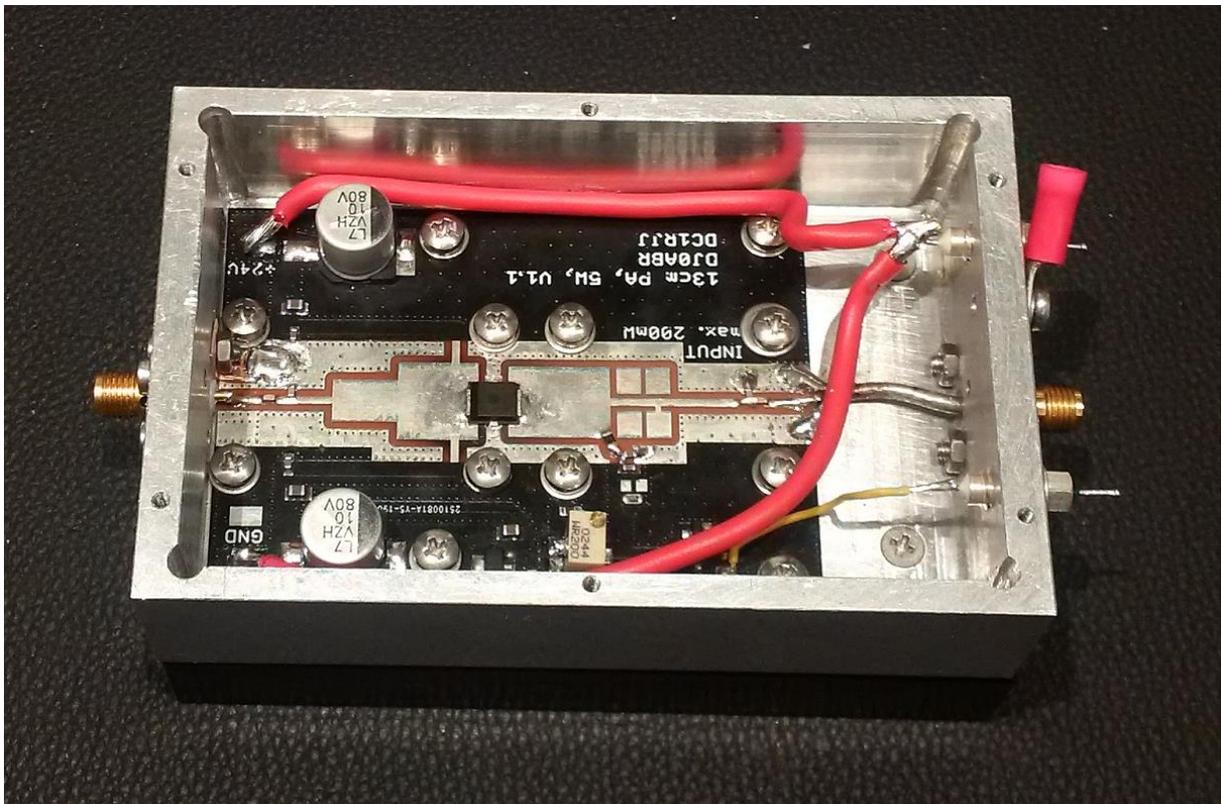
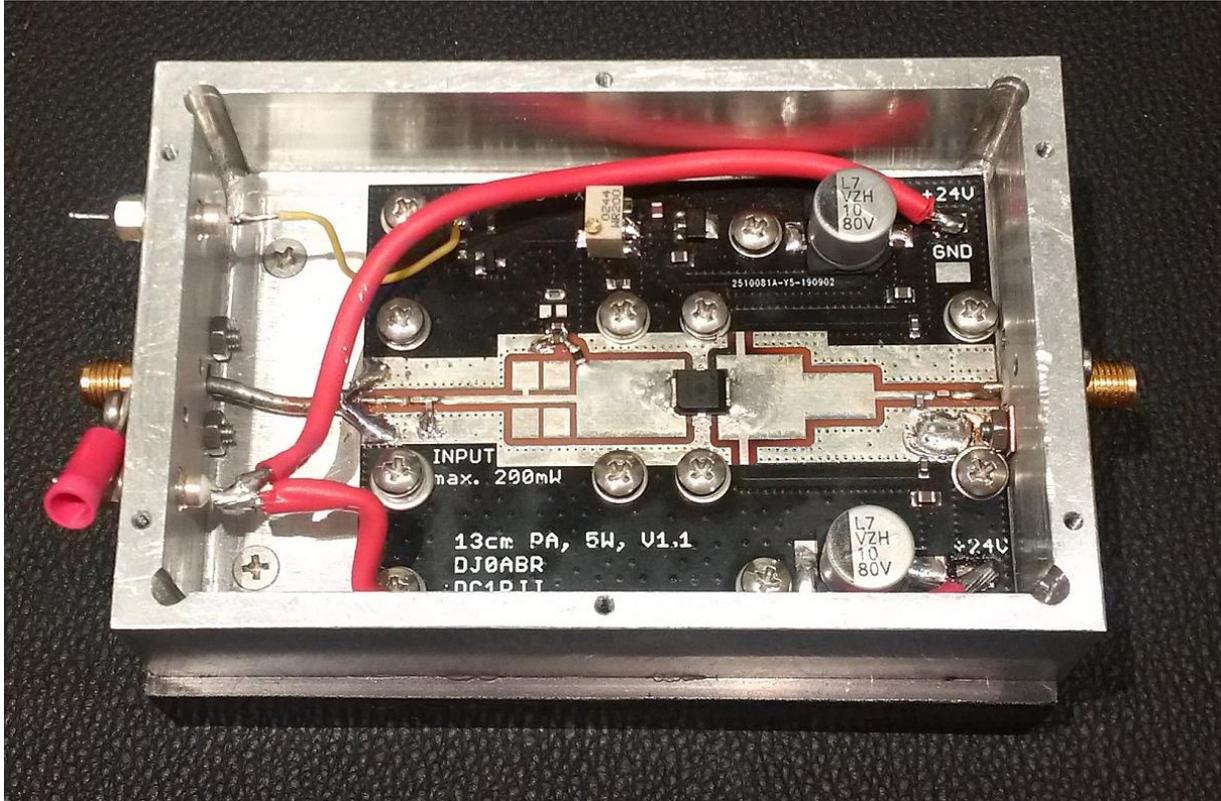
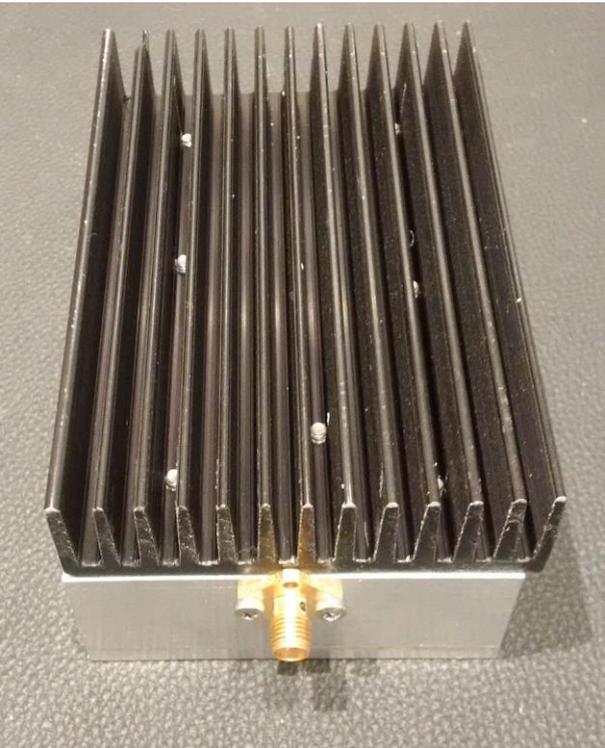
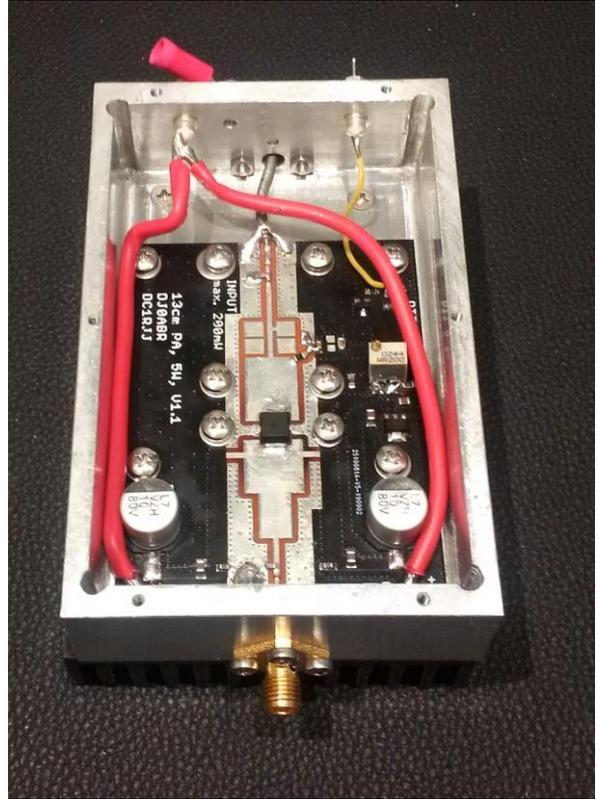
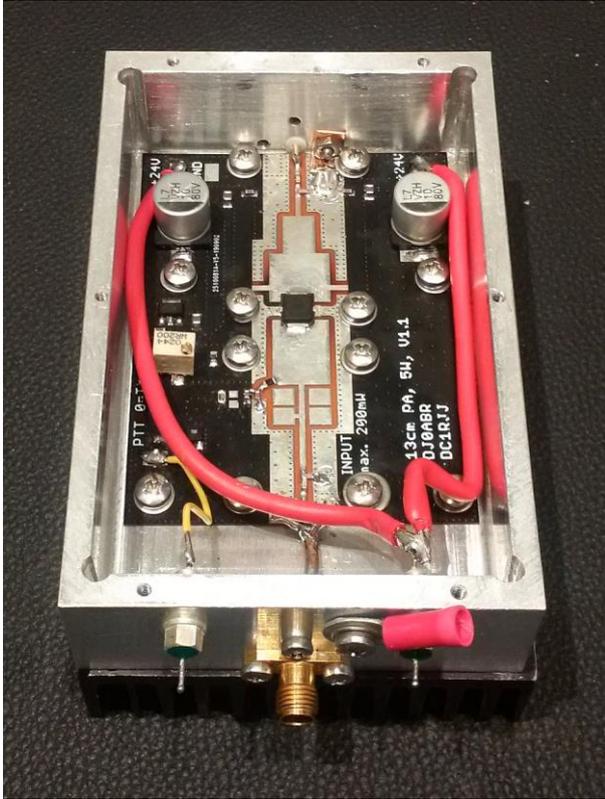




I found a suitable milled aluminum encasing in my storage and mounted the PCB into it.

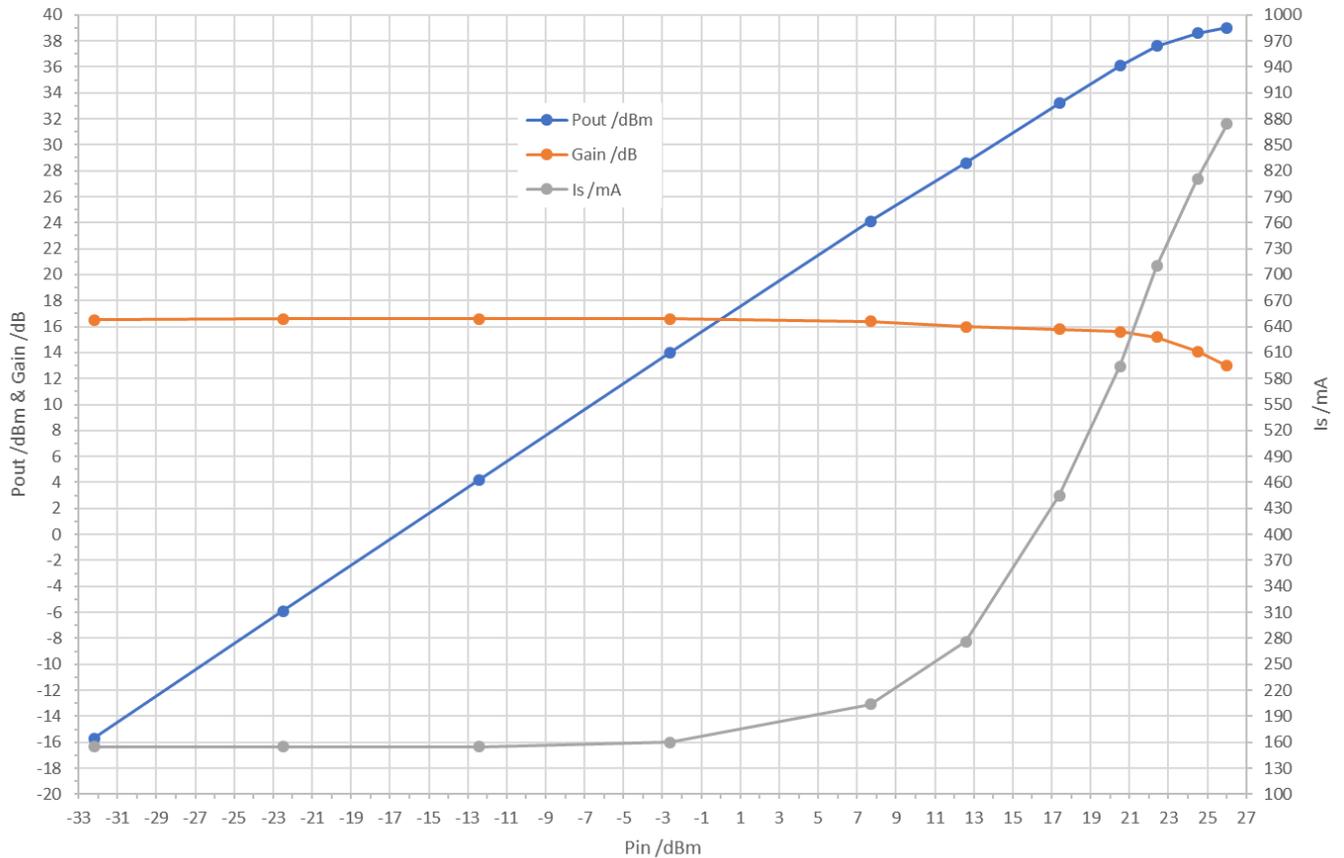






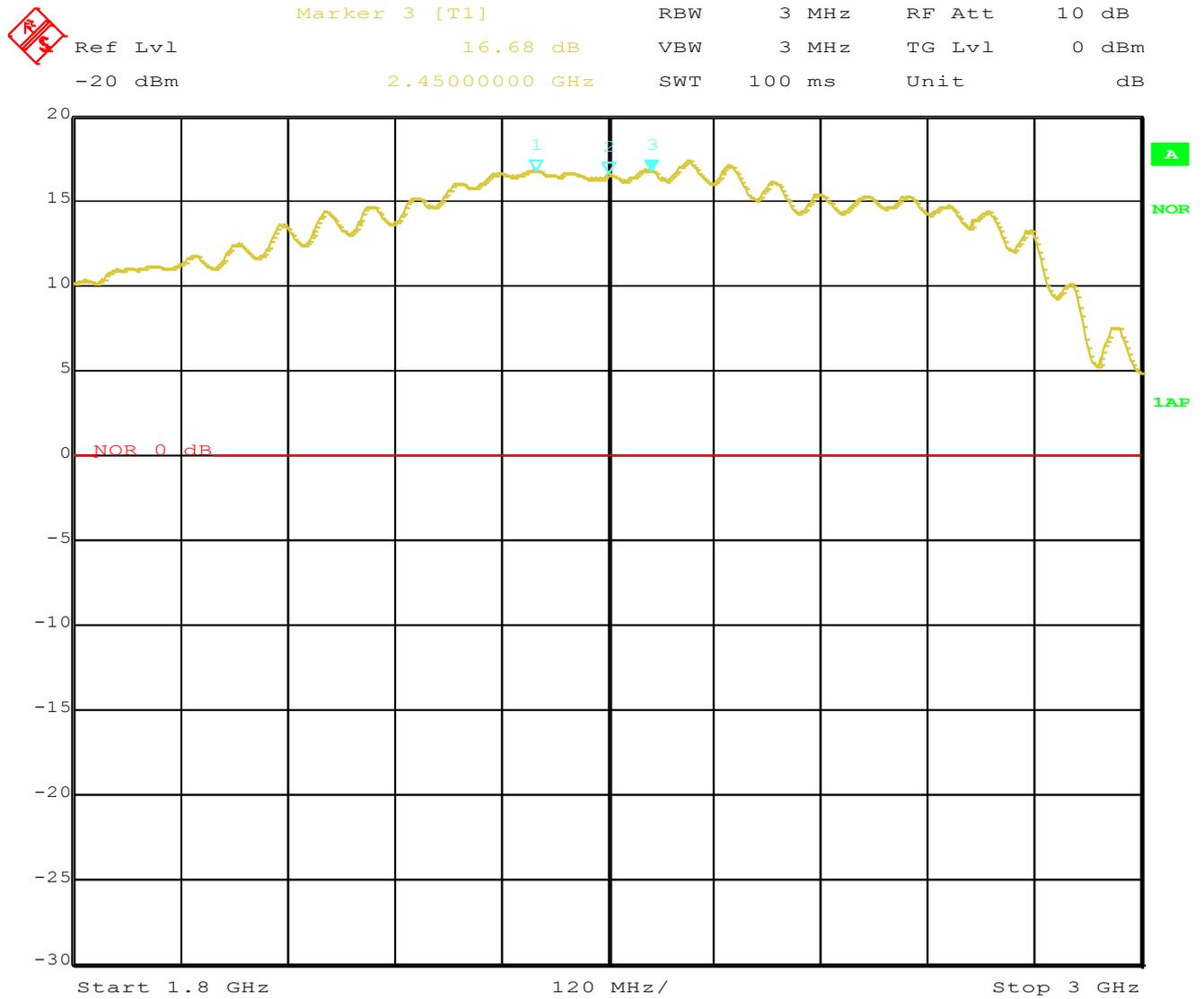
First I measured the output power as a function of the drive level. I operated the PA at a supply voltage of 24V and set the bias point to a quiescent current of 155mA. About 25mA are consumed by the bias circuit itself, thus the drain current of the MHT1008 was approx. 130mA.

Pout, Gain and Is versus Pin @2400MHz



The small signal gain is 16.5dB, the P1dB is +36dBm=4W with a drain efficiency of 29%. The saturated output power is +39dBm=8W at a current consumption of 880mA and a drain efficiency of 38%.

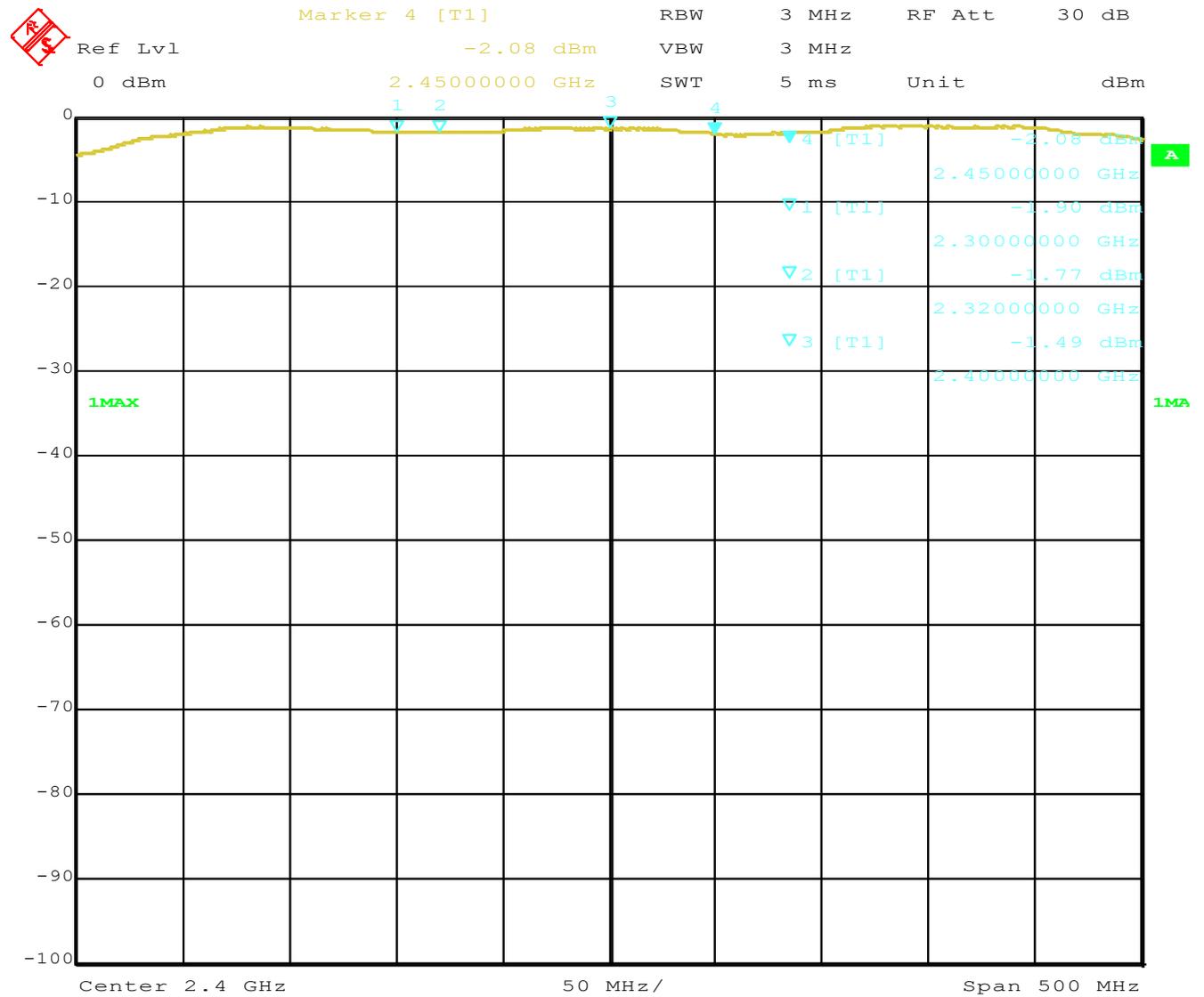
Next, I measured the small signal frequency response of the PA:



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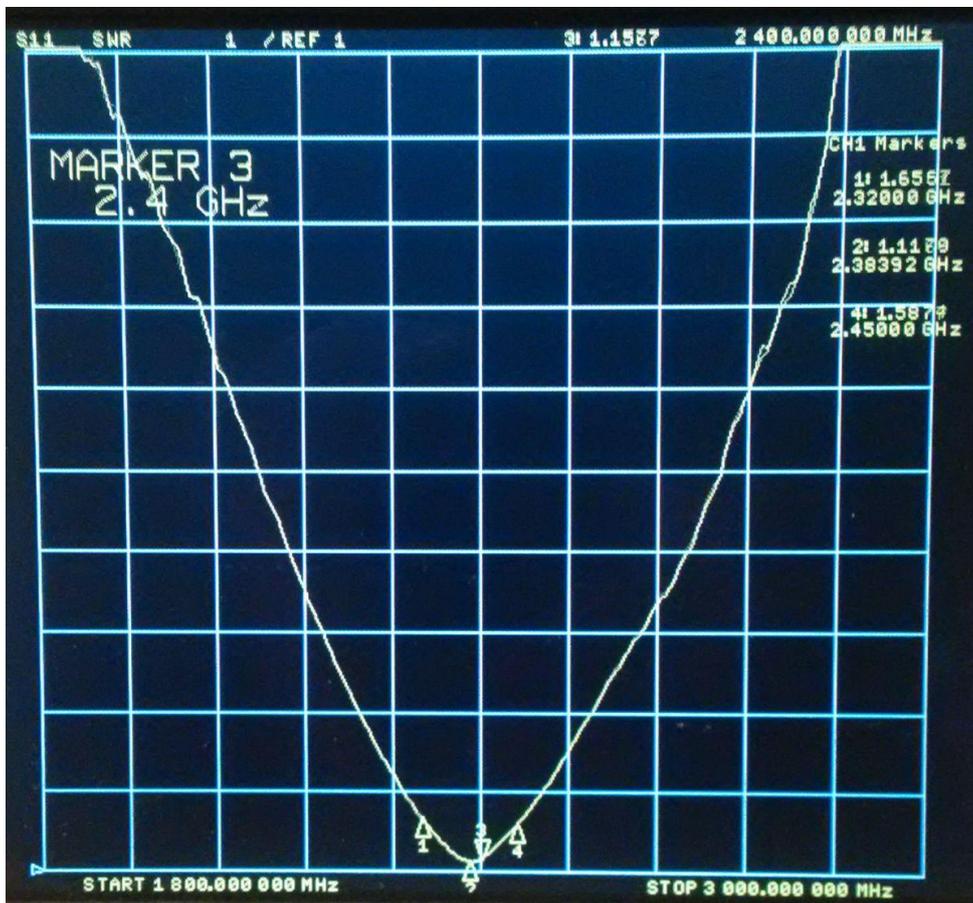
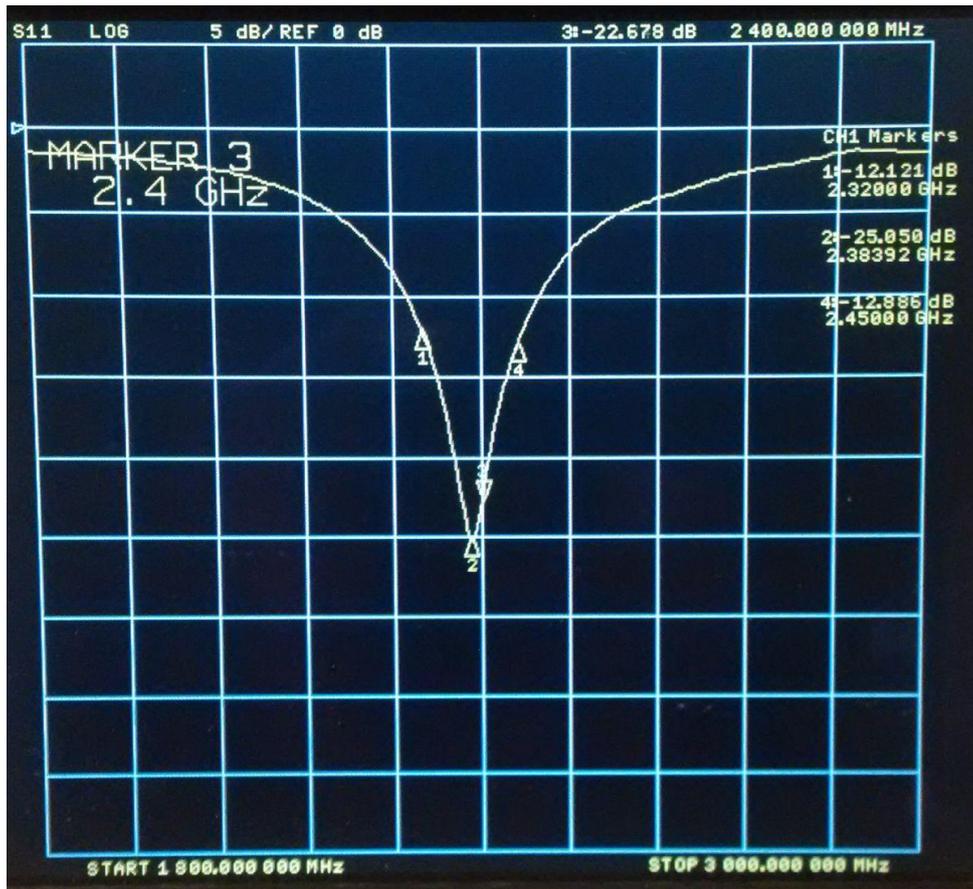
The maximum gain approx. 16.5dB and nicely centered around 2.4 GHz. The ripple is probably due to my measurement setup.

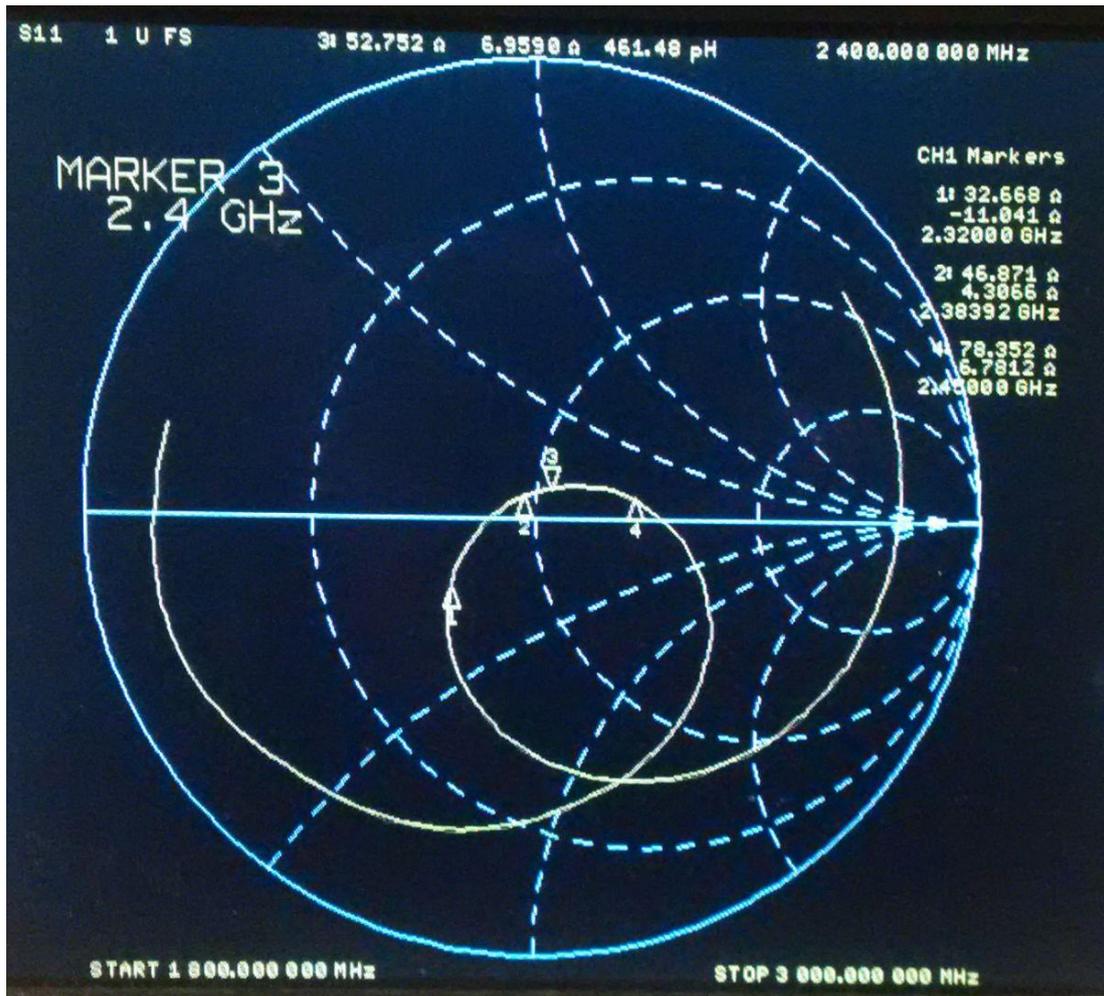
Then, I measured the frequency response with the PA driven in saturation. Please note that the power attenuator between the PA output and the analyzer input is 40,8dB which has to be added to the numbers shown in the graph:



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Finally, I checked the input matching of the PA:





The input matching of this PA is very good. The return loss at 2.4 GHz is 23dB, the VSWR is <1:1.2

In summary the PA is working as expected. If a lower output power is acceptable it can be operated also at a supply voltage of +12V. The maximum supply voltage is +28V. For SSB an output power of approx. 2W is recommended to generate a clean signal.

I am always grateful to get feedback and will be happy to answer questions.

Please direct them to the Email address which you will find below.

Best regards

Matthias DD1US

Email: [DDIUS@AMSAT.ORG](mailto:DDIUS@AMSAT.ORG)

Homepage: <http://www.dd1us.de>