

Wideband Amplifier MITEQ 121643-10-17

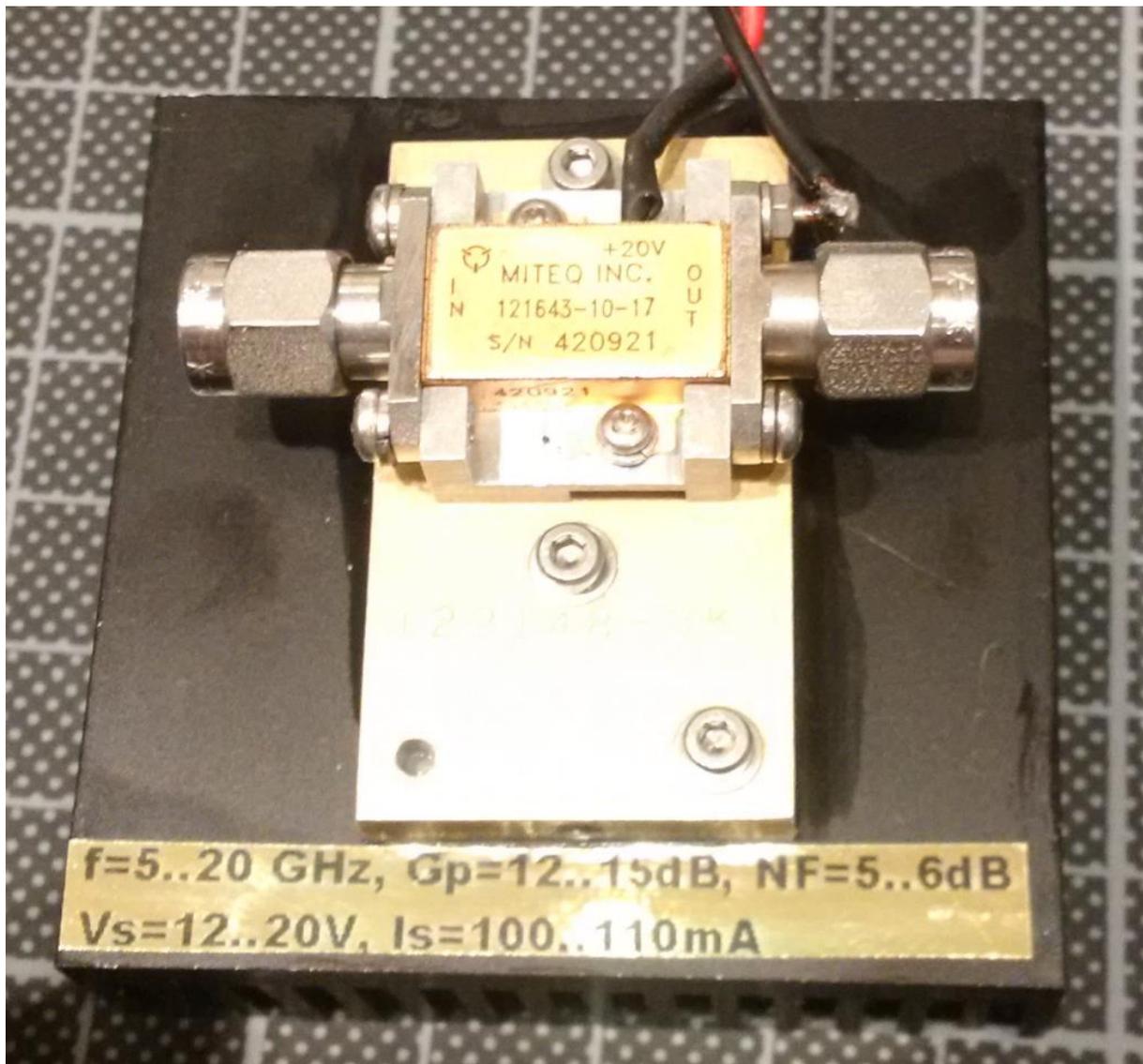
Matthias, DD1US, June 4th 2018

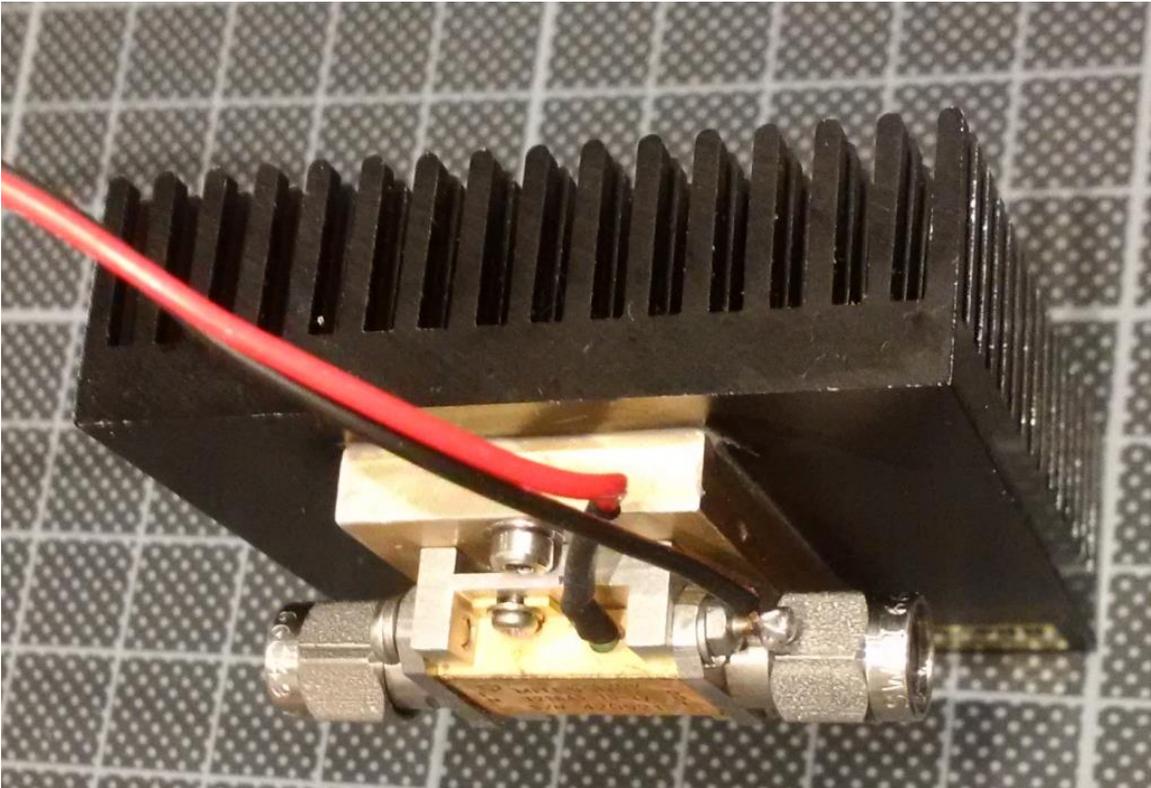
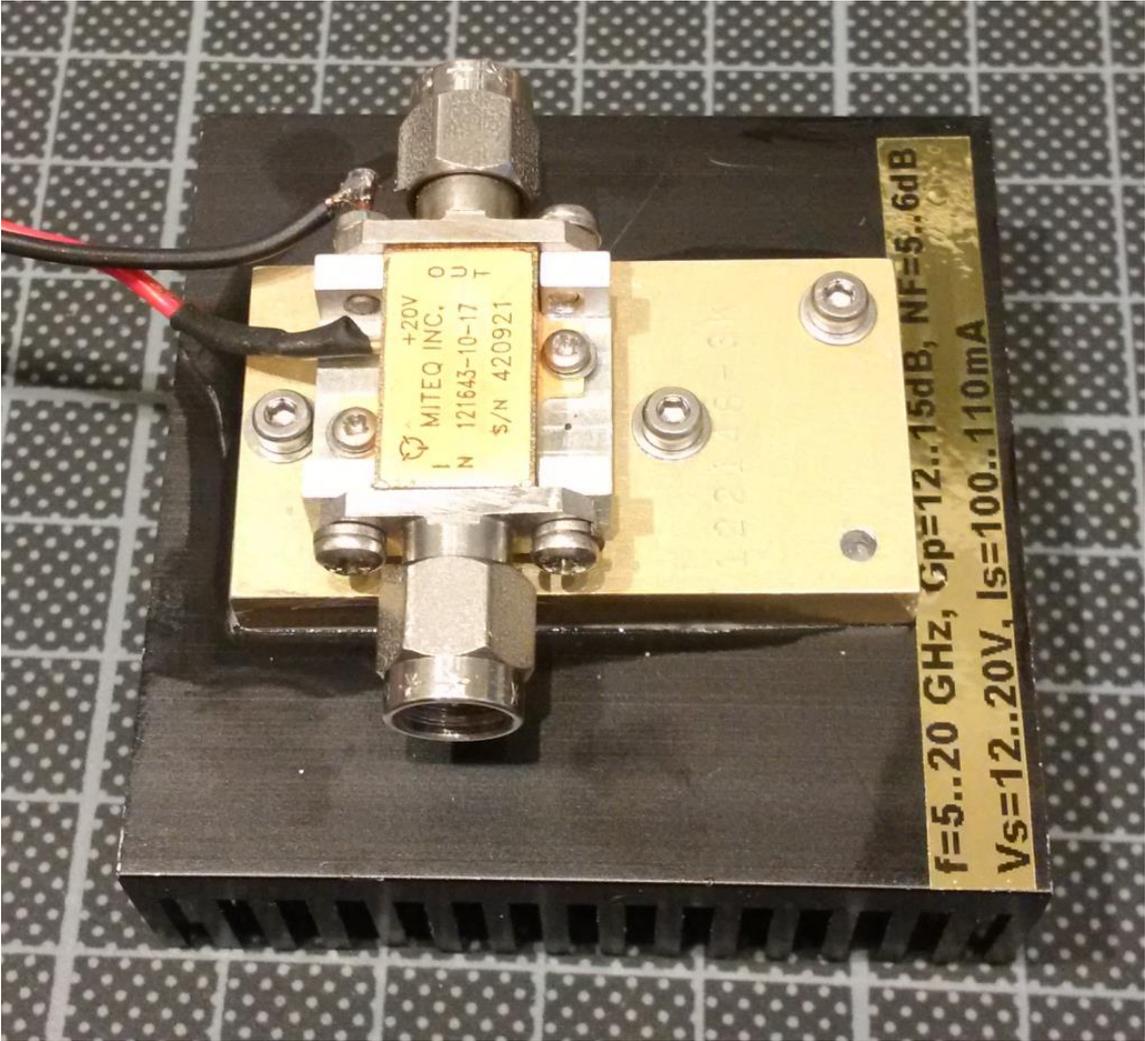
Last week I was visiting a fleamarket and found a wide band amplifier from MITEQ. The data like frequency range, gain and noise figure was not known but I decided to give it a try.

The amplifier is marked with 121643-10-17 and has the serial number S/N 420921. The single supply pin is marked with +20V.

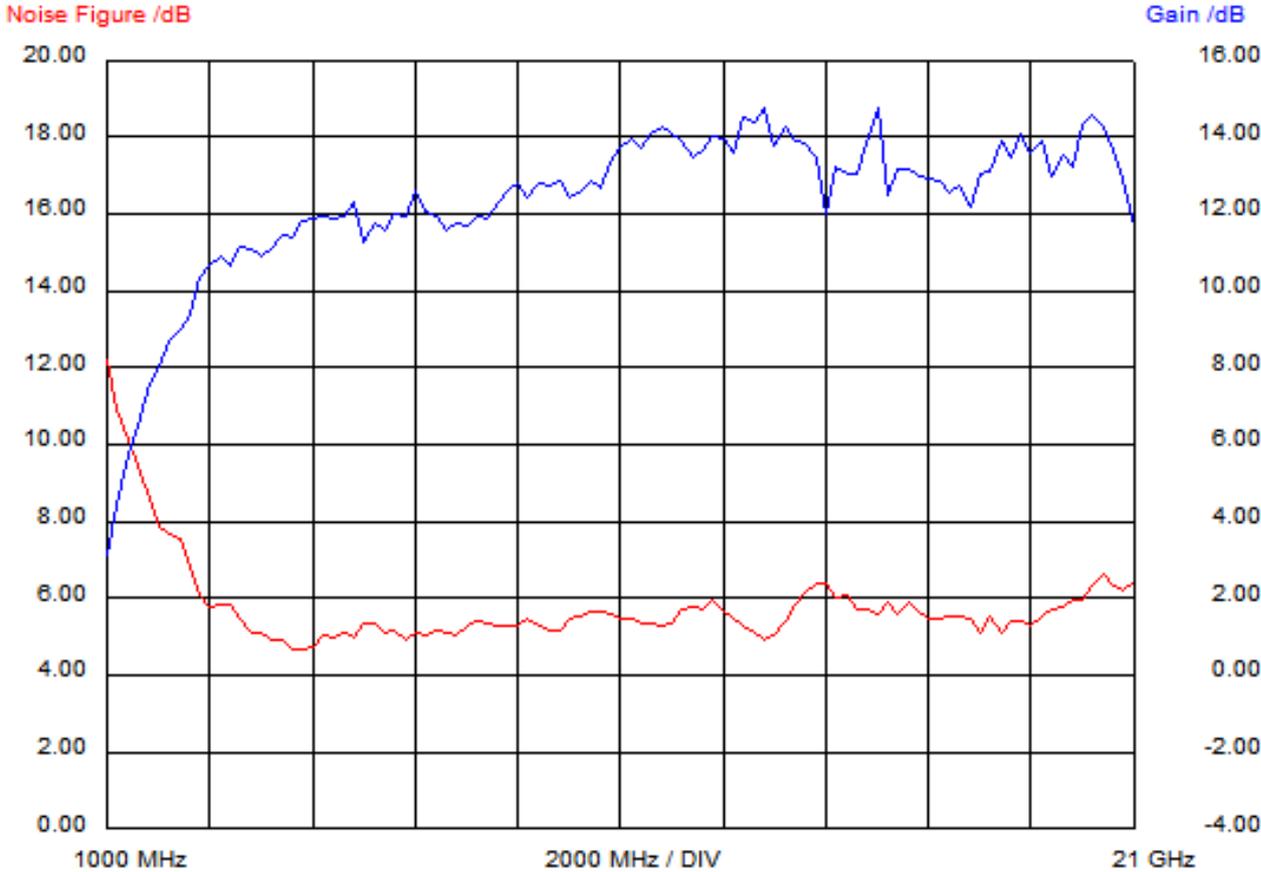
I mounted the amplifier on a heat sink in order to avoid getting it too warm as this certainly degrades not only the lifetime but also performance. My device has a current consumption of 110mA at a supply voltage of 20V. At 12V the supply current is still 100mA. Reducing the supply voltage from 20V to 12V does reduce the gain a bit and most likely the large signal capability, which I did not yet measure, but the amplifier can still be used as shown later. Below 12V the performance drops rather sharp.

Here are some pictures of the device:



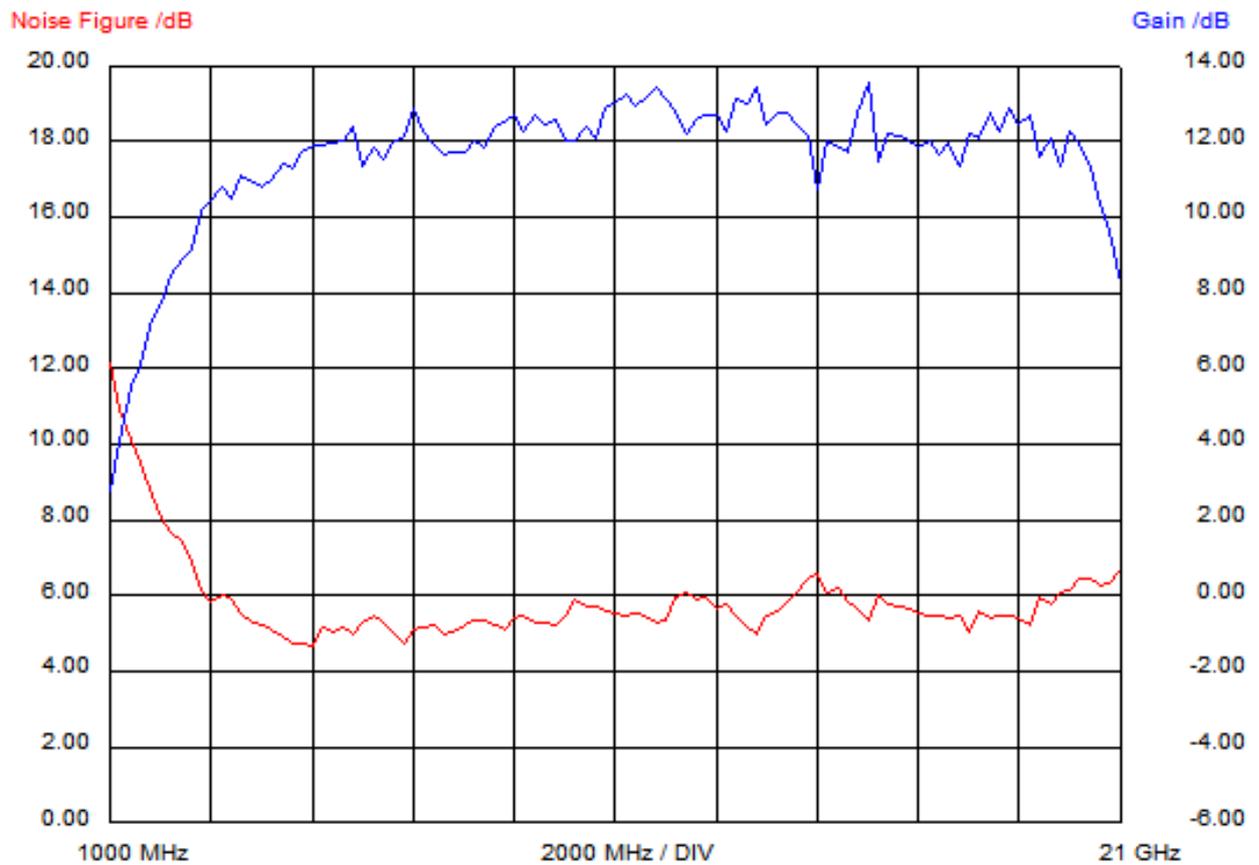


Next, I measured gain and noise figure versus frequency. The first measurement was done at the nominal supply voltage of 20V and a corresponding supply current of 110mA.



The frequency response is rather flat. Between 5 and 20 GHz the gain is between 12 and 15dB and the noise figure between 5 and 6dB.

Next, I repeated the same measurement with a supply voltage of 12V and a corresponding supply current of 100mA.



Between 5 and 20 GHz the gain is between 12 and 13dB. The noise figure is almost the same as before (between 5 and 6dB).

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: DD1US@AMSAT.ORG

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