

Wideband Amplifier ALDETEC ALS01069

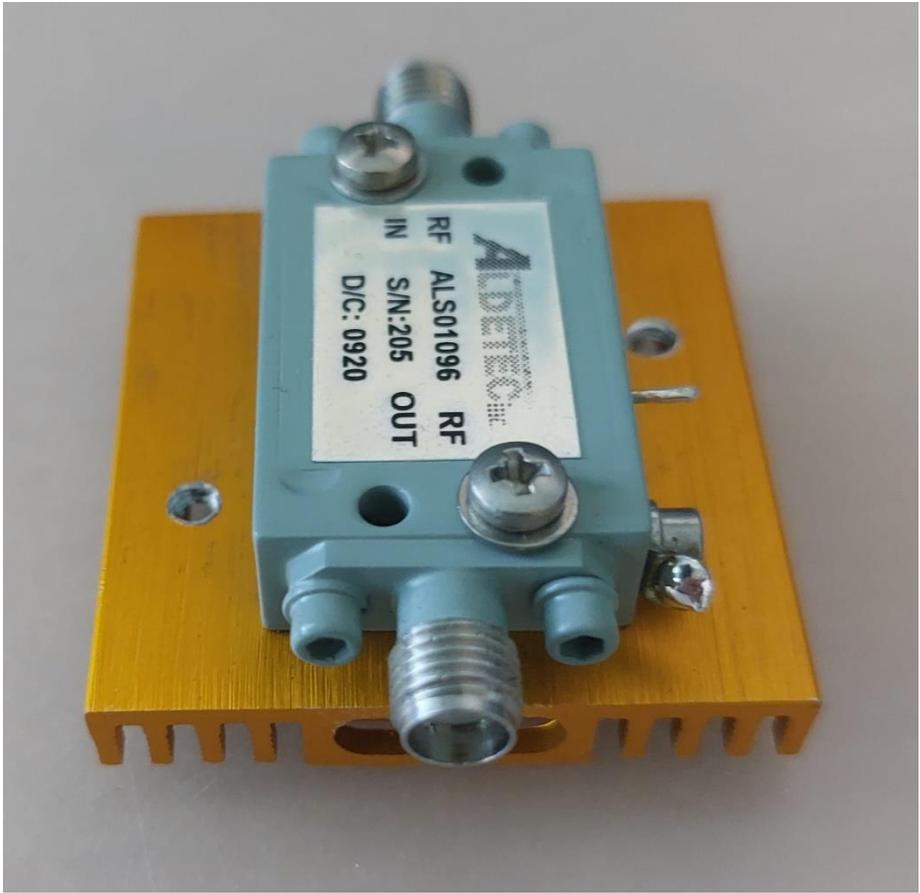
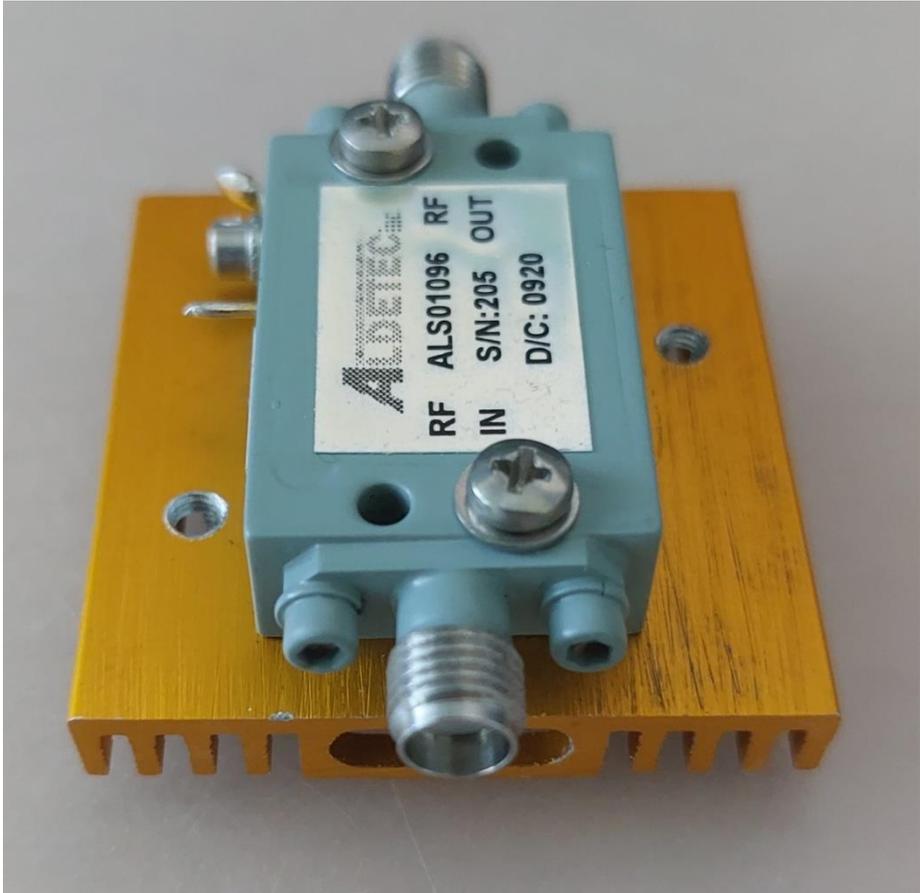
Matthias, DD1US, October 11th 2025

Yesterday I found the time to characterize a wideband amplifier which I bought second hand. The amplifier is from ALDETEC, the model number is ALS01069, the serial number is 205, the date code is 09/20.

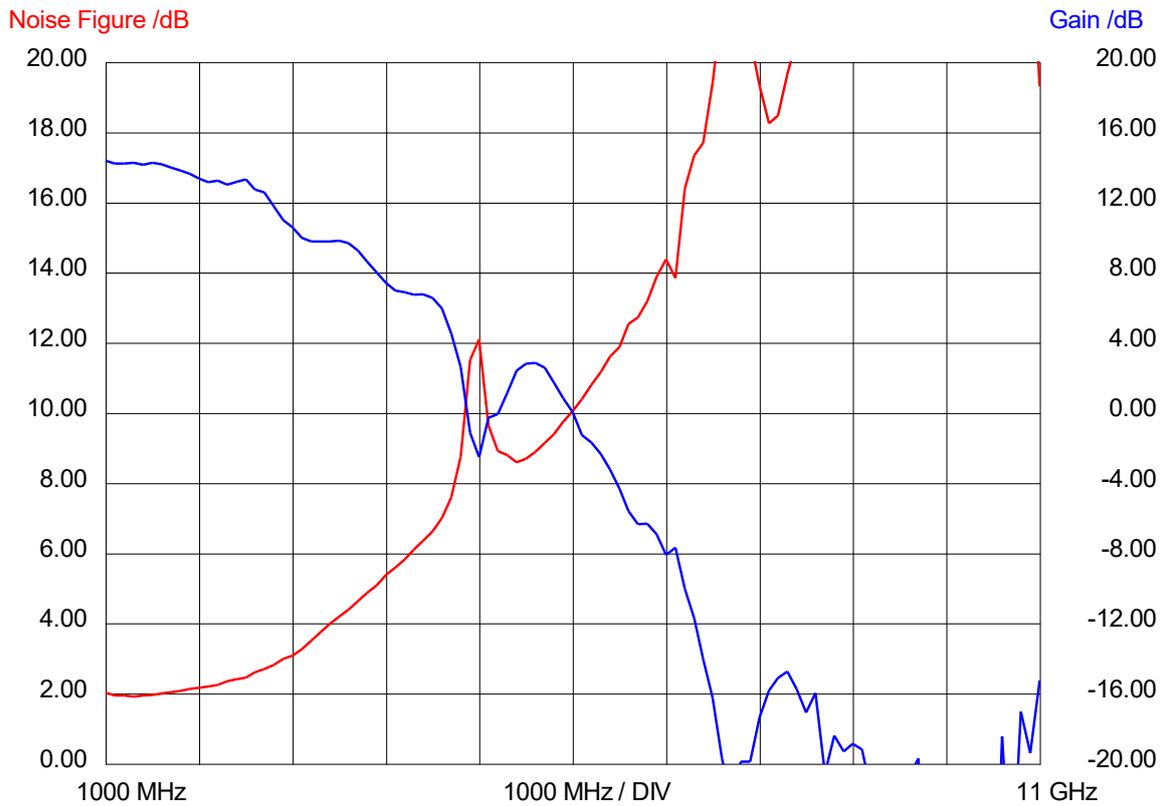
I did not find any data on this amplifier in the internet thus I was curious to see the results. The amplifier features female SMA connectors at its input and output. The nominal supply voltage is 12 V. I measured a corresponding supply current of 63 mA.

Here are some pictures of this amplifier mounted on a small heatsink in order to keep it cool while I made gain and noise figure measurements.

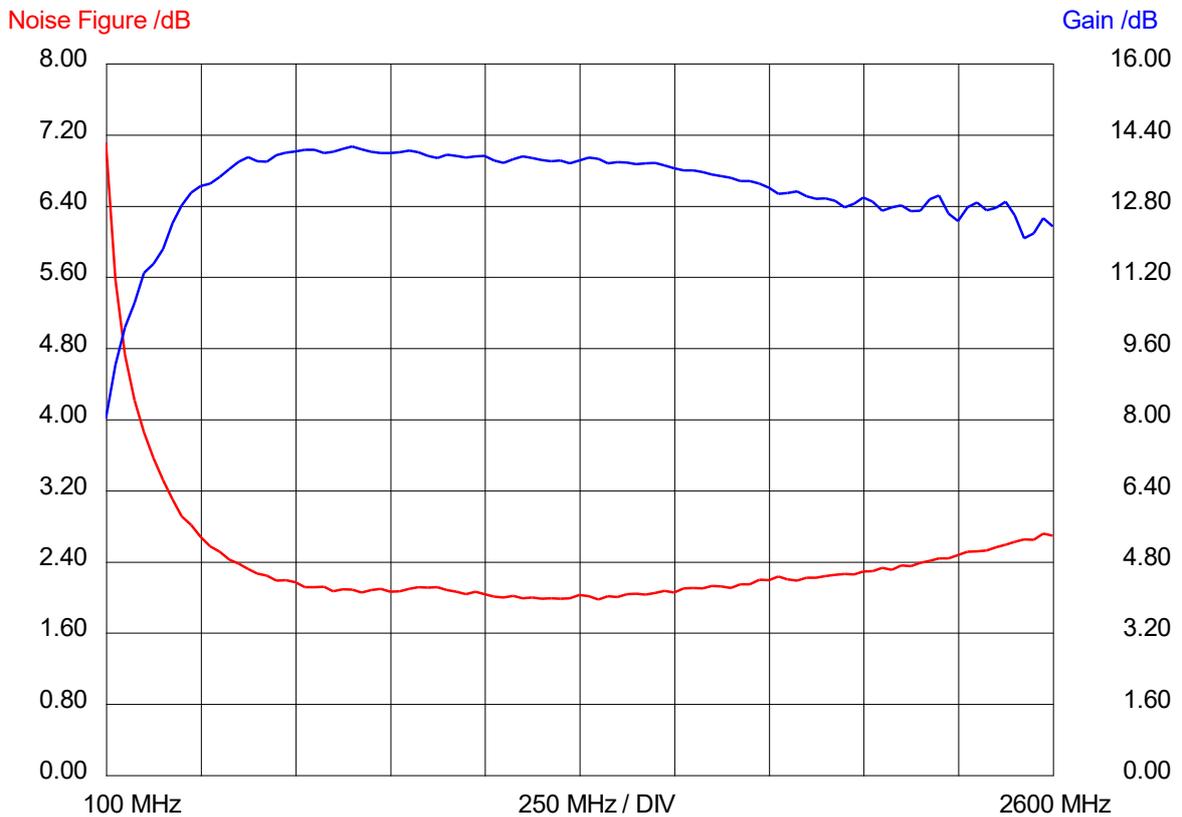




First, I measured the gain and the noise figure between 1 GHz and 11 GHz.



As this amplifier is obviously covering a lower frequency range, I repeated the measurement in the frequency range from 100 to 2600 MHz.



Below you can find the exact measurement results in two tables covering the frequency range 100 MHz to 925 MHz and 950 MHz to 2600 MHz:

Frequency	Gain /dB	NF /dB	Frequency	Gain /dB	NF /dB
100 MHz	8.02	7.11	525 MHz	13.78	2.24
125 MHz	9.22	5.56	550 MHz	13.93	2.18
150 MHz	10.06	4.72	575 MHz	13.99	2.19
175 MHz	10.61	4.21	600 MHz	14.02	2.17
200 MHz	11.28	3.85	625 MHz	14.06	2.11
225 MHz	11.49	3.56	650 MHz	14.05	2.11
250 MHz	11.82	3.32	675 MHz	13.98	2.12
275 MHz	12.41	3.10	700 MHz	14.01	2.07
300 MHz	12.81	2.91	725 MHz	14.07	2.09
325 MHz	13.09	2.81	750 MHz	14.13	2.08
350 MHz	13.24	2.67	775 MHz	14.07	2.05
375 MHz	13.29	2.57	800 MHz	14.01	2.08
400 MHz	13.44	2.51	825 MHz	13.98	2.09
425 MHz	13.62	2.42	850 MHz	13.98	2.06
450 MHz	13.78	2.37	875 MHz	14.00	2.06
475 MHz	13.89	2.32	900 MHz	14.03	2.09
500 MHz	13.80	2.27	925 MHz	14.00	2.11

Frequency	Gain /dB	NF /dB	Frequency	Gain /dB	NF /dB
950 MHz	13.92	2.11	1800 MHz	13.35	2.14
975 MHz	13.87	2.11	1825 MHz	13.30	2.19
1000 MHz	13.94	2.08	1850 MHz	13.20	2.19
1025 MHz	13.91	2.06	1875 MHz	13.07	2.23
1050 MHz	13.88	2.03	1900 MHz	13.08	2.20
1075 MHz	13.90	2.06	1925 MHz	13.12	2.19
1100 MHz	13.92	2.03	1950 MHz	13.01	2.22
1125 MHz	13.82	2.00	1975 MHz	12.95	2.22
1150 MHz	13.76	2.00	2000 MHz	12.96	2.24
1175 MHz	13.84	2.01	2025 MHz	12.91	2.25
1200 MHz	13.91	1.99	2050 MHz	12.76	2.26
1225 MHz	13.87	1.99	2075 MHz	12.85	2.26
1250 MHz	13.82	1.98	2100 MHz	12.98	2.29
1275 MHz	13.80	1.98	2125 MHz	12.89	2.29
1300 MHz	13.81	1.98	2150 MHz	12.69	2.33
1325 MHz	13.75	1.99	2175 MHz	12.76	2.31
1350 MHz	13.82	2.02	2200 MHz	12.81	2.36
1375 MHz	13.88	2.01	2225 MHz	12.68	2.35
1400 MHz	13.85	1.97	2250 MHz	12.68	2.38
1425 MHz	13.75	2.01	2275 MHz	12.94	2.41
1450 MHz	13.78	2.00	2300 MHz	13.02	2.43
1475 MHz	13.77	2.03	2325 MHz	12.62	2.43
1500 MHz	13.73	2.04	2350 MHz	12.46	2.47
1525 MHz	13.75	2.03	2375 MHz	12.76	2.51
1550 MHz	13.76	2.05	2400 MHz	12.87	2.52
1575 MHz	13.71	2.07	2425 MHz	12.70	2.52
1600 MHz	13.64	2.05	2450 MHz	12.75	2.56
1625 MHz	13.59	2.10	2475 MHz	12.89	2.59
1650 MHz	13.59	2.10	2500 MHz	12.58	2.62
1675 MHz	13.56	2.10	2525 MHz	12.06	2.65
1700 MHz	13.50	2.12	2550 MHz	12.17	2.65
1725 MHz	13.47	2.12	2575 MHz	12.52	2.71
1750 MHz	13.43	2.10	2600 MHz	12.33	2.69
1775 MHz	13.36	2.14			

Here is a brief summary of the measurement results:

Ambient temperature: 23 ° C:
Supply voltage: 12 V
Supply current: 63 mA
Supply power: 750 mW

Frequency /MHz	Gain /dB	NF /dB
150	10.1	4.7
450	13.8	2.4
1300	13.8	2.0
2400	12.9	2.5

Gain (325 – 1950 MHz): 13.7 dB +/- 0.35 dB
NF (325 – 1950 MHz): 2.4 dB +/- 0.4 dB

Gain (400 – 2400 MHz): 12.8 dB +/- 0.3 dB
NF (400 – 2400 MHz): 2.25 dB +/- 0.25 dB

Gain (450 – 1300 MHz): 14.0 +/- 0.2 dB
NF (450 – 1300 MHz): 2.2 dB +/- 0.2 dB

This amplifier covers the frequency range from the 2m band to the 13cm.

It is especially well suited as a measurement amplifier with a flat gain of about 14 dB and a noise figure of 2.2 dB in the frequency range 450 MHz to 1300 MHz.

As mentioned above, I did not find any specifications on this amplifier in the internet. Thus, I am very interested to get any data.

Also, 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

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