

SVP

BROADCAST
MICROWAVE

LNA-5GHz **Low Noise Amplifier**

MANUAL V1.2



Dear Customer,

We would like to thank you for choosing this equipment and welcome you to the SVP's growing family of products.

We are sure that the addition of this equipment to your existing installation will cause you nothing but satisfaction.

Please read these instructions carefully, and keep them at hand in case you have to refer to them.

IMPORTANT NOTES:

1. The LNA low noise preamplifier for COFDM signals has a selective input filter, which can be modified under request of the customer in order to work in the wanted frequency range.
2. The COFDM low noise preamplifier is powered through the output coax connector. For it, a bias insertion tee (BIAS-TEE) can be used, which is an accessory available in our catalogue.
3. The high performance of this equipment is only guaranteed using high quality cables and connectors.

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1 Description

The very low noise preamplifier for COFDM signals offers its best performance with COFDM digital links. Also, it can be used with analogue links. This LNA is very useful for Broadcast applications.

This equipment expands the possibilities of existing COFDM digital links, because with it, the noise figure of the receivers is improved. The selectivity is also increased and it compensates the attenuation caused by the coaxial cable between the antenna and the receiver.

The LNA preamplifier for COFDM signals has an excellent noise figure and so, link sensitivity is increased, thus improving coverage and reliability.

It has a good input adaptation, eliminating undesired self-oscillations.

The LNA is powered through the output coax. For it, a bias insertion tee (BIAS-TEE) can be used.

Features

- Small mechanical dimensions
- Low noise figure
- Milled aluminium case
- High IP3 for good large signal performance
- Remote power supply via output connector
- Very good input return loss (S11)
- Static protection (ESD) at preamplifier input

Fulfilled standards

- RoHs directive 2011/65/EU
- Low Voltage directive 2014/35/EU
- EMC directive 2014/30/EU

2 Technical Specifications

General Specifications

Table 1 General Specifications

Item	Specification
Frequency range	5.15 to 5.35 GHz (Typ. 5,0-5,9 GHz)
Gain	13 dB
Static protection	Yes
Max input power	3 mW
Filtering Rejection	>50dB @ f0+/- 450MHz
Power range	9 to 30 VDC
Current consumption	30mA @ 12v - 15mA @ 25v
Output IP3	+25 dBm
Output power P1db	+17 dbm
Noise Figure	<2 dB
R.F. Input connector	N Female
R.F. Output and DC connector	N Female
Connectors impedance	50 Ohms
Size	162.6 x 119.5 x 34.5 mm
Weight	0.75 Kg
Temperature Range	-40°C to 60°C

*Other filters under request

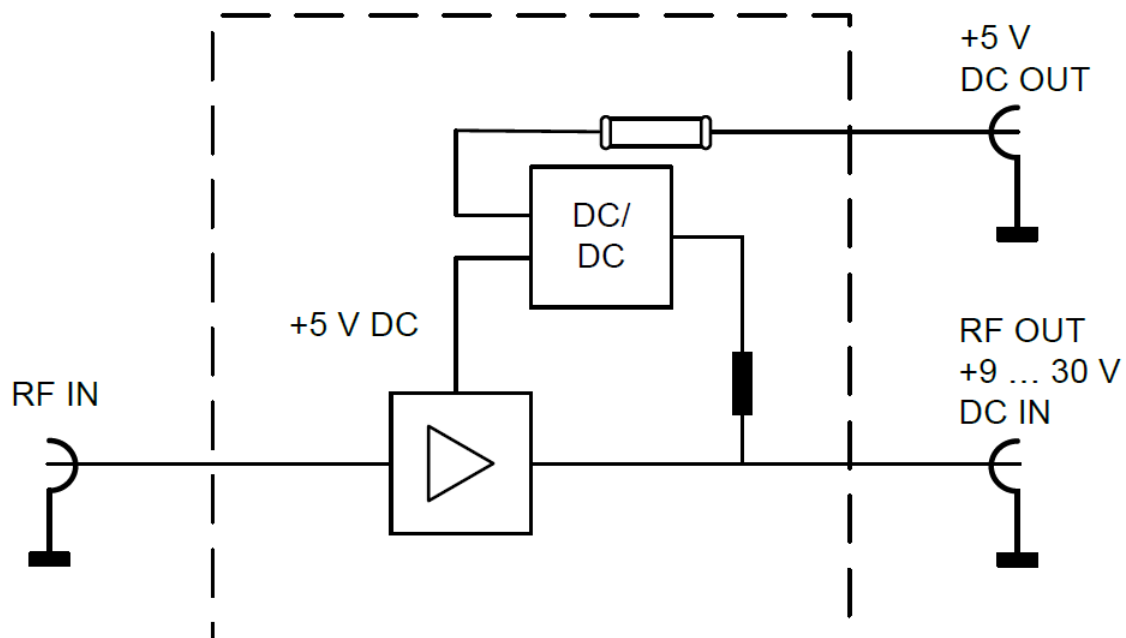


Figure 2.1 LNA Block diagram

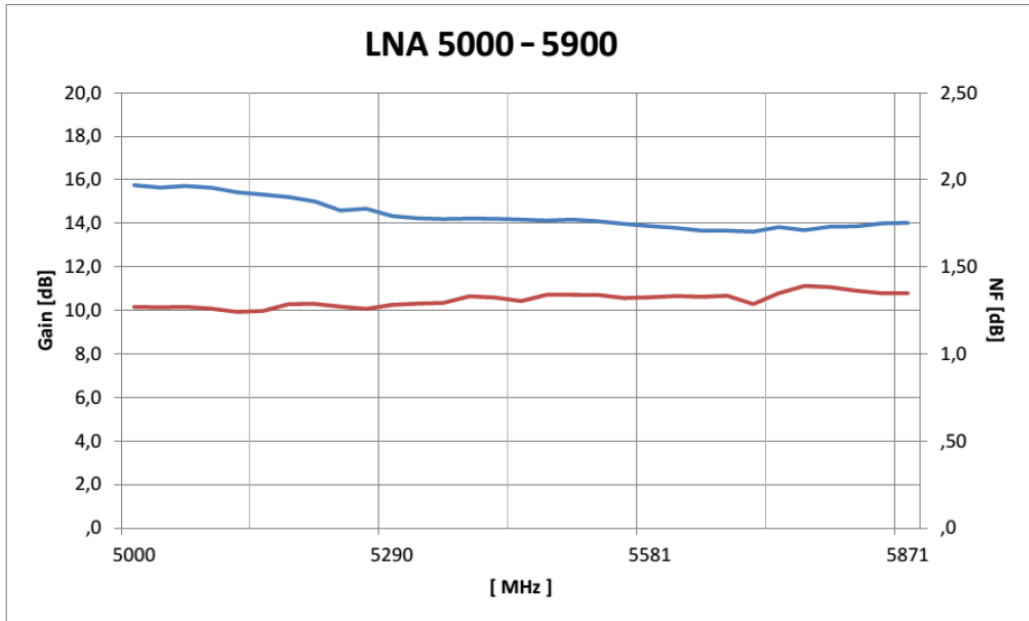


Figure 2.2 LNA Gain and Noise Figure

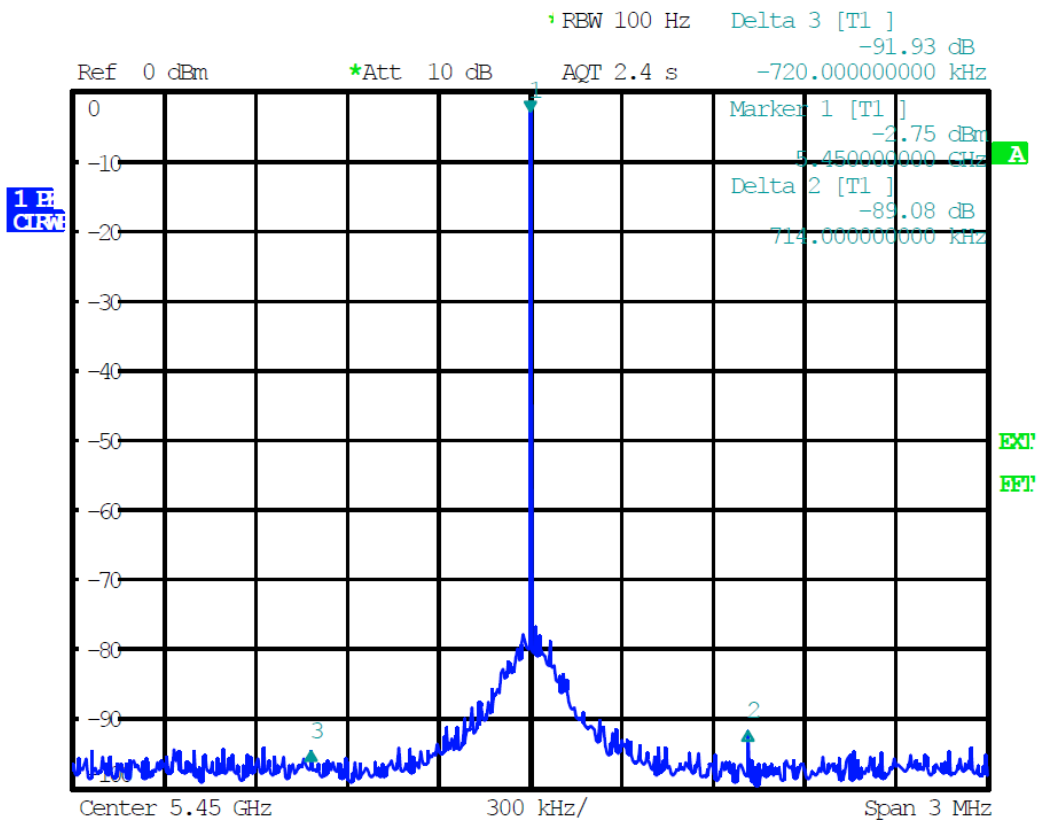


Figure 2.3 Spurious Rejection for DCDC Regulator

3 Mechanical dimensions

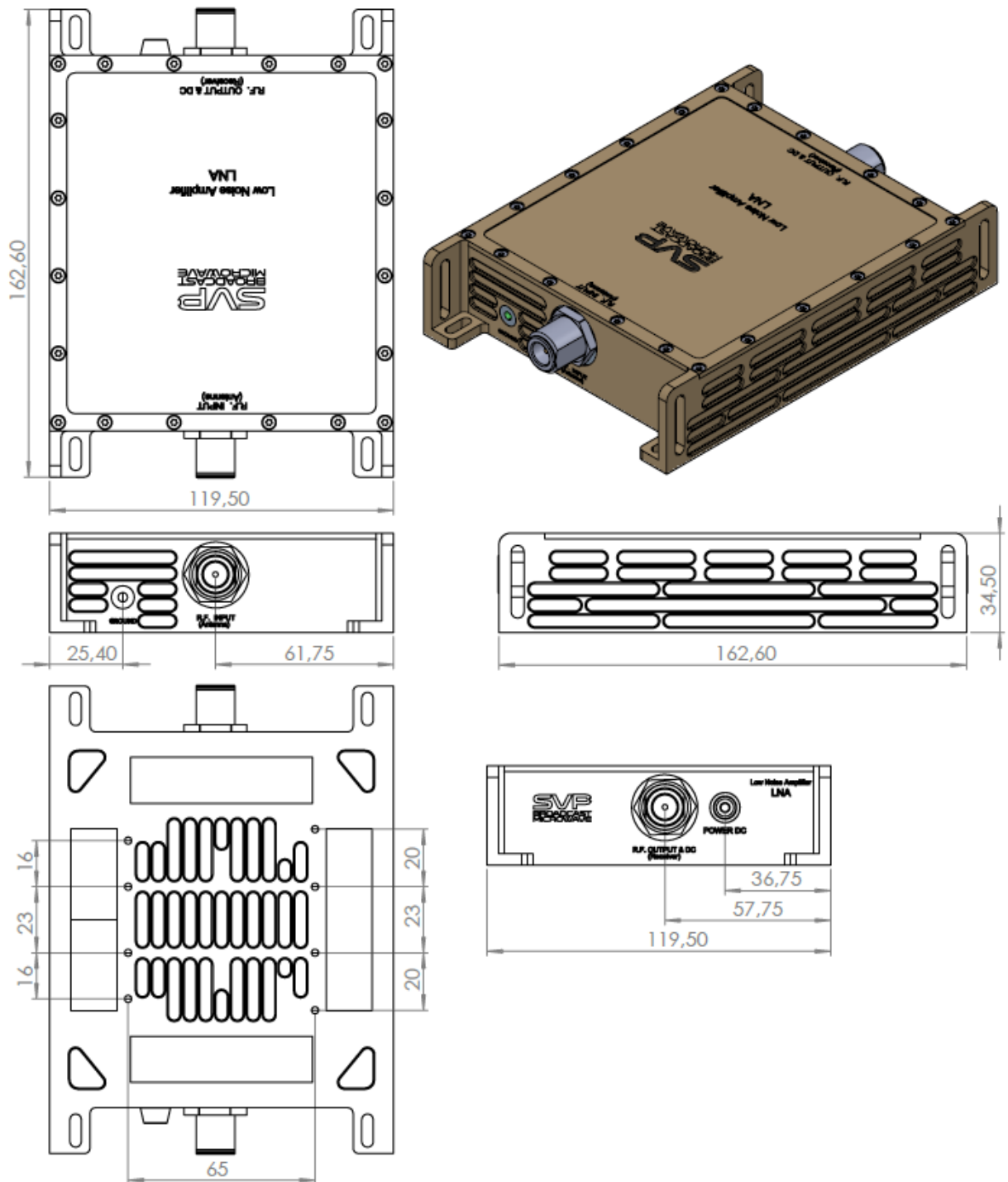


Figure 3.1 LNA Mechanical Dimensions

End note

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