



L5ULNA, LNH & LNHG

SPECIFICATIONS

	L5ULNA	L5ULNAH	L5ULNAHG
Noise Figure:	<0 .7 dB	<0.8 dB	<1.0dB
Gain:	> 14 dB	>25 dB	>40 dB
Frequency Range:	5650-5800 MHz	5650-5800 MHz	5650-5800 MHz
Input Voltage:	7 - 16 VDC	7 - 16 VDC	7 - 16 VDC
Current Drain:	< 50 ma	<75 ma	<100 ma

DESCRIPTION:

The L5ULNA series is a low noise amplifier designed by W5LUA and Down East Microwave Inc. using the latest PHEMPT technology. This LNA was designed for receive only purposes including, EME, and other standard weak signal reception between 5650 and 5800 MHz. The LNA is assembled in a machined chemical etched enclosure with SMA connectors only. It is biased through the external DC feed through connector. The standard model is available as a board or complete kit but not recommended unless you have suitable gain and noise figure measuring equipment.



Standard L5ULNA shown above

INSTALLATION and USE:

Depending on your application, the LNA may be installed anywhere in your system to increase gain. To maintain or improve the systems noise figure requires the LNA to be installed as close to the systems antenna as possible. If you are using this LNA in a transceive system with transmit bypass relays, be sure of their isolation characteristics and transmit power handling capabilities before transmitting. Use only interconnecting cables and adapters that are rated for use at or above 10 GHz. Inadequate cabling or cables with poor shielding may cause system instabilities, signal loss, or undesirable intermittent operation.

The connector marked **INPUT**, is to be connected to the antenna. The **OUTPUT** is connected to the receiver. The LNA requires protection from lightning or high static discharges. The LNA will withstand input RF levels of up to 20 mW. Other precautions will need to be made such as sequencing or protection against voltage spikes on the +DC line.



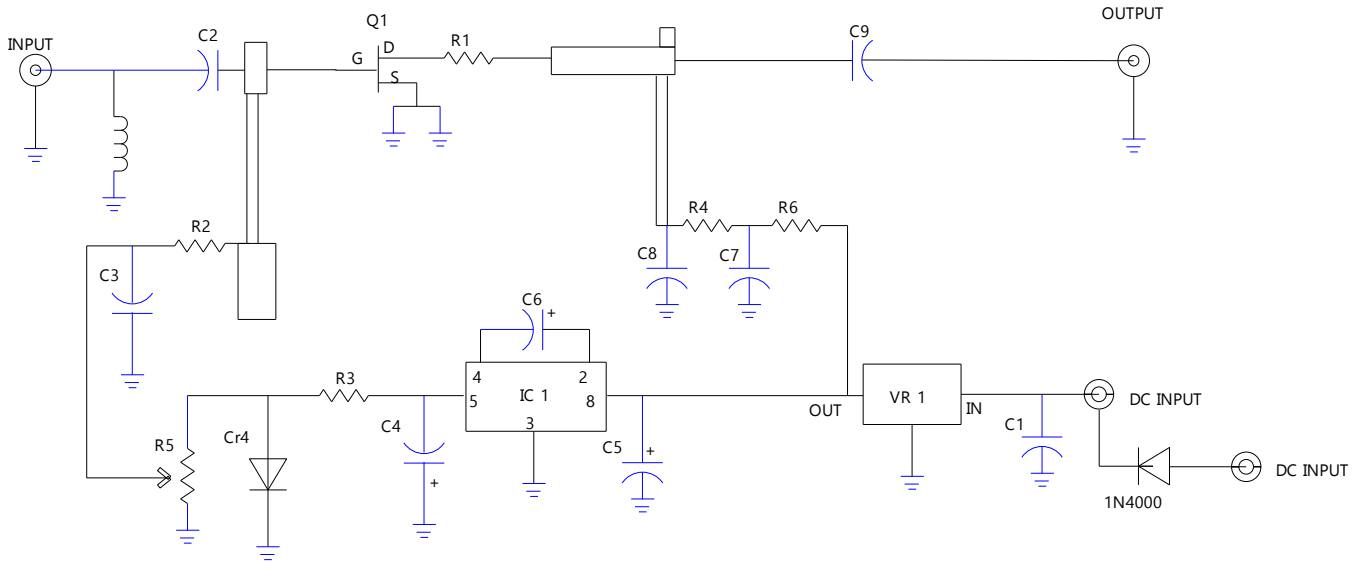
OPERATING:

Expected performance with the LNA correctly installed should be overall improvement in gain and noise figure of the receive system. The proper installation of a LNA becomes more and more important at these frequencies and because of out of band interference and high insertion loss of all connection cables and connectors. The gain bandwidth of the LNA design is wide to obtain a low noise figure. Therefore, certain conditions may cause overloading of your receiver producing intermodulation. It is always suggested to use adequate filtering between gain stages and to practice gain management by not cascading amplifiers to solve system noise problems. Use of directional antennas will also increase desired signals and aid in elimination of undesired signals.

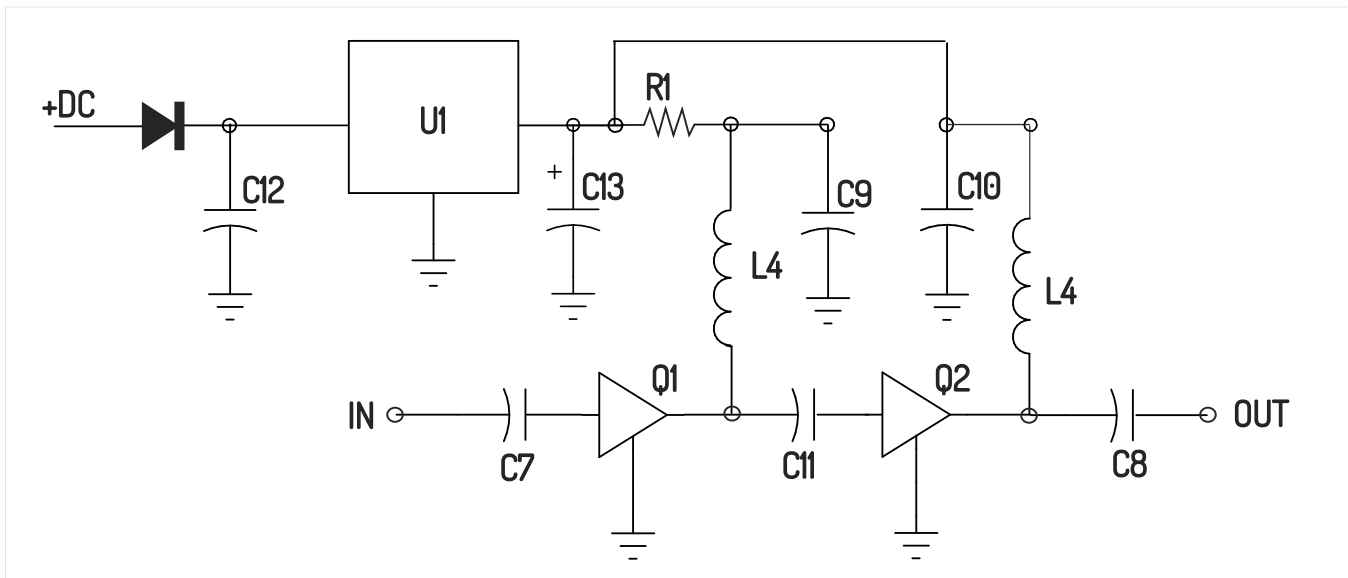


**The LNH & LNHG Enclosure
Measuring 4.00" x 2.00" x .875"**

L5ULNA SCHEMATIC



Standard Single Stage LNA



>25 dB and > 40 dB additional amplifiers