

DEM LXXULNA - Ultra Low Noise Amplifier

Specifications:

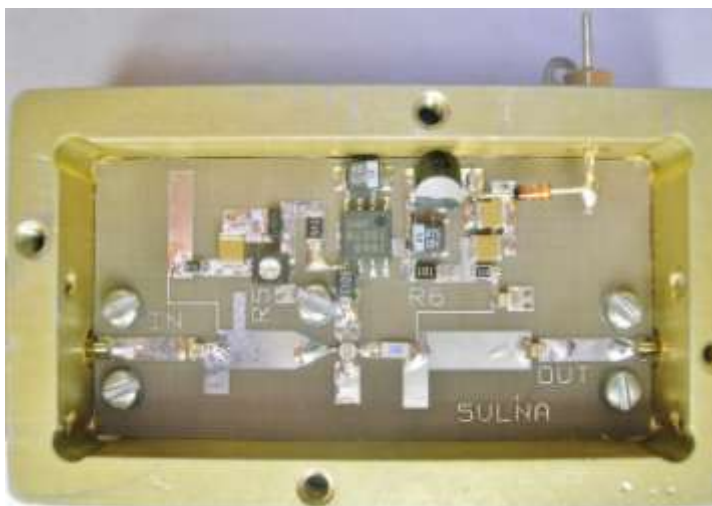
Model:	L13ULNA	L13ULNAH
Frequency:	2300-2450MHz	2300-2450MHz
Gain:	15dB minimum	+30dB minimum
Noise Figure:	<0.6dB maximum	<0.7dB maximum
Current Drain:	<35mA	<100mA
Voltage:	+7 - +16 VDC	+7 - +16 VDC

Product Description:

The DEM L13ULNA and L13ULNAH are part of a series of Ultra Low Noise Amplifiers that were designed by W5LUA and produced by Down East Microwave Inc. The L13ULNA's utilizes the latest in PHEMT technology and is designed for receive systems such as Terrestrial and EME stations require the lowest noise figure possible. All of the L13ULNAs do not provide any RF bypass switching circuitry. Noise figure is FET dependant and optimized for best performance. adjusted on an individual basis for the best performance possible. Each version may be biased through the coax or from the external DC feed through. Internal regulators and diodes provides external power supply isolation.



Our design incorporates low loss microstrip circuitry and resistive loading to accomplish all RF matching. During testing, the ULNA circuit is optimized for gain and noise figure. We do not use tuned output circuits or baluns in our L13ULNA designs. Tuned output circuits and baluns do not offer constant output impedances over wide bandwidths and may cause out of band instabilities from reflected signals. Tuned circuits may also require returning if a cable length or the tuning of a filter that is connected to the output of a tuned circuit LNA is changed.

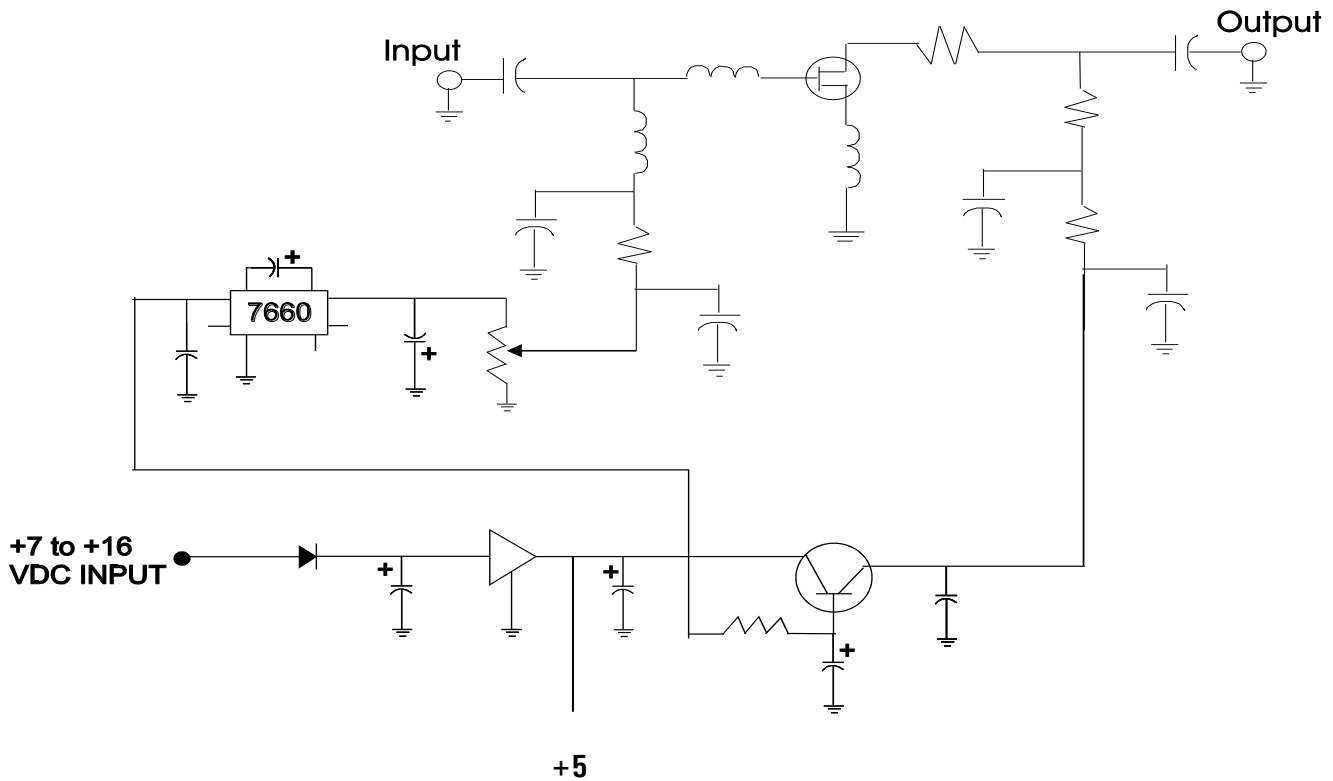


enclosures enhances RF insusceptibility and protects against stray external EMI. DC power is either applied through a Pi-circuit feed through filter connector which is a simple solder connection

This L13ULNA design is provided with type "N" or SMA connectors that are mounted on a machined aluminum enclosure that measures 2.6" L x 2.5" W x 0.9" H. The high gain version measures 4.15"L x 2.0" W x .9" high and its enclosure is weatherproof. Both

that attenuates frequencies through 18 GHz. or it may be applied through the coax. The standard gain L13ULNA design is offered in kit form as a PCB kit or complete kit depending on your requirements. And of coarse it is offer as an assembled and tested LNA. The High gain version is only offered as and assembly tested and ready to use.

Schematic Diagram of Standard Gain L13ULNA Design:



Schematic Diagram portion of High Gain Stage: