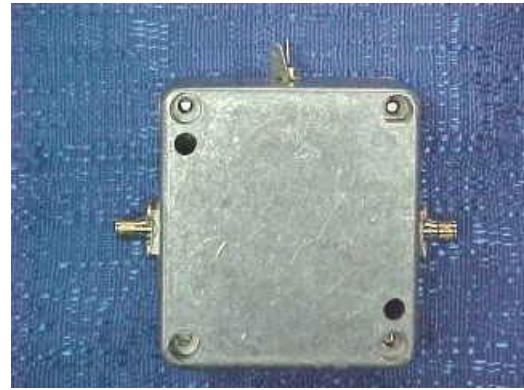




DEM 3-2ULNA - 10.00-10.500 GHz. Ultra Low Noise Amplifier

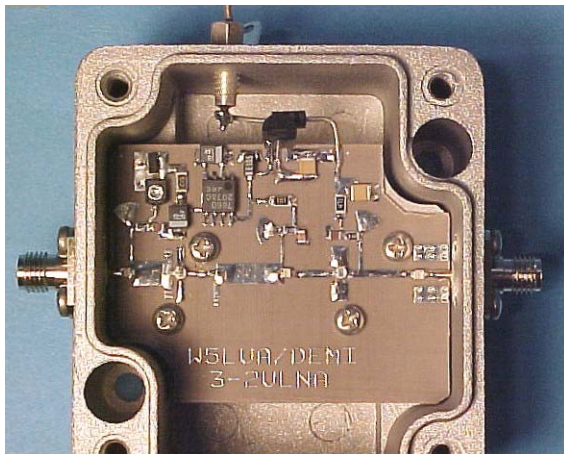
Specifications:

Gain:	22dB minimum
Noise Figure:	<1.10dB
P1dB:	+5dBm output
Input VSWR:	>6dB @ design frequency
Output VSWR:	>10dB 8-12 GHz.
Voltage:	+7 - +16 VDC



Product Description:

The DEM 3-2ULNA is one of a series of **Ultra Low Noise Amplifiers** that was designed by W5LUA and Down East Microwave Inc. The 3-2ULNA series utilizes the latest in PHEMT technology and is designed for receive systems such as EME and weak signal stations requiring higher gain with the lowest noise figure possible. The 3-2ULNA is receive only LNA and does not provide any RF bypass switching circuitry. Standard gain of our 3-2ULNA is greater than 22dB. Maximum noise figure is 1.1 dB. The 3-2ULNA is adjusted on an individual basis for the best performance possible. This is accomplished by bias adjustments and circuit manipulation. Each 3-2ULNA is biased through a external DC feed through. A internal power supply provides external power supply isolation for the LNA.



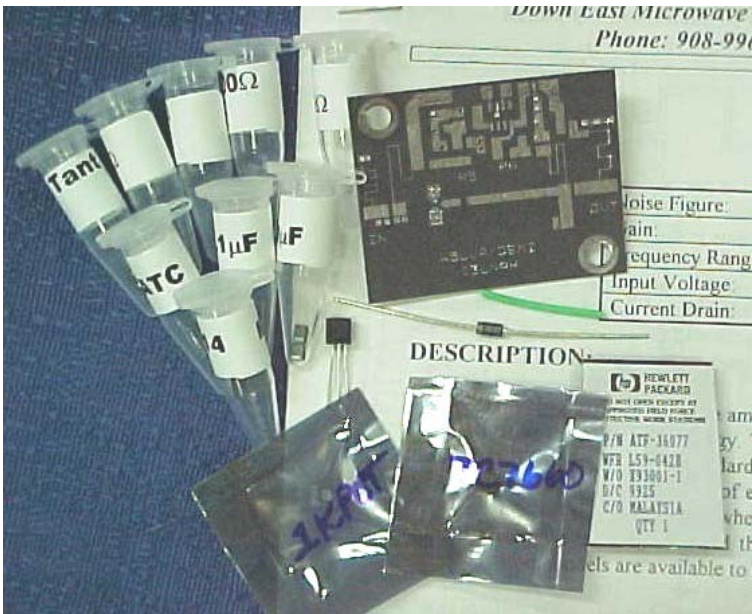
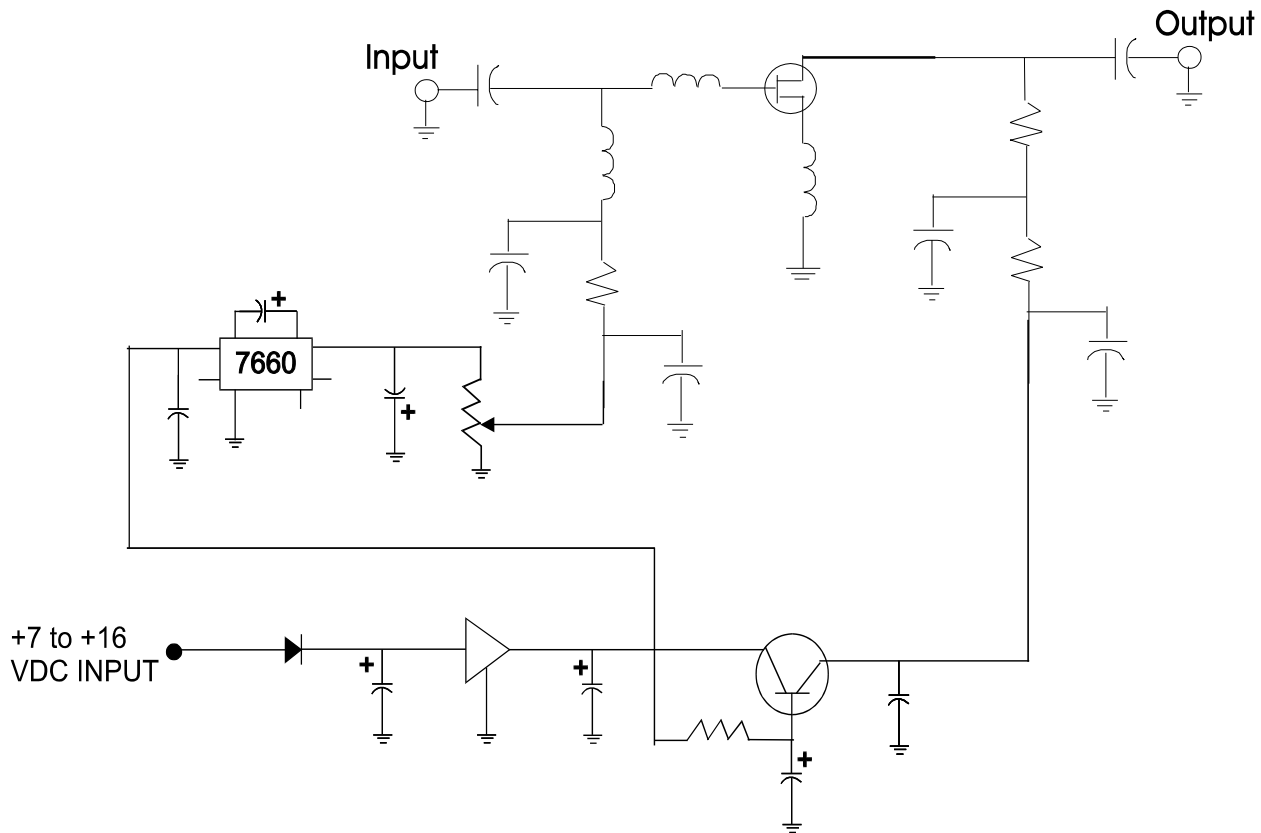
Our ULNA design incorporates low loss microstrip circuitry to accomplish all RF matching. During testing, the input circuit and output circuit is optimized for gain and noise figure. The Bias is adjusted to control the noise figure and gain and is then tested for a constant wide bandwidth output impedance. This is important for stability and to resist products caused by reflections from band pass filters or high Q receiver front ends. In this design, we use a tuned input and output circuit that offers a constant impedance over a wide bandwidth to eliminate out of band instabilities from reflected signals.

This 3-2ULNA design is only provided with SMA connectors that are mounted on a weather proof die cast aluminum enclosure that measures 2.5" L x 2.25" W x 1.375" H. This enclosure enhances RF insusceptibility and protects against stray external EMI. DC power is applied through a Pi-circuit feed through filter connector which is a simple solder connection that attenuates frequencies through 18 GHz. The 3-2ULNA design is also offered in kit form as a PC board kit or complete kit depending on you requirements.

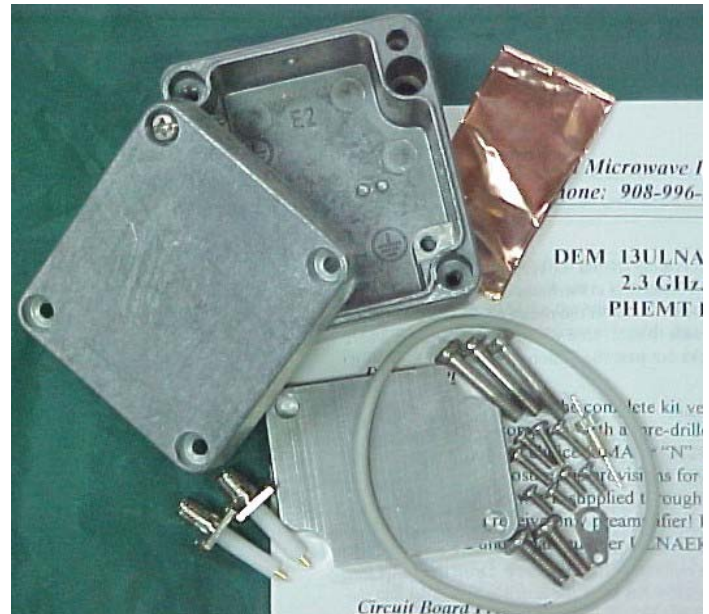
ULNAs with operating frequencies, configurations, gains and noise figures not found on our price list or product descriptions can be designed by Down East Microwave Inc. and produced with relatively short delivery times. Please contact us with your specifications and/or requirements.



Schematic Diagram of ULNA Design:



3-2ULNAK-PC Board Parts Kit



3-2ULNACK-Contains Parts Kit and Hardware