

Ultra Low Noise and high linearity Amplifier for L Band with GaAs pHEMT MMIC

NEW

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Features:

800 - 1800MHz

NF

Noise Temp. 21 Kelvin
 0.3dB @ 1296MHz
 0.31dB @ 1420MHz
 0.32dB @ 1575MHz
 measured at 25 deg C

Gain

23dB +/- 1dB

IP3

High OIP3 performance
 +35dBm @ 1296MHz
 IIP3 +12dBm @ 1296MHz
 Input Comp. Point -4dBm
 OP1dB 21dBm

Max input power

+24dBm

Supply voltage:

7 to 15V, 80-100mA

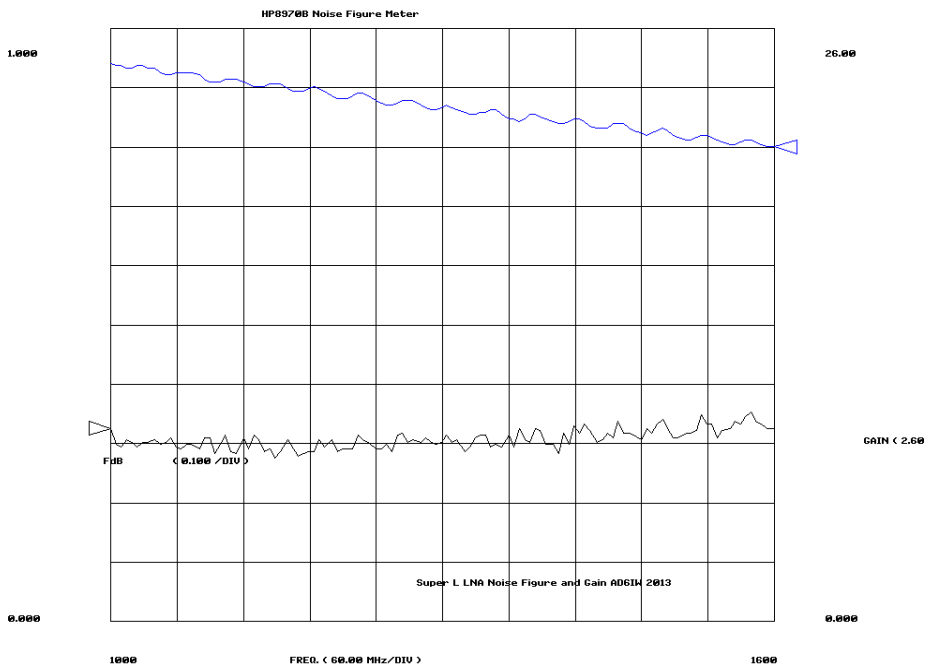
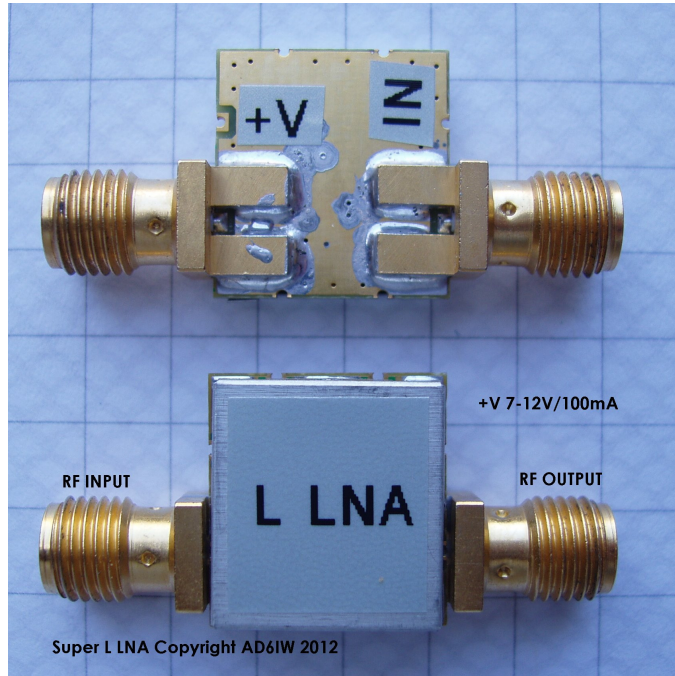
Built in voltage
 regulator *

Option: LPF, HPF,
 bias T

Unconditional stable
 LNA

Input RL >10dB

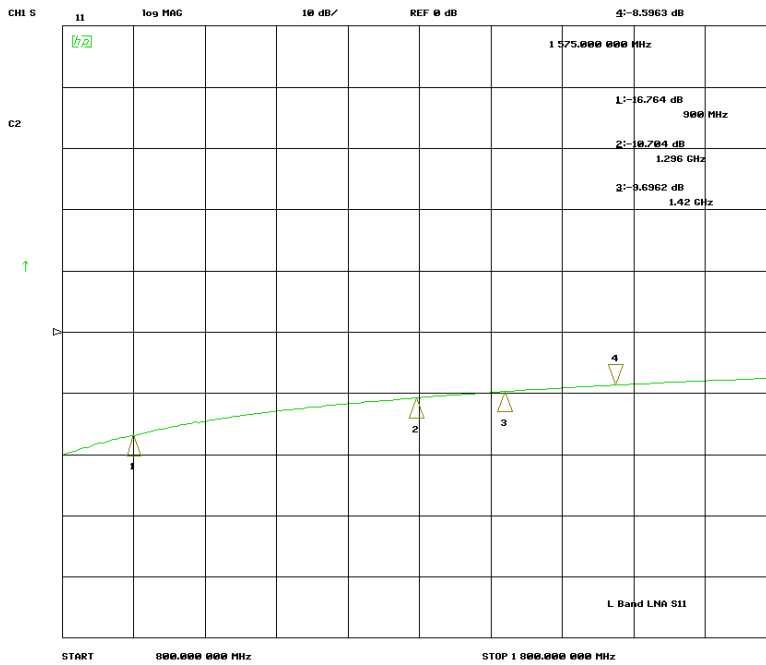
Output RL 20dB



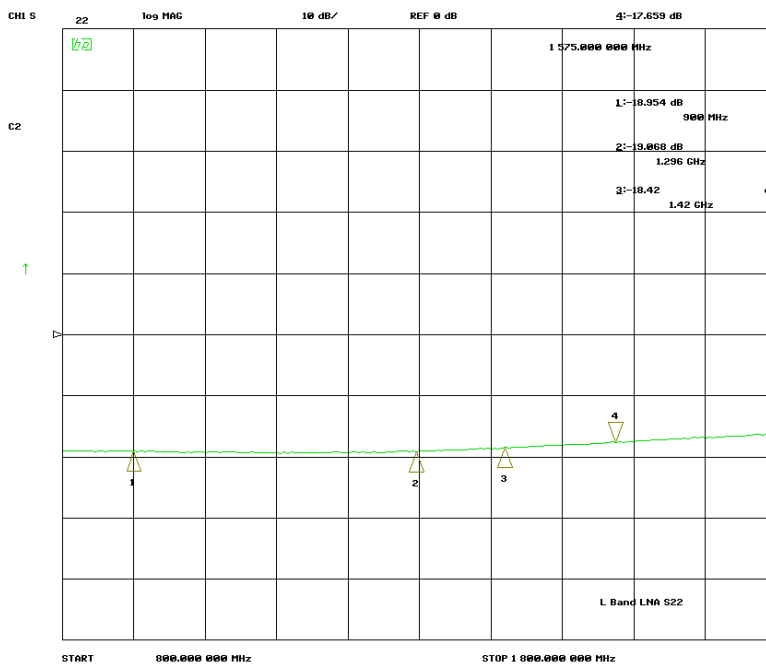
Noise Figure and Gain vs Frequency 1000 – 1600 MHz

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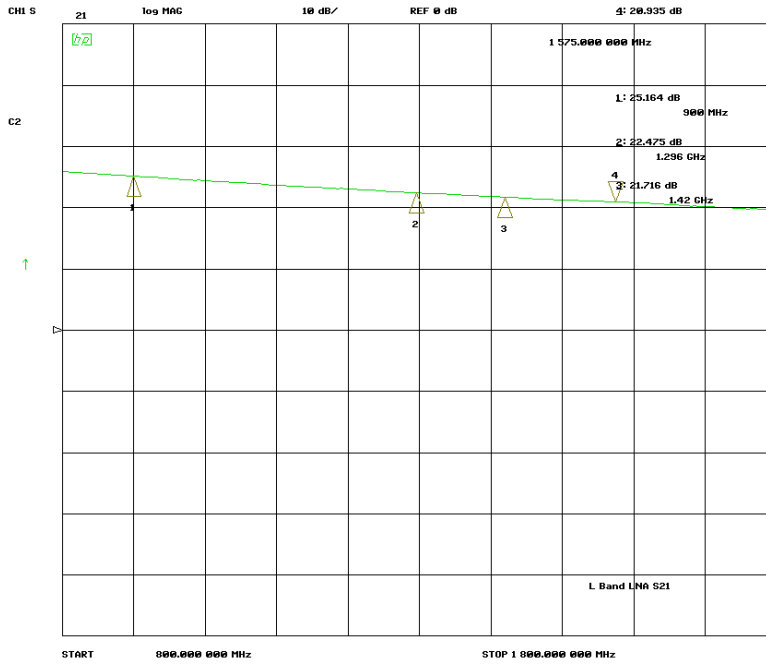
S11 Input Return Loss



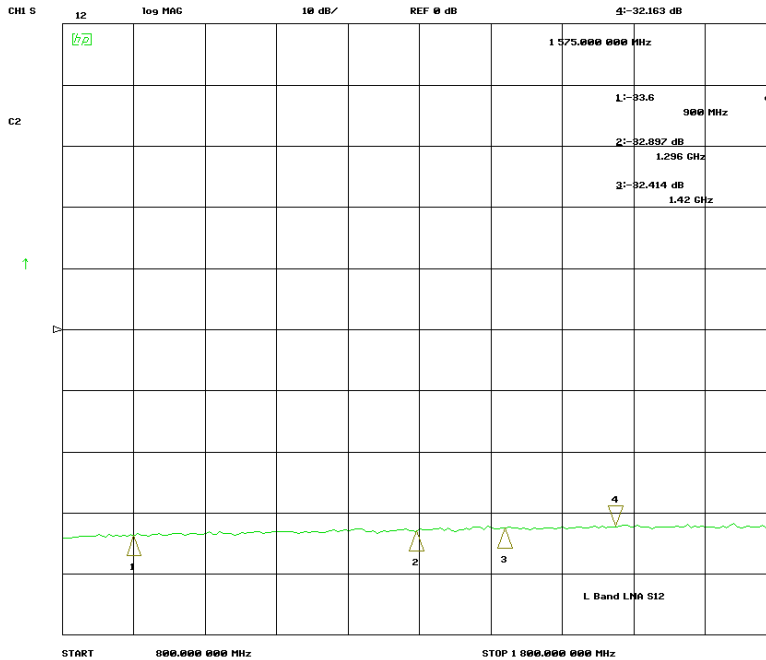
S22 Output Return Loss

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S21 Gain



S12 Isolation

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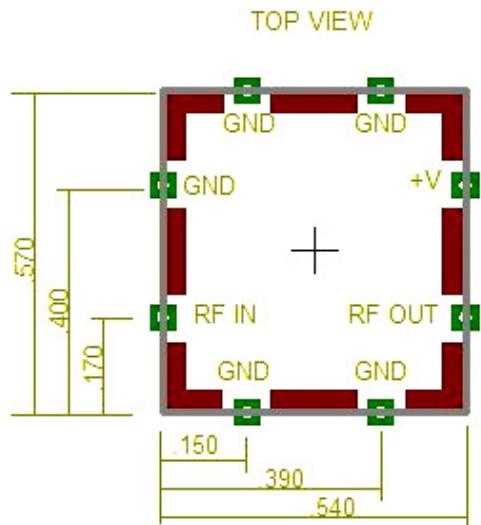
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Dimensions:

33 x 15 x 7mm SMA

15 x 15 x 3.7 mm Module

Both SMA and SMD Module for PCB mount versions available



SMD Module PCB footprint, size in inches

*REMARKS

To keep noise figure low, physical temperature of LNA should be kept low. MMIC is high current device. To keep MMIC DIE temperature low it is recommended to:

Install LNA on small heat sink or metal chassis with larger thermal mass.

When supply voltage is 12V or higher install 56 Ohms $\frac{1}{2}$ W resistor in series with V+

Strong signal levels presented at the input of LNA may saturate or damage receiver or mixer.

Signal level of -4 dBm at the input of LNA, will be increased to 21dBm (125mW) at the output of amplifier. To prevent receiver saturation or damage it is highly recommended to switch LNA supply voltage off during transmission period, install limiter diode at the output of LNA, or both. Strong out of band signals may be suppressed with appropriate filter installed at the output of LNA.