



Low Noise Amplifier

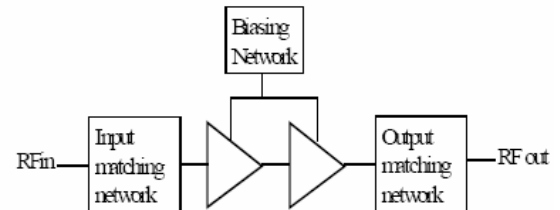
RGLNA08

Description

The **RGLNA08** is 2.4 to 2.5 GHz high efficiency GaAs Enhancement mode pseudomorphic high electron mobility transistor Low noise amplifier. The device is designed for 802.11b/g and WLAN MIMO system.

The noise figure is 1.5 dB at 2.4 GHz and die area is 1.5 mm x 1.0 mm. A single +3.3V and 12.4 mA current bias the LNA. No input and output matching components are required.

Functional Diagram



Applications

- IEEE 802.11 b/g WLAN
- WLAN MIMO System
- WiFi Systems
- ISM Band Systems

Key Features

- High Gain
- High Performance
- Low noise as low as 1.5dB

Electrical Specification

Conditions: $V_{cc} = 3\text{ V}$ & $T_A = 25\text{ }^\circ\text{C}$

Parameter	Min	Typical	Max	Units
Frequency Range	2.4		2.5	GHz
Noise Figure		1.5		dB
OIP3		24		dBm
Power Output (P1 dB)		14		dBm
Gain		17		dB
Input Return Loss		11		dB
Output Return Loss		13		dB

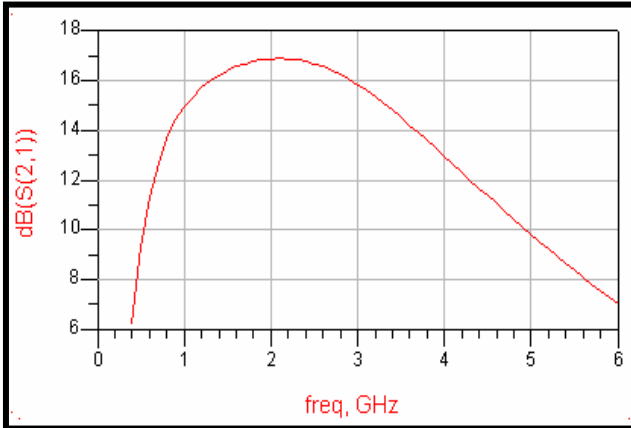


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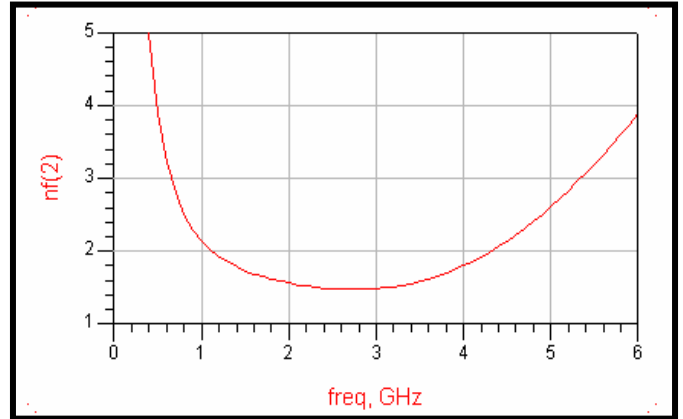
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Simulated results

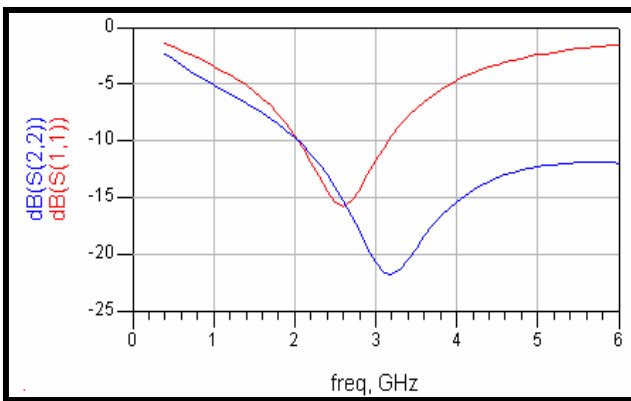
Gain Vs Freq



Noise Figure Vs Freq



Input/Output Return Loss Vs Freq



Layout

