



Low Noise Amplifier

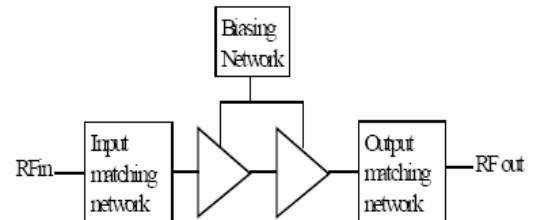
RGLNA02

Description

The **RGLNA02** is 2.0 to 6.0 GHz high efficiency GaAs Enhancement mode pseudomorphic high electron mobility transistor Low noise amplifier. The device is designed for 802.11a/b/g and Wi-Fi systems. It gives Power Output of 5 dBm at P1 dB.

The minimum noise figure achieved 1.8 dB at 2 GHz. A single 3V supply and 18 mA current bias the LNA. No input and output matching components are required.

Functional Diagram



Applications

- IEEE 802.11 a/b/g WLAN
- MMDS Band
- Cellular System
- Wi-Fi Systems
- ISM Band Systems

Key Features

- Broadband Amplifier
- High Performance
- Low Current, Low Cost
- High Gain

Electrical Specification

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

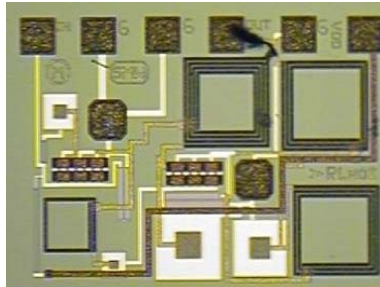
Parameter	Min	Typical	Max	Units
Frequency Range	2		6	GHz
Gain	18		21	dB
Noise Figure	1.8		2.2	dB
IIP3		-2		dBm
Power Output (P1dB)		5	6	dBm
Input Return Loss		10	15	dB
Output Return Loss		3.5		dB
Supply Current		18		mA
DC Voltage		3		V



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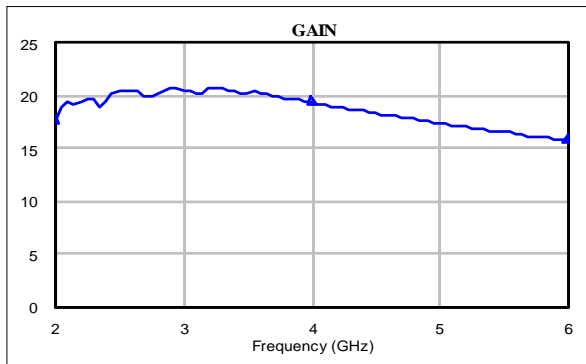
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Die Photograph (0.6 mm x 0.55 mm)

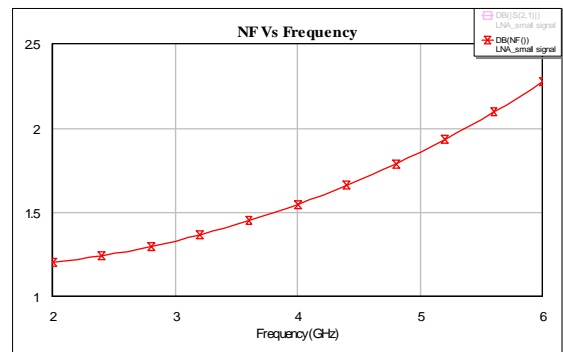


Measured results

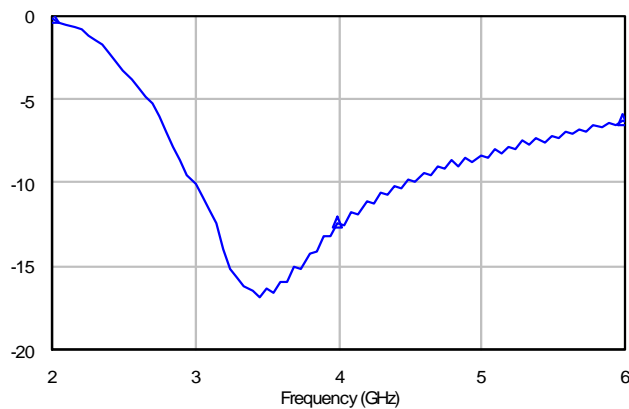
Gain Vs Freq



Noise Figure Vs Freq (Simulated)



Input Return Loss Vs Freq



Output Return Loss Vs Freq

