Abstract

The LNA is usually the first stage in any microwave receiver circuit, this stage has an important rule in the quality of the receiver. The design of a LNA in Radio Frequency (RF) circuit requires the trade-off for many importance characteristics such as gain, Noise Figure (NF), stability, power consumption and complexity. This situation Forces designers taking decision in the design of RF circuits. In this paper the aim is to design and simulate a single stage LNA circuit with high gain and low noise using PHEMT transistor at frequency 2.4 GHz. The design simulation process is performed using Advance Design System (ADS). A single stage LNA has successfully designed with 16.29dB forward gain and 0.44dB noise figure and with good stability in frequency of 2.4 GHz.

References

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Index Terms

Computer Science  Signal Processing

Keywords
Noise figure; gain; LNA; ADS; Stability; S parameters.