

## **LOW NOISE AMPLIFIER DESIGN**

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### **Abstract**

Low noise amplifiers represent one of the basic building blocks of the communication system. The purpose of the LNA is to amplify the received signal to acceptable levels while minimizing the noise it adds. The reduction in the signal due to losses during transmission, reception and power dissipation in circuit components must be compensated by using a device to provide sufficient gain for the receiver circuit. The article explains the different stages of design processes for LNA. The modeling and simulation has been done using ADS simulation. The design has been carried out for a frequency range of 1.45 GHz to 1.55 GHz using an Agilent AT41435 bipolar transistor. S-parameters have been calculated for the bipolar transistor and graphs plotted for S-parameters at different frequencies.