

# **DESIGN OF 2.4 GHZ NEW WIDEBAND RF FRONT END LNA**

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## **ABSTRACT**

Low Noise Amplifier (LNA) in Radio Frequency (RF) circuit is the first stage in which we can suppress the noise, which requires the trade-off many importance characteristics such as gain, Noise Figure (NF), stability, power consumption and complexity).In this paper the aim is to design and simulate a single stage LNA circuit with high gain and low noise using 0.18um TSMC NMOS for frequency 2.4 GHz. A single stage LNA has successfully designed with 18.82 dB forward gain and 1.986 dB noise figures, reverse isolation more than 12 dB at the frequency of 2.4 GHz.

**KEYWORDS:** Low Noise Amplifier, Noise Figure, Gain,