

Design of Cascode LNA Using Microstrip Matching Network for Wireless Applications

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Abstract: This paper presents a design of Cascode LNA using microstrip matching network applicable for wireless applications. The amplifier use FHX76LP Low Noise SuperHEMT FET. The LNA designed used T-matching network consisting of lump reactive element at the input and the output terminal. The cascode low noise amplifier (LNA) produced gain of 18.5 dB and noise figure (NF) of 1.30 dB. The input reflection (S_{11}) and output return loss (S_{22}) are -11.5 dB and -12.3 dB respectively. The bandwidth of the amplifier recorded is 1.4 GHz. The input sensitivity is compliant with the IEEE 802.16 standards.

Keyword: Cascode LNA, Radio Frequency, T-Matching Network

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