

## عنوان مقاله:

A 0.4V, 790μW CMOS Low Noise Amplifier in the Sub-Threshold Region at 1.5GHz

## محل انتشار:

مجله مهندسی برق مجلسی، دوره 7، شماره 4 (سال: 1392)

تعداد صفحات اصل مقاله: 6

## نویسندگان:

Amin Zafarian - *Electrical Engineering Department, Islamic Azad University Branch Of Arak, Iran*

Iraj Kalali Fard - *Institute of Communication Systems and Data Processing, RWTH Aachen University*

Abbas Golmakani - *Electrical Engineering Department, Sadjad Institute for Higher Education, Mashhad, Iran*

Jalil Shirazi - *Electrical Engineering Department, Islamic Azad University Branch Of Gonabad, Iran*

## خلاصه مقاله:

A fully integrated low-noise amplifier (LNA) with 0.4V supply voltage and ultra-low power consumption at 1.5GHz by folded cascode structure is presented. The proposed LNA is designed in a TSMC 0.18 μm CMOS technology, in which the all transistors are biased in sub-threshold region. Through the use of the proposed circuit for the gain enhancement in this structure and using forward body bias technique, a very high figure of merit is achieved, in comparison to the similar structures. The LNA provides a power gain of 14.7dB with a noise figure of 2.9dB while consuming only 790μW dc power. Also, the impedance matching of the input and output circuit in its operating frequency is desirable and in the whole circuit bandwidth, input and output isolation is below -33dB.

## کلمات کلیدی:

en

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1795283>

