

## عنوان مقاله:

A New Design of Dual-band Low power Consumption Low noise Amplifier

## محل انتشار:

دومین همایش سراسری محیط زیست، انرژی و پدافند زیستی (سال: 1393)

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## خلاصه مقاله:

A low-power dual-band complementary metal-oxide semiconductor (CMOS) low-noise amplifier (LNA) for wireless local-area network applications is presented. The switched external capacitor is added to the gate-source node of the input transistor, which match to the input port in two frequency bands of 2.4 and 5.2 GHz. By just adding a small-size switched capacitor to the conventional source-degenerated topology, the proposed LNA has an advantage of occupying less chip area compared to other concurrent topology that uses more inductors by adopting LC tank resonators. In addition, it consumes less current compared to other topology which adopts a switched transistor technique. The proposed LNA is designed and simulated using a 0.18- $\mu\text{m}$  CMOS technology. The LNA core draws only 2.3 mA from a 1 V supply voltage. The S11 and S22 of the proposed LNA are less than -10 dB in the two frequency bands. The noise figure is 3.2 and 3.5 dB at 2.4 and 5.2 GHz, respectively. The power gain is larger than .10 dB. The input P3 is -2.9 and -3.1 dBm at 2.4 and 5.2 GHz, respectively

## کلمات کلیدی:

Dual-band, Low-noise amplifier, Low power consumption, Wireless local-area network

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/320045>

