

## عنوان مقاله:

Design and Simulation of a Low Power RF Front-End for Short Range Outdoor Applications

## محل انتشار:

فصلنامه بین المللی مهندسی مکترونیک، برق و کامپیوتر، دوره 5، شماره 18 (سال: 1394)

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## خلاصه مقاله:

This paper presents a low power low voltage RF front-end for short range outdoor applications, meeting the IEEE 802.15.4 standard of 2.4 GHz for ZigBee systems. The design includes a two stage low power LNA with an integrated differential power splitter. Also, a low power, low voltage mixer is implemented to maintain the power specification of the design. The whole system has an almost 2.76mW power dissipation and is supplied by 1.2 V voltage source. The design accomplished in TSMC 180nm CMOS process. According to the simulation results acquired by Cadence .Virtuoso, the design owns 22 dB conversion gain and 4.8 dB noise figure with IIP3 of -6.3 dBm

## کلمات کلیدی:

.RF front-end; Low noise amplifiers; low power mixer; ZigBee; wireless sensors; solar cells

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/992156>

