

عنوان مقاله:

A Modern High Efficient Full Integrated CMOS Rectifier for Wireless Power Transfer in Biomedical Application

محل انتشار:

پنجمین کنفرانس ملی مهندسی برق و الکترونیک ایران (سال: 1392)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

in this paper is suggested a modern of full-wave rectifier in CMOS technology with high efficient for wirelessly powered devices. This is rectifier include simple structure with low power consumption and low voltage drop. Number of fewer transistors in this circuit has low power consumption. This new topology leads to a very high efficiency for the proposed rectifier. The maximum output voltage and current in $|V_{in}|=5V$ reach to 4.735v and 13.8mA respectively, which makes it ideal for using in biomedical applications and also human bodies' implantable chips. This new proposed rectifier in $|V_{in}|=5V$ reached to 92.18% for power efficiency and 64.2% for voltage efficiency. This rectifier designed and simulated in 0.18um CMOS technology by Hspice software.

کلمات کلیدی:

Full-wave rectifier, Passive and Active Rectifier, Bootstrapped Technique, Biotelemetry system, Power Transmission Efficiency, Voltage Transmission Efficiency, leakage current

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