

Design of a 1.8V on-chip voltage generator for applications in low voltage transceiver

ABSTRACT

This paper presents a design of on-chip voltage generator for applications in battery-less low voltage transceiver. The supply voltage for this on-chip voltage generator is obtained from mutual inductive coupling through radio frequency (RF) electromagnetic field which is able to generate 150mV peak voltage. This on-chip voltage generator is used to generate a supply voltage for a low voltage low power transceiver. Simulation results showed that it is able to give a constant voltage of 1.8V with 30 A of current from an input of 150mV peak voltage. This chip is realized using a CMOS 0.18 m process.

Keyword: On-chip voltage generator; Low voltages; Low-power transceivers; Battery-less