Abstracts

The design of CMOS transimpedance amplifier based on BSIM large-signal model

Chin-Wei Kuo, Chao-Chih Hsiao, Shih-Cheng Yang and Yi-Jen Chan. "The design of CMOS transimpedance amplifier based on BSIM large-signal model." 2001 Radio Frequency Integrated Circuits (RFIC) Symposium 01. (2001 [RFIC]): 165-168.

A modified BSIM CMOS RF large-signal model is presented for RF circuit design. The high-frequency CMOS model is based on BSIM3v3, by adding some passive components to describe the microwave behavior. Integrated CMOS transimpedance (TZ) amplifier circuits were designed and fabricated based on this model. A 0.35 /spl mu/m CMOS technology was used for circuit realization, and a capacitive-peaking [1-3] design to improve the bandwidth of TZ amplifier was also proposed and investigated.

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