Abstracts

Noise characterization of MOSFETs for RF oscillator design

H. Aoki and M. Shimasue. "Noise characterization of MOSFETs for RF oscillator design." 1999 MTT-S International Microwave Symposium Digest 99.2 (1999 Vol. II [MWSYM]): 423-426 vol.2.

This paper presents 1/f noise measurement and modeling techniques of sub-micron MOSFETs. The capacitor and inductor free biasing circuit enables quick bias tuning. A new MOSFET 1/f noise model has been developed to represent more accurate noise current spectrum density characteristics than existing models. The direct parameter extraction method for the new noise model does not use any corner frequencies. Phase noise of an RF oscillator was analyzed for verification.

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