Abstracts

A fully integrated 1.9-GHz CMOS low-noise amplifier

Cheon Soo Kim, Min Park, Chung-Hwan Kim, Yeong Cheol Hyeon, Hyun Kyu Yu, Kwyro Lee and Kee Soo Nam. "A fully integrated 1.9-GHz CMOS low-noise amplifier." 1998 Microwave and Guided Wave Letters 8.8 (Aug. 1998 [MGWL]): 293-295.

A fully integrated 1.9 GHz CMOS low-noise amplifer (LNA) has been implemented in a 0.8 /spl mu/m CMOS technology. For low-noise performance, the amplifier employs high-quality spiral inductors with a duality factor of 8.5-12.5, and device layout and bias condition of the active devices were optimized for low-noise conditions. This amplifier showed a noise figure of 2.8 dB with a forward gain of 15 dB at current consumption of 15 mA. To the authors' knowledge, this represents the lowest noise figure reported to date for a fully integrated CMOS LNA operating at 1.9 GHz.

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