Abstracts

Gain controllable very low voltage (/spl les/ 1 V) 8-9 GHz integrated CMOS LNAs

T.K.K. Tsang and M.N. El-Gamal. "Gain controllable very low voltage (/spl les/ 1 V) 8-9 GHz integrated CMOS LNAs." 2002 Radio Frequency Integrated Circuits (RFIC) Symposium 02. (2002 [RFIC]): 205-208.

This paper presents the design and experimental results of two CMOS low-voltage low noise amplifiers intended for future wireless applications, and featuring a new and very simple gain control mechanism. Implemented In a standard 0.18 /spl mu/m CMOS process, and operating from a supply voltage of 1 V, the 8 GHz LNA exhibits a power gain of 13.7 dB and a noise figure of 3.2 dB, while the 9 GHz LNA achieves a forward transmission S/sub 21/ of 12.2 dB and a noise figure of 3.7 dB. Both circuits have a gain tuning range of over 10 dB, and can operate from a supply voltage as low as 0.7 V.

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