Abstracts

A 2.5 GHz low noise high linearity LNA/mixer IC in SiGe BiCMOS technology

D. Wang, K. Krishnamurthi, S. Gibson and J. Brunt. "A 2.5 GHz low noise high linearity LNA/mixer IC in SiGe BiCMOS technology." 2001 Radio Frequency Integrated Circuits (RFIC) Symposium 01. (2001 [RFIC]): 249-252.

A monolithic low noise high linearity LNA/mixer circuit for 2.5 GHz applications has been fabricated in IBM 47 GHz SiGe production process. The measured performance is 8 dBm input IP3, 1.6 dB NF and 12 dB Gain for a low noise amplifier (LNA), and 2.5 dBm input IP3, 7.5 dB NF and 14 dB gain for a downconversion mixer with a total current consumption of 26 mA for a 2.75 V supply. LNA matching, mixer RF and LO matching and two baluns are all integrated on chip, requiring no critical RF tuning components.

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