Abstracts

A 1.7 mA low noise amplifier with integrated bypass switch for wireless 0.05-6 GHz portable applications (2001 [RFIC])

H. Morkner, M. Frank and S. Yajima. "A 1.7 mA low noise amplifier with integrated bypass switch for wireless 0.05-6 GHz portable applications (2001 [RFIC])." 2001 Radio Frequency Integrated Circuits (RFIC) Symposium 01. (2001 [RFIC]): 235-238.

An ultra low current low noise amplifier with an integrated bypass switch has been developed using PHEMT technology. The LNA/Sw uses only 1.7 mA when powered and less than 1 uA when bypassed. It is usable from 50 MHz to 6 GHz. This enables portable systems such as Bluetooth, Home RF, PDAs, wireless LANs. The LNA provides 15 dB gain, 1.8 dB noise figure with 50 /spl Omega/ load at the output and /spl Gamma/opt at the input. Bypass mode provides 5 dB insertion loss into the same I/O match. The LNA and bypass switch with associated control circuitry are integrated into a single RFIC and housed in the miniature SOT package. This LNA/Sw provides lower current and easier usage with comparable NF, Gain, and bandwidth than previously reported products.

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