Abstracts

A 23-GHz low-noise amplifier in SiGe heterojunction bipolar technology

G. Schuppener, T. Harada and Yinggang Li. "A 23-GHz low-noise amplifier in SiGe heterojunction bipolar technology." 2001 Radio Frequency Integrated Circuits (RFIC) Symposium 01. (2001 [RFIC]): 177-180.

A monolithic low-noise amplifier for operation in the 23-GHz band is presented. The circuit has been designed utilizing an advanced 0.2-micron SiGe heterojunction bipolar technology, featuring npn transistors with f/sub T/ and f/sub max/ of about 90- and 100-GHz, respectively. Measurements show a gain of 21-dB and noise figure of 4.1-dB at 23-GHz, which compare reasonably well with simulated results. The circuit consumes 20-mA from a 2.5-V single supply. To our knowledge, 23 GHz band is the highest operation frequency reported so far for LNA in SiGe technology.

❑ Return to main document.