Abstracts

Dual bias feed SiGe HBT low noise linear amplifier (2001 [RFIC])

E. Taniguchi, K. Maeda, T. Ikushima, K. Sadahiro, K. Itoh, N. Suematsu and T. Takagi. "Dual bias feed SiGe HBT low noise linear amplifier (2001 [RFIC])." 2001 Radio Frequency Integrated Circuits (RFIC) Symposium 01. (2001 [RFIC]): 227-230.

A 2 GHz-band SiGe HBT low noise amplifier (LNA) achieving high saturation power and low distortion performance is described. It has a novel diode/resistor dual bias feed circuit for the base of the HBT to extend its P1dB. In small signal region, the conventional resistor feed circuit is a dominant base current source, but in large signal region, the diode turns on and the diode feed circuit can supply base current like a voltage source which allows higher output power and linearity. The fabricated dual feed type LNA shows the P1dB improvement of 5 dB compared with the conventional resistor feed LNA.

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