Abstracts

An even harmonic type direct conversion SiGe-MMIC receiver for W-CDMA mobile terminals

E. Taniguchi, M. Shimozawa, T. Ikushima, K. Sadahiro, T. Katsura, K. Maeda, K. Itoh, N. Suematsu, T. Takagi and O. Ishida. "An even harmonic type direct conversion SiGe-MMIC receiver for W-CDMA mobile terminals." 2002 Radio Frequency Integrated Circuits (RFIC) Symposium 02. (2002 [RFIC]): 133-136.

An even harmonic type direct conversion MMIC receiver for W-CDMA mobile terminals in SiGe HBT technology is described. A 2-stage low noise amplifier (LNA) and two self biased anti-parallel diode pairs (APDPs) for even harmonic mixer (EH-MIX) are integrated into a single chip. The LNA employed dual bias feed circuit to improve the output power and linearity. The EH-MIX can obtain high IIP2 by using APDP. Noise performance of Schottky barrier diode (SBD) for APDP fabricated in SiGe process is lower than that of conventional SBD in the market. Both fabricated LNA and EH-MIX demonstrated high RF performances, and they are applicable to RF front-end of W-CDMA mobile terminals.

❑ Return to main document.