Abstracts

800 MHz-band low noise low distortion Si-MMIC front-end using BJT/MOSFET LNA and MOSFET mixer

N. Suematsu, M. Ono, S. Sugiyama, S. Kubo, M. Uesugi, K. Hasegawa, K. Hiroshige, Y. Iyama and O. Ishida. "800 MHz-band low noise low distortion Si-MMIC front-end using BJT/MOSFET LNA and MOSFET mixer." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 689-692.

Both low noise and low distortion characteristics are strongly desired for cellular terminal receiver application. In the case of Si-MMIC, BJT has superior feature in its low noise performance and MOSFET has it in low distortion performance. By using BJT amplifier as the 1st stage of LNA and MOSFET as the 2nd stage of LNA and a down mixer, both low noise and low distortion performance is achieved. The fabricated Si-MMIC front-end, which contains two-stage LNA and down mixer and LO amplifier, performs 3.7 dB NF, 16.7 dB conversion gain and -15.5 dBm IIP/sub 3/ with 3V/13.7 mA d.c. power and -10 dBm LO power.

❑ Return to main document.