Abstracts

Design of W-Band Monolithic Low Noise Amplifiers Using Accurate HEMT Modeling

T. Kashiwa, N. Tanino, H. Minami, T. Katoh, N. Yoshida, Y. Itoh, Y. Mitsui, T. Imatani and S. Mitsui. "Design of W-Band Monolithic Low Noise Amplifiers Using Accurate HEMT Modeling." 1994 MTT-S International Microwave Symposium Digest 94.1 (1994 Vol. I [MWSYM]): 289-292.

A W-band monolithic two-stage low noise amplifiers have been developed using new accurate HEMT modeling. The modeling includes intrinsic FET noise parameters that are independent of frequency. A noise figure of 5.5 dB with an associated gain of 8.7 dB is achieved at 91GHz when biased for low noise figure, and a small signal gain of 10.4 dB with noise figure of 5.9 dB is obtained when biased for high gain. Good agreement between measured and simulated data of the low noise amplifier verifies the HEMT modeling.

❑ Return to main document.