Abstracts

Modeling of low-frequency noise in GaInP/GaAs hetero-bipolar transistors

P. Heymann, M. Rudolph, R. Doerner and F. Lenk. "Modeling of low-frequency noise in GaInP/GaAs hetero-bipolar transistors." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 1967-1970 vol.3.

Accurate low-frequency noise modeling is a prerequisite for oscillator phase-noise simulation. In this paper, the LF noise sources of GaInP/GaAs HBTs are investigated. It turns out that the 1/f-noise model must contain two sources, the base-emitter diode and the emitter resistance. Quantitatively, excess noise power at 100 kHz scales with the square of collector current-density.

❑ Return to main document.