Abstracts

A Study of the Relation Between Device Low-Frequency Noise and Oscillator Phase Noise for GaAs MESFETs

H. Rohdin, C.-Y. Su and C. Stolte. "A Study of the Relation Between Device Low-Frequency Noise and Oscillator Phase Noise for GaAs MESFETs." 1984 MTT-S International Microwave Symposium Digest 84.1 (1984 [MWSYM]): 267-269.

An analytical model for oscillator noise resulting from active device LF noise is presented. We apply it to a number of GaAs MESFET oscillators finding good quantitative agreement, and demonstrating several ways of reducing the phase noise. We show evidence that after having reduced the effect of the normally dominant device LF noise source, a residual LF noise source starts to dominate the phase noise. The best phase noise result for the 5GHz oscillators is S/sub phi/(1kHz) = -75dB/Hz.

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