Abstracts

Harmonic-Balance Optimization of Microwave Oscillators for Electrical Performance, Steady-State Stability, and Near-Carrier Phase Noise

V. Rizzoli, A. Costanzo, F. Mastri and C. Cecchetti. "Harmonic-Balance Optimization of Microwave Oscillators for Electrical Performance, Steady-State Stability, and Near-Carrier Phase Noise." 1994 MTT-S International Microwave Symposium Digest 94.3 (1994 Vol. III [MWSYM]): 1401-1404.

The numerical optimization of microwave oscillators including specifications on steady-state stability and near-carrier phase noise is demonstrated for the first time. The approach relies on the harmonic-balance technique and is fully general-purpose. Oscillators designed without such constraints may be strongly suboptimal from the noise viewpoint with no substantial improvement of electrical performance.

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