Abstracts

A unified approach for the linear and nonlinear stability analysis of microwave circuits using commercially available tools

S. Mons, M.A. Perez, R. Quere and J. Obregon. "A unified approach for the linear and nonlinear stability analysis of microwave circuits using commercially available tools." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 993-996 vol.3.

For the first time, an exhaustive linear and nonlinear stability analysis of multi-transistor MMIC circuits is presented. A key point of the proposed stability analysis lies in that it can be easily implemented on any CAD package. Our straightforward and powerful approach allows both linear and nonlinear stability analysis of any complex circuit submitted or not to large RF signals. Following our novel approach, a MMIC HBT power amplifier was analyzed. Division frequency phenomena and spurious oscillations were detected by simulations and confirmed by measurements.

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