Abstracts

General Stability Analysis of Periodic Steady-State Regimes in Nonlinear Microwave Circuits

V. Rizzoli and A. Lipparini. "General Stability Analysis of Periodic Steady-State Regimes in Nonlinear Microwave Circuits." 1985 Transactions on Microwave Theory and Techniques 33.1 (Jan. 1985 [T-MTT]): 30-37.

The problem of analyzing the stability of periodic equilibrium regimes in nonlinear microwave circuits is tackled by a general-purpose computer-aided approach. By means of a perturbation technique, the search for instabilities is reduced to a generalized eigenvalue equation expressed in matrix form, and is then carried out by Nyquist's analysis. The use of a vector processor allows the computer time requirements to be kept well within reasonable limits, even in the case of large-size problems. In perspective, this could open the way to the complementation of existing nonlinear CAD packages by an on-line facility for automatic stability analysis.

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