Abstracts

Nonlinear Mixed Analysis/Optimization Algorithm for Microwave Power Amplifier Design

F. Giannini, G. Leuzzi, E. Limiti, J.S. Mroz and L. Scucchia. "Nonlinear Mixed Analysis/Optimization Algorithm for Microwave Power Amplifier Design." 1995 Transactions on Microwave Theory and Techniques 43.3 (Mar. 1995 [T-MTT]): 552-558.

A nonlinear mixed analysis/optimization algorithm for the design of microwave power amplifiers is presented. Matching conditions for optimum power and efficiency performance are imposed together with the balancing equations of the nonlinear analysis in a consistent way. The analysis/preoptimization of the power stage requires a computation time comparable to or smaller than a single conventional harmonic balance analysis. The algorithm forms the basis of a design procedure for the fulfillment of design specifications in terms of output power, power-added efficiency, and gain. Comparisons to the results of commercial CAD nonlinear analysis programs are presented.

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