

Direct-Synthesis Design Technique for Nonlinear Microwave Circuits

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A novel design technique for the direct synthesis of large-signal microwave circuits is presented. It is based on an equivalent linear representation of the nonlinear circuit directly derived from an exact nonlinear analysis method, e.g., of the harmonic balance type. Linear, direct synthesis methods are then applied to this equivalent network. The drawbacks of nonlinear optimization are so avoided, while keeping the advantages of exact nonlinear analysis and accurate nonlinear models.

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