Abstracts

Definition of Nonlinear Reflection Coefficient of a Microwave Device Using Describing Function Formalism (Short Papers)

J. Obregon and F. Farzaneh. "Definition of Nonlinear Reflection Coefficient of a Microwave Device Using Describing Function Formalism (Short Papers)." 1984 Transactions on Microwave Theory and Techniques 32.4 (Apr. 1984 [T-MTT]): 452-455.

At microwaves, it is necessary to define rigorously the large signal reflection coefficient of a nonlinear device. In this paper, the describing function concept is applied to the power waves incident on, and reflected by, a nonlinear element. This method allows us to define the nonlinear reflection coefficient (NLRC) on the power wave basis. This NRLC is then compared with that defined on the current or voltage basis. Numerical calculations applied to nonlinear elements illustrate the theoretical results.

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