

Abstracts

A Novel Method for the Analysis of Microwave Two-Port Active Mixers (Short Papers)

J. Dreifuss, A. Madjar and A. Bar-lev. "A Novel Method for the Analysis of Microwave Two-Port Active Mixers (Short Papers)." 1985 Transactions on Microwave Theory and Techniques 33.11 (Nov. 1985 [T-MTT]): 1241-1244.

An analysis method for a microwave mixer, based on an active nonlinear device, is developed. The method is a two-port extension of Kerr's work on a one-port (diode)-type mixer and utilizes the harmonic balance approach for the large-signal analysis portion. It results in a relatively fast and efficient program, the use of which is demonstrated by simulating the operation of a mixer based on a NEC MESFET for a range of local oscillator available power and frequency conditions.

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