Abstracts

Nonlinear analysis of a microwave diode mixer using the extended FDTD

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The application of the extended Finite-Difference Time-Domain (FDTD) method to the analysis of microwave diode mixers is presented in this paper. Using equivalent current-sources and equivalent circuit models, nonlinear active devices can be incorporated into FDTD simulation. An X-band singly balanced diode mixer is analyzed. Good agreement between the experimental and theoretical results verifies the validity of the FDTD algorithm.

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