Abstracts

Analysis of millimeter-wave Fabry-Perot cavities using the FDTD technique

R. Sauleau, P. Coquet, J.P. Daniel, T. Matsui and N. Hirose. "Analysis of millimeter-wave Fabry-Perot cavities using the FDTD technique." 1999 Microwave and Guided Wave Letters 9.5 (May 1999 [MGWL]): 189-191.

The finite-difference time-domain (FDTD) technique combined with periodic boundary conditions (PBC's) is applied to the study of infinite periodic three-dimensional structures excited by normally incident plane waves. Berenger's PML (perfectly matched layers) are employed as absorbing boundary conditions to simulate free space. The method takes into account dielectric and metallic losses. It has been developed to study plane parallel Fabry-Perot cavities with two-dimensional metal mesh mirrors. Experimental results in the 60 GHz band show good agreement with simulation.

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