Abstracts

Dispersion Analysis for a TLM Mesh of Symmetrical Condensed Nodes with Stubs

J.A. Morente, G. Gimenez, J.A. Porti and M. Khalladi. "Dispersion Analysis for a TLM Mesh of Symmetrical Condensed Nodes with Stubs." 1995 Transactions on Microwave Theory and Techniques 43.2 (Feb. 1995 [T-MTT]): 452-456.

In this paper, the dispersion characteristics of a TLM mesh formed by interconnected symmetrical condensed nodes with stubs are calculated using two different formulations. The dispersion relation derived is an implicit function of the wave number, frequency, dielectric permittivity, and magnetic permeability. Group and phase velocities are obtained for the three fundamental directions and different values of the relative permittivity. The study demonstrates that an increase in the modeled-medium permittivity leads to a decrease in the cutoff frequency for TLM numerical results.

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