

Abstracts

Enhancing Finite-Difference Time-Domain Analysis of Dielectric Resonators Using Spectrum Estimation Techniques

Z. Bi, Y. Shen, K. Wu and J. Litva. "Enhancing Finite-Difference Time-Domain Analysis of Dielectric Resonators Using Spectrum Estimation Techniques." 1992 MTT-S International Microwave Symposium Digest 92.2 (1992 Vol. II [MWSYM]): 869-872.

In this paper we discuss the use of digital filtering and spectrum estimation techniques for improving the efficiency of the FD-TD algorithm in solving eigenvalue problems. It is demonstrated by means of numerical results that the efficiency of the FD-TD method for dielectric resonator analysis has been improved at least one order of magnitude. This new result makes it possible for the FD-TD method to be a practical designing tool for the dielectric resonator analysis.

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