

Abstracts

Application of the Spatial Finite-Difference and Temporal Differential (SFDTD) Formulation to Cylindrical Structure Problems (Short Papers)

A.M.K. Chan and Z. Chen. "Application of the Spatial Finite-Difference and Temporal Differential (SFDTD) Formulation to Cylindrical Structure Problems (Short Papers)." 1996 Transactions on Microwave Theory and Techniques 44.9 (Sep. 1996 [T-MTT]): 1595-1600.

The recently developed spatial finite-difference and temporal differential (SFDTD) approach is extended to dielectric loaded cylindrical environments. Although the method is developed differently, its resultant formulation can be directly obtained from the corresponding finite-difference time-domain (FD-TD) method. Good agreements between the SFDTD and reference results are obtained for different configurations of dielectric loaded cylindrical structures. As a result, the SFDTD approach is shown to be generally effective and robust for resonant structures.

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