

## FDTD Method Coupled with FFT: A Generalization to Open Cylindrical Devices

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A. Navarro and M.J. Nunez. "FDTD Method Coupled with FFT: A Generalization to Open Cylindrical Devices." 1994 Transactions on Microwave Theory and Techniques 42.5 (May 1994 [T-MTT]): 870-874.

The extension of a numerical method, based in an FDTD algorithm coupled with FFT, is presented. It can be widely applied to the analysis of axially symmetric passive microwave devices. By incorporating the proper radiation conditions to the algorithm, its capacity to deal with the study of open systems is shown; this allows the determination of its quality factor, as well as the resonant frequency and the spatial distribution of the modes. On the other hand, the proper performance of the technique has been verified (stability of the algorithm, accuracy of results) for modes of high angular dependence.

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