Abstracts

FDTD analysis of dielectric resonators with curved surfaces

N. Kaneda, B. Houshmand and T. Itoh. "FDTD analysis of dielectric resonators with curved surfaces." 1997 Transactions on Microwave Theory and Techniques 45.9 (Sep. 1997 [T-MTT]): 1645-1649.

In this paper, the finite-difference time-domain (FDTD) method is applied to calculate the resonant frequency of dielectric resonators (DRs) with curved surface. The contour-path integral FDTD (CFDTD) is modified to deal with the curved surface of the dielectric body while the traditional rectangular cells are maintained. Results are compared with theoretical values and staircase approximation, and show that the present method is more accurate than the staircase approximation.

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