Abstracts

Periodic waveguide structures with long cells

J. Votruba. "Periodic waveguide structures with long cells." 2000 Transactions on Microwave Theory and Techniques 48.10 (Oct. 2000 [T-MTT]): 1717-1724.

In this paper, a class of periodic waveguide structures with stepwise constant circular cross section is analyzed by means of Hahn's method of modal field matching along transverse planes. It allows one to resolve algebraically the implicit determinant relation between the phase shift per cell and frequency and to obtain an explicit formula. Dispersion diagrams and field distributions are also calculated and plotted and convergence properties of the method are tested.

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