Abstracts

A Modified Finite Element Method for Analysis of Finite Periodic Structures

S.-J. Chung and J.-L. Chen. "A Modified Finite Element Method for Analysis of Finite Periodic Structures." 1994 Transactions on Microwave Theory and Techniques 42.8 (Aug. 1994 [T-MTT]): 1561-1566.

A modified finite element method with new solving algorithm is proposed to analyze electromagnetic problems of finite periodic structures. Dielectric-loaded parallel-plate waveguides with rectangular and triangular dielectric gratings are tackled as an example of the present approach. Numerical results are checked by the self-convergence test and by comparing with those obtained by other methods. Finally, the dependence of the scattering parameters on the frequency, the period number, and the grating height is analyzed and compared.

❑ Return to main document.