Abstracts

Semi-Discrete Finite Element Analysis of Zero-Thickness Inductive Strips in a Rectangular Waveguide (Short Papers)

D. Crawford and M. Davidovitz. "Semi-Discrete Finite Element Analysis of Zero-Thickness Inductive Strips in a Rectangular Waveguide (Short Papers)." 1993 Transactions on Microwave Theory and Techniques 41.3 (Mar. 1993 [T-MTT]): 523-527.

A semi-discrete finite element method is applied to determine the network parameters for zero-thickness inductive discontinuities in a rectangular guide. The solution obtained is computationally efficient and is applicable under multi-mode conditions. Moreover, after obtaining the solution for a given geometry at a specific frequency, further frequency analysis for the same geometry requires only nominal additional recalculation. Convergence properties of the solution are studied and comparison with published data is carried out to verify the solution accuracy.

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