Abstracts

Analysis of Closed Arbitrary Dielectric Waveguides Using a Modified Rayleigh-Ritz Technique

B. Young. "Analysis of Closed Arbitrary Dielectric Waveguides Using a Modified Rayleigh-Ritz Technique." 1991 Transactions on Microwave Theory and Techniques 39.3 (Mar. 1991 [T-MTT]): 431-437.

To avoid the meshing difficulties of the finite-element method, the classical Rayleigh-Ritz method is combined with an additional optimization to analyze closed arbitrary dielect waveguides. The method is easily implemented in compact code and is user-friendly. The paper develops the method and its rationale and presents numerical examples to demonstrate its accuracy in propagation constant and nonperturbational loss calculations. In addition, the method is shown to be rapidly convergent and extremely stable.

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