Abstracts

Variational Method for the Analysis of Microstrip Lines

E. Yamashita and R. Mittra. "Variational Method for the Analysis of Microstrip Lines." 1968 Transactions on Microwave Theory and Techniques 16.4 (Apr. 1968 [T-MTT]): 251-256.

This paper reports a method for computing the line capacitance of a microstrip line based on the application of Fourier transform and variational techniques. The characteristic impedance, guide wavelength, and the surface potential distribution in the microstrip line are obtained for a range of structure parameters and the dielectric constant. The results calculated from the expressions developed in the paper are compared with the theoretical results presently available in the literature and good agreement is found. Comparison with available experimental results is also made where feasible. Possible applications and limitations of the method are discussed.

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