Abstracts

A Full Wave Analysis of Microstrips by the Boundary Element Method

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In this paper, the boundary element method (BEM) is formulated to carry out a full wave analysis of microstrip lines. Numerical results for frequency dependence of effective dielectric constant and calculated longitudinal and transverse current distributions are presented. Fundamental and higher order modes supported by the microstrip are identified and characterized. Compared with other techniques, the present method requires less memory size without requiring intricate mathematical skills because of the inherent characterization of BEM in needing only to discretize the boundary of the structure. Through our simulation, it shows that this method can reduce memory size as well as the computation time. Numerical results also show good agreement with available data in literature.

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