Abstracts

Microstrip lines on substrates with segmented or continuous permittivity profiles

Jean-Fu Kiang. "Microstrip lines on substrates with segmented or continuous permittivity profiles." 1997 Transactions on Microwave Theory and Techniques 45.2 (Feb. 1997 [T-MTT]): 229-235.

The propagation properties of microstrip lines on a substrate with inhomogeneous permittivity and conductivity profiles are analyzed. The eigenmodes in each inhomogeneous layer are obtained by solving an eigen equation. These eigenmodes are then used to formulate the Green's function of the stratified medium. An integral equation is next derived in terms of the surface current on the strip. Galerkin's method is then applied to obtain a determinantal equation to be solved for the propagation constant. The effect of several permittivity and conductivity profiles are analyzed.

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