Abstracts

A Simple Method to Account for Edge Shape in the Conductor Loss in Microstrip

E.L. Barsotti, E.F. Kuester and J.M. Dunn. "A Simple Method to Account for Edge Shape in the Conductor Loss in Microstrip." 1991 Transactions on Microwave Theory and Techniques 39.1 (Jan. 1991 [T-MTT]): 98-106.

A new technique has been developed to examine the effect of strip edge shape on conductor loss in planar transmission lines using a modified incremental inductance rule. Based on Lewin's and Vainshtein's zero-thickness strip perturbation in loss calculations, this method requires an expression for the infinitely thin strip inductance, as well as prescribed integration stopping points for the different strip shapes. Results are given comparing loss for different edge shapes in a microstrip system, using both this new method and the Lewin/Vainshtein technique. Finally, the differing results of some other published analytical and numerical loss methods based on the surface impedance boundary condition are compared.

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