Abstracts

Green's Function Treatment of Edge Singularities in the Quasi-TEM Analysis of Microstrip

V. Postoyalko. "Green's Function Treatment of Edge Singularities in the Quasi-TEM Analysis of Microstrip." 1986 Transactions on Microwave Theory and Techniques 34.11 (Nov. 1986 [T-MTT]): 1092-1096.

A new Green's function approach to the quasi-TEM analysis of microstrip is presented. By expressing the charge density on the strip conductor as the sum of a singular term, derived from the consideration of a Motz expansion, and a continuous term, the integral equation defining this charge density is transformed into an integral equation for the continuous term. An accurate numerical solution to this new integral equation can be obtained by approximating the continuous term by a low-order unit-pulse expansion. It is seen that the numerical scheme developed in this work is both easy to implement and rapidly convergent, thus making it an excellent choice for use in microwave CAD packages.

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