

Abstracts

Electric Field Integral Equation Formulation for a Dynamic Analysis of Nonuniform Microstrip Multi-Conductor Transmission Lines

T.R. Arabi, A.T. Murphy and T.K. Sarkar. "Electric Field Integral Equation Formulation for a Dynamic Analysis of Nonuniform Microstrip Multi-Conductor Transmission Lines." 1992 Transactions on Microwave Theory and Techniques 40.10 (Oct. 1992 [T-MTT]): 1857-1869.

The objective of this paper is to present a numerical technique based on a combined approach of using a "quasi-dynamic," a "dynamic" and an asymptotic approach for the analysis of nonuniform microstrip transmission lines and discontinuities using the grounded dielectric slab Green's functions. The regions of validity of the quasi-dynamic and asymptotic approximations have been determined in terms of the required accuracy in the Green's functions. Finally, numerical examples have been presented and checked with available data to check the accuracy of this new technique.

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