Abstracts

Rigorous Quasi-TEM Analysis of Multiconductor Transmission Lines in Bi-Isotropic Media -- Part II: Numerical Solution for Layered Media

F. Olyslager, E. Laermans and D. De Zutter. "Rigorous Quasi-TEM Analysis of Multiconductor Transmission Lines in Bi-Isotropic Media -- Part II: Numerical Solution for Layered Media." 1995 Transactions on Microwave Theory and Techniques 43.7 (Jul. 1995, Part I [T-MTT]): 1416-1423.

An integral equation technique is used to determine the circuit parameters of the nonreciprocal and nonsymmetrical set of transmission lines that describe a multiconductor line in a layered bi-isotropic background in the quasi-TEM approximation. The integral equation is solved with the method of moments and pointmatching technique. The integrations arising in the problem are handled carefully to allow a fast and accurate implementation. The conductors have an arbitrary cross-section consisting of straight and circularly curved segments. At the edges of the conductors the singular behavior of the surface charge density and surface current density is explicitly taken into account.

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