Abstracts

Decoupling the Multiconductor Transmission Line Equations

C.R. Paul. "Decoupling the Multiconductor Transmission Line Equations." 1996 Transactions on Microwave Theory and Techniques 44.8 (Aug. 1996 [T-MTT]): 1429-1440.

A comprehensive discussion of the method of decoupling the multiconductor transmission line (MTL) equations by the method of transformation of the voltages and currents to mode voltages and currents in order to obtain their general solution is presented. Various ways of defining and obtaining the transformations are shown which serve to connect the myriad of such definitions and also point out where inconsistencies in those definitions can result. Structures for which the decoupling is assured are also discussed. The MTL equations to be decoupled are in the frequency domain, and extensions to their applicability in the time-domain are shown.

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