Abstracts

New Fast and Accurate Line Parameter Calculation of General Multiconductor Transmission Lines in Multilayered Media

F. Olyslager, N. Fache and D. De Zutter. "New Fast and Accurate Line Parameter Calculation of General Multiconductor Transmission Lines in Multilayered Media." 1991 Transactions on Microwave Theory and Techniques 39.6 (Jun. 1991 [T-MTT]): 901-909.

This paper presents a considerably enhanced method to calculate C, L, and R of a multiconductor bus in a multilayered medium. Different board technologies, conductors of complicated shape, and conductors embedded in different layers can be handled without loss of accuracy or substantial increase in CPU time compared with existing simulation techniques. Correct determination of skin effect losses is shown to depend critically on surface charge modeling. Surface charge discontinuities are explicitly taken into account, which results in reduced computation time. A further reduction of computation time is obtained by a new treatment of the calculation of the Green's function.

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