Abstracts

A Method for the Computation of the Characteristic Immittance Matrix of Multiconductor Striplines with Arbitrary Widths

L.J.P. Linner. "A Method for the Computation of the Characteristic Immittance Matrix of Multiconductor Striplines with Arbitrary Widths." 1974 Transactions on Microwave Theory and Techniques 22.11 (Nov. 1974 [T-MTT]): 930-937.

An exact method for the computation of the characteristic impedance matrix of coplanar coupled multiconductor striplines with arbitrary widths is presented. The system of conductors is enclosed in a rectangular shielding box with a homogeneous dielectric medium. Use is made of conformal mapping by hyperelliptic integrals. The reverse problem of determining the geometrical dimensions for a given characteristic impedance matrix is solved by employing an optimization procedure in conjunction with carefully determined initial approximations. This yields low computer running time compared to current methods for the treatment of multiconductor transmission lines.

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