Abstracts

Accurate Impedance Determination of Coupled TEM Conductors

R.R. Gupta. "Accurate Impedance Determination of Coupled TEM Conductors." 1969 Transactions on Microwave Theory and Techniques 17.8 (Aug. 1969 [T-MTT] (Special Issue on Computer-Oriented Microwave Practices)): 479-489.

A computer-aided finite-difference method is described which can be used to calculate accurately TEM mode impedances of a uniform pair of offset parallel-coupled conductors of arbitrary cross section. The calculated impedance is the average of the lower and upper bounds computed on the mode impedance. For a given computing time, the average impedance is usually found to be more accurate than the one obtainable with either bound alone. The use of a graded mesh is found to provide a smaller separation between the bounds, and hence a smaller maximum error in the average impedance value, in a time much shorter than with the uniform mesh.

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