Abstracts

The Use of Interpolation in Improving Finite Difference Solutions of TEM Mode Structures

D.H. Sinnott. "The Use of Interpolation in Improving Finite Difference Solutions of TEM Mode Structures." 1969 Transactions on Microwave Theory and Techniques 17.1 (Jan. 1969 [T-MTT]): 20-28.

A finite difference potential solution to a TEM mode transmission line cross section may be used to define a continuous potential function, leading to an upper bound for the capacitance. The accuracy of the capacitance calculation is shown to depend on the potential function fitted. A method is developed for interpolating a suitable potential function; in the cases considered, the use of this potential function gave capacitance solutions with an error approximately one-fifth that obtained using the usual methods.

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