Abstracts

A Low-Frequency Investigation into the Discontinuity Capacitance of a Coaxial Line Terminated in a Lossless, Dielectric-Loaded Circular Waveguide (Short Papers)

J.D. Mahony. "A Low-Frequency Investigation into the Discontinuity Capacitance of a Coaxial Line Terminated in a Lossless, Dielectric-Loaded Circular Waveguide (Short Papers)." 1987 Transactions on Microwave Theory and Techniques 35.3 (Mar. 1987 [T-MTT]): 344-346.

The problem of theoretically determining the normalized discontinuity capacitance of a dielectric-loaded coaxial termination has been reexamined and it is shown that, when frequency effects can be ignored, the solution to the problem may be expressed in the form of a rapidly convergent power series with power terms which depend only on the relative permittivity of the dielectrics and with coefficients which depend only on the line size. Values for the coefficients in the case of typical line sizes are presented and the accuracy of the power series solution is discussed.

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