Abstracts

Capacitance of Parallel Rectangular Plates Separated by a Dielectric Sheet

To determine the capacitance between two rectangular parallel plates separated by a dielectric sheet, the charge distribution on the plates is formulated in terms of a Fredholm integral equation of the first kind. This equation is solved numerically by a projective method using polynomial approximants. The resulting capacitance values are given in normalized graphical form, permitting capacitance determination for any practical values of dielectric constant and geometric parameters to within a few percent.

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