Abstracts

Computation of Excess Capacitances of Various Strip Discontinuities Using Closed-Form Green's Functions (Short Papers)

K.S. Oh, J.E. Schutt-Aine and R. Mittra. "Computation of Excess Capacitances of Various Strip Discontinuities Using Closed-Form Green's Functions (Short Papers)." 1996 Transactions on Microwave Theory and Techniques 44.5 (May 1996 [T-MTT]): 783-788.

An efficient quasi-static method to compute excess (equivalent) capacitances of various strip discontinuities in a multilayered dielectric medium is presented. The excess charge distribution on the surface of a conductor is obtained by solving an integral equation in conjunction with closed-form Green's functions. A complete list of expressions of the closed-form Green's functions for a point charge, a line charge, and a semi-infinite line charge is presented. An open end, a bend, a step junction, and aT junction are considered as numerical examples.

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