Abstracts

A unified method for characterization of microstrip and waveguide discontinuities of irregular shape

Tzyy-Sheng Horng. "A unified method for characterization of microstrip and waveguide discontinuities of irregular shape." 1997 MTT-S International Microwave Symposium Digest 3. (1997 Vol. III [MWSYM]): 1815-1818.

A unified numerical method is proposed to analyze the discontinuities of two major waveguide structures, microstrips and rectangular waveguides, at microwave frequencies. Roof-top and rectangular-pipe subdomain functions are used in an electric-field integral-equation formulation to adequately expand the three-dimensional current densities of an irregularly-shaped conductor. The method is therefore applicable to general configurations of microstrip and waveguide discontinuities. Shielded microstrips, which are a combination of microstrips and rectangular waveguides, can be evaluated efficiently using this technique.

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