Abstracts

Numerically Efficient Analysis of Planar Microstrip Configurations Using Closed-Form Green's Functions

I. Park, R. Mittra and M.I. Aksun. "Numerically Efficient Analysis of Planar Microstrip Configurations Using Closed-Form Green's Functions." 1995 Transactions on Microwave Theory and Techniques 43.2 (Feb. 1995 [T-MTT]): 394-400.

An efficient technique for the analysis of a general class of microstrip structures with a substrate and a superstrata is investigated in this paper using newly-derived closed-form spatial domain Green's functions employed in conjunction with the Method of Moments (MoM). The computed current distributions on the microstrip structure are used to determine the scattering parameters of microstrip discontinuities and the input impedances of microstrip patch antennas. It is shown that the use of the closed-form Green's functions in the context of the MoM provides a computational advantage in terms of the CPU time by almost two orders of magnitude over the conventional spectral domain approach employing the transformed version of the Green's functions.

❑ Return to main document.