Abstracts

Electromagnetic Scattering Solution of Conducting Strips in Layered Media Using the Fast Multipole Method

L. Gurel and M.I. Aksun. "Electromagnetic Scattering Solution of Conducting Strips in Layered Media Using the Fast Multipole Method." 1996 Microwave and Guided Wave Letters 6.8 (Aug. 1996 [MGWL]): 277-279.

The fast multipole method (FMM) is applied to the solution of the electromagnetic scattering problems in layered media for the first time. This is achieved by using closed-form expressions for the spatial-domain Green's functions for layered media. Until now, the FMM has been limited to the homogeneous-medium problems. An integral equation based on the two-dimensional scalar Helmholtz equation is solved to compute the electromagnetic scattering from sample geometries of conducting strips in layered media in order to demonstrate the accuracy and the efficiency of the new method.

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