Abstracts

Numerical Analysis of Surface-Wave Scattering by Finite Periodic Notches in a Ground Plane

Surface-wave scattering by finite periodic notches loaded in a ground plane is investigated in terms of a full-wave theory. The analytical method presented is based on a spectral-domain analysis where the sampling theorem is applied in order to discretize the final equation to be solved. Numerical calculations are earned out for reflected, transmitted, and radiated waves. The numerical results show that maximnm reflection and radiation occur at frequencies somewhat different from those expected from the Bragg condition based on a first-order perturbation theory.

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