

Use of the finite-difference method for solving the problem of H-wave diffraction by two-dimensional dielectric gratings

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Abstract

The work is devoted to the application of a differential approach to solving Maxwell's equations and the wave equation for simulating the process of propagation of an electromagnetic H-wave through a two-dimensional dielectric grating. A comparison with the well-known simulation method (differential method) is performed, the advantages and disadvantages of both approaches are highlighted.

Keywords: H-wave diffraction, two-dimensional grating, Maxwell's equation, wave equation, differential method.

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