Abstracts

On the use of SDA for the analysis of boxed planar lines with complex media

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This paper discusses the conditions under which the spectral-domain approach (SDA) can be applied to the analysis of boxed planar lines when complex materials (anisotropic dielectrics, ferrites, magnetoplasmons, chiral media, and so on) are used as substrates. It will be shown that whereas SDA can always be efficiently applied to study laterally open structures, the simultaneous presence of lateral boundary conditions and nonisotropic materials requires further study. Thus, the symmetry properties of the constitutive dyadics that makes possible a rigorous application of the SDA to those kinds of structures will be reported in this paper.

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