

Reconstruction of the Constitutive Parameters for an Omega Material in a Rectangular Waveguide

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The inverse problem of determining the constitutive parameters of an Omega material is considered. The dispersive bianisotropic Omega sample is placed in a rectangular waveguide. All the constitutive parameters except one are reconstructed using the reflection and transmission data for some TE/sub m_0 / and TE/sub $0n$ / modes. The remaining one can be obtained, e.g., from reflection of normally incident plane waves. Numerical results for the reconstruction are presented.

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