Abstracts

Waveguide and Resonator Perturbation Techniques Measuring Chirality and Nonreciprocity Parameters Biisotropic Materials (Short Papers)

S.A. Tretyakov and A.J. Viitanen. "Waveguide and Resonator Perturbation Techniques Measuring Chirality and Nonreciprocity Parameters Biisotropic Materials (Short Papers)." 1995 Transactions on Microwave Theory and Techniques 43.1 (Jan. 1995 [T-MTT]): 222-225.

Waveguide and resonator perturbation techniques are considered for determining electromagnetic parameters of general biisotropic, or nonreciprocal chiral, materials. The biisotropic materials are the most general linear isotropic media, whose constitutive relations are governed by four complex material parameters. The material parameters of biisotropic media can be obtained through measuring the change in the propagation constant of waveguide modes or measuring the shift in the resonant frequency for resonators with perturbation techniques. To measure these parameters a method utilizing waveguides or cavity resonators with two degenerate modes is proposed.

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