Abstracts

Analysis of a CPW on Electric and Magnetic Biaxial Substrate

G. Maze-Merceur, S. Tedjini and J.-L. Bonnefoy. "Analysis of a CPW on Electric and Magnetic Biaxial Substrate." 1993 Transactions on Microwave Theory and Techniques 41.3 (Mar. 1993 [T-MTT]): 457-461.

This paper deals with a new formulation of the Spectral Domain Technique (SDT) for the analysis of the general case of uniaxial/biaxial, electric/magnetic anisotropic multilayer planar structures. As an illustration of the capabilities of this formulation we apply it to the analysis of shielded CPW structures. The dispersive properties of the fundamental and higher order modes in various cases of electric/magnetic anisotropy as well as the induction electric and magnetic lines are calculated. Such results, and particularly the induction lines, may be used to predict the behaviour of the studied structure as well as to point out its sensitive geometrical and electrical parameters. Some general rules will be discussed which lead to a better understanding of the effect of anisotropy.

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