Abstracts

The Application of Planar Anistropy to Millimeter-Wave Ferrite Phase Shifters

S.B. Thompson and G.P. Rodrigue. "The Application of Planar Anistropy to Millimeter-Wave Ferrite Phase Shifters." 1985 Transactions on Microwave Theory and Techniques 33.11 (Nov. 1985 [T-MTT]): 1204-1209.

The torque produced by the planar anistropy that occurs in some hexagonal ferrites is included in the equation of motion of the magnetization. The elements of the permeability tensor, derived here for a lossless approximation, are affected by the planar anistropy in much the same way as by an increase in saturation magnetization. This modified permeability has been incorporated into a model for a planar ferrite loaded rectangular waveguide, and the calculated values for differential nonreciprocal phase shift are found to increase substantially over those for a conventional isotropic ferrite.

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