Abstracts

Coupling through an Aperture Containing an Anisotropic Ferrite

D.C. Stinson. "Coupling through an Aperture Containing an Anisotropic Ferrite." 1957 Transactions on Microwave Theory and Techniques 5.3 (Jul. 1957 [T-MTT]): 184-191.

Coupling through an aperture containing anisotropic ferrites is investigated theoretically by a simple extension of Bethe's hole coupling theory to include the dipole moment of the body in the aperture. The magnetic dipole moment of the ferrite body is ordinarily a vector but becomes a tensor upon the application of a field. This new theory is applicable to any situation where Bethe's small-hole coupling theory is valid. Experimental verification was quite satisfactory and was obtained on two Bethehole couplers: one with the waveguides parallel, and the other with the waveguides perpendicular.

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