Abstracts

Hollow-Cylinder Waveguide Isolators for Use at Millimeter Wavelengths

M. Kanda and W.G. May. "Hollow-Cylinder Waveguide Isolators for Use at Millimeter Wavelengths." 1974 Transactions on Microwave Theory and Techniques 22.11 (Nov. 1974 [T-MTT]): 913-917.

The device considered in this study is a semiconductor waveguide isolator consisting of a hollow column of a semiconductor mounted coaxially in a circular waveguide in a longitudinal dc magnetic field. An elementary and physical analysis based on the excitation of plane waves in the guide and a more rigorous mode-matching analysis (MMA) are presented. These theoretical predictions are compared with experimental results for an InSb isolator at 94 GHz and 7.5 K.

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