Abstracts

Influence of nonuniform magnetic field on a ferrite junction circulator

H. How, S.A. Oliver, S.W. McKnight, P.M. Zavracky, N.E. McGruer, C. Vittoria and R. Schmidt. "Influence of nonuniform magnetic field on a ferrite junction circulator." 1999 Transactions on Microwave Theory and Techniques 47.10 (Oct. 1999 [T-MTT]): 1982-1989.

We have analytically formulated the problem that a ferrite circulator junction is biased by a nonuniform magnetic field. Interport impedances of the junction can, therefore, be solved numerically. Nonuniform-bias field will reduce the transmission bandwidth, and the circulation condition is apt to be altered if the bias field shows nonuniformity near the center of the junction. Our calculation compares very well with measurements.

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