Abstracts

Nonreciprocal Operation of Structures Comprising a Section of Coupled Ferrite Lines with Longitudinal Magnetization

J. Mazur and M. Mrozowski. "Nonreciprocal Operation of Structures Comprising a Section of Coupled Ferrite Lines with Longitudinal Magnetization." 1989 Transactions on Microwave Theory and Techniques 37.6 (Jun. 1989, Part I [T-MTT]): 1012-1020.

Nonreciprocal devices based on a section of two coupled lines containing ferrite magnetized in the propagation direction are investigated. The necessary conditions for nonreciprocal operation are derived. Several new configurations are proposed and their scattering matrices are given. An explanation of the action of experimental devices constructed by other researchers is proposed and substantiated by a numerical investigation of their simplified models under nonideal operating conditions.

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