Abstracts

A Tunable Absorbing Band-Stop Filter: The Field Rotation Filter

P. Bernardi. "A Tunable Absorbing Band-Stop Filter: The Field Rotation Filter." 1969 Transactions on Microwave Theory and Techniques 17.2 (Feb. 1969 [T-MTT]): 62-66.

A study has been made of the propagation of the first-order modes in a structure obtained by placing a thin magnetized ferrite slab against a broad wall of a rectangular waveguide. The numerical solution of the characteristic equation shows that, with a suitable choice of parameters, it is possible to realize an electrically tunable band-stop filter. An experimental investigation carried out on a component constructed in this way has given results in full agreement with the theoretical analysis and has allowed an estimate to be made of the influence of the parameters on the selectivity characteristics and tunability of the filter.

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