Abstracts

Improved Rectangular Waveguide Resonance Isolators

M.T. Weiss. "Improved Rectangular Waveguide Resonance Isolators." 1956 Transactions on Microwave Theory and Techniques 4.4 (Oct. 1956 [T-MTT]): 240-243.

The early resonance isolators, using nearly full waveguide height ferrite slabs, gave a high reverse loss per unit length but a disappointingly low reverse-to-forward loss ratio. By substantially reducing the height of the ferrite slabs, the reverse-to-forward loss ratio can be increased at the expense of reverse loss per unit length. More recently, it has been found that the addition of certain dielectric loading in rectangular waveguide resonance isolators results in generally improved performance. Thus, the reverse-to-forward loss ratio of these isolators is high (150 to 1 at X band) and the reverse loss per unit length is also high (20 db/inch at X band). The broad-banding problem will also be briefly discussed.

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