Abstracts

Design of Waveguide Circulators with Chebyshev Characteristics Using Partial-Height Ferrite Resonators

J. Helszajn. "Design of Waveguide Circulators with Chebyshev Characteristics Using Partial-Height Ferrite Resonators." 1984 Transactions on Microwave Theory and Techniques 32.8 (Aug. 1984 [T-MTT] (Special Issue on Electromagnetic-Wave Interactions with Biological Systems)): 908-917.

This paper outlines a step-by-step approach to the design of waveguide circulators using partial-height resonators, which incorporates every linear dimension of the device, The approach used consists of defining the physical variables of the ferrite region in terms of the frequency, VSWR, and bandwidth specification. It also incorporates the definition of the length and admittance level of the radial transformer. The model employed is essentially a two-mode one, with the third mode separately adjusted to exhibit an ideal electric-wall boundary condltion at the terminals of the junction.

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