Abstracts

Reciprocal Ferrite Devices in TEM Mode Transmission Lines

D. Fleri and B.J. Duncan. "Reciprocal Ferrite Devices in TEM Mode Transmission Lines." 1958 Transactions on Microwave Theory and Techniques 6.1 (Jan. 1958 [T-MTT]): 91-96.

Several new reciprocal ferrite devices have been designed in TEM mode transmission lines to operate over both narrow and extremely broad bandwidths in the low-microwave frequency region. These include variable attenuators, an amplitude modulator, and a traveling-wave tube equalizer. Each component utilizes the attenuation associated with gyromagnetic resonance in low saturation magnetization ferrites. The techniques used to overcome the matching problems inherent in TEM mode transmission lines when ferrite loaded, and the design considerations pertinent to each component, are treated in detail. The parameters affecting the characteristics of each device are discussed and both final design and operating characteristics of the components are presented.

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