Abstracts

Wide-Band Resonance Isolator

W.W. Anderson and M.E. Hines. "Wide-Band Resonance Isolator." 1961 Transactions on Microwave Theory and Techniques 9.1 (Jan. 1961 [T-MTT]): 63-67.

A parallel-plate transmission line loaded with capacitors or high dielectric constant material along a narrow strip has a circularly polarized RF magnetic field everywhere external to the loading over a very broad band. The magnetic resonance line of a narrow linewidth ferrite was inhomogeneously broadened by a very inhomogeneous magnetic field to provide resonance absorption over a wide frequency range. A prototype structure has given better than 15 db per inch attenuation in the reverse direction over a bandwidth from 1.5 kMc to 6.0 kMc. The forward loss caused by the ferrite is about 0.2 db to 0.4 db over this range of operation.

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