Abstracts

Ferrimagnetic Parts for Microwave Integrated Circuits

G.R. Harrison, G.H. Robinson, B.R. Savage and D.R. Taft. "Ferrimagnetic Parts for Microwave Integrated Circuits." 1971 Transactions on Microwave Theory and Techniques 19.7 (Jul. 1971 [T-MTT] (Special Issue on Microwave Integrated Circuits)): 577-588.

Tremendous technological strides have been made in recent years in the development of miniaturized microwave components and modules using microstrip transmission lines in combination with both semiconductor and ferrite technology. This technology growth has been spurred by rapidly increasing microwave systems complexity and diversity and the need for lower cost, more reliable, and smaller microwave assemblies. This paper describes the design and performance of various ferrimagnetic components as functional blocks for use in microwave integrated modules. The design and performance of the following components are described as well as their utilization in various multifunction modules: junction circulators both fixed bias and latching including their use as isolators, duplexers, switches, modulators, and other signal processing circuits; ferrimagnetic planar phase shifters; various combinations of these circuit elements where both all ferrimagnetic and composite ferrimagnetic/dielectric substrates are utilized.

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