Abstracts

Ferrite Planar Circuits in Microwave Integrated Circuits

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The ferrite planar circuit to be discussed in this paper is a general planar circuit using ferrite substrates magnetized perpendicular to the ground conductors. The main subject of this paper is the analysis of an arbitrarily shaped triplate ferrite planar circuit. In particular, the circuit parameters of the equivalent multiport are determined. To analyze ferrite planar circuits in general, two approaches are possible. One approach is based upon a contour-integral solution of the wave equation. In the other approach the fields in the circuit are expanded in terms of orthonormal eigenfunctions. Examples of the application of such analyses are described.

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