Abstracts

Fully Computer-Aided Synthesis of a Planar Circulator (Short Papers)

A planar junction circulator consists, in general, of a three-fold symmetric resonator of arbitrary shape to which three transmission lines are connected. So far, the circulators having disk, triangle, and hexagonal resonators, have been studied in detail, In the analysis of the circuit parameters of circulators, two general methods which were presented in 1977 are used widely. One is based upon a contour-integral solution of the wave equation. In the other approach, the circuit parameters of the junction are expanded in terms of the eigenmodes of the magnetized planar resonator. Since both methods have been applied successfully to various circulators, there is no doubt as to the usefulness of the methods at present.

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