Abstracts

Standing Wave Solutions of Planar Irregular Hexagonal and Wye Resonators

J. Helszajn. "Standing Wave Solutions of Planar Irregular Hexagonal and Wye Resonators." 1981 Transactions on Microwave Theory and Techniques 29.6 (Jun. 1981, Part I [T-MTT]): 562-567.

Suitable planar resonators for the design of three-port symmetrical junction circulators are the irregular hexagonal resonator and the wye resonator consisting of the junction of three open-circuited stubs. This paper describes the equipotential standing wave solutions and cutoff numbers of some lower order modes in such resonators using a finite element program. Circulator standing wave solutions in magnetized hexagonal and wye resonators are obtained by taking suitable combinations of those of the demagnetized resonators. The paper also includes the solution of planar resonators formed by the junction of four open-circuited stubs.

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