Abstracts

Symmetry of microwave devices with gyrotropic media-complete solution and applications

In this paper, a general procedure for constructing all the possible solutions for symmetrical devices and components with gyrotropic medias is suggested. Using the theory of symmetry and crystallographic principles, all the color groups and corresponding matrices [S], [Z], and [Y] of the devices can be obtained. With this approach, it is possible to select those symmetrical structures and magnetic fields, which can be considered as candidates in the process of synthesis of microwave devices and components. In order to illustrate the procedure, some examples are given.

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