Abstracts

More Compact Ferrite Circulator Junctions with Predicted Performance

A.M. Borjak and L.E. Davis. "More Compact Ferrite Circulator Junctions with Predicted Performance." 1992 Transactions on Microwave Theory and Techniques 40.12 (Dec. 1992 [T-MTT] (1992 Symposium Issue)): 2352-2358.

The analysis of two novel types of 3-port junction circulator is discussed in detail, and, neglecting losses, graphs of the predicted performance of specific theoretical designs are shown. The first type of circulator is based on a ferrite ring, and it is shown that by appropriately selecting the ratio of the inner/outer radius of the ring the need for transformers can be eliminated. An 11 GHz design with 1 GHz bandwidth is presented. The second type is based on a three-port ferrite disk having two ports positioned 60° away from a middle port. This provides a more compact layout and a design for 94 GHz is presented.

❑ Return to main document.