

Abstracts

Circulator Synthesis (1964 [MWSYM])

J.A. Weiss. "Circulator Synthesis (1964 [MWSYM])." *1964 PTGMTT International Symposium Program and Digest* 64.1 (1964 [MWSYM]): 60-64.

Theoretical consideration of the junction circulator has taken the form of group-theoretical treatment of the characteristic modes of symmetrical junctions and analysis of the spatial configurations of the modes under certain simplifying assumptions regarding the structure of the junction. Although a considerable advance in the quality of Y-junction circulators has taken place during the same period, it has not been possible to apply the results of the theory to the design effort. The mechanical improvements, which include the shaping of the ferrite, use of composite dielectric-ferrite elements, addition of tuning elements at the ports and, in stripline versions, shaping of the center conductor, have increased the complexity of the device to the point where existing simplified theoretical models can serve at most only as a qualitative guide.

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