Abstracts

The Ring-Network Circulator for Integrated Circuits: Theory and Experiments

J.A. Weiss, G.F. Dionne and D.H. Temme. "The Ring-Network Circulator for Integrated Circuits: Theory and Experiments." 1995 Transactions on Microwave Theory and Techniques 43.12 (Dec. 1995, Part II [T-MTT] (1995 Symposium Issue)): 2742-2747.

The theoretical model of a ring network junction circulator introduced in 1965 is reexamined and further elaborated, in view of its prospects for compatibility with accomplished and anticipated advances in microcircuit technology. Following a brief review of the theory, solutions are presented to illustrate the potential for novel, efficient designs with options including miniature, self-magnetized, reversible, broadband superconducting, or other advantageous characteristics. New experimental models are showing good conformance to theoretical predictions for this promising alternative circulator design concept.

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