

Abstracts

A Study of Nonlinearities and Intermodulation Characteristics of 3-Port Distributed Circulators

Y.-S. Wu, W.H. Ku and J.E. Erickson. "A Study of Nonlinearities and Intermodulation Characteristics of 3-Port Distributed Circulators." 1976 Transactions on Microwave Theory and Techniques 24.2 (Feb. 1976 [T-MTT]): 69-77.

Results of a study of nonlinearities and intermodulation characteristics of 3-port distributed circulators are presented. Based on a rigorous theoretical analysis of the third-order nonlinearity in ferrites, analytical results are derived for the field strength and the power level of the intermodulation signal. These explicit results are applicable to high-power distributed circulators operating in VHF, UHF, and microwave frequencies. Measured intermodulation characteristics of an experimental distributed VHF high-power circulator are also presented.

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