

Abstracts

The Theoretical Design of Broadband 3-Port Waveguide Circulators (Correspondence)

C.G. Parsonson, S.R. Longley and J.B. Davies. "The Theoretical Design of Broadband 3-Port Waveguide Circulators (Correspondence)." 1968 Transactions on Microwave Theory and Techniques 16.4 (Apr. 1968 [T-MTT]): 256-258.

An extension of earlier field analysis has made possible the prediction, purely by theory, of broadband 3-port H-plane circulator designs. Using a configuration consisting of concentric rings of ferrite and dielectric material surrounding a conducting post in the center of the junction, circulators with isolation bandwidths up to 42 percent have been predicted. In practice, bandwidths up to 30 percent have been obtained in X band and bandwidths of about 20 percent in C and Q band.

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