

Abstracts

Stripline to Microstrip Line Aperture Coupler (Short Papers)

G.V. Jogiraju and V.M. Pandharipande. "Stripline to Microstrip Line Aperture Coupler (Short Papers)." 1990 Transactions on Microwave Theory and Techniques 38.4 (Apr. 1990 [T-MTT]): 440-443.

The paper presents the analysis of aperture coupling between stripline and microstrip line as a function of the electric and magnetic polarizabilities of the aperture using Bethe's small-aperture coupling theory. A coupling expression for the general case of an aperture in the common ground plane is derived. Coupling variations with aperture dimensions for the case of a thin slot, a hole, a diamond, a rounded end slot, and an ellipse are determined using McDonald's polynomial approximations for the electric and magnetic polarizability for small apertures. Experimental results for the case of a thin slot and a circular aperture are also presented.

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