

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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