Abstracts

Aperture Coupling Between Adjacent Layers Using a New Stripline Geometry

N.I. Herscovici, N.K. Das, S. Papatheodorou and D.M. Pozar. "Aperture Coupling Between Adjacent Layers Using a New Stripline Geometry." 1995 Microwave and Guided Wave Letters 5.1 (Jan. 1995 [MGWL]): 24-25.

The excitation of the parallel plate mode in stripline configurations is a serious concern in the design of multilayer feeding networks. Using either probes or slots as means of power transfer between adjacent layers, the parallel-plate is always excited, and to insure its suppression a considerable effort has to be made. This letter presents a new method to solve this problem by using striplines with two different dielectric substrates on the two sides of its center strip. By inserting a dielectric plug of a high dielectric constant, only in the vicinity of the source, the excitation of the parallel-plate mode is significantly suppressed. A microstrip-to-stripline-to-microstrip coupler was designed with the new plug configuration and tested to demonstrate this concept.

❑ Return to main document.