

Abstracts

Analysis of Broadside Coupled Strip Inset Dielectric Guide

Z. Fan and S.R. Pennock. "Analysis of Broadside Coupled Strip Inset Dielectric Guide." 1993 MTT-S International Microwave Symposium Digest 93.2 (1993 Vol. II [MWSYM]): 839-842.

A theoretical and numerical method is presented for the analysis of broadside-coupled strip inset dielectric guide. The method of analysis is based on an integral equation formulation and Galerkin's procedure. In addition to propagation constants for two fundamental and higher order modes, the characteristic impedances for the two fundamental modes are calculated using the total propagating power and the longitudinal strip currents. The propagation characteristics of two fundamental modes are then used to compute 4-port circuit parameters. These are essential for accurate analysis and design of coupled line circuits such as directional couplers.

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