

Abstracts

Sensitivity Analysis of Coupled Microstrip Directional Couplers

S.D. Shamasundara and K.C. Gupta. "Sensitivity Analysis of Coupled Microstrip Directional Couplers." 1978 Transactions on Microwave Theory and Techniques 26.10 (Oct. 1978 [T-MTT] (Special Issue on Microwave and Millimeter-Wave Integrated Circuits)): 788-794.

Sensitivities of the parameters (coupling, bandwidth and impedance) of a coupled-line directional coupler with respect to even- and odd-mode impedances have been evaluated. These are used to determine the accuracy required from the closed-form expressions for even- and odd-mode impedances of microstriplines. Closed-form expressions satisfactory for a coupling coefficient greater than 0.3 are proposed and used for evaluating the effect of dimensional tolerances on the performance of microstrip directional couplers. This effect is significant when compared with effects of unequal phase velocities and dispersion.

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