Abstracts

Fringing Capacitance in Strip-Line Coupler Design (Correspondence)

J. Singletary, Jr.. "Fringing Capacitance in Strip-Line Coupler Design (Correspondence)." 1966 Transactions on Microwave Theory and Techniques 14.8 (Aug. 1966 [T-MTT]): 398-398.

Very useful relationships between stripline directional coupler dimensions and the even- and odd-mode impedance have been derived by S. B. Cohn for both the case of side-by-side strips (edge coupling) and broadside coupling. In each case the relations for even- and odd-mode impedance contain, respectively, terms for even- and odd-mode fringing capacitance per unit length. Cohn has derived relationships for both even- and odd-mode fringing capacitances for the case of side-by-side strips and broadside coupling for strips of zero thickness, and has published a paper on thickness corrections. Gunderson and Guida have shown that for the broadside coupled case the even- and odd-mode fringing capacitances are not independent and have thus derived a relationship between the coupler dimensions and even and odd impedance which does not involve expressions for the fringing capacitances. This has led them to formulate a simpler design procedure.

❑ Return to main document.