Abstracts

Coupled Rectangular Bars Between Parallel Plates

W.J. Getsinger. "Coupled Rectangular Bars Between Parallel Plates." 1962 Transactions on Microwave Theory and Techniques 10.1 (Jan. 1962 [T-MTT]): 65-72.

Curves are presented giving the even-mode fringing capacitance, the odd-mode fringing capacitance, and the difference between odd- and even-mode fringing capacitances for wide ranges of thickness and spacing of rectangular bars centered between parallel plates. Simple formulas are given relating these capacitances to even- and odd-mode characteristic impedances of coupled rectangular bars. Possible applications to strip-line and other circuits are described. The appendix gives the derivation of the fringing, capacitances by conformal mapping techniques. The results are exact for bars extending in width infinitely far from the coupling region, and have only small error (less than 1.24 per cent) for bars whose width is greater than about 35 per cent of the difference between plate spacing and bar thickness.

❑ Return to main document.