Abstracts

Rectangular Bars Coupled Through a Finite-Thickness Slot

J.H. Cloete. "Rectangular Bars Coupled Through a Finite-Thickness Slot." 1984 Transactions on Microwave Theory and Techniques 32.1 (Jan. 1984 [T-MTT]): 39-46.

A rigorous new solution, based on fringing capacitances and conformal mapping, is presented for the coupling problem in the parallel-coupled TEM transmission-line structure formed by two rectangular bars coupled through a rectangular slot, cut longitudinatly in a finite-thickness ground plane. The conformal mapping solution is summarized in Appendix I and is based on the procedure published by Getsinger. Graphs of the capacitances needed to calculate the coupling for a given physicat geometry, without solving the complicated equations associated with the theoretical solution, are also presented. A measurement procedure and experimental results are presented which verify the accuracy of the theoretical coupling data.

❑ Return to main document.