Abstracts

Prediction of the Excess Capacitance of a Via-Hole through a Multilayered Board Including the Effect of Connecting Microstrips or Striplines

P.A. Kok and D. De Zutter. "Prediction of the Excess Capacitance of a Via-Hole through a Multilayered Board Including the Effect of Connecting Microstrips or Striplines." 1994 Transactions on Microwave Theory and Techniques 42.12 (Dec. 1994, Part I [T-MTT]): 2270-2276.

An integral equation-based quasi-static method is described for calculating the capacitance of multilayer board via's. The considered via geometry contains connecting strips, pads on the via, and a finite ground plane thickness. After showing that coupling through ground plane openings is very small for realistic configurations, via's are treated as a number of independent sections (one section per multiboard layer). The influence of the geometric parameters on the via capacitance is examined; results are also compared with previous publications and with measurements.

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