Abstracts

Shunt Posts in Microstrip Transmission Lines

K.L. Finch and N.G. Alexopoulos. "Shunt Posts in Microstrip Transmission Lines." 1990 Transactions on Microwave Theory and Techniques 38.11 (Nov. 1990 [T-MTT]): 1585-1594.

Shunt posts in open microstrip lines are analyzed by employing the planar waveguide model. A multipole expansion method with greatly enhanced efficiency and accuracy has been achieved with the development of very fast algorithms for the computation of Schloemilch-type series. The method applies to perfectly conducting, imperfectly conducting, and composite shunt posts. This approach is compared with the standard point matching technique for perfectly conducting posts. The two methods are found to be in excellent agreement in regions of overlapping applicability. Applications to microstrip short circuits, cavity filters, and single dielectric post filters are discussed and illustrated.

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