Abstracts

A CAD-Suitable Approach for the Analysis of Nonuniform MMIC and MHMIC Transmission Lines (Short Papers)

A.H. Hamade, A.B. Kouki and F.M. Ghannouchi. "A CAD-Suitable Approach for the Analysis of Nonuniform MMIC and MHMIC Transmission Lines (Short Papers)." 1996 Transactions on Microwave Theory and Techniques 44.9 (Sep. 1996 [T-MTT]): 1614-1617.

A new method of moment-based formulation for the solution of the telegraphist's equations in nonuniform transmission lines is presented. Entire domain basis functions that build in a frequency variation are used to cover wider frequency and physical dimension ranges. The results obtained using the proposed formulation are validated by comparison to those obtained by a CAD package and to measured data. Different nonuniform lines in microstrip and coplanar technologies on monolithic microwave/millimeter wave integrated circuit (MMIC) and miniaturized hybrid microwave integrated circuit (MHMIC) substrates are investigated with an application to the design a matched taper transition in a MMIC coplanar line.

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