Abstracts

Accurate and Efficient Computation of Dielectric Losses in Multi-Level, Multi-Conductor Microstrip for CAD Applications (Short Papers)

J.P.K. Gilb and C.A. Balanis. "Accurate and Efficient Computation of Dielectric Losses in Multi-Level, Multi-Conductor Microstrip for CAD Applications (Short Papers)." 1993 Transactions on Microwave Theory and Techniques 41.3 (Mar. 1993 [T-MTT]): 527-530.

Accurate and efficient computation of dielectric losses in complex microstrip structures is important in the computer-aided design of microwave and millimeter-wave integrated circuits. The proposed approach can be used in lieu of lossy, full-wave solutions to provide accurate and efficient data for the CAD of multi-level, multi-conductor MIC and MMIC structures. This new application gives results that are as accurate as lossy full-wave techniques over a wide range of frequencies, including the dispersive region. In addition to providing accurate results, this method is up to three times faster, depending on the number and type of substrates or superstrates. Results are shown for various multi-conductor, multi-level structures which compare well with the lossy, full-wave approach and require significantly less computer time.

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