Abstracts

Fast and Accurate Computation of Dielectric Losses in Mulit-Layer, Multi-Conductor Microstrip Structures

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Accurate analysis of the 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-layer, 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 frequency, including the dispersive region. In addition to giving 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 symmetric and asymmetric, multi-conductor, multi-layer structures which have good agreement with the lossy, full-wave approach and use significantly less computer time.

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