Abstracts

Spectral Domain Solution of Arbitrary Coplanar Transmission Line with Multilayer Substrate (Short Papers)

J.B. Davies and D. Mirshekar-Syahkal. "Spectral Domain Solution of Arbitrary Coplanar Transmission Line with Multilayer Substrate (Short Papers)." 1977 Transactions on Microwave Theory and Techniques 25.2 (Feb. 1977 [T-MTT]): 143-146.

A hybrid mode analysis is presented for a multilayer dielectric within a rectangular conducting box. An arbitrary set of conductors may be distributed along the lower surface of the top layer, so that single or coupled forms may be analyzed of slot line, microstrip, or coplanar waveguide. The analysis combines a transfer-matrix approach with the spectral domain method to give a versatile and efficient solution. CPU time on an IBM 360/65 is about 1 s per layer of substrate, for a single slot or strip, at one frequency.

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