Abstracts

Fourier Transformed Matrix Method of Finding Propagation Characteristics of Complex Anisotropic Layered Media (Dec. 1984 [T-MTT])

A planar structure having arbitrarily located conductor lines immersed in complex anisotropic media presents one with a very general guided wave problem. This problem is solved here by a rigorous formulation technique characterizing each layer by a 6 x 6 tensor and finding the appropriate Fourier transformed Green's function matrix G of 2n x 2n size. From G, a method-of-moments solution for the propagation characteristics follows, including propagation constant eigenvalues and field eigenvectors at all spatial locations. The method is very versatile and can handle a huge class of microwave or millimeter-wave integrated circuit or monolithic circuit problems, no matter how simple or complex as long as they possess planar symmetry.

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