Abstracts

Cylindrical Substrate Microstrip Line Characterization

N.G. Alexopoulos and A. Nakatani. "Cylindrical Substrate Microstrip Line Characterization." 1987 Transactions on Microwave Theory and Techniques 35.9 (Sep. 1987 [T-MTT]): 843-849.

In this article, quasi-static and dynamic solutions are derived for microstrip transmission lines on circularly symmetric cylindrical substrates. Novel numerical techniques have evolved which lead to very efficient algorithms. The model is applicable to substrates of arbitrary thickness and cylinder size. Furthermore, it has been checked against a variety of limiting cases, including microstrip on a flat substrate, and it has been found to provide results with excellent accuracy. The analytical extraction of the quasi-static behavior from the dynamic Green's function introduces considerable simplicity in developing the algorithm.

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