Abstracts

Formulation of the Singular Integral Equation Technique for Planar Transmission Lines

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The singular integral equation technique is used to determine the normal modes of propagation in general planar transmission lines. Taking finlines as, an example, it is demonstrated how high-order modes can effectively and accurately be calculated. It is also shown that complex and backward-wave modes, which are known to exist in rectangular and circular waveguides with dielectric inserts, can also exist in finlines. Besides a discussion of their characteristic features, this paper describes the conditions under which complex and backward-wave modes are found in finlines.

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