Abstracts

Rigorous, Multimode Equivalent Network Representation of Capacitive Discontinuities

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In this paper we present novel, rigorous, multimode equivalent network representations for a variety of zero-thickness capacitive windows and obstacles in a parallel plate waveguide. A key feature of these representations is that the coupling between all of the modes excited is described by a matrix whose elements do not depend on frequency or absolute dimensions. The value of the results presented is that the networks developed can be used to analyze rigorously a large variety of single and coupled planar transmission line structures.

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