Abstracts

A suitable integral equation for the quasi-TEM analysis of hybrid strip/slot-like structures

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This paper reports on a suitable formulation of the spectral domain/integral-equation method for the quasi-TEM analysis of hybrid strip/slot-like planar lines. The free surface charge distribution is used as an unknown on the strip-like interface, whereas the electric field is used on the slot-like region. This formulation allows us to reduce the number of basis functions and makes possible a unified treatment of the problem. A single type of basis functions is used, leading to a quasi-analytical evaluation of the Galerkin matrix entries. The performance of the method is illustrated with a practical example structure useful for coupler design.

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