Abstracts

Resonance in a Superstrate-Loaded Cylindrical-Rectangular Microstrip Structure

K.-L. Wong, Y.-T. Cheng and J.-S. Row. "Resonance in a Superstrate-Loaded Cylindrical-Rectangular Microstrip Structure." 1993 Transactions on Microwave Theory and Techniques 41.5 (May 1993 [T-MTT]): 814-819.

The complex resonant frequencies of the cylindrical-rectangular microstrip structure loaded with a dielectric super-strata layer is studied by using a rigorous full-wave analysis and the numerical results are obtained by using the Galerkin's moment method calculation. The numerical convergence for the selected sinusoidal basis functions with and without the edge singularity condition is also discussed. Numerical results for the dependence of the real and imaginary parts of the complex resonant frequencies on the superstrata permittivity and thickness are calculated and analyzed, which are also compared with those obtained for the planar microstrip structure.

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