Abstracts

Resonance in Spherical--Circular Microstrip Structures

W.-Y. Tam and K.-M. Luk. "Resonance in Spherical--Circular Microstrip Structures." 1991 Transactions on Microwave Theory and Techniques 39.4 (Apr. 1991 [T-MTT]): 700-704.

The resonance problem of a circular microstrip disk mounted on a spherical surface is studied theoretically. The radiator is replaced by a surface current distribution. The effects of the dielectric substrate as well as the curvature effect are taken into account by the Green's function formulation in the spectral domain. A new vector Legendre series is defined. Cavity model current distribution is used as the current basis. Galerkin's procedure is employed to solve for the complex resonant frequencies. Some numerical results are given to illustrate the effects of curvature and dielectric substrate on the resonance of the microstrip patch.

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