Abstracts

Resonant Frequency of Uncovered and Covered Rectangular Microstrip Patch Using Modified Wolff Model

A.K. Verma and Z. Rostamy. "Resonant Frequency of Uncovered and Covered Rectangular Microstrip Patch Using Modified Wolff Model." 1993 Transactions on Microwave Theory and Techniques 41.1 (Jan. 1993 [T-MTT]): 109-116.

A new model, called the Modified Wolff Model (MWM) is proposed to calculate the resonant frequency of a rectangular open microstrip patch, a patch with a dielectric superstrata and a patch inside a shielded enclosure. The model has also been applied to calculate resonant frequencies of higher order modes. Dependence of resonant frequency on the various parameters and its accuracy has been discussed using MWM. Results obtained from MWM follow very closely the results from various forms of fullwave analysis, and in almost all cases they are within 0.5% of published experimental results for the fundamental mode and within 1.7% for higher order modes. The method is computationally fast and efficient even on a desktop computer. The method could be used for other patches like circular, hexagonal and equilateral triangle.

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