Abstracts

Natural Resonant Frequencies of Microwave Dielectric Resonators (Correspondence)

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The application of dielectric resonators are currently of considerable interest in microwave techniques. The design of a dielectric resonator; as in the case of a metal cavity, depends on its natural resonant frequencies. Since exact solutions of dielectric resonators having shapes other than a sphere or a doughnut cannot be rigorously computed, approximate techniques must be adopted to solve the problem. Two types of resonant modes can be excited in a dielectric resonator, namely, the H mode and the E mode. The H mode is defined as the mode which has a large normal component of magnetic field at the boundary surfaces; and the E mode is the mode with no predominant normal component of magnetic field at the surfaces.

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