Abstracts

Miniaturized Coaxial Resonator Partially Loaded with High-Dielectric-Constant Microwave Ceramics

S. Yamashita and M. Makimoto. "Miniaturized Coaxial Resonator Partially Loaded with High-Dielectric-Constant Microwave Ceramics." 1983 Transactions on Microwave Theory and Techniques 31.9 (Sep. 1983, Part I [T-MTT]): 697-703.

A partially dielectric-filled stepped impedance resonator (PDSIR) is introduced as a class of a miniaturized coaxial resonator. The length of this resonator is less than that of a fully dielectric-filled quarter-wavelength resonator. The conditions for obtaining resonance with a high dielectric constant of epsilon/sub r/ =35 or 85, sensitivity analysis, and temperature drift of the resonant frequency, are described. The spurious response, in which the characteristics are better than for a conventional quarter-wavelength resonator, is also analyzed.

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