

Abstracts

Dielectric Resonators as Microstrip Circuit Elements

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Dielectric resonators may be used as hybrid circuit elements in microstrip transmission line circuits. These resonators may function as bandpass filters, bandstop filters, passive stabilization cavities for solid-state diode oscillators, or as reference cavities for Pound discriminators. Dielectric resonators are small size and high Q which makes them desirable for microstrip circuits where deposited resonators are large at lower microwave frequencies and have limited Q's. The purpose of this paper is to present a simple design procedure for cylindrical TiO_2 resonators on microstrip and to illustrate the use of such a resonator in a practical Pound discriminator circuit.

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