Abstracts

A Small Dielectric TEM Mode Resonator with a Crossing Slot and its Application to a Cellular Radio VCO

T. Uwano. "A Small Dielectric TEM Mode Resonator with a Crossing Slot and its Application to a Cellular Radio VCO." 1993 Transactions on Microwave Theory and Techniques 41.4 (Apr. 1993 [T-MTT]): 639-646.

A small TEM mode dielectric resonator which has a new feature with a crossing slot on the outer ground conductor plane is presented. The slot, functioning as a short-ended stub line serially inserted into the transmission line, can tune the resonant frequency down. The resonant frequency in a stripline resonator structure is rigorously analyzed by the method based on the Spectral Domain Approach, and hence the equivalent circuit is derived. This resonator is applied to a cellular radio VCO with a varactor connected across the slot. The performance of the VCO in the 900 MHz cellular band is described.

❑ Return to main document.