Abstracts

Accurate Conductor Q-Factor Resonator Placed in an MIC of Dielectric Environment

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The unloaded Q-factor of a dielectric resonator is degraded due to conductor loss when it is placed in an MIC environment. In this paper, we report approximate but quite accurate closed form expressions for the Q-factor due to conductor loss. The results obtained are in good agreement with those of rigorous numerical methods. The effect of geometrical parameters on the useful tuning range of the structure is studied. Finally, an explicit relationship between the resonant frequency sensitivity factors and the conductor Q-factor is derived,

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