

Abstracts

Resonant Frequency of Cylindrical Dielectric Resonator Placed in an MIC Environment (Short Papers)

R.K. Mongia. "Resonant Frequency of Cylindrical Dielectric Resonator Placed in an MIC Environment (Short Papers)." 1990 Transactions on Microwave Theory and Techniques 38.6 (Jun. 1990 [T-MTT]): 802-804.

In this paper, an effective dielectric constant technique has been used to determine the resonant frequency of the $TE_{01\delta}$ mode of a cylindrical dielectric resonator placed in an MIC environment. A suitable expression for ϵ_{eff} has been reported which makes it possible to obtain results that compare favorably with rigorous methods. A large number of experimental results are also reported to demonstrate the validity of the method. Finally, for a given resonant frequency, closed-form expressions are given for computing the height of the resonator.

[Return to main document.](#)