

Abstracts

Measurement of Dielectric Materials Using a Cutoff Circular-Waveguide Cavity (Short Papers)

J. Hanfling and L. Botte. "Measurement of Dielectric Materials Using a Cutoff Circular-Waveguide Cavity (Short Papers)." 1972 Transactions on Microwave Theory and Techniques 20.3 (Mar. 1972 [T-MTT]): 233-235.

A technique is presented for accurately determining the dielectric constant of microwave materials. The concept is to resonate a cutoff circular-waveguide cavity by inserting the dielectric-disk sample. Unlike most dielectric measurement techniques which rely on perturbation methods, this one determines the dielectric constant from the absolute measurement of the resonant frequency. Also, the use of a cutoff cavity prevents false dielectric constant readings by eliminating spurious resonances.

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