

Abstracts

An Extension of the TE/sub 01n/ Resonator Method of Making Measurements on Solid Dielectrics (Correspondence)

D.T. Paris. "An Extension of the TE/sub 01n/ Resonator Method of Making Measurements on Solid Dielectrics (Correspondence)." 1964 Transactions on Microwave Theory and Techniques 12.2 (Mar. 1964 [T-MTT]): 251-252.

Dielectric measurements using cylindrical cavities resonating in the TE/sub 01n/ mode are discussed by several authors. The cavity is physically arranged as illustrated in Fig. 1, and the dielectric properties of the specimen are determined from three experimentally observed variables: the resonant frequency, the phase shift constant of the empty resonator and the Q of the cavity. The dielectric constant and loss tangent of the specimen are then calculated using formulas which are strictly valid only if the losses of the sample-filled cavity are very small.

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