

A New Technique for Measuring the Permittivity and Loss Tangent of Cylindrical Dielectric Rods

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A new technique is presented for measuring the permittivity and loss tangent of cylindrical dielectric rods. It is a resonant technique and exhibits highly accurate results for low-loss dielectrics. The finite-element method is used to model the measurement fixture. Also, a procedure is presented to characterize the surface resistance of the conducting walls. Experimental results are compared to previously reported values and are in excellent agreement.

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