Abstracts

Simple Microwave Technique for Independent Measurement of Sample Size and Dielectric Constant with Results for a Gunn Oscillator System

M.R. Lakshminarayana, L.D. Partain and W.A. Cook. "Simple Microwave Technique for Independent Measurement of Sample Size and Dielectric Constant with Results for a Gunn Oscillator System." 1979 Transactions on Microwave Theory and Techniques 27.7 (Jul. 1979 [T-MTT]): 661-665.

Standard perturbation theory analysis has been used to develop a new microwave technique for simultaneously and independently measuring the size and dielectric constant of dielectric samples. Gunn flange oscillators have heen used to show that simple and low cost systems give measurement accuracies better than 5 percent when applied to nylon, Teflon, and quartz samples. The techniques should be particularly useful with samples of irregular cross section.

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