Abstracts

Measurement of temperature dependence of relative permittivity by the cavity perturbation method

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A new cavity perturbation method has been proposed as a technique for evaluating the temperature dependence of relative permittivity, /spl tau//spl epsi/, in the pseudo-microwave range. In order to increase the accuracy of this method, an automatic measuring apparatus, satisfying the perturbation principle, was constructed and improvements in data processing were employed, such as the periodic least square method. Results for some microwave dielectrics demonstrated that measured /spl tau//spl epsi/ values for this method conform to those of the dielectric rod resonator method.

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