

Abstracts

Observations on Resonant Cavity Perturbation by Dielectric Objects (Short Papers)

A.W. Kraszewski and S.O. Nelson. "Observations on Resonant Cavity Perturbation by Dielectric Objects (Short Papers)." 1992 Transactions on Microwave Theory and Techniques 40.1 (Jan. 1992 [T-MTT]): 151-155.

Microwave resonators can be used as sensors for sorting dielectric objects. Differences in volume or mass can be distinguished among objects of irregular shape but of uniform dielectric properties. Moisture content, or other permittivity-dependent qualities can also be distinguished independent of mass or volume when objects are of uniform shape. Fundamental principles of the shape-independent and size-independent measurements are discussed, and experimental results are presented.

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