Abstracts

A New Method for Measurement of Complex Permittivity of Liquids Using the Phase Information of Standing Waves (Short Papers)

H. Jiang, M. Sun and W. Chen. "A New Method for Measurement of Complex Permittivity of Liquids Using the Phase Information of Standing Waves (Short Papers)." 1995 Transactions on Microwave Theory and Techniques 43.3 (Mar. 1995 [T-MTT]): 688-690.

A new approach to determine the propagation constant, gamma=alpha+jBeta, of waves on a transmission line from phase measurements is proposed in this paper. This new method is very snitable for determining small alpha. Its distinctive feature is that the attenuation constant alpha of waves on the transmission line is the slope of a linear function of the displacement of a detector. Thus the attenuation constant alpha can be determined accurately even if it is very small.

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