Abstracts

Permittivity Measurements Using a Short Open-Ended Coaxial Line Probe

H. Zheng and C.E. Smith. "Permittivity Measurements Using a Short Open-Ended Coaxial Line Probe." 1991 Microwave and Guided Wave Letters 1.11 (Nov. 1991 [MGWL]): 337-339.

Improvements for permittivity measurements with short, open-ended coaxial line probes are achieved by using a more accurate formulation and by adding a finite conductor flange at the aperture of the probe. A conductor flange with a diameter of about 10 times the outer diameter of the coaxial line greatly improves the performance of the coaxial line probe. For a probe without a flange, a three-term admittance formula with calculated coefficients gives good measured results as compared to standards. However, for a probe with flange, a two-term admittance formula with a calibration coefficient gives better measured results.

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