Abstracts

Dielectric Probe for Permittivity and Permeability Measurements at Low Microwave Frequencies

D. Derray, A. Julien, P. Guillon, P. Naud, J.L. Bonnefoy and J.P. Prulhiere. "Dielectric Probe for Permittivity and Permeability Measurements at Low Microwave Frequencies." 1992 MTT-S International Microwave Symposium Digest 92.3 (1992 Vol. III [MWSYM]): 1557-1560.

A new non-destructive method using a dielectric probe of cross section 1 cm² for measuring the complex electromagnetic parameters (epsilon and μ) of materials around 1 GHz is developed. The theoretical analysis uses the 3 dimensional Finite Element Method. The comparison between theoretical and experimental results provides the electromagnetic parameters of the sample under test. Results for a high loss material are presented respectively at 25°C and 100°C.

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