Abstracts

Measurements of complex permittivity of biological and organic liquids up to 110 GHz

F. Duhamel, I. Huynen and A. Vander Vorst. "Measurements of complex permittivity of biological and organic liquids up to 110 GHz." 1997 MTT-S International Microwave Symposium Digest 1. (1997 Vol. I [MWSYM]): 107-110.

A new procedure for measuring the complex permittivity of liquids has been set up. It is based on measuring the scattering parameters of waveguide two-ports, up to 110 GHz, and on an original calibration method previously developed by the authors. Measurements describe the complex permittivity of biological and organic liquids at frequencies above 20 GHz, up to 110 GHz. The liquids are methanol, dioxane, and blood. Comparisons with the well established Debye equations have been made and some parameters have been recalculated when necessary.

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