# Abstracts

## Influence of Wall Contacts on Measured Complex Permittivity Spectra at Coaxial Line Frequencies

*K.E. Mattar, D.G. Watters and M.E. Brodwin. "Influence of Wall Contacts on Measured Complex Permittivity Spectra at Coaxial Line Frequencies." 1991 Transactions on Microwave Theory and Techniques 39.3 (Mar. 1991 [T-MTT]): 532-537.*

We examine the effects on observed complex permittivity caused by gaps between a sample and the conductors of the coaxial sample holder. A transverse resonance model relates the observed and true values given the dimensions of the gap. This model also confirms the accuracy of the simpler capacitance model for small conductivities and low frequencies. We describe, how, experimentally, variation in the observed sample characteristics with frequency may be used to identify a gap problem. Experimental results demonstrate the usefulness of conducting pastes or copper plating in reducing the gap effect.

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