Abstracts

Numerical Analysis of Open-Ended Coaxial Lines

G.B. Gajda and S.S. Stuchly. "Numerical Analysis of Open-Ended Coaxial Lines." 1983 Transactions on Microwave Theory and Techniques 31.5 (May 1983 [T-MTT]): 380-384.

Numercal methods are applied in the analysis of coaxial structures used as sensors for in vivo permittivity studies of biological substances. The methods used for the solution of the resulting static conductor-dielectric problems are the Finite Element Method (FEM) and the Method of Moments (MOM) applied to a pair of coupled integral equations. A linear model which relates the sample permittivity to the fringing field capacitance of the sensor is discussed and values of the model parameters are calculated for different types of sensors.

❑ Return to main document.