Abstracts

Effects of mechanical flaws in open-ended coaxial probes for dielectric spectroscopy

D. Popovic and M. Okoniewski. "Effects of mechanical flaws in open-ended coaxial probes for dielectric spectroscopy." 2002 Microwave and Wireless Components Letters 12.10 (Oct. 2002 [MWCL]): 401-403.

A detailed study of dielectric properties of breast tissue in the 0.1 to 20 GHz frequency range currently under way uses open-ended teflon coaxial probes as sensors. This letter quantifies the effects of small mechanical imperfections at the probe aperture on the measured reflection coefficient. The mechanical flaws in the probe can lead to significant errors, thus probes for dielectric spectroscopy of breast tissue have to be carefully manufactured.

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