Abstracts

Characterization of biological tissues up to millimeter wave: test fixture design

M.R. Tofighi and A.S. Daryoush. "Characterization of biological tissues up to millimeter wave: test fixture design." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 1041-1044.

Various design aspects of a two-port test fixture are presented to measure permittivity of biological tissues. Dimensions of this fixture are optimized using a commercial finite element method package. High measurement sensitivity to the tissue parameters is obtained up to 45 GHz by careful design of the microstrip feed line and aperture dimensions. Material inhomogeneity with millimeter spatial resolution is predicted using this optimized fixture.

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