

Abstracts

Microwave system for breast tumor detection

E.C. Fear and M.A. Stuchly. "Microwave system for breast tumor detection." 1999 Microwave and Guided Wave Letters 9.11 (Nov. 1999 [MGWL]): 470-472.

A preliminary numerical analysis of a system for breast tumor detection, amenable to practical implementation, is described. The general idea was previously introduced and relies on ultrawide-band radar and confocal imaging. The system consists of an array of small antennas placed away from the breast. Simulations of each antenna in the array are performed with the finite-difference time-domain (FDTD) method. A tumor detection algorithm is applied to the data, incorporating skin return subtraction to enhance tumor returns.

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