Abstracts

Estimation of deep-seated profile of temperature distribution inside biological tissues by means of multifrequency microwave thermograph

B. Stec, A. Dobrowolski and W. Susek. "Estimation of deep-seated profile of temperature distribution inside biological tissues by means of multifrequency microwave thermograph." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 2261-2264 vol.3.

This paper presents problems related to thermal radiation of human bodies in the microwave range in relation to diagnosis of breast carcinoma. A mathematical model of thermal radiation transmission through tissues is introduced and methods of measurement of temperature and the depth and size of a heat source, by means of multifrequency microwave thermography, are described. Theoretical considerations are supplemented by results of experiments.

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