Abstracts

Complete Three-Dimensional Modeling of New Microstrip-Microslot Applicators for Microwave Hyperthermia Using the FDTD Method (Dec. 1994, Part II [T-MTT])

P.-Y. Cresson, C. Michel, L. Dubois, M. Chive and J. Pribetich. "Complete Three-Dimensional Modeling of New Microstrip-Microslot Applicators for Microwave Hyperthermia Using the FDTD Method (Dec. 1994, Part II [T-MTT])." 1994 Transactions on Microwave Theory and Techniques 42.12 (Dec. 1994, Part II [T-MTT] (1994 Symposium Issue)): 2657-2666.

This paper describes a complete 3-D modeling, using the FDTD method, of a new generation of external applicators for microwave hyperthermia used at either 434 or 915 MHz without any modification. With this new model, it is possible to obtain the theoretical results concerning the variations of the reflection coefficient as a function of frequency, the power deposition inside the lossy tissues, and the heating patterns. The experimental electromagnetic and thermal characteristics are presented and compared to the theoretical results obtained with the 3-D method.

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