Abstracts

Complete Three-Dimensional Modeling of New Microstrip-Microslot Applicators for Microwave Hyperthermia Using F.D.T.D. Method (1994 Vol. I [MWSYM])

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 F.D.T.D. Method (1994 Vol. I [MWSYM])." 1994 MTT-S International Microwave Symposium Digest 94.1 (1994 Vol. I [MWSYM]): 539-542.

This paper describes a complete 3D modeling using F.D.T.D. method of a new generation of external applicators for microwave hyperthermia used either at 434 MHz or 915 MHz without any modifications. 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 heated lossy tissues and the heating patterns. The experimental electromagnetic and thermal characteristics are presented and compared with the theoretical results obtained with the 3D method.

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