

Abstracts

Deeper-Penetrating Wave Applicator in Noninvasive Hyperthermia

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The penetration depth of a electromagnetic wave into the lossy medium can be greatly enhanced in the near-field zone of a suitably designed applicator with transient excitaion. In the far field of the applicator, EM energy may also decay relatively slowly. We study the decay of EM power in a nondispersive lossy dielectric, and carry out the numerical calculations for the waves in dispersive high water content tissue. The potential for applications of this method is discussed.

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