Abstracts

Electromagnetic Fields and Relative Heating Patterns Due to a Rectangular Aperture Source in Direct Contact with Bilayered Biological Tissue

A.W. Guy. "Electromagnetic Fields and Relative Heating Patterns Due to a Rectangular Aperture Source in Direct Contact with Bilayered Biological Tissue." 1971 Transactions on Microwave Theory and Techniques 19.2 (Feb. 1971 [T-MTT] (Special Issue on Biological Effects of Microwaves)): 214-223.

Expressions are derived and evaluated for the electro-magnetic fields and associated relative heating patterns in two-layered biological tissue media exposed to a direct-contact rectangular aperture source. The source consists of a linearly polarized electric field distribution specified in the plane of the aperture. The results may be used for many biomedical applications ranging from the design of diathermy applicators to the establishment of standardized electromagnetic field intensities in connection with research on electromagnetic effects in living biological media.

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