

Abstracts

Effects of the Surroundings on Electromagnetic-Power Absorption in Layered-Tissue Media (Short Papers)

P. Bernardi, F. Giannini and R. Sorrentino. "Effects of the Surroundings on Electromagnetic-Power Absorption in Layered-Tissue Media (Short Papers)." 1976 Transactions on Microwave Theory and Techniques 24.9 (Sep. 1976 [T-MTT]): 621-625.

The influence of the surroundings on the interaction between electromagnetic (EM) waves and biological tissue is examined by schematizing the environment by a perfectly conducting screen placed beyond the irradiated tissue. The effects of standing waves, which are created in this situation, are determined as a function of the electrical and geometrical parameters of the structure. In particular, the hazard increase due to the presence of the screen combined with a phase disuniformity of the incident field--an elementary schematization of the "near-field"--is pointed out.

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