

Abstracts

Calculation of Electromagnetic Energy Absorption in Prolate Spheroids by the Point Matching Method

R. Ruppin. "Calculation of Electromagnetic Energy Absorption in Prolate Spheroids by the Point Matching Method." 1978 Transactions on Microwave Theory and Techniques 26.2 (Feb. 1978 [T-MTT]): 87-90.

The point matching method is used to calculate electromagnetic power absorption in tissue prolate spheroids irradiated by a plane wave. The calculation extends from the low-frequency region and well into the resonance region, but is restricted to spheroids of small eccentricity. A strong dependence of the absorption on the orientation and the polarization of the incident beam is found to occur, in agreement with previous experimental measurements on animals and phantom models.

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