Abstracts

Further Studies on the Microwave Auditory Effect

J.C. Lin. "Further Studies on the Microwave Auditory Effect." 1977 Transactions on Microwave Theory and Techniques 25.11 (Nov. 1977 [T-MTT]): 938-943.

Auditory signals generated in humans and animals who are irradiated with short rectangular pulses of microwave energy have been studied. Assuming that the effect arises from sound waves generated in the tissues of the head by rapid, thermal expansion caused by microwave absorption, and using a technique described previously, the governing equations are solved for a homogeneous spherical model of the head under constrained-surface conditions. The results indicate that the frequency of the auditory signal is a function of the size and acoustic property of the head only. While the amplitude and frequency of the microwave-induced sound are higher than those predicted by the stress-free boundary condition formulation, they are compatible with the experimental results reported to date.

❑ Return to main document.