

Abstracts

Effect of the human tissue on EMI from a cellular telephone with a hearing aid

K. Caputa, M.A. Stuchly, M. Skopek, H.I. Bassen and M. Kanda. "Effect of the human tissue on EMI from a cellular telephone with a hearing aid." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 1029-1032.

This paper presents evaluation of EMI with a hearing aid using electromagnetic modeling and measurements, and acoustic measurements. For modeling the FDTD technique is used, and the fields around a commercial telephone are computed in free space and near a heterogeneous model of the human head. Very good agreement of computed near fields of the telephone in free space is obtained, provided that its antenna is correctly represented. Computed field levels in the ear canal correlate well with the measured acoustic interference levels.

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