

## The antennas on a mobile board and their electromagnetic compatibility

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### Abstract

This paper presents the solutions of a problem of optimization in the decrease of antenna-coupling coefficients on a mobile board in case of limitations on coverage for each antenna. To determine a minimum value of an antenna-coupling coefficient for one pair of antennas, we use the Gauss-Zeidel optimization method or search method. When two or several antenna pairs have a common antenna, the coordinates of this antenna are determined by the compromise. The algorithms of optimum antenna placement are supported by the computer software and are tested for a case of four antennas.

<http://dx.doi.org/10.1109/TEMC.2002.808071>

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### Keywords

Antenna-coupling coefficient, Electromagnetic compatibility (EMC), Gauss-Zeidel optimization method, Search method