

Simulation of Electrodynamic Planar Loudspeaker (EDPL) with COMSOL Multiphysics® Software

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Abstract

Electro Dynamic Planar Loudspeaker (EDPL) allow an unprecedented level of control over the spatial sound. The lightweight and ultra-thin design of EDPL, enables to integrate into difficult installation locations where conventional loudspeakers could not be installed. Better understanding the physical acoustic properties of EDPL will drive future design improvements. Using the COMSOL Multiphysics® software, the finite element analysis (FEA) of EDPL is developed in this study. The AC/DC, Structural Mechanics and Acoustics Modules are used to simulate the sound pressure level. The frequency response and directivity patterns of EDPL are discussed.