

ABSTRACT**MEMS LOUDSPEAKER HAVING AN ACTUATOR STRUCTURE AND A
DIAPHRAGM SPACED APART THEREFROM**

A MEMS loudspeaker for generating sound waves in the audible wavelength spectrum includes a carrier substrate with a substrate cavity with two substrate openings formed on two opposite sides of the carrier substrate, and a diaphragm anchored in the substrate. An actuator structure is arranged in the region of one of the two substrate openings and configured to vibrate the diaphragm to generate sound waves. An intermediate cavity is formed in a space between the diaphragm and the actuator structure. A coupling element is disposed in the intermediate cavity and connects the actuator structure to the diaphragm and can vibrate with respect to the carrier substrate.

FIG. 3