Abstract

LOUDSPEAKER ARRAY WITH CIRCUIT BOARD-INTEGRATED ASIC

Loud speaker arrangement with a circuit board, an MEMS loudspeaker for producing sound waves in the audible wavelength spectrum, said MEMS loud speaker having a membrane deflectable along a z-axis, a sound-conducting channel adjacent to the MEMS loudspeaker with an acoustic outlet opening and an ASIC electrically connected to the MEMS loudspeaker. The circuit board comprises a first circuit board cavity in which the ASIC is arranged so as to be fully integrated in the circuit board. The circuit board comprises a second circuit board cavity with an opening, said opening being closed by means of the MEMS loudspeaker so that the second circuit board cavity forms at least one part of a cavity of the MEMS loudspeaker. The sound-conducting channel extends obliquely to the z-axis of the MEMS loudspeaker. Moreover, the acoustic outlet opening is arranged on the lateral surface of the loudspeaker arrangement.

Fig. 5