Title (en)

SOUND TRANSDUCER ARRANGEMENT

Title (de)

SCHALLWANDLERANORDNUNG

Title (fr)

ENSEMBLE FORMANT TRANSDUCTEUR ACOUSTIQUE

Publication

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Application

EP 18786303 A 20181012

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Abstract (en)

[origin: WO2019081220A1] The invention relates to a MEMS sound transducer (1), in particular for generating and/or detecting sound waves in the audible wavelength spectrum, comprising: a substrate (2); a diaphragm (3) that is connected to the substrate (2) and can be deflected relative to same along a stroke axis (4a, 4b); at least one piezo-element (5a, 5b) spaced apart from the diaphragm (3) in the direction of the stroke axis (4), which is for generating and/or detecting a deflection of the diaphragm (3), and which has a first end (6a, 6b) connected to the substrate (2) and a second end (7a, 7b) that can be deflected in the direction of the stroke axis (4a, 4b); and a coupling element (8a, 8b) which extends in the direction of the stroke axis (4a, 4b) between the piezo-element (5a, 5b) and the diaphragm (3) and connects the second end (7a, 7b) of the piezo-element (5a, 5b) to the diaphragm (3). In addition, the at least one piezo-element (5a, 5b) and the coupling element (8a, 8b) together form a cantilever (9a, 9b) which is clamped on one side and has a clamped end (10a, 10b) formed by the first end (6a, 6b) of the piezo-element (5a, 5b) and a free end (11a, 11b) formed by the coupling element (8a, 8b). The MEMS sound transducer (1) also comprises multiple cantilevers (9a, 9b). According to the invention, at least two cantilevers (9a, 9b) are arranged behind one another when viewed from above.

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