PIEZOELECTRIC DEVICE

ABSTRACT

A piezoelectric device includes an at least locally thin-walled ceramic substrate (2) and at least one film-type piezoelectric transducer (3) on the substrate. The substrate is locally formed with at least one cavity (4) defined by at least one peripheral wall (2c) and a bottom wall (2a) having a reduced thickness. The piezoelectric transducer is arranged on the outer surface opposite to the bottom wall and includes a first electrode layer, a piezoelectric layer and a second electrode layer which are sequentially laminated with each other. The outer surface of the substrate has relatively thick-walled regions (2d) adjacent to and surrounding said peripheral wall of the cavity. Each thick-walled region is formed with at least one groove (5) extending along the peripheral wall and having a depth which is greater than the thickness of the bottom wall. The groove (5) is arranged so as to permit simultaneous displacements of the bottom wall and the thick-walled region between the cavity and the groove, to thereby cause a volume change of the cavity (4).

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