

## Abstract

A MEMS accelerometer, including: a substrate (100), a movable component (200) and a fixed electrode group (E), wherein a surface of the substrate (100) has an anchoring region (A1); the movable component (200) is connected to the anchoring region (A1) through a supporting beam (B1) and is suspended above the substrate (100), and the movable component (200) includes a first proof mass (M1) and a second proof mass (M2); the first proof mass (M1) has a first hollowed-out region (K1) in the middle, the first hollowed-out region (K1) is I-shaped, and the second proof mass (M2) is located in the first hollowed-out region (K1); and the fixed electrode group (E) includes a first electrode group, and the first electrode group is fixed on the surface of the substrate (100), is located between the substrate (100) and the movable component (200), and forms a Z-axis detection capacitor bank with the first proof mass (M1) and the second proof mass (M2), to detect an acceleration input along a Z axis. The two proof masses of the MEMS accelerometer are disposed at an interval in a Y-axis direction, so that the accelerometer can not only reduce the influence of substrate warping caused by stress, but also reduce zero offset caused by deflection of the proof masses in an initial state.

Fig 1