

Abstract

Film Bulk Acoustic Resonator and Manufacturing Method therefor, and Film Bulk Acoustic Wave Filter

The disclosure provides a film bulk acoustic resonator and a manufacturing method therefor, and a film bulk acoustic wave filter, and relates to the technical field of resonators. The film bulk acoustic resonator includes a substrate, where the substrate is provided with two opposite protective walls protruding out of a surface of the substrate, a cavity is formed between the two protective walls, and an insulating layer is further arranged on one side, away from the cavity, of each protective wall on the substrate; and the film bulk acoustic resonator further includes a transducer stacking structure, where the transducer stacking structure covers the insulating layer, the cavity and the protective walls, and two sides, along a stacking direction, of the transducer stacking structure are in communication with the cavity and the outside respectively. With the cavity formed through the protective walls, the cavity being in communication with the outside, and the cavity formed by releasing corrosive substances to the cavity area from the outside, accurate control over cavity release machining is achieved, a process is simpler, cost is controlled, and a process period is shortened; an area proportion of the protective walls is small, and a chemical mechanical polishing (CMP) requirement is low, so as to advantageously improve a yield; and a structure of the film bulk acoustic resonator is built on the insulating layer, so as to advantageously reduce parasitic capacitance and resistance and improve comprehensive device performance.

Figure 2