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(54) **FILM PIEZOELECTRIC ACOUSTIC WAVE FILTER AND FABRICATION METHOD THEREOF**

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(57) **ABSTRACT**

The present disclosure provides a film piezoelectric acoustic wave filter and a fabrication method. The film piezoelectric acoustic wave filter includes a first substrate; a plurality of acoustic wave resonator units disposed on the first substrate, where each acoustic wave resonator unit includes a piezoelectric induction plate, and a first electrode and a second electrode which are opposite to each other for applying a voltage to the piezoelectric induction plate; and further includes a capping layer on the first substrate, where the capping layer includes a plurality of sub-caps, a sub-cap of the plurality of sub-caps surrounds an acoustic wave resonator unit of the plurality of acoustic wave resonator units to form a first cavity between the acoustic wave resonator unit and the sub-cap, and a separation portion is disposed between adjacent sub-caps to isolate adjacent first cavities.