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(19) **United States**(12) **Patent Application Publication**
WANG(10) **Pub. No.: US 2022/0368309 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **BULK ACOUSTIC WAVE FILTER HAVING
RELEASE HOLE AND FABRICATING
METHOD OF THE SAME**(52) **U.S. Cl.**CPC *H03H 9/54* (2013.01); *H03H 9/13*
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(57)

ABSTRACT

A bulk acoustic wave filter includes: a first bulk acoustic wave resonator including, in an order from bottom to top, a first cavity, a first bottom electrode, a first segment of a piezoelectric layer, and a first top electrode; a second bulk acoustic wave resonator disposed adjacent to the first bulk acoustic wave resonator, and including, in the order from bottom to top, a second cavity, a second bottom electrode, a second segment of the piezoelectric layer, and a second top electrode; a boundary structure surrounding the first cavity and the second cavity, the boundary structure including a boundary portion extending between and separating the first cavity and the second cavity, and the boundary portion being disconnected at a disconnection region; and a first release hole formed in the piezoelectric layer, and overlapping the disconnection region.

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