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**HATAKEYAMA et al.**(10) **Pub. No.: US 2022/0416757 A1**(43) **Pub. Date: Dec. 29, 2022**(54) **ACOUSTIC WAVE DEVICE, FILTER AND MULTIPLEXER**(52) **U.S. Cl.**CPC ..... *H03H 9/02574* (2013.01); *H03H 9/6483* (2013.01); *H03H 9/725* (2013.01)(71) Applicant: **TAIYO YUDEN CO., LTD.**, Tokyo (JP)(72) Inventors: **Kazushige HATAKEYAMA**, Tokyo (JP); **Jyunichi HAMASAKI**, Tokyo (JP)

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**ABSTRACT**(73) Assignee: **TAIYO YUDEN CO., LTD.**, Tokyo (JP)(21) Appl. No.: **17/836,752**(22) Filed: **Jun. 9, 2022**(30) **Foreign Application Priority Data**

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An acoustic wave device includes a first substrate, an acoustic wave element provided on a first surface of the piezoelectric layer, a second substrate, a first metal layer provided on the first surface and conductively connected to the acoustic wave element, a second metal layer provided on a second surface of the second substrate, a third metal layer that connects the first metal layer to the second metal layer, is thicker than the first metal layer and the second metal layer, and contains copper or silver, and a first conductive layer that covers a side surface of the third metal layer, and a third surface of the first metal layer in a region surrounding another region where the third metal layer is bonded to the first metal layer, is thinner than the third metal layer, and contains a component other than copper, silver, and tin as a main component.

