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DAIMON (43) **Pub. Date: Dec. 1, 2022**(54) **ACOUSTIC WAVE DEVICE**(52) **U.S. Cl.**(71) Applicant: **Murata Manufacturing Co., Ltd.**,
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9/02574 (2013.01); **H03H 9/02992** (2013.01)(72) Inventor: **Katsuya DAIMON**, Nagaokakyo-shi
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An acoustic wave device includes a support substrate, a piezoelectric film, and an IDT electrode. When a wavelength defined by an electrode finger pitch of the IDT electrode is λ , a thickness of the piezoelectric film is about 1λ or less. The piezoelectric film has crystal axes. The support substrate includes first and second silicon layers. A plane orientation of the first and second silicon layers is (100), (110), or (111). When angles α_1 and β_2 are defined between the plane orientations of the first and second silicon layers and the crystal axes, each of the angles α_1 and α_2 is one of three types of angles of an angle α_{100} , an angle α_{110} , and an angle α_{111} . A type of the angle α_1 is different from a type of the angle α_2 and/or a value of the angle α_1 is different from a value of the angle α_2 .

