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**Caron**(10) **Pub. No.: US 2022/0416758 A1**(43) **Pub. Date: Dec. 29, 2022**(54) **ACOUSTIC WAVE RESONATORS AND  
RADIO FREQUENCY ELEMENTS WITH  
ISOLATION**(71) Applicant: **Skyworks Solutions, Inc.**, Irvine, CA  
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(57)

**ABSTRACT**

Embodiments of this disclosure relate to reducing coupling between acoustic wave resonators. An isolation region of a substrate can be located between acoustic wave resonators. The isolation region can reduce capacitive coupling through the substrate between the acoustic wave resonators. In certain embodiments, the isolation region can be located between acoustic wave resonators of different filters to thereby increase isolation between the filters.

