

ABSTRACT

Embodiments of the present application provide a wafer level surface acoustic wave filter and a package method, the surface acoustic wave filter includes a wafer, an electrode layer, a supporting wall and a cover plate; wherein, the wafer includes a substrate layer and a piezoelectric thin film layer combined together by wafer bonding, the electrode layer is arranged on a surface of the piezoelectric thin film layer, the supporting wall surrounds between the piezoelectric thin film layer and the cover plate to form a sealed cavity; and the cover plate includes at least a first material layer, which uses the same material as the substrate layer. In the embodiments of the present application, through the use of wafer level package, the size of the surface acoustic wave filter can be effectively reduced; the substrate layer and the piezoelectric thin film layer are combined together by wafer bonding, the performance of the surface acoustic wave filter based on this type of wafer is less affected by temperature; and the cover plate uses the same or similar material as the substrate layer, thereby enhancing the reliability and temperature stability of a device.

Figure 2