

Abstract

Bulk acoustic wave resonator and bulk acoustic wave filter

This present disclosure provides a bulk acoustic wave resonator and a bulk acoustic wave filter, and relates to the technical field of filters. A substrate and a piezoelectric stack structure arranged on the substrate are included. The piezoelectric stack structure includes a bottom electrode, a piezoelectric material layer and a top electrode which are sequentially stacked, and an outline of an orthographic projection of the top electrode on the substrate includes at least one Bezier curve of order greater than or equal to 2. Accordingly, a length of a transverse propagation path of transverse acoustic waves can be increased, thereby increasing losses of the transverse acoustic waves during propagation, and reducing influences of the transverse acoustic waves on a transverse parasitic mode caused by the bulk acoustic wave resonator, and namely, an effect of restraining the transverse parasitic mode is improved by the bulk acoustic wave resonator, thereby improving performance of the bulk acoustic wave filter.

Figure 4