ABSTRACT

Cross-coupling filter elements in resonating structures having multiple harmonic resonance bulk waves

The elementary filter of the HBAR type comprises two resonators (20, 22) of the HBAR type which are each formed by a transducer (8) and a substrate (12) which are coupled in a suitable manner by electroacoustic waves.

The first resonator (20), the second resonator (22) and the coupling element (28) by means of evanescent waves comprise the same monobloc acoustic substrate (12) which is arranged facing and coupled to the piezoelectric transducer (8) by waves having the same longitudinal or transverse vibration mode through the same reference electrode (10).

Figure 1.