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(54) BAW RESONATOR ARRANGEMENT WITH RESONATORS HAVING DIFFERENT RESONANCE FREQUENCIES AND MANUFACTURING METHOD

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## (57)ABSTRACT

In at least one embodiment, the electric component comprises a first BAW-resonator (1), a second BAW-resonator (2) electrically connected to the first BAW-resonator and a carrier substrate (3) with a top side (30) on which the BAW-resonators are arranged. The first and the second BAW-resonator each comprise a bottom electrode (11,21) and a top electrode (12,22). The bottom electrodes are in each case located between the carrier substrate and the respective top electrode. A first piezoelectric layer (13) is arranged between the top electrode and the bottom electrode of the first BAW-resonator and laterally protrudes from the first BAW-resonator. The second BAW-resonator is mounted on the first piezoelectric layer in a region laterally next to the first BAW-resonator and comprises a second piezoelectric layer (23) between its top electrode and its bottom electrode. The two piezoelectric layers may have different thickness to realize resonators with different resonance frequencies on the same die.

