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(54) **TRANSDUCER STRUCTURE FOR AN ACOUSTIC WAVE DEVICE**

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(57) **ABSTRACT**

A transducer structure for a surface acoustic device comprises a composite substrate comprising a piezoelectric layer, a pair of inter-digitated comb electrodes, comprising a plurality of electrode means with a pitch p satisfying the Bragg condition, wherein the inter-digitated comb electrodes are embedded in the piezoelectric layer such that, in use, the excitation of a wave propagating mode in the volume of the electrode means is taking place and is the predominant propagating mode of the structure. The present disclosure relates also to an acoustic wave device comprising at least one transducer structure as described above and to a method for fabricating the transducer structure. The present disclosure relates also to the use of the frequency of the bulk wave propagating in the electrode means of the transducer structure in an acoustic wave device to generate contribution at high frequency, in particular, above 3 GHz.