STUDIES OF ELECTRO-ACOUSTIC VIBRATIONS IN $LiNBO_3$ PLATE-RESONATORS

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S u m m a r y

The variational formulation of the problem concerning three-dimensional linear electro-acoustic vibrations that are electrically induced in a piezoelectric crystal resonator belonging to an arbitrary crystallographic class and cut is presented. The discrepancies between the experimentally measured and theoretical values of the eigenfrequencies for an extensional vibration mode of 128°-rotated Y-cut $LiNbO_3$ rectangular plates have been shown to fall within a few percent. For that vibration mode, the dependences of the eigenfrequencies on the plate's linear dimensions (the frequency plans) have been calculated for several lower overtones.