Possibility of Resonance in Spatial Movement of Electrons in GaAs/Ga_{1-x} Al_xAs-type Classic Super lattices

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ABSTRACT:

The question of distribution of electrons in GaAs/$Ga_{1-x}Al_x$As –type materials is studied and the conditions upon which additional resonance frequency can be integrated in to the electron system through the periodic spatial movement are investigated. The existence of this frequency relates to the electrons that move through the lower resistance areas of super lattices and are reflected from the potential barrier walls. In particular, if the active layer is placed within the interval of d ~ 0.1 - 1μm, then the resonance frequency would appear in the sub millimeter area.

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