

QUASISTATIONARY ELECTRON
STATES AND THE CONDUCTIVITY
OF A SYMMETRIC THREE-BARRIER
RESONANT TUNNEL STRUCTURE

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S u m m a r y

The evolution of spectral parameters (resonance energies and widths) of quasistationary electron states and its dependence on geometrical parameters of a nanosystem have been studied in the framework of the rectangular and δ -like potential barrier models for a symmetric three-barrier resonant tunnel structure (TBRTS). The conductivity of symmetric TBRTS has been determined in the low-electric-field approximation. The maximal magnitudes of conductivity in the model of δ -like potential barriers were found to be ten times as low as that in a more realistic model of rectangular potentials, due to the neglect of the difference between electron effective masses in the wells and barriers.