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Photoelectrical properties of structures with a high-resistance layer on the recristallized Si base
S. Khudaverdyan, A. Kocharyan 1

The paper considers the functional potentiality of structures with a high-resistance thin layer between two opposite directed potential barriers and the photo-electric and electro-physical processes in them. The linear character of the dependence of the space charge territory (SCT) width of both barriers on the external bias voltage is revealed. Layers of polycrystalline silicon, recrystallized by a laser beam, were used as initial material for the receiver structures. In similar structures the inversion of the spectral photocurrent sign with the section of the linear dependence of the inversion point on the external voltage was observed. The results of the research are very promising for creating selective sensitive solid-state photoreceivers with spectrophotometrical properties.

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