

Experimental study of NBvN barrier structures based on MBE *n*-HgCdTe for MWIR and LWIR photodetectors

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This work is devoted to an experimental study of the electrical and photoelectric characteristics of barrier photosensitive structures in the NBvN configuration based on n-HgCdTe. Seven different types of photosensitive structures for MWIR and LWIR infrared radiation ranges grown by molecular beam epitaxy have been studied. The current-voltage characteristics were measured both in the dark and under the illumination. The parameters of the NBvN structure, which realizes the maximum values of the photocurrent and the minimum values of dark currents in the operating range of bias voltages V for elevated operating temperatures, are determined.

Keywords: current-voltage characteristic, admittance, impedance, MCT, HgCdTe, molecular beam epitaxy, barrier structure, nBn, NBvN.

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