



On features of potential distribution in avalanche photodiodes with deeply buried pixels

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Abstract

[en] The shape of potential distribution in micro-pixel avalanche photodiodes (MAPD) with deeply buried pixels is investigated. It was found that the electrons created in the photosensitive part of the device are collected to the corresponding n-pixel and multiplied in the avalanche region. At the same time the holes generated in the semiconductor substrate passes through the gaps between the n-pixels and therefore they are not amplified. This results in improvement the both signal/noise ratio and radiation resistance of the device

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