

A micropixel avalanche phototransistor for time of flight measurements

This paper presents the results of a study of the new micropixel avalanche phototransistor (MAPT) on the basis of silicon. MAPT is a modification of well-known silicon photomultipliers (SiPMs) and differs from them in that each photosensitive pixel MAPT operating in Geiger mode further comprises an individual transistor operating in binary mode. This provides high amplitude of single photoelectron signal with significantly shorter duration. The obtained results are compared with the parameters known SiPMs.

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