OPTICA APPLICATA online
open access
A quarterly of the Institute of Physics, Wroclaw University of Technology
Wroclaw University of Technology
INSTITUTE OF PHYSICS

Optica Applicata 2009(Vol.39), No.1, pp. 161-167

Investigations of photoresponse signals of LT-GaAs photodetector

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Keywords

electro-optic sampling, ultrafast photodetectors, low-temperature-grown GaAs (LT-GaAs)

Abstract

In this paper, we demonstrate our electro-optic sampling system constructed for characterization of high-speed photodetectors based on low-temperature-grown GaAs (LT-GaAs). Changes in the shape of electrical signals for different optical powers, voltage biases and positions of a probe beam have been shown. The obtained photoresponse of the investigated photodetector exhibits 0.9 ps (full width at half maximum).