

**EFFECT ON THE GAAS PARAMETERS OF A PHOTOCONDUCTING SEMICONDUCTOR
SWITCH WITH A SILICON OXIDE LAYER WHEN SWITCHED BY 355-NM LASER
RADIATION***

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The influence of the oxide layer of silicon deposited on the front side of a GaAs photoconductive semiconductor switch (PCSS) on its resistance in on-state has been discovered. The PCSS was switched by a laser pulse with a duration 5 ns and a wavelength of 355 nm from the back side of the PCSS. The effect is to reduce the required electric field for breakdown in the nonlinear mode and increase the resistance in the on-state. With an increase in the electric field applied to the PCSS with an oxide layer, an increase in resistance to a threshold value is observed, after which there is a sharp decrease to a value comparable to the resistances without an oxide layer.

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