MILLIMETER AND TERAHERTZ RADIATION DETECTOR

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The aim of this work is an analytical review of terahertz and millimeter-wave radiation receivers. Classification of terahertz radiation receivers and their comparative characteristics are made. Various aspects of the application of terahertz radiation, as well as the main types and types of receivers of this radiation, are considered in this paper. Photon and thermal receivers, terahertz receivers based on Golay cells, and terahertz-to-infrared convectors are analyzed. As a result, a method for increasing the sensitivity of electromagnetic radiation receivers based on the application of the photon jet effect is proposed.

Keywords: terahertz range, photonics, sensitivity, thermal detectors, detectors based on the effect of photoconductivity, Schottky diodes, converters, photon jet

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Received 19.11.2020