

# Analysis of CdTe Detectors Using I-V Characteristics

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**Abstract.** Cadmium telluride (CdTe) is a compound semiconductor with a wide band gap of 1.44 eV and a cubic zincblende crystal structure. These properties make CdTe an attractive material for X-ray and gamma ray detectors, especially for applications that require high detection efficiency, good energy resolution, and room temperature operation. In this paper, CdTe detectors based on a metal-semiconductor-metal structure with In and Ti Schottky contacts and Ohmic Pt contact were studied. Current-voltage characteristics in the reverse and forward directions of prepared detectors were measured. The average dark current at bias 70 V was 93 nA for CdTe detectors with Ohmic contact and the dark current at bias 700 V was in interval from 5 to 77 nA for CdTe detectors with Schottky contact.