

# The Study of 4H-SiC Alpha Particle Detectors with Different Schottky Contact Metallization

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**Abstract.** We fabricated and characterized 4H-SiC Schottky diodes as a spectrometric detector of alpha particles. Two types of blocking contacts based on Ni/Au and Pt/Au were used. The total thickness of prepared blocking contacts was about 15 nm to minimize the influence on alpha particles energy resolution. Current-voltage characteristics of two types of detectors were measured at room temperature and compared. As a source of alpha particles we utilized triple radioisotope of <sup>239</sup>Pu <sup>241</sup>Am <sup>244</sup>Cm. Detected alpha particles had energies from 5.1 MeV up to 5.8 MeV. The spectrometric performance of detectors with two types of blocking contacts were evaluated and compared.