

# Electrical Characterization of Irradiated Silicon Diodes at Different Temperature

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For CV/IV characterization of irradiated silicon detectors a standard temperature of 20°C and frequency of 10 kHz are adopted. However, at high irradiation level it is necessary to perform measurements at lower temperature. The obtained values  $V_{fd}$  and  $I_d$  depend on the temperature and frequency, as well as on material and radiation type and the fluence.

To study this dependence CV/IV measurements in the temperature range from -10°C to 20°C and in the frequency range from 100 Hz to 100 kHz, as well as charge collection measurements were performed for epitaxial and MCz silicon diodes after irradiation with 24 GeV/c protons and reactor neutrons of different fluences.

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