

Impact of bulk generation current on operation of floating guard rings in silicon segmented detectors

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The physical model of voltage terminating structure with floating guards in silicon segmented detectors is developed. The model combines earlier investigation of potential distribution between the floating guard rings which are based on electrostatic approach, and supposed new approach of the generation current impact on the potential distribution between the rings. The new aspects are based on the recent experimental studies of potential distribution and intergap characteristics in Si segmented detectors elaborated for high energy physics experiments.

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