

Latest Developments on Trench-Isolated LGADs

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Trench-Isolated LGAD (TI-LGAD) is a novel LGAD design where the standard inter-pixel isolating structure has been replaced with a trench, physically etched in the silicon and filled with a dielectric material. The first TI-LGAD samples with 250 μm pitch have been produced at FBK and characterized with I-Vs and C-Vs analysis. In this contribution, we will discuss the technology design and the main results from the electrical characterization. We will present also the latest updates on the “RD50 TI-LGAD” project, an R&D project funded by RD50 and aimed at producing pixelated detectors, based on the TI-LGAD technology, with pixel and strips dimensions down to 50 μm .

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