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Electrical characterization of TI-LGADs production under AIDA-INNOVA

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FBK has produced the Trench-Isolated LGADs (TI-LGADs) to study the effect of Carbon on breakdown and demonstrate the scalability of the technology for larger sensors. TI-LGADs have the potential to significantly reduce the no-gain region as compared to the standard LGAD technology. This contribution presents the electrical characterization of TI-LGADs produced under AIDA-INNOVA. The devices used for this study consist of 169×168 , 32×32 , 5×5 , and 2×1 pixel sensors, and the measurements include the IV characteristics and yield. The results of this study provide a comparison between different layout designs and show how the number and width of trenches affect the breakdown of the sensors.

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