

# Development of the fast timing driver board for SiPM

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We investigated a fast time -resolved SiPM driver board that could be used in the CEPC-TOF and other large experimental facilities with high time resolution. General the commercial SiPM driver boards are only available for certain models of SiPM. And this kind of driver board is unique for single-channel testing in the laboratory. This obviously does not apply to batch testing in large scientific engineering. Therefore, A new type of SiPM driver circuit has been developed which can realize the multi-channel test. In addition, compared with the commercial driver board, this type of new SiPM driver plate developed in this paper have achieved simultaneously the functions of voltage regulation, temperature compensation and multi-channel cascade readout of SiPM on a smaller volume, and also better time resolution of the SiPM.

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