

Investigations of Resolution Limitations in Receivers Operating in a MTCA.4 Environment

Crates and racks are usually a rough environment for sensitive electronics. In this contribution we focus on evaluating the resolution limitations of single and multiple receiver sections used for LLRF applications. All the measurements are performed inside various types of MTCA.4 crates, which are located inside a rack in a laboratory or in a typical accelerator environment. The investigation is carried out over a frequency range from 100 Hz up to the first Nyquist zone. Measurement methods and results are presented. A general approach for simulating EMI related disturbances inside crates is presented.

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