

G-RAD Workshop - Grenoble Radiation Testing of semiconductor devices and systems



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Testing complex and highly-integrated RFIC devices under radiation conditions

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According to Moore's law, technologies sizes decreases rapidly and allows the integration of multiple functions of integrated circuits into a single component. State-of-the-art radio frequency integrated circuits (RFIC), for instance the AD9361, integrates analog-to-digital converters , digital-to-analog converters , synthesizers, filters, amplifiers, mixers as well as several logics and interfaces. Usually, each individual function needs to be tested discretely as for single devices, which is impossible in case of RFICs, since probing the die is not feasible. In this talk, the developed test methodology, setup and the test results of various test campaigns for an RFIC are presented.

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