

Single Event Effects Characterization of the AD8151 Digital Cross Point Switch

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We have characterized the AD8151 Cross Point Switch for Single Event Effects (SEEs) and Total Ionizing Dose (TID). The AD8151 can switch signals operating at 3.2 Gb/s between any of 33 inputs to any of 17 outputs. SEEs manifest themselves as either single bit upsets, strings of upsets or loss of synchronization. The SEE cross section was measured as a function of number of paths through the switch being utilized, signal frequency and ion LET. The parts were also sensitive to protons and continued to operate to high TIDs.