

LIST OF IDENTIFIED PROBLEMS

1. Radiation hardness of DACs.

The DACs circuits implemented in the ABCD are expected to be sensitive to radiation effects unless during irradiation all the bits are set to 1. It is therefore recommended that during the radiation tests which are not focused on the DAC radiation hardness the DACs are set with all bits to 1.

2. Inverted polarity of the calibration strobe.

When using the internal calibration circuit it is required that the LSB of the delay register is always set to 1. Due to a bug in the delay circuit this causes that the polarity of the calibration strobe is inverted compared to the required one. As a result the calibration signal of right polarity corresponds to the second edge of the calibration signal. The baseline at the shaper output is therefore disturbed by the signal of opposite polarity injected to the front-end by the first edge of the calibration strobe. This will introduce some errors to the measurements of gain when using the internal calibration circuit. In order to make accurate gain and linearity measurements an external calibration pulser should be used. This problem applies to the n-side and the p-side polarity chips.