



Fermi National Accelerator Laboratory

Mike Utes

Engineering Note

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Project: D0 Tracking Electronics

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Subject: Procedure for finding power plane shorts on SVX Sequencers

All shorts found to date have been associated with the card edge where the voltage and ground traces are exposed. The following procedure has been successful in finding these shorts.

- 1) Set up current-regulated bench supply for 2 volt, 5 amp operation. Clip-lead the supply to the +5V Transorb D1 and apply voltage.
- 2) Measure voltage at various locations of the board. Pins 10 and 20 of the ABT541s are good measurement points. The closest measurement point to the short will be a few millivolts lower than other measurement points.
- 3) Remove power and inspect the card edge near this point for small solder deposits. Scrape off and remeasure. Measurement should now be about 56 ohms.
- 4) Similar procedure can be done to the -5.2 volt plane at D2 which should read >20k ohm when no shorts exist.
- 5) Carefully wipe off edge of board, remeasure, and coat with insulating paint.