

Measured the reference voltages after the opamplifier at the resistor and the output from the DAC was measured at the capacitor at the input to the opamplifier. The purpose was to investigate the correlation in phase and amplitude between DAC and opamplifier outputs.

In these measurements the biascontrol was off, i.e. the ADC was switched off, and the preamplifier (PCA16) was shutdown. The SRU was off so no clocks to the SALTRO was active. This was done to keep the temperature low and avoid any clocks to disturb the measurement.

At capacitor and resistors

RefP	Capacitor C1	Resistor R41	Expected Level: 1.25V	page 4
InCM	Capacitor C2	Resistor R42	Expected Level: 0.75V	page 5
CmOut	Capacitor C79	Resistor R44	Expected Level: 0.75V	page 6
RefN:	Capacitor C3	Resistor R43	Expected Level: 0.25V	page 7

The placements of the components can be found in page 2 (component placement) and page 3 (picture of mcm).

The phase and amplitudes are the same. The output from the opamplifier follow the input.

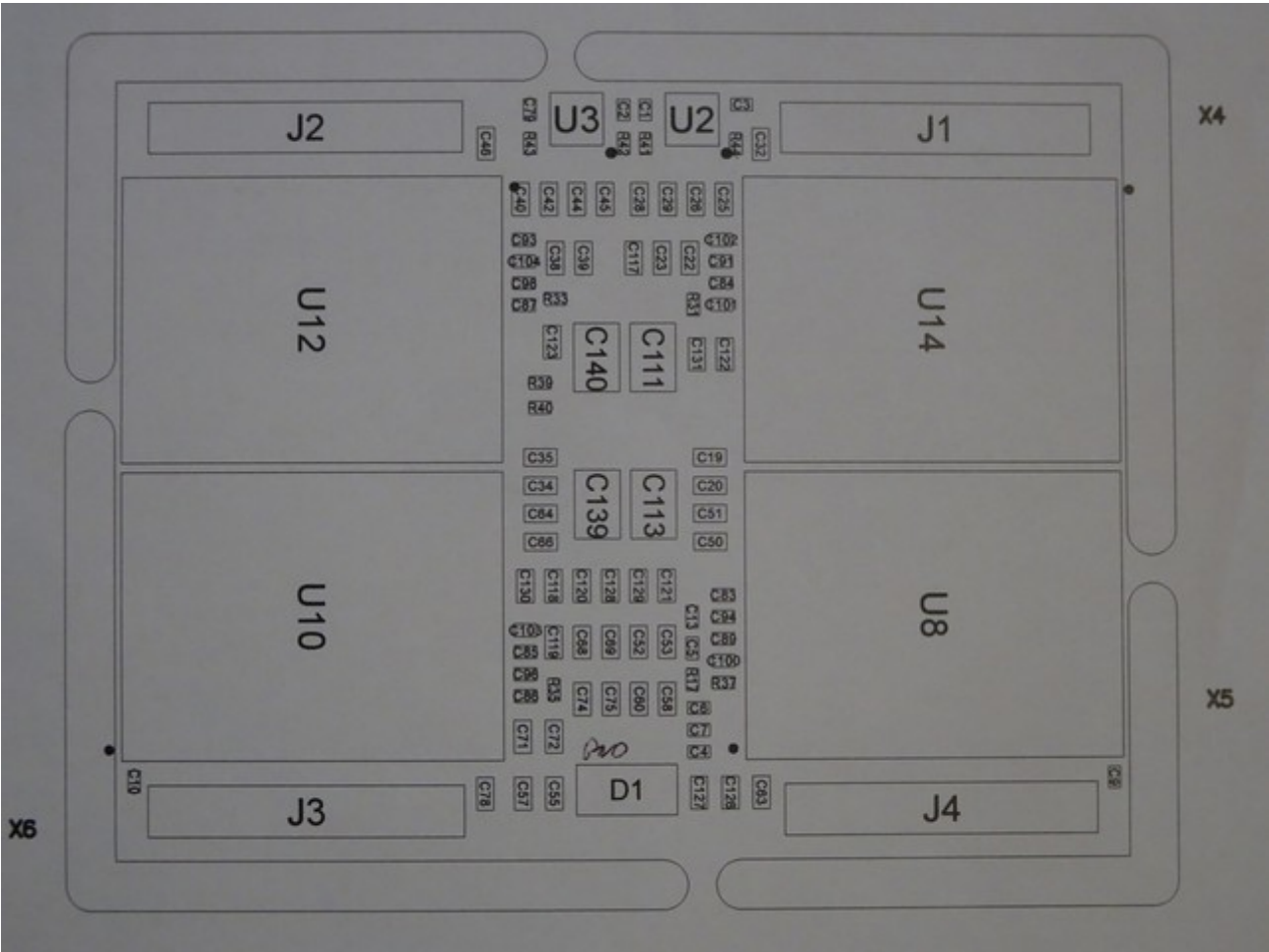
Overlaid is another oscillation on the output from the opamplifier. This can be due to a propagation delay in the opamplifier or that the resistor on the output of opamplifier is too small.

The main oscillation on the DAC output can be due to the capacitive load of at least 1nF on the output, which we did not have on the previous version where the ground was missing at the capacitor.

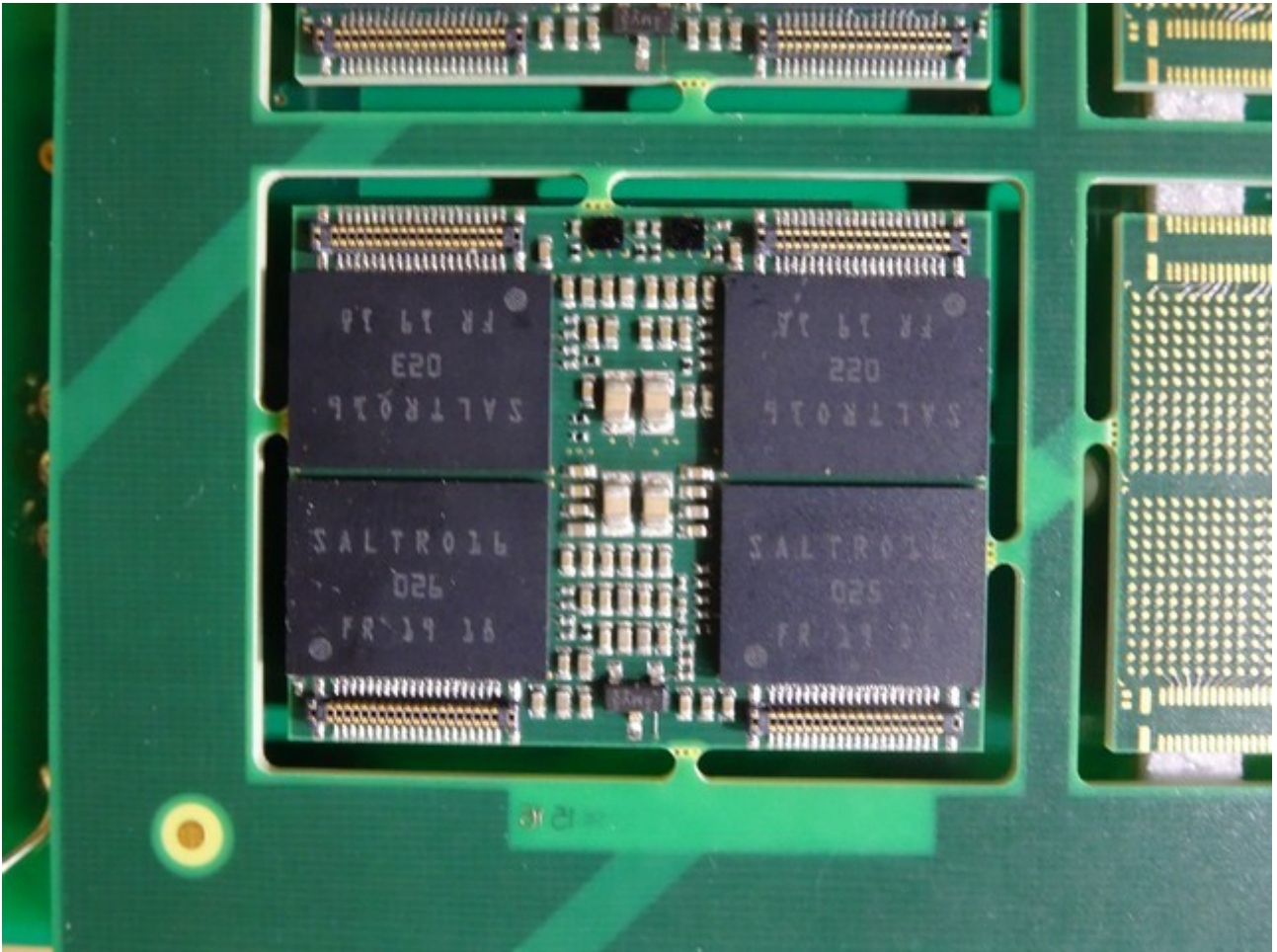
Proposed actions:

1. Remove the capacitor on the DAC output.
2. If the other oscillation on the opamplifier is still present replace the resistor with a larger value.

Component placement



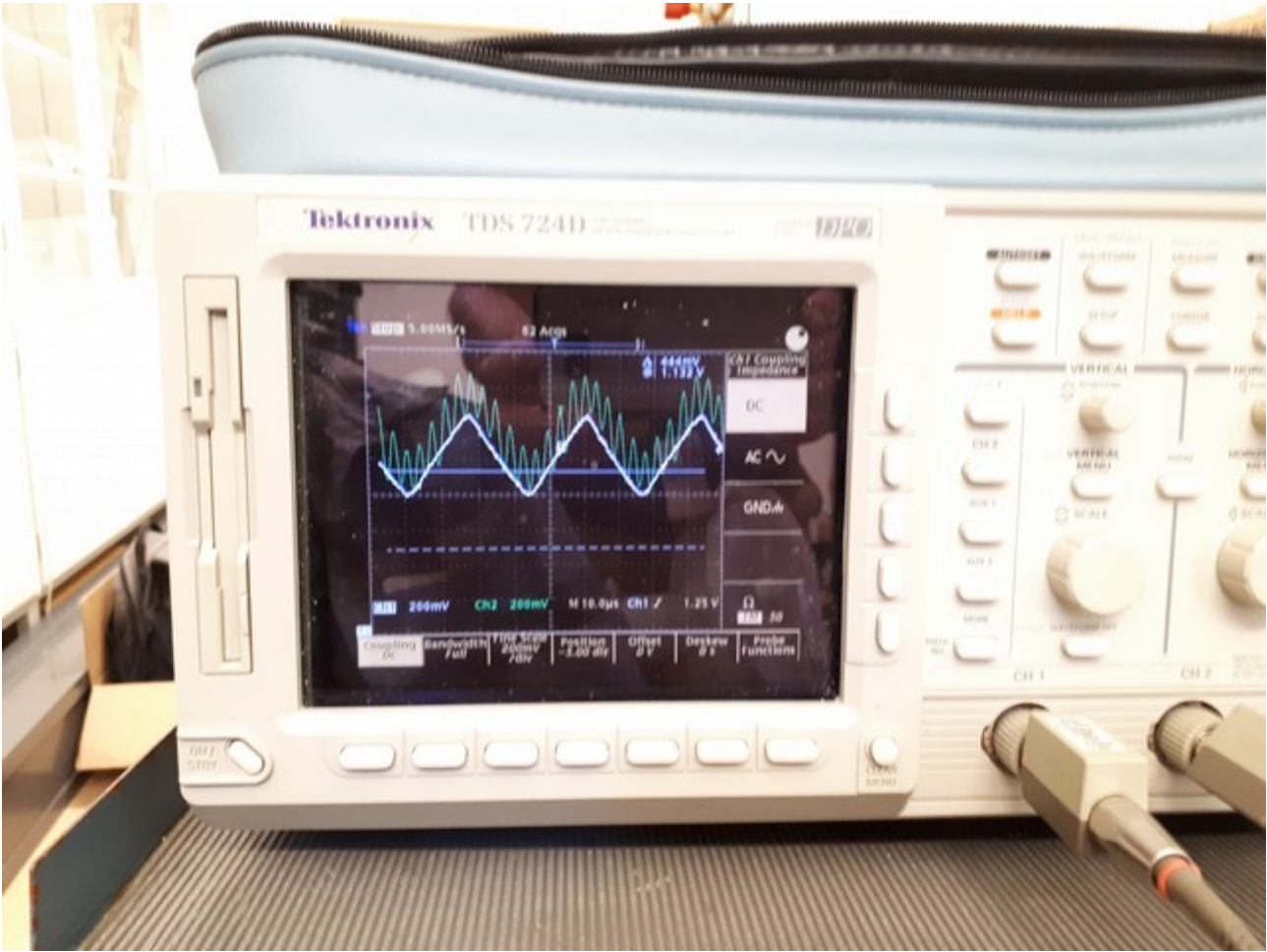
Picture of mcm



RefP

Capacitor C1 Resistor R41

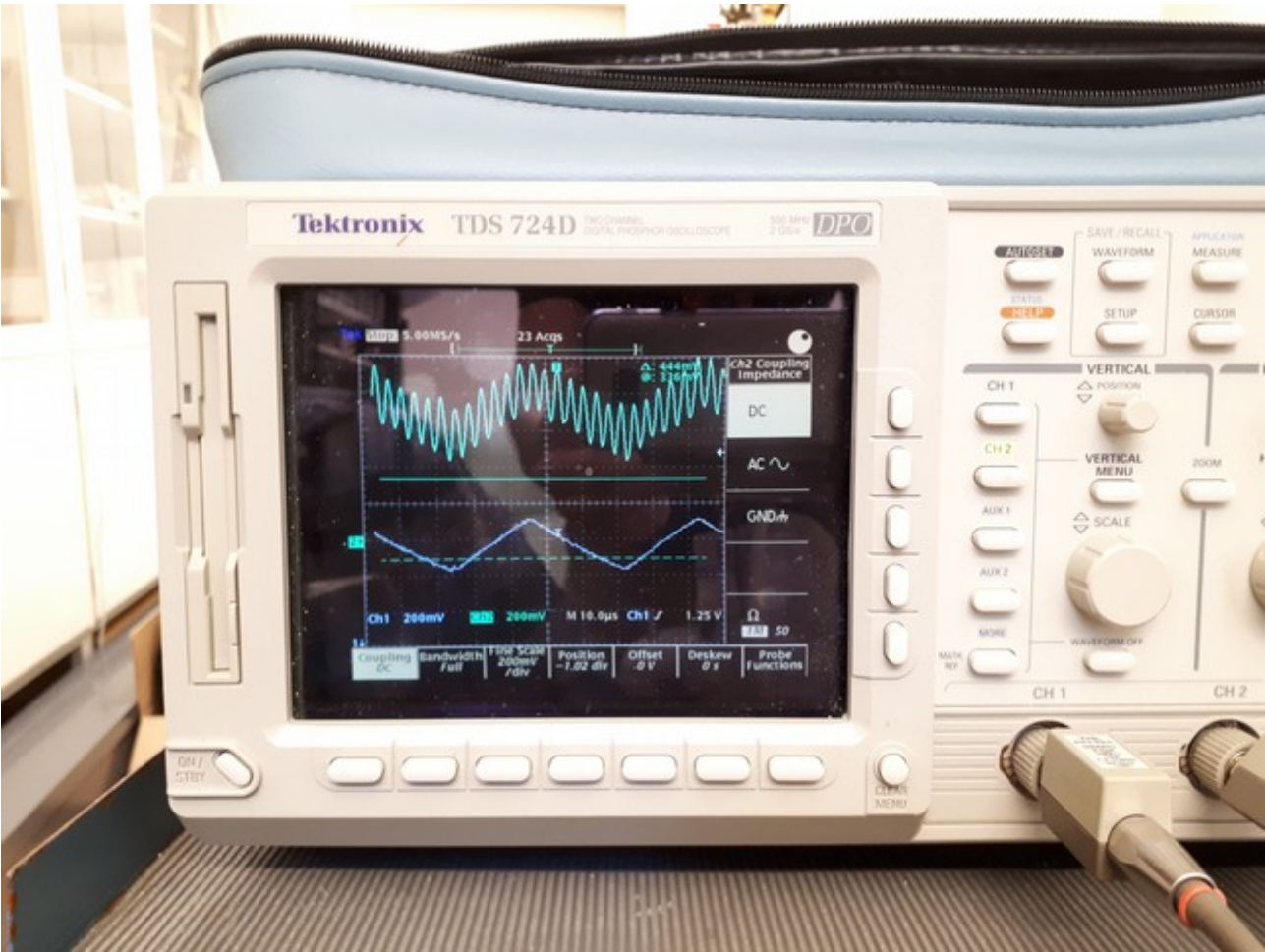
Expected Level: 1.25V



InCM

Capacitor C2 Resistor R42

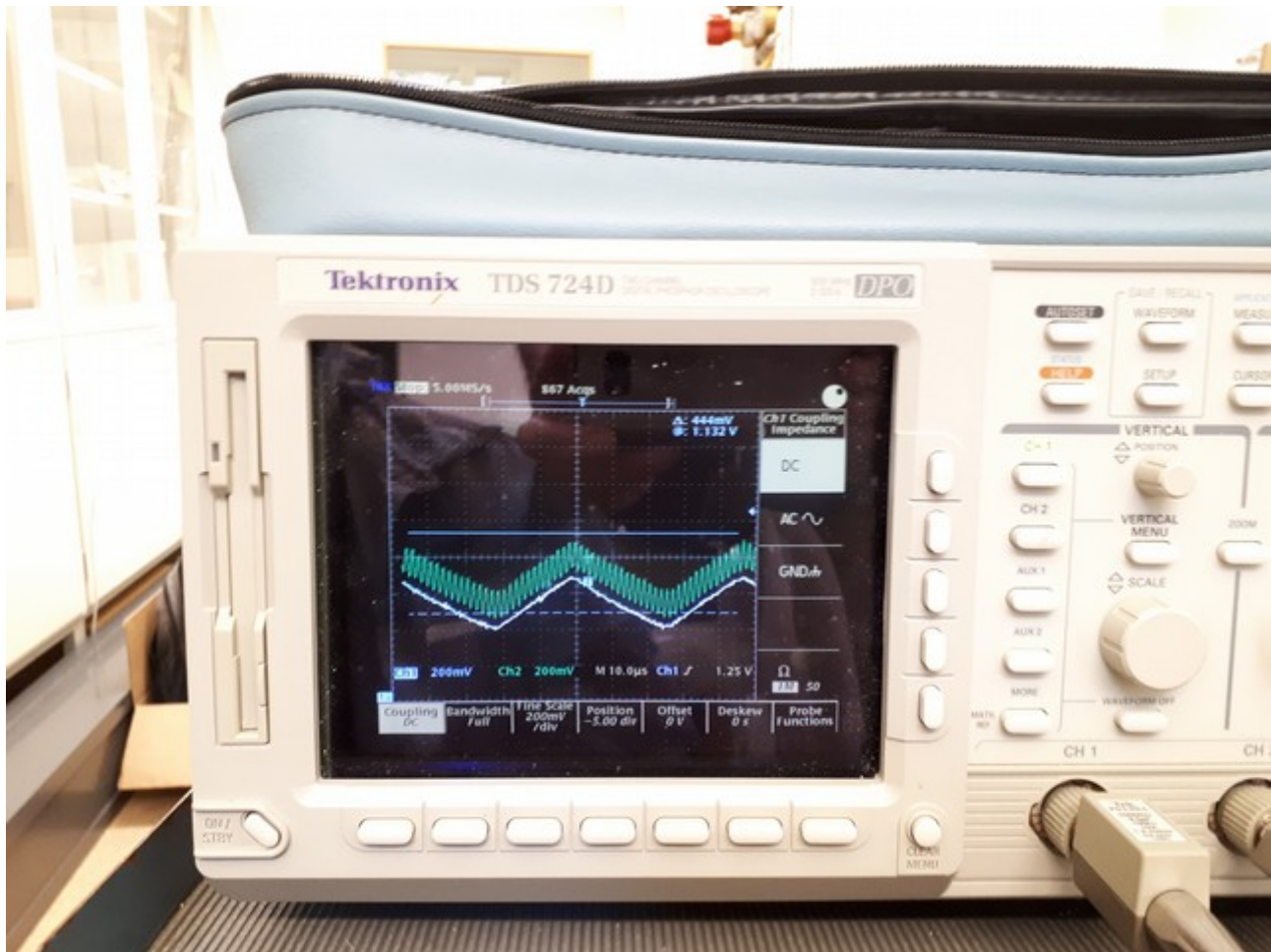
Expected Level: 0.75V



CmOut

Capacitor C79 Resistor R44

Expected Level: 0.75V



RefN: Capacitor C3 Resistor R43 Expected Level: 0.25V

