

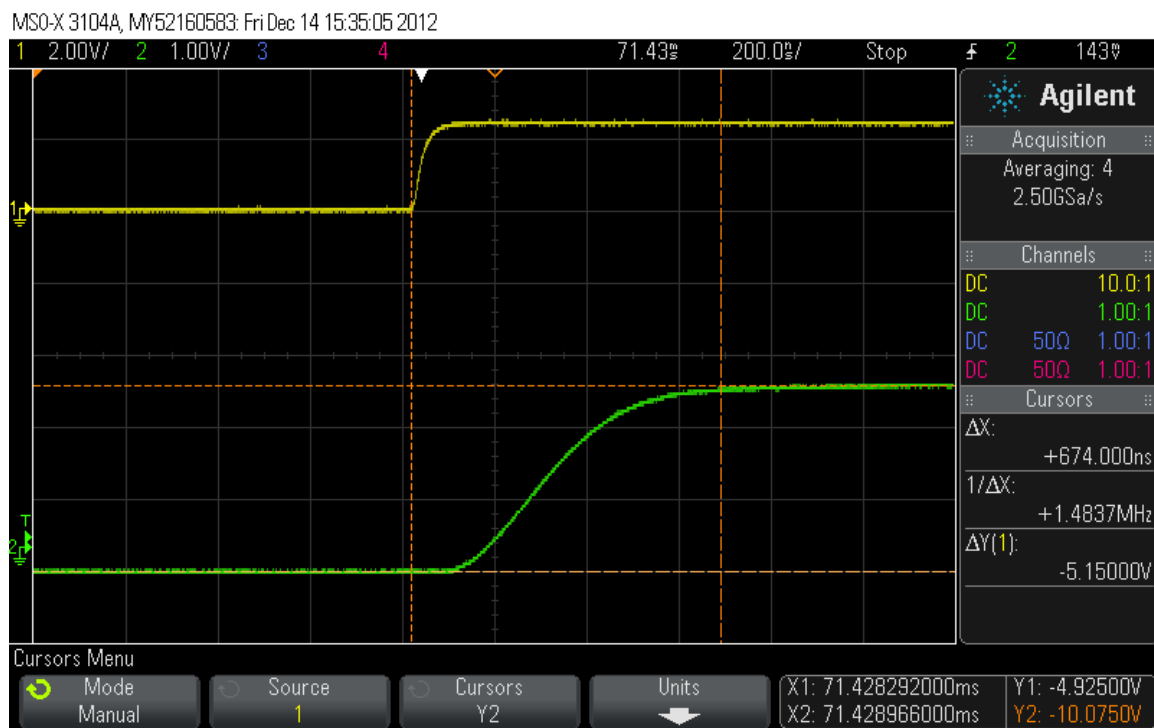
## Test results with the prototype Bergoz ACCT

(H. Hassanzadegan, 14 Dec. 2012)

### Test setup

The generator port of the oscilloscope was used to generate a current going through the ACCT. The output current went through a 47 Ohm resistor, passed through the ACCT and then returned to the ground contact of the generator port. CH1 of the oscilloscope measured the voltage across the 47 Ohm resistor (proportional to the ACCT current) and CH2 measured the output voltage of the ACCT electronics. Both CH1 and CH2 were set to high impedance.

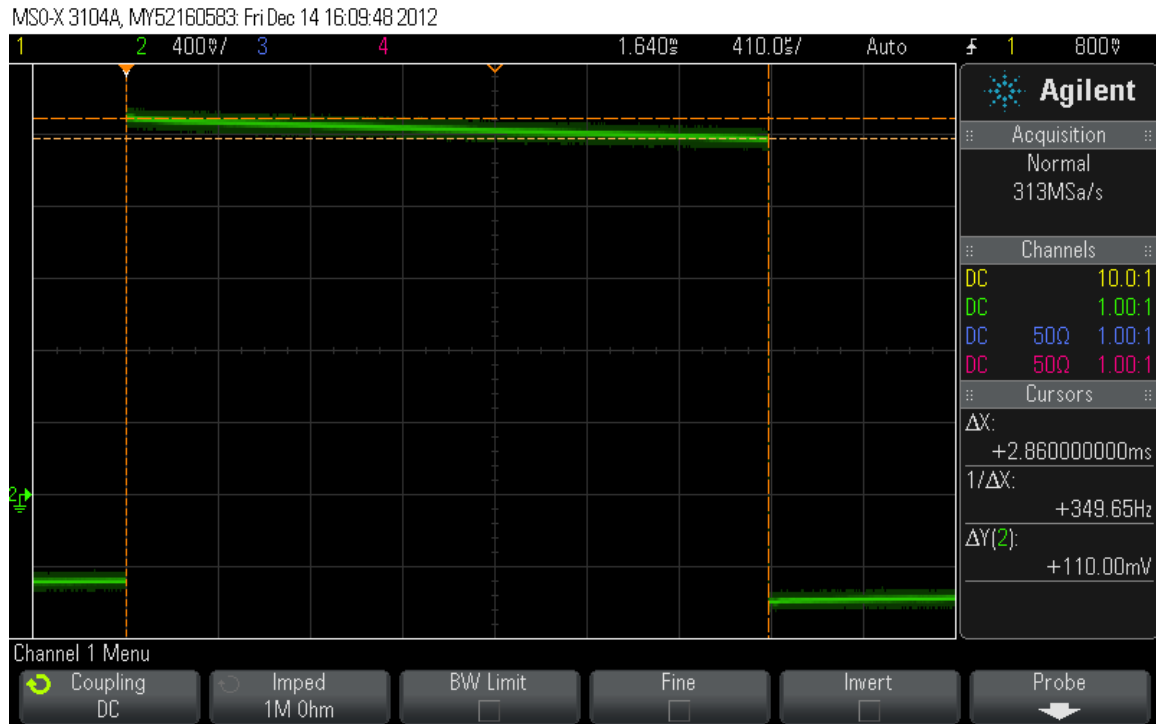
### Response time



the total response time from the start of the current pulse until the output voltage settle was measured at 674 ns.

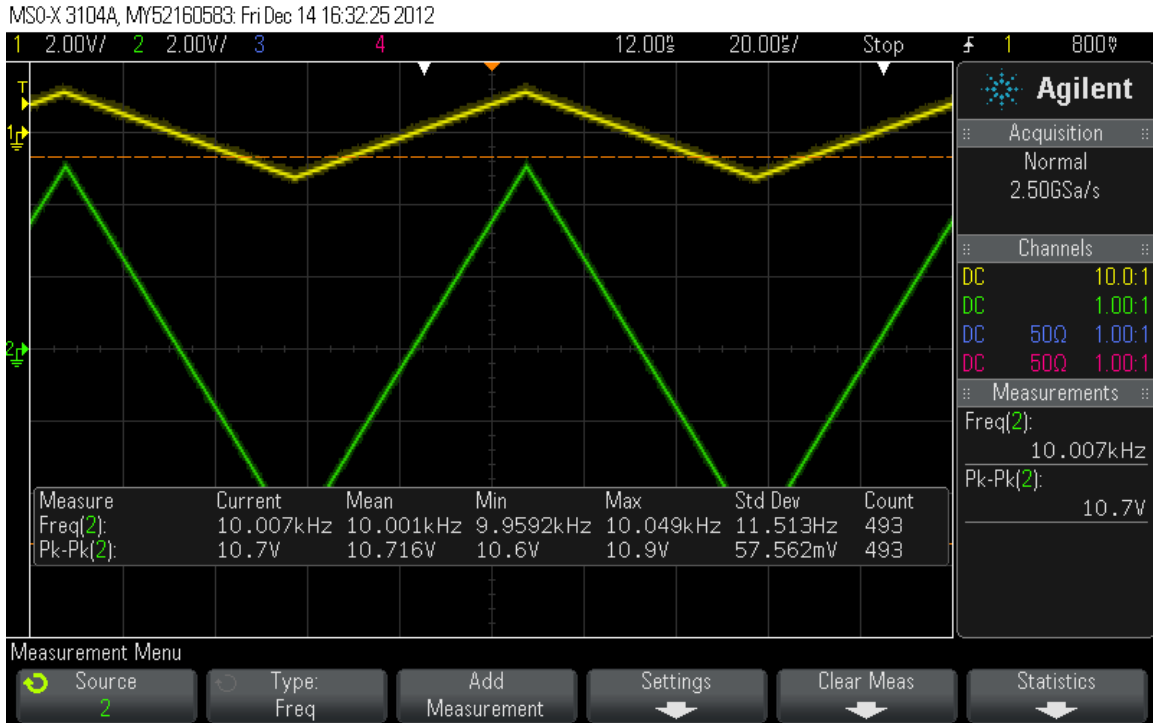
## Droop

The ACCT droop for a 2.86 ms pulse was measured at 4.2%.



## Linearity

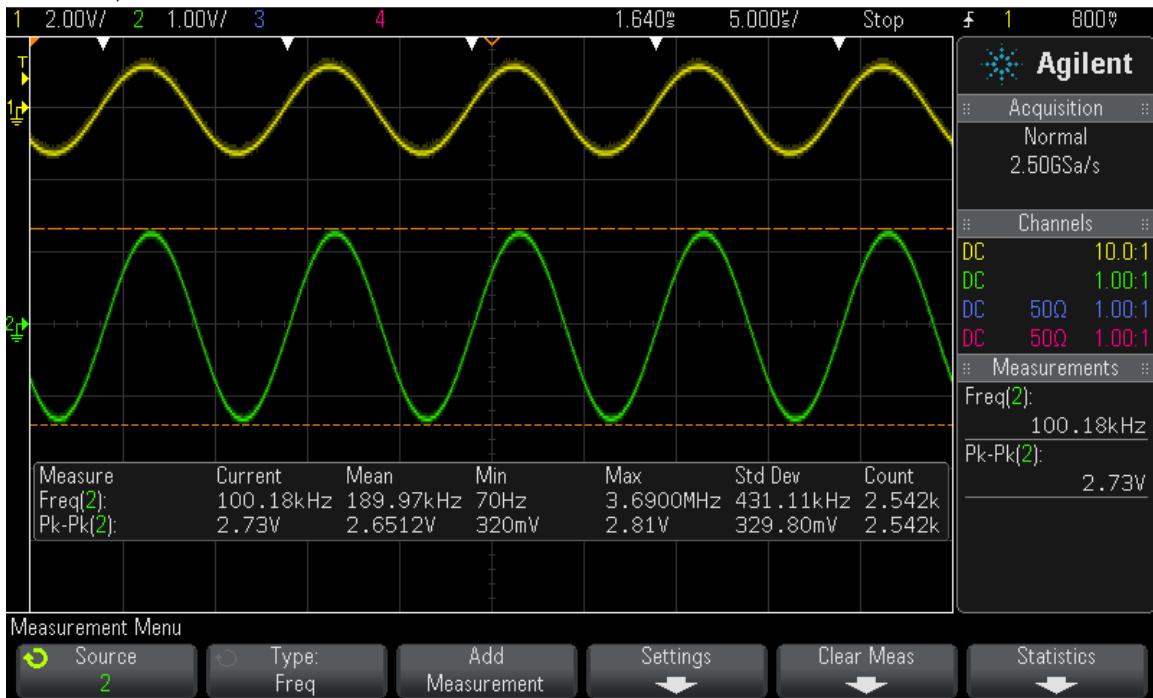
The ACCT was operated with +/-50 mA of input current generating an output voltage of +/- 5V (i.e. half of its dynamic range). The response looked good and no issues were seen with linearity.



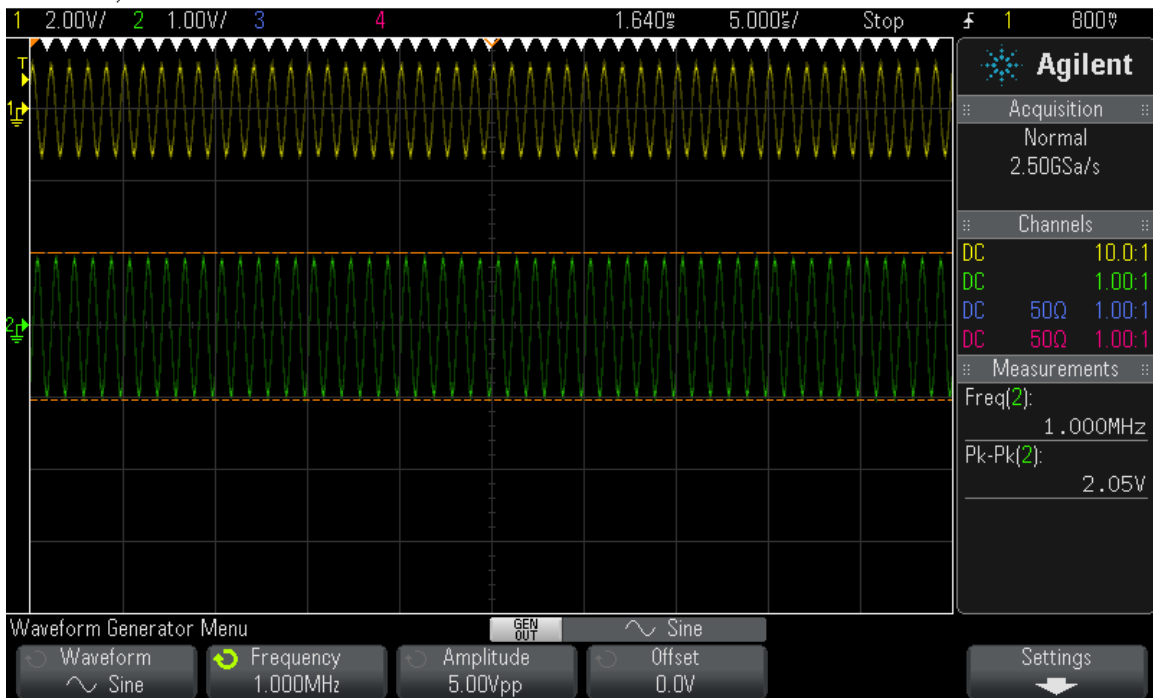
## Bandwidth

The current waveform was set to sinusoidal with frequencies equal to 100 kHz, 1 MHz and 3 MHz. The output voltage with  $f=1$  MHz was 76% of the voltage with  $f=100$  kHz, which is consistent with the specifications (i.e. B.W. = 1 MHz). With  $f=3$  MHz, the output voltage was 18% in comparison with  $f=100$  kHz.

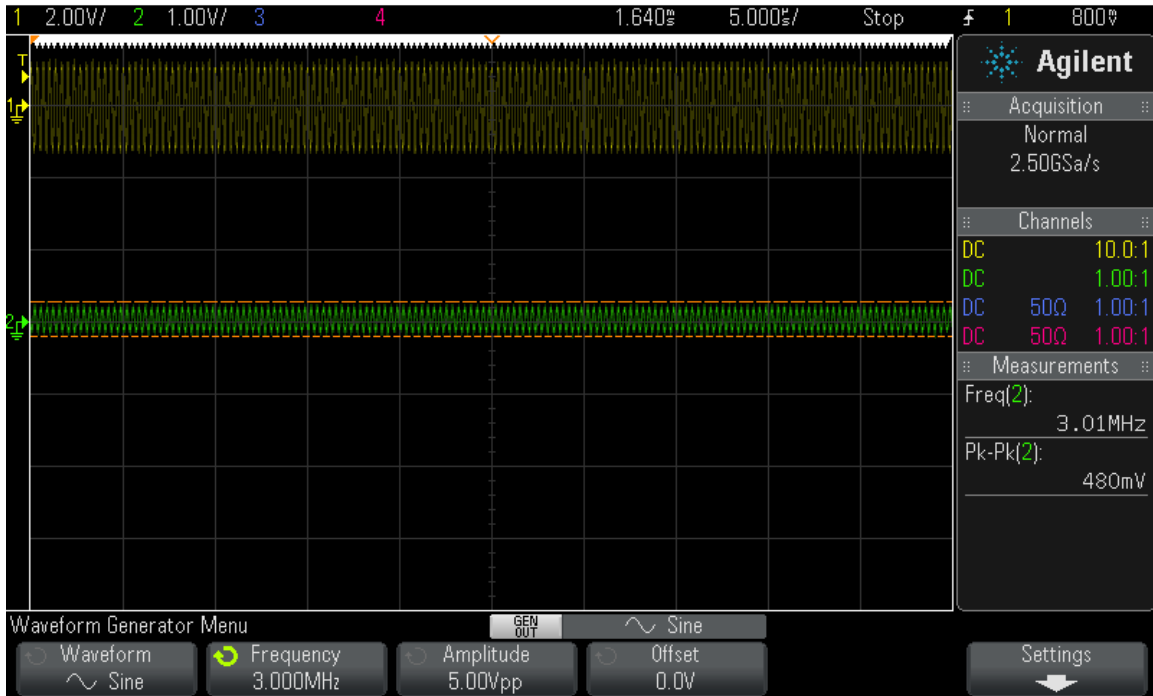
MSO-X 3104A, MY52160583: Fri Dec 14 16:19:05 2012



MSO-X 3104A, MY52160583: Fri Dec 14 16:19:52 2012



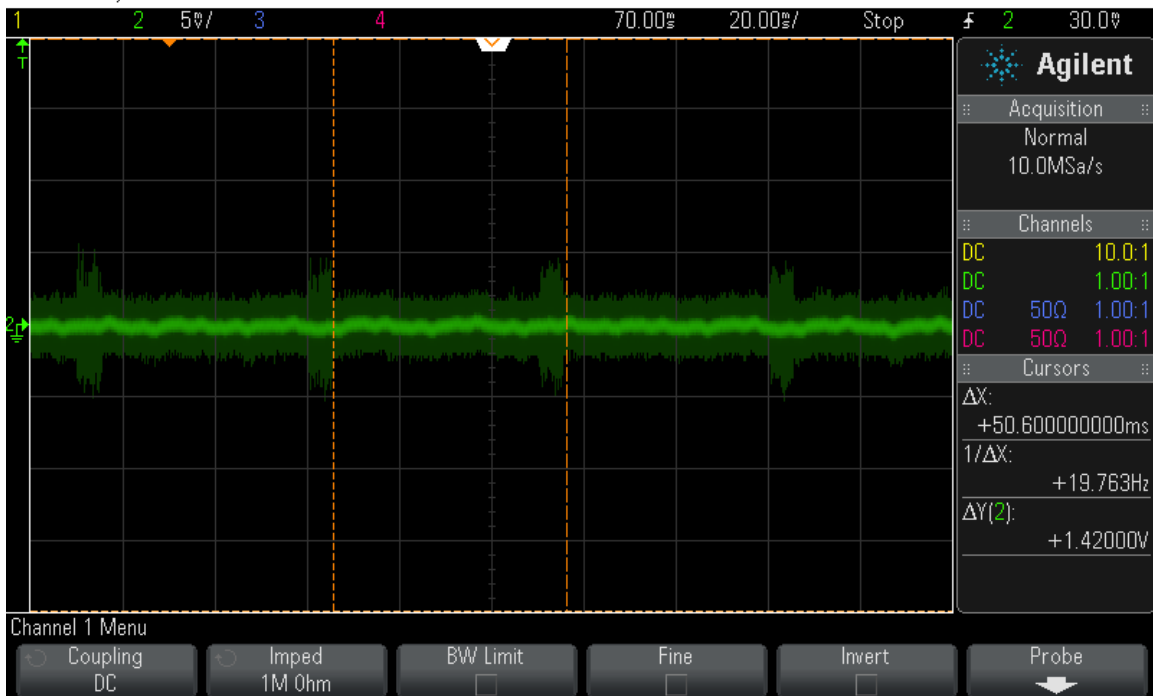
MSO-X 3104A, MY52160583: Fri Dec 14 16:20:18 2012



## Noise

The baseband noise was measured at 8 mVpp approximately.

MSO-X 3104A, MY52160583: Fri Dec 14 15:47:27 2012



## Response to a longer pulse

MSO-X 3104A, MY52160583, Fri Dec 14 15:39:33 2012

