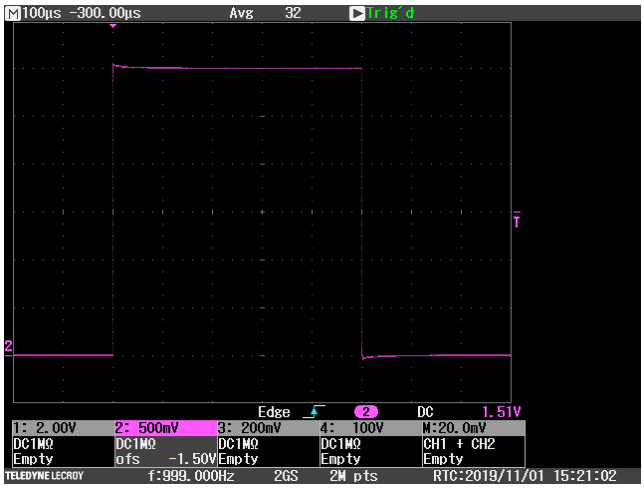
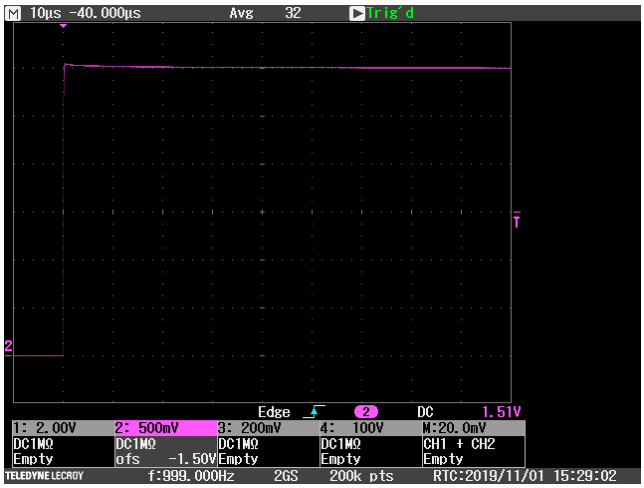
Measurements from 11-01-2019

Scope Probes

LeCroy 1:10, 400 Vmax

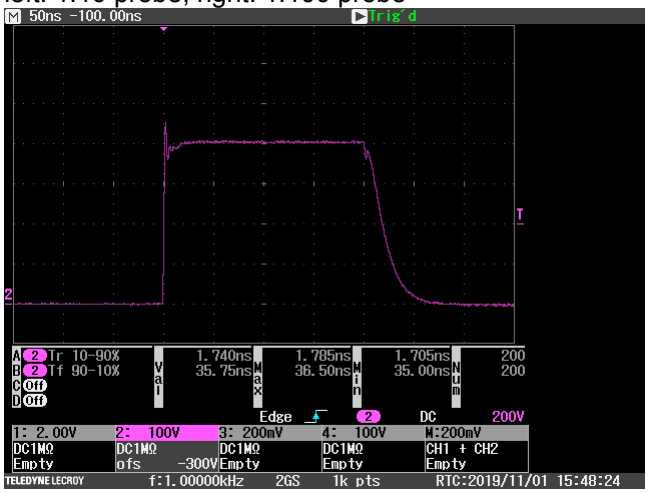


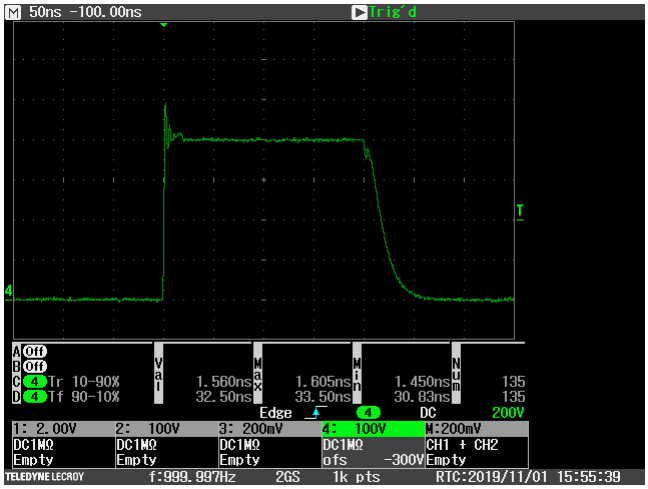


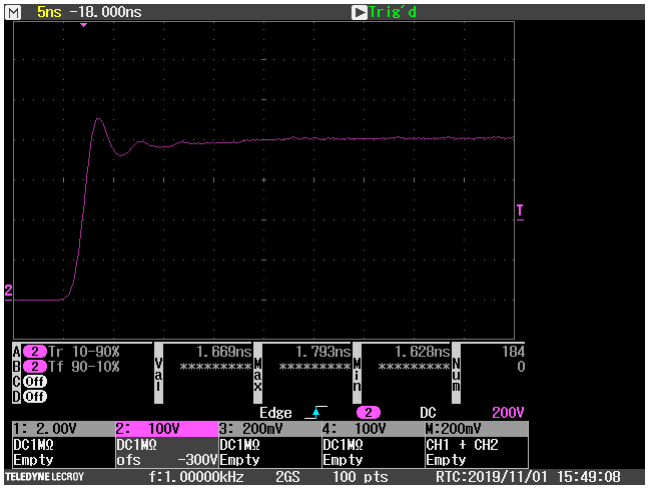
The probe shows small overshoot with a time constant of several 10 µs that cannot be compensated.

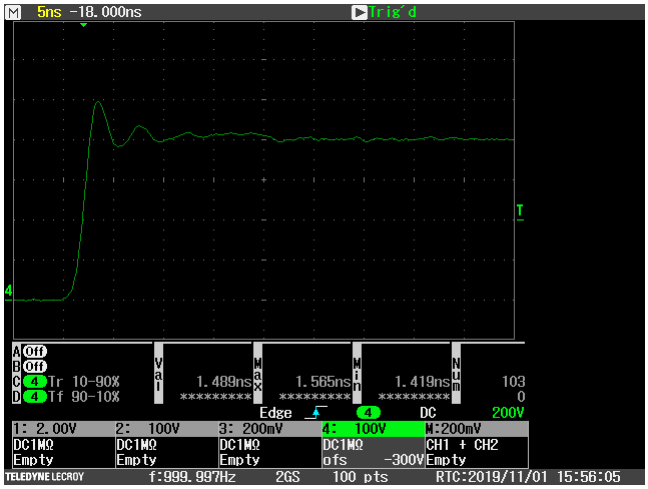
LeCroy 1:10, 400 Vmax vs. HV LeCroy 1:100

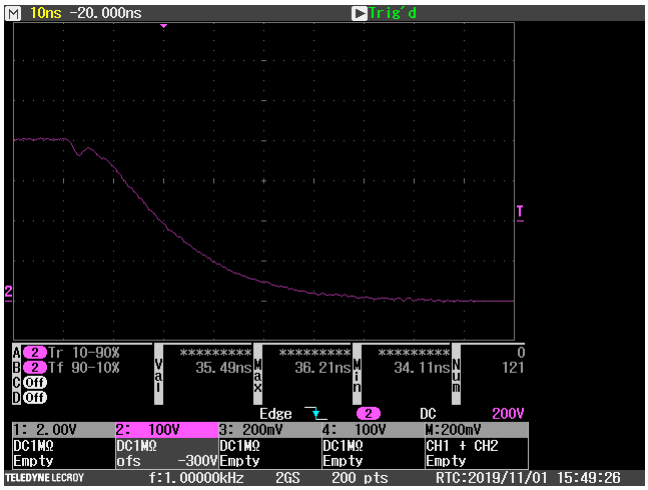
left: 1:10 probe, right: 1:100 probe

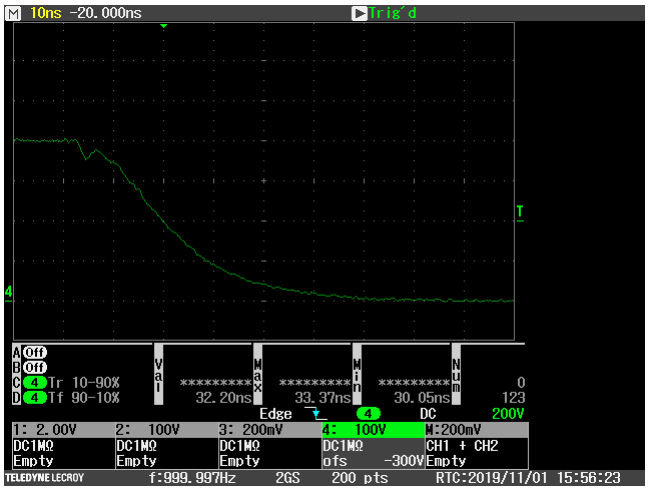










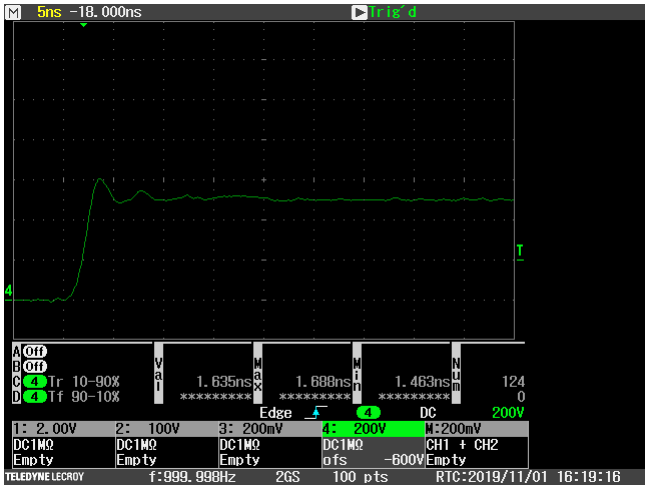


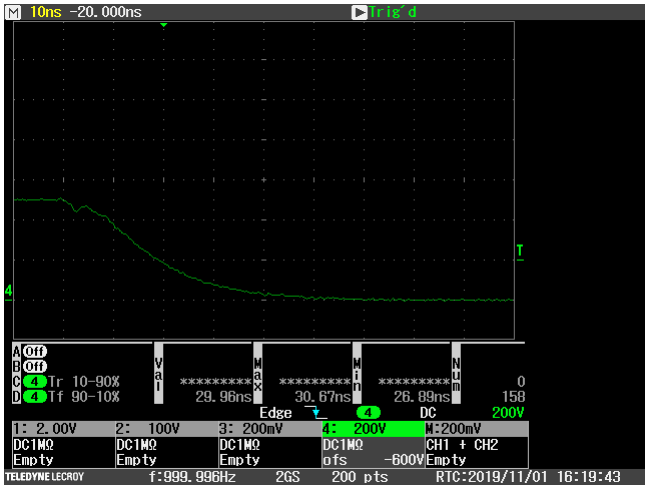
The 1:100 probe shows much more ringing after the fast slope - this is most probably connected to ringing in the ground plane. The ground connection to the probe was made by a short wire, its length is comparable to the probe tip.

Within 10-20 ns after the fast transition, the 1:100 probe shows a small overshoot that cannot be compensated.

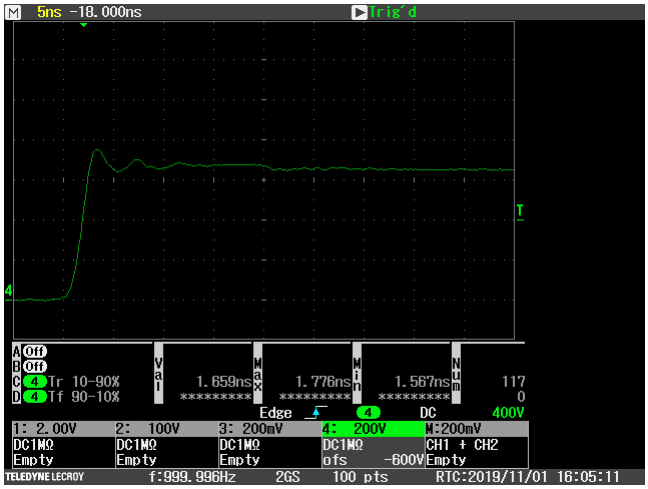
Due to the required voltage rating, all further measurement were done with the 1:100 probe.

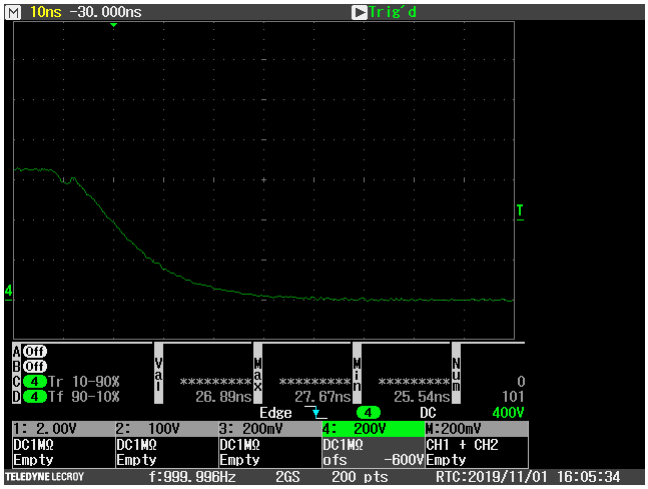
Buncher #3 at 500 V



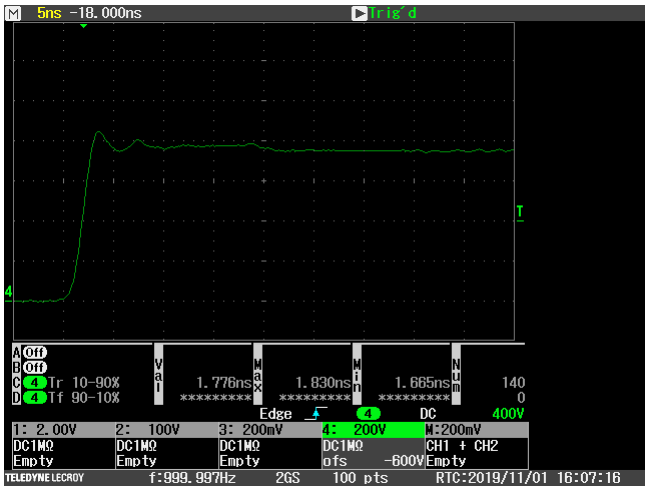


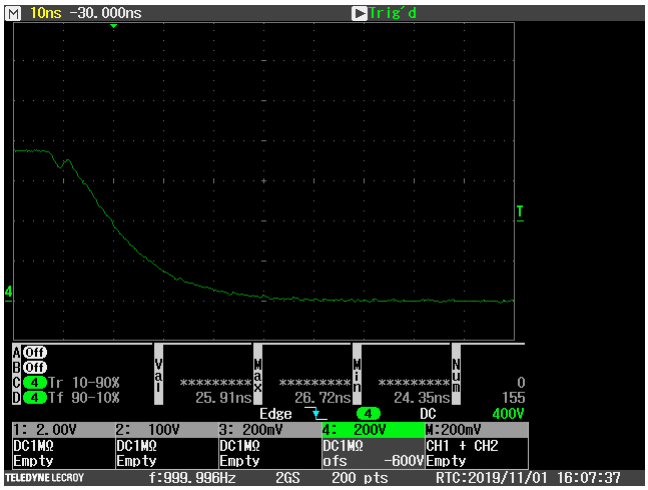
Buncher #3 at 650 V





Buncher #3 at 750 V

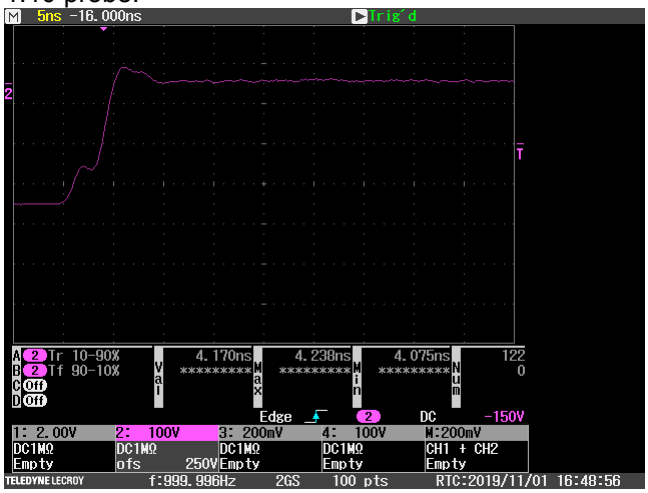


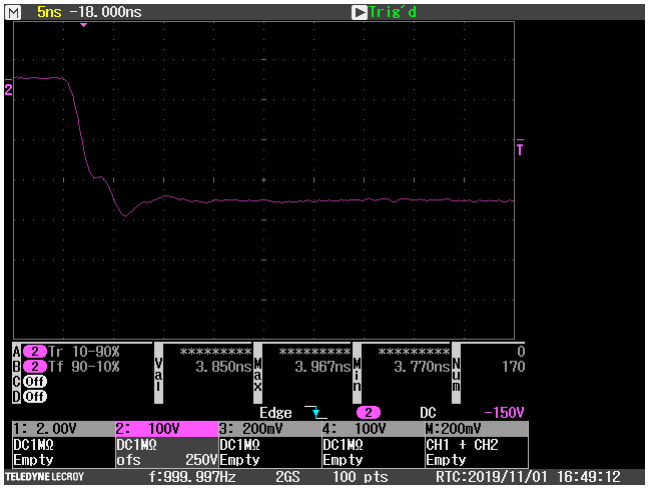


The rising slope seems to be faster than 2 ns

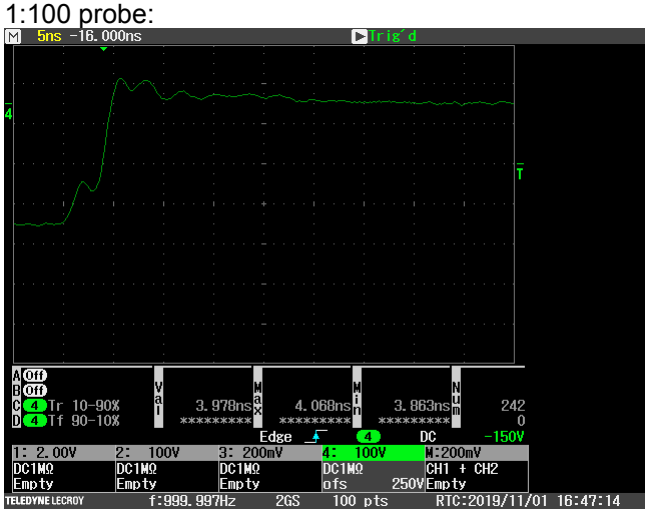
Chopper negative at 300 V

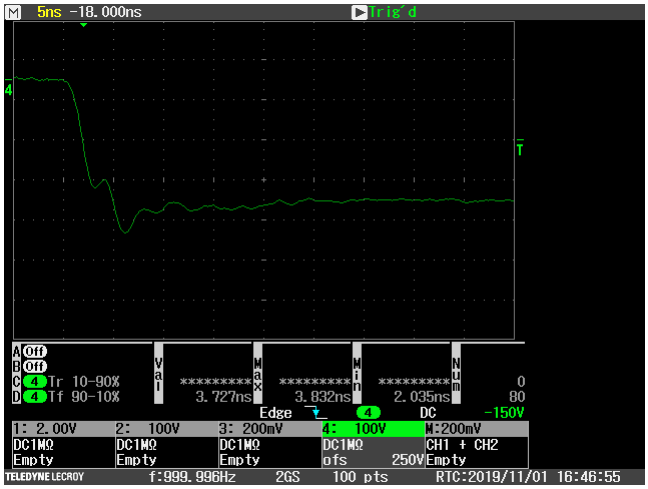
1:10 probe:



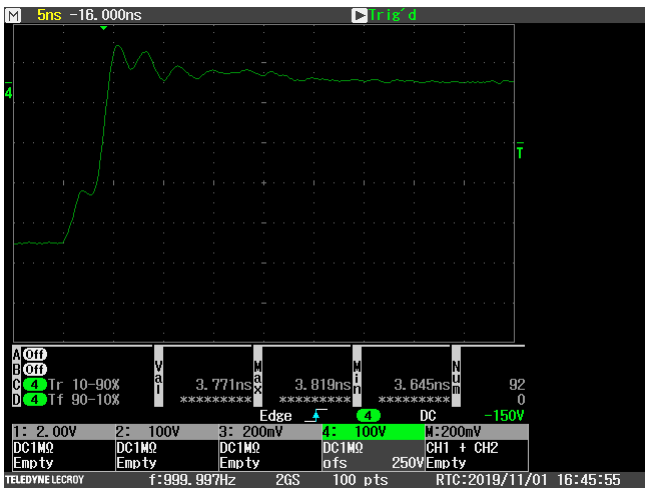


1:100 probe:

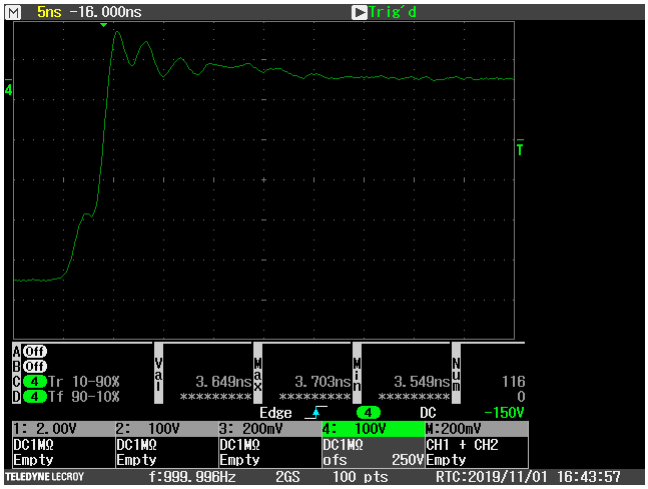


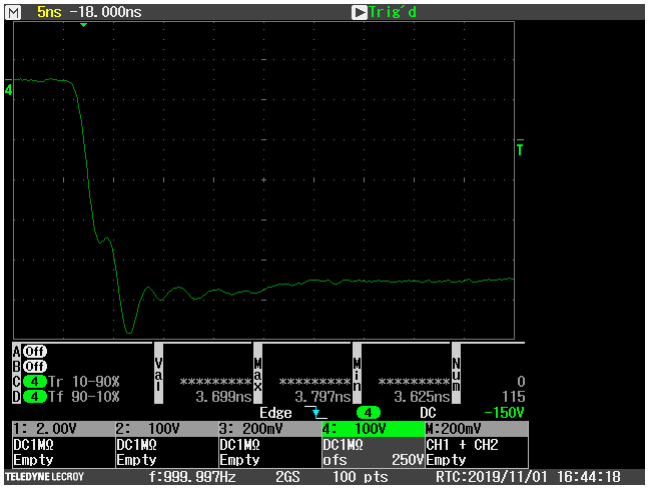


Chopper negative at 400 V



Chopper negative at 500 V





The ringing and the overshot is probably due to the used 1:100 probe, the 1:10 probe shows cleaner waveforms but cannot be used for larger voltages.