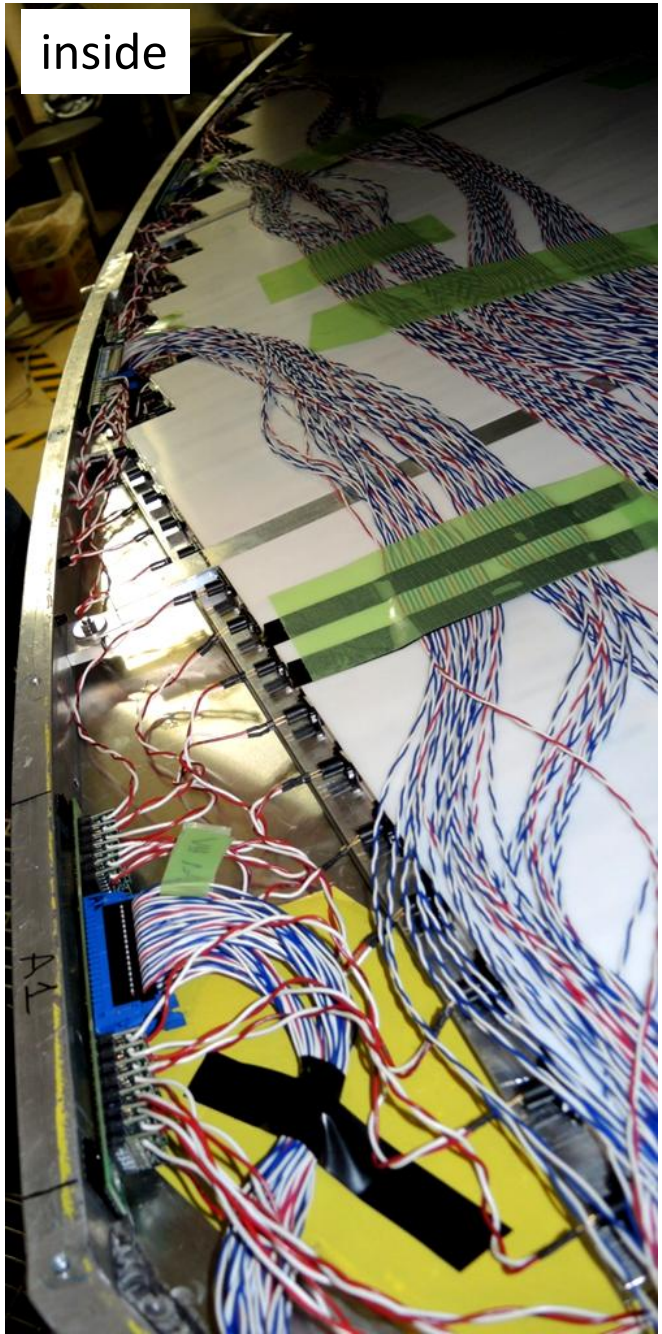
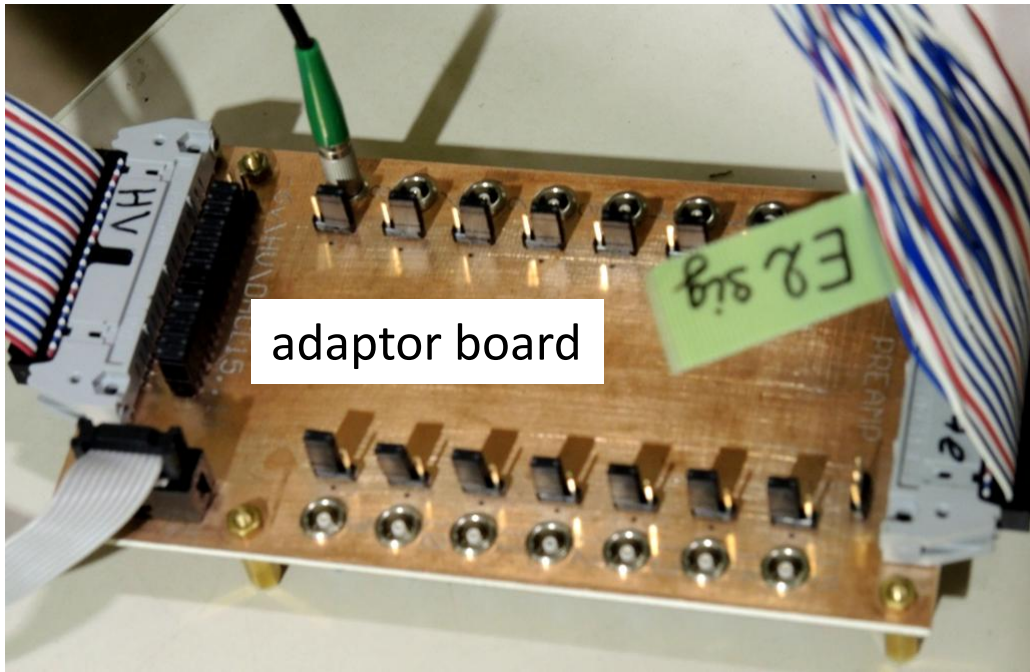
Studies of 50kHz oscillations using Module #2 of EKLM

May 19, 2013





We see oscillations with both ceramic and tantalum capacitors, amplitude is the same.

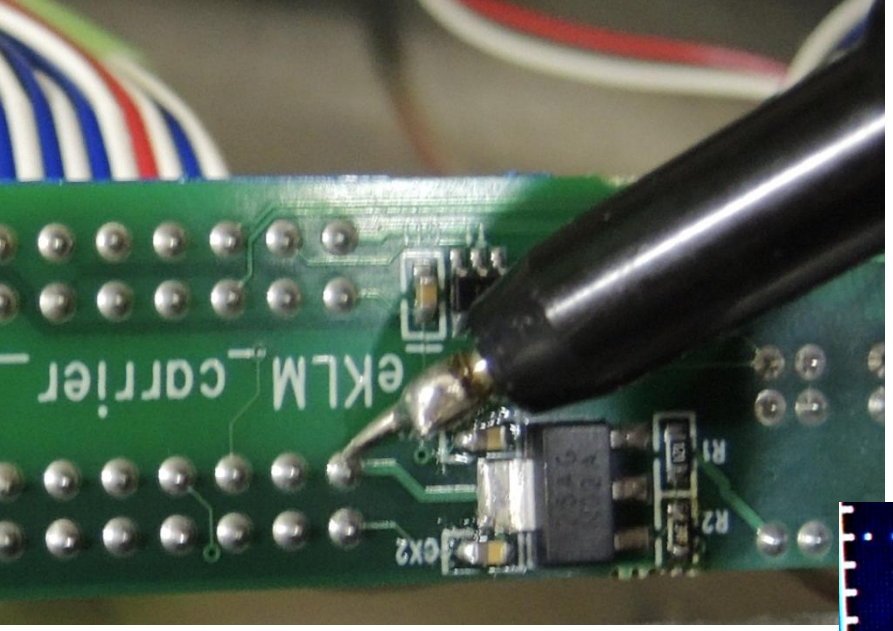
Oscillations are out of phase for different carrier boards in the same module.

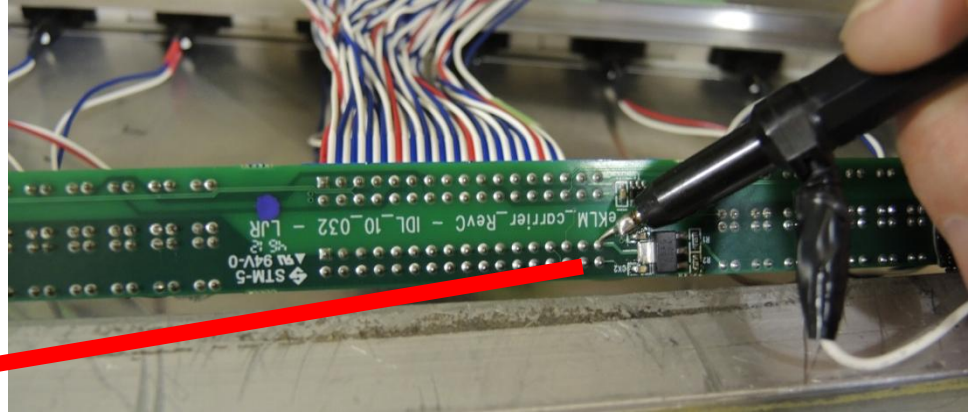
The aluminum box of the module is grounded. We do not see any changes if the ground of the carrier board is connected to the aluminum box.

Peak2peak amplitude measured using lemo cable is 7mV (1p.e. corresponds to 10mV), peak2peak measured using probe is 12mV.

Oscillations measured at the power supply output (-6V) are 20mV.

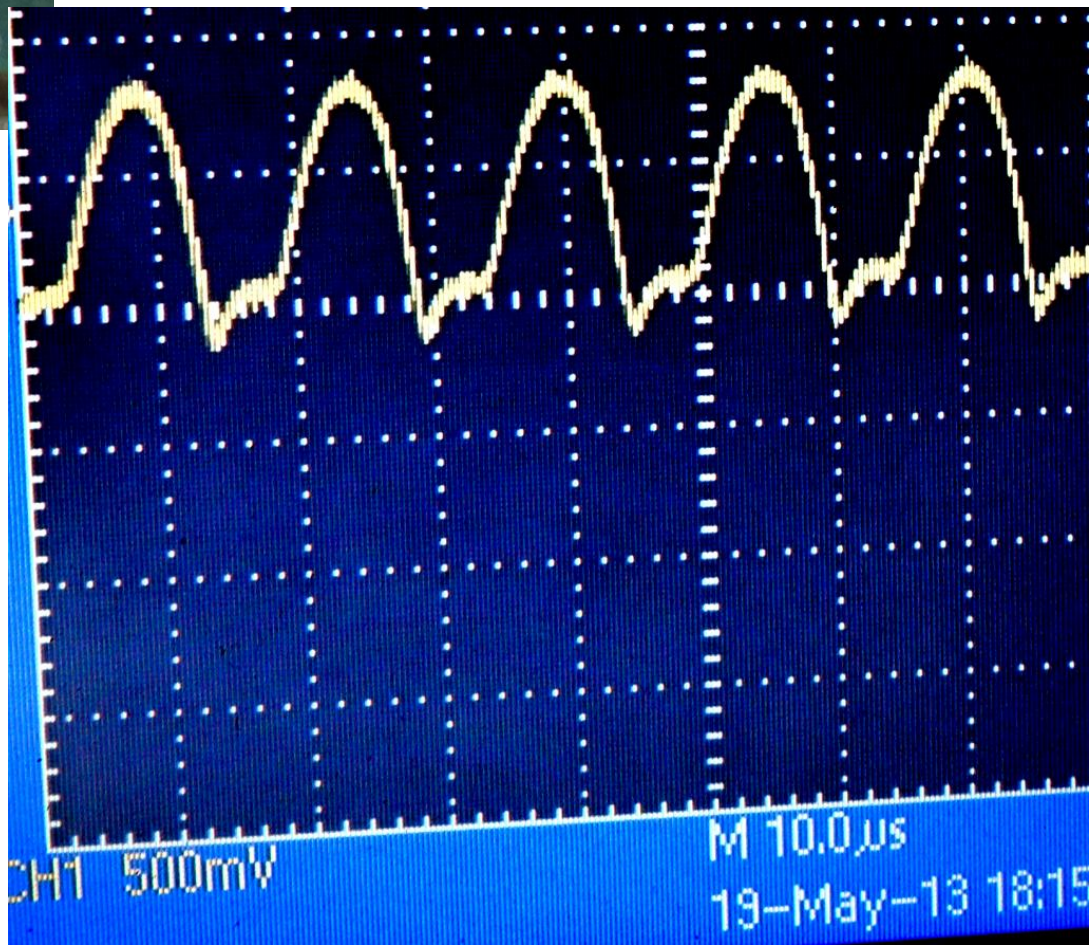
Measurements presented in the following slides were performed using carrier board with tantalum capacitors.

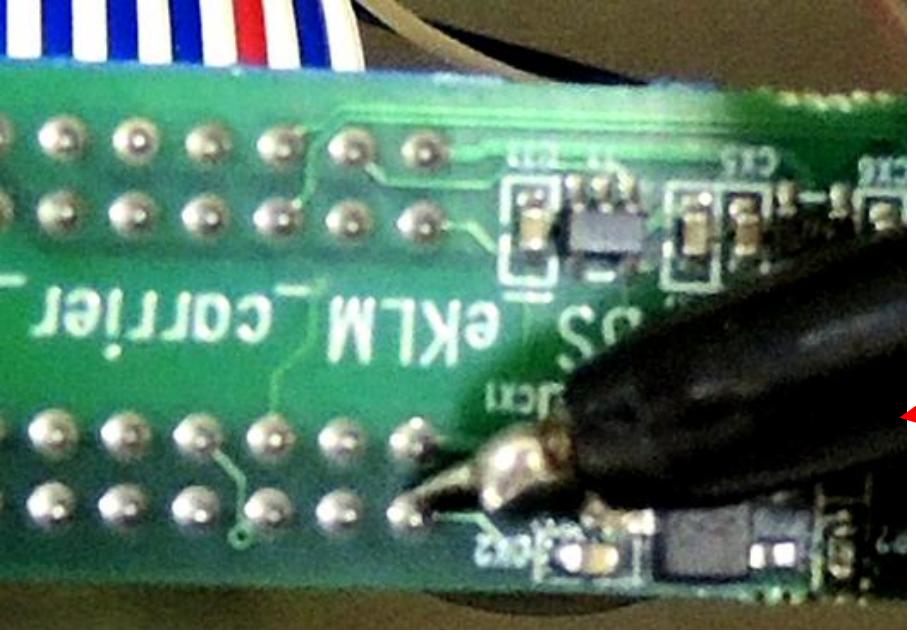


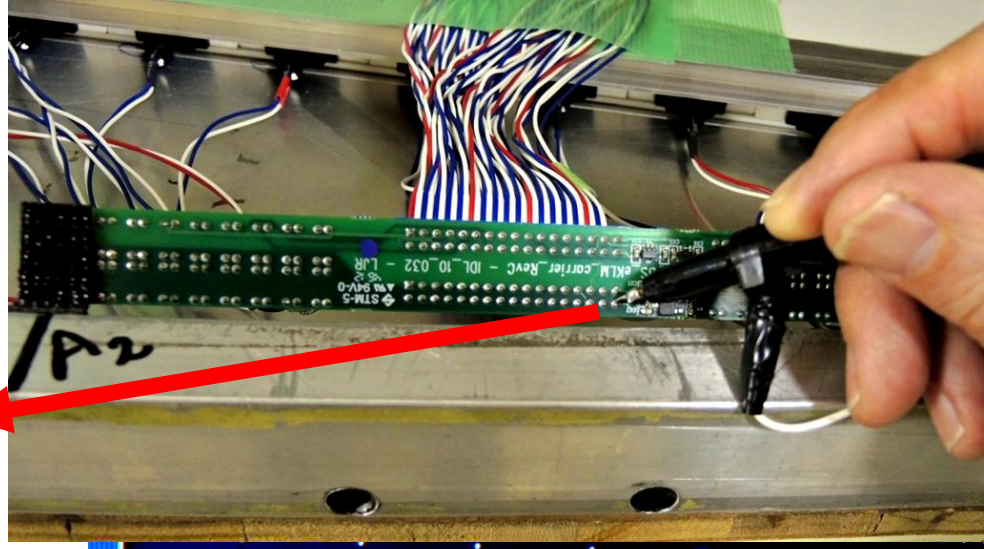


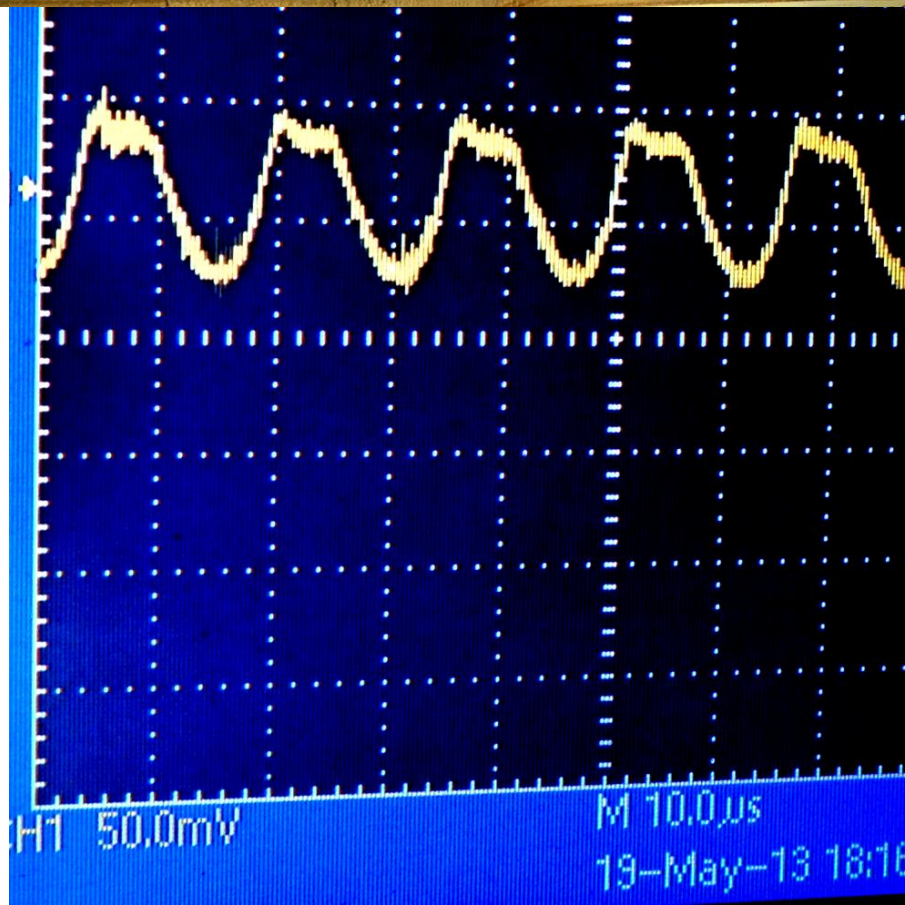
Probe @ carrier board:
-6V

peak2peak: 800mV



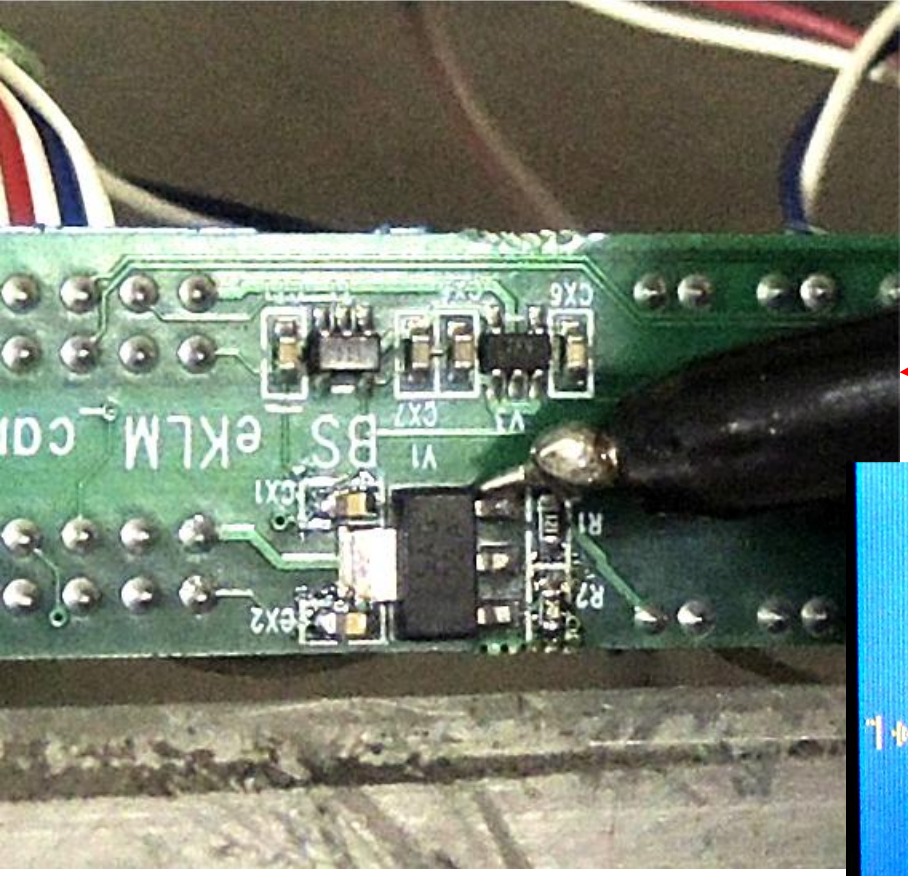


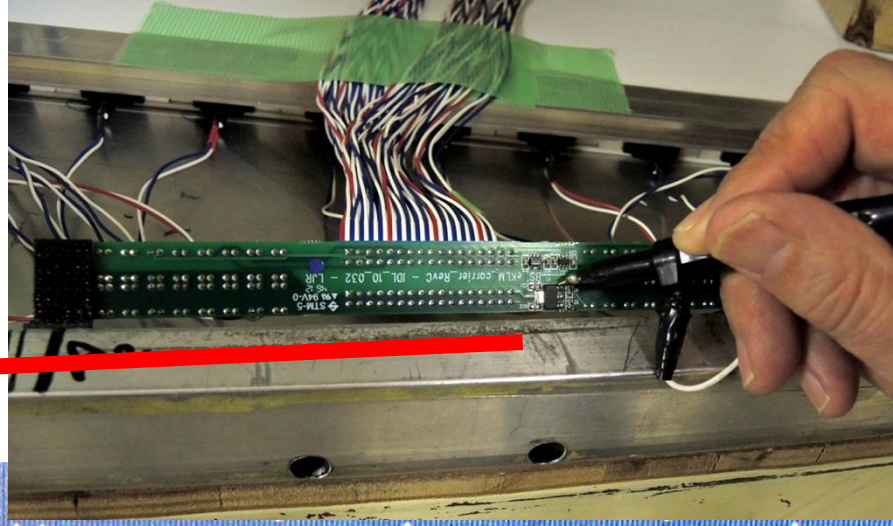


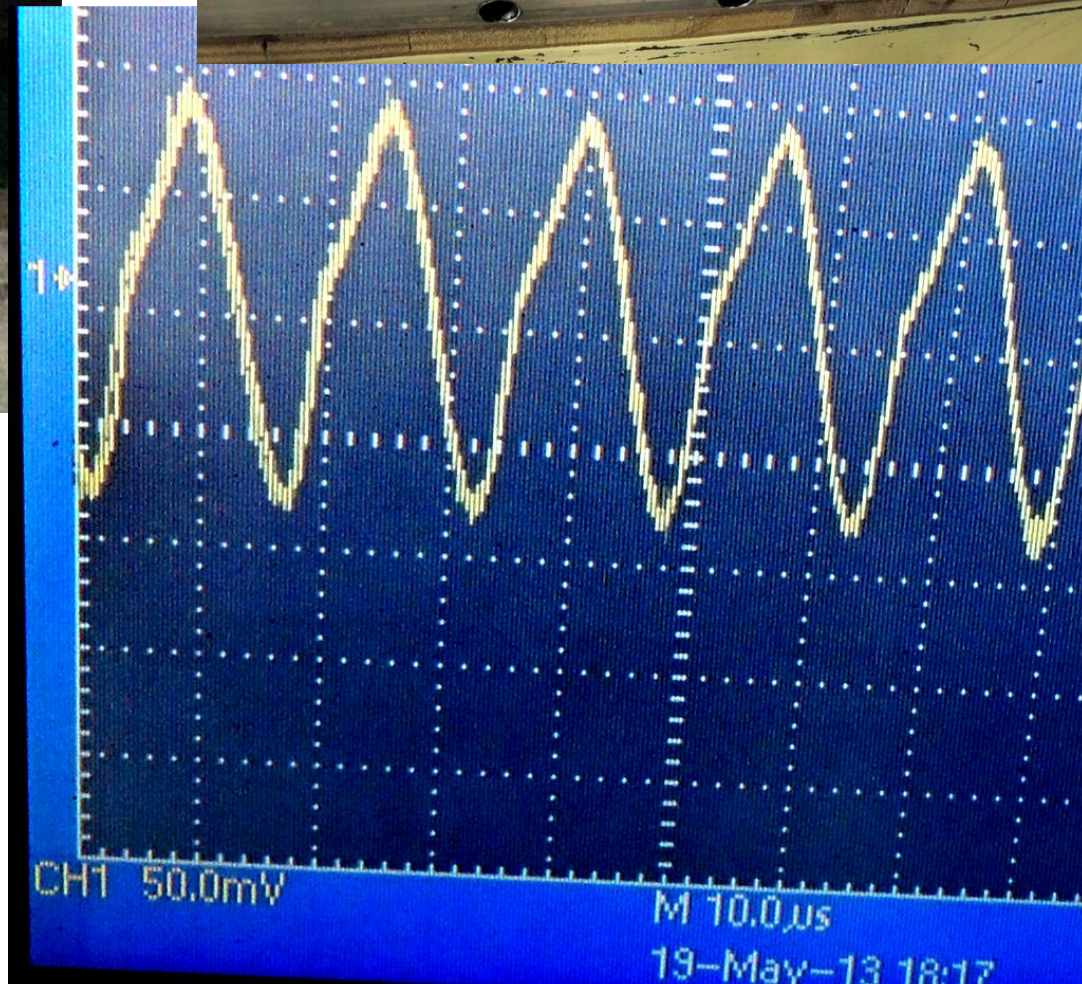


Probe @ carrier board:
ground

peak2peak: 70mV







Probe @ carrier board:
regulated -3.8V

peak2peak: 170mV