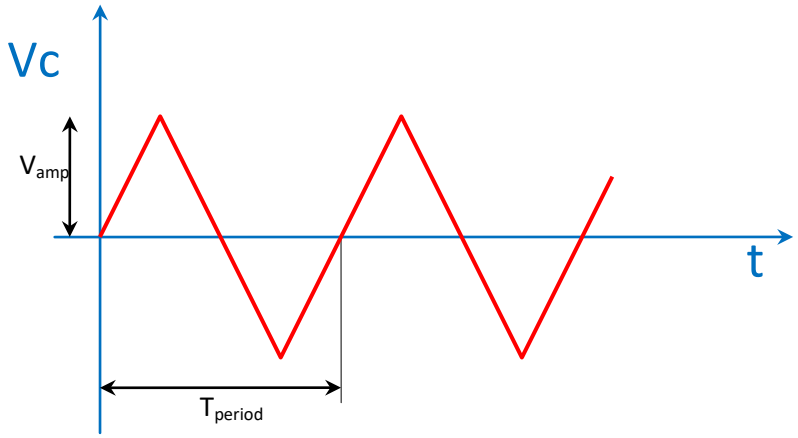
elements
enablingtechnologies for Life Science

VOLTAGE PROTOCOL LIST

1) Triangular wave (01h) (infinite repetition)

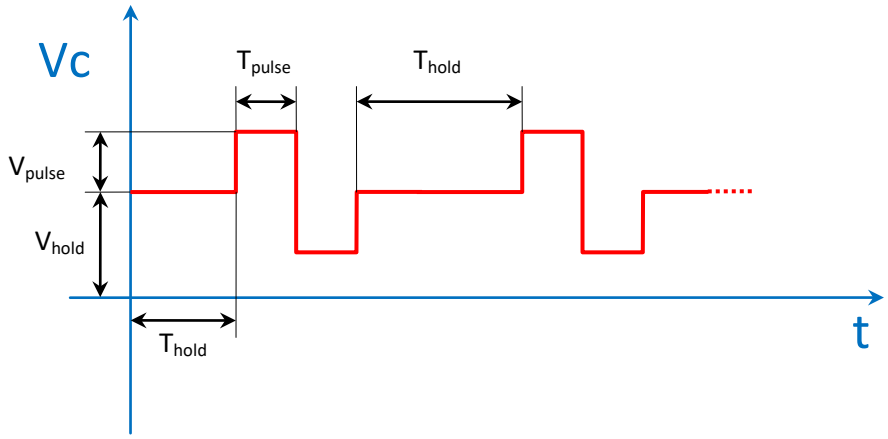


Triangular wave parametric. Possible values:

Vamp = 25, 50, 75, 100 mV

Tperiod = variable from 1ms to 1000ms

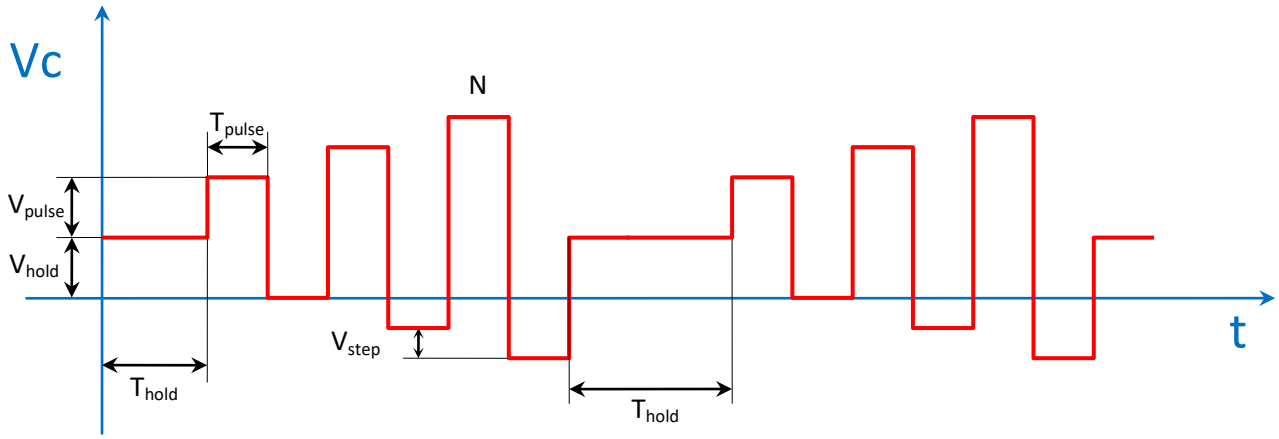
2) Seal Test (02h)(infinite repetition)



Parameters: Vhold, Vpulse, Tpulse, Thold

3) Conductance estimation (03h)

Test for the conductance estimation.



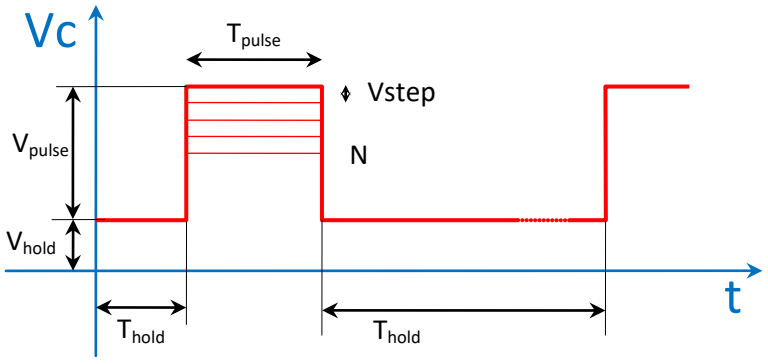
Parameters: Vhold, Vpulse, Vstep, Tpulse, Thold, N, NR

N: number of symmetric pulses

NR: number of repetition of the protocol. If 0, infinite repetitions.

4) Rectangular pulse with variable amplitude (04h)

Pulse with amplitude variable between two consecutive pulses of Vstep quantity



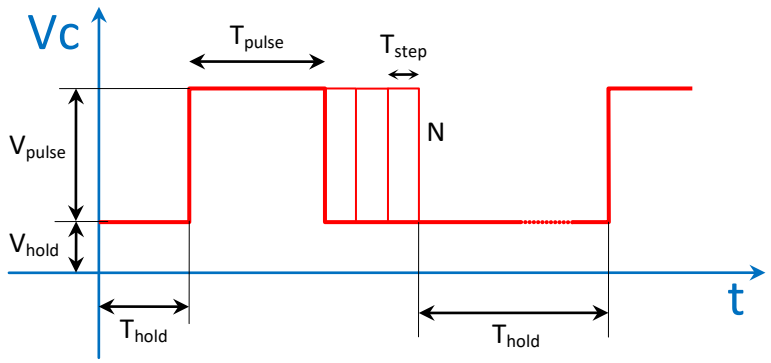
Parameters: Vhold, Vpulse, Vstep, Tpulse, Thold, N, NR

N: number of pulses with changing amplitude from the previous pulse

NR: number of repetition of the protocol. If 0, infinite repetitions.

5) Rectangular pulse with variable duration (05h)

Variation of the time duration of the pulse of the quantity Tstep



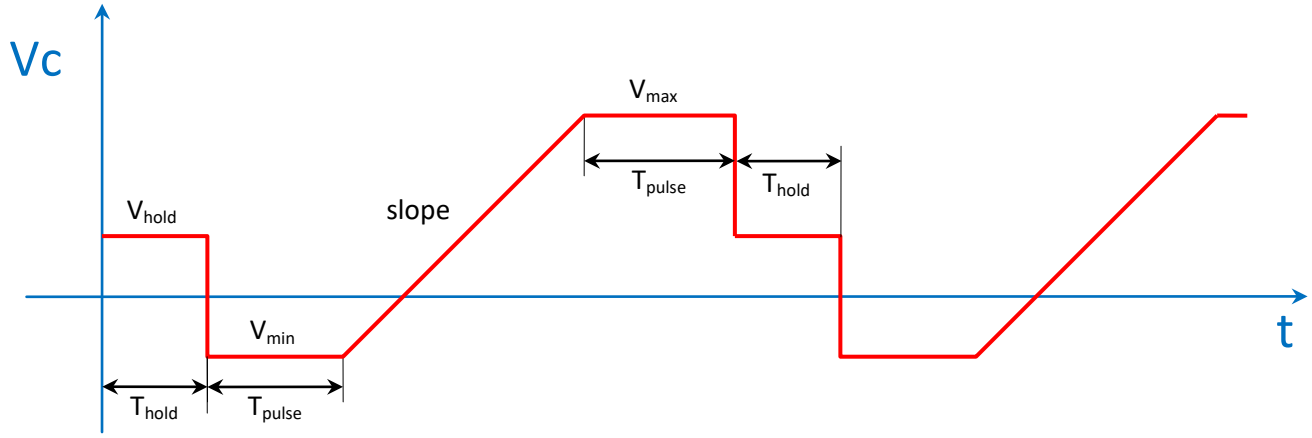
Parameters: Vhold, Vpulse,Tpulse, Tstep, Thold, N, NR

N: number of pulses with changing duration from the previous pulse

NR: number of repetition of the protocol. If 0, infinite repetitions.

6) Ramp (06h)

In the first version, the min voltage step will be 1mV. We will try to refine it using the finest voltage step available with the new asic.

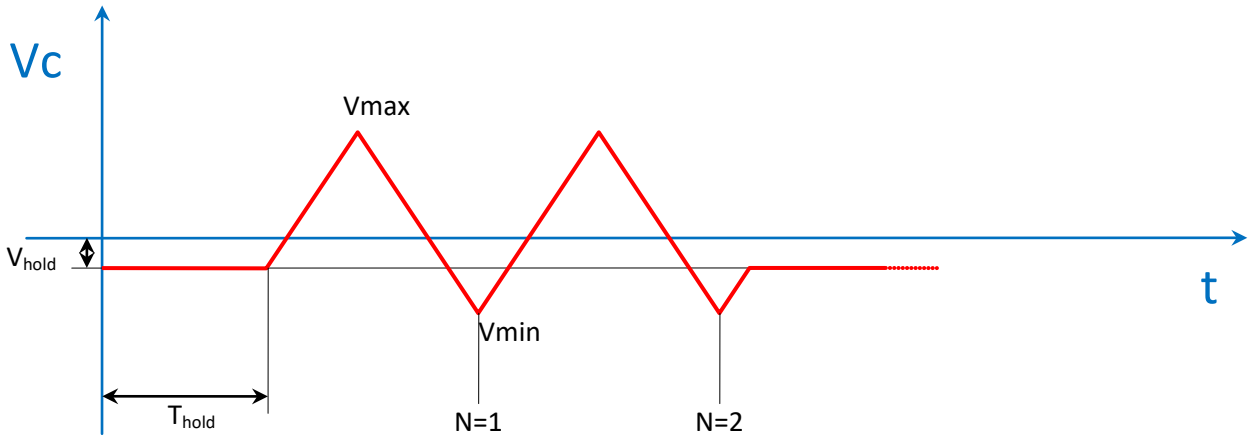


Parameters: Vhold, Vmin, Vmax, Tpulse, Thold, Slope, NR

NR: number of repetition of the protocol. If 0, infinite repetitions.

7) Cyclic voltammetry (07h) (only one repetition)

In the first version, the min voltage step will be 1mV. We will try to refine it using the finest voltage step available with the new asic.



Parameters: Vhold, Vpulse,Vmin, Vmax, Slope, N

N: number of cycle Vmax-Vmin-Vmax

Ranges for Voltage protocol parameters:

Vhold: ± 500 mV, min step 1mV

Vpulse: ± 500 mV, min step 1mV

Vstep: ± 500 mV, min step 1mV

Vmax: ± 500 mV, min step 1mV

Vmin: ± 500 mV, min step 1mV

Tpulse: from 0 to 2^{28} * 1 ms, equal to about 74h

Thold:from 0 to 2^{28} * 1 ms, equal to about 74h

Tstep: from 0 to 2^{27} * 1 ms, equal to about 37h, with sign

N: number of repetition of pulses, from 1 to 1000

NR: number of repetition of the full set of pulses, from 1 to 1000. If 0, infinite repetition of the full set of pulses.

Slope: inclination of the ramp, in mV/ms, variable from 1mV/ms to 1000mV/ms