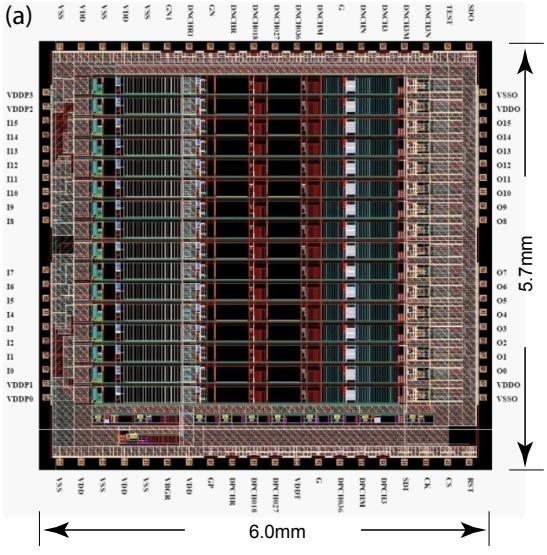
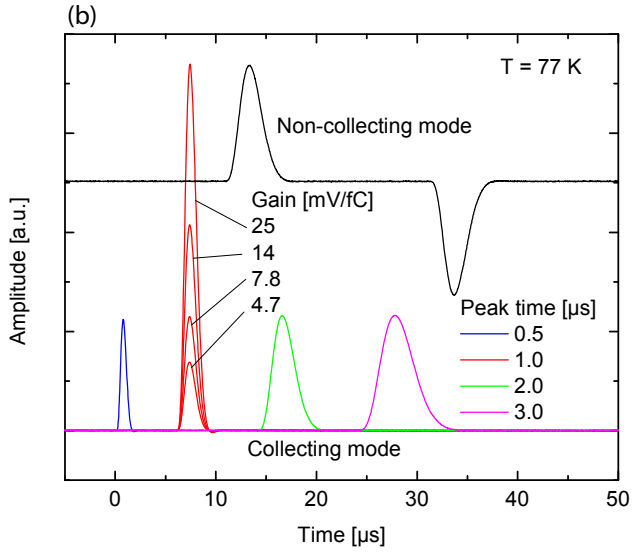
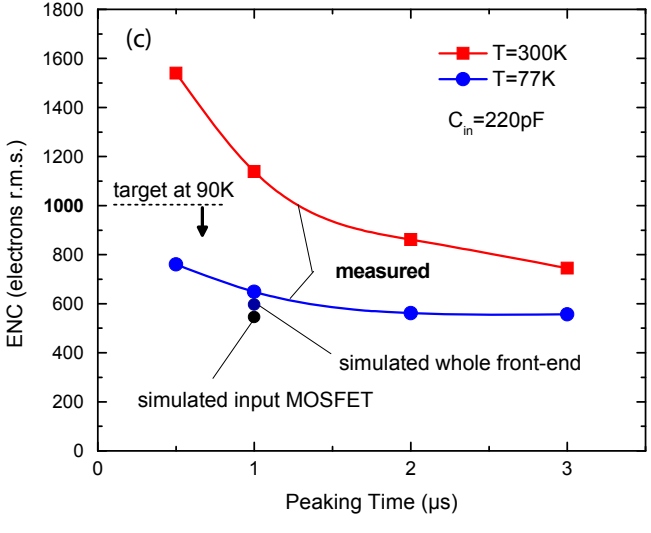
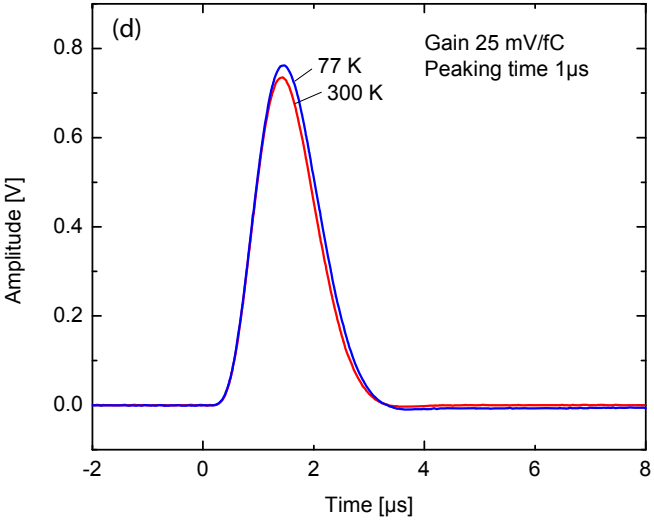

(a)
5.7mm
6.0mm


(b)
T = 77 K
Non-collecting mode
Gain [mV/fC]
25
14
7.8
4.7
Peak time [µs]
0.5
1.0
2.0
3.0
Collecting mode
Amplitude [a.u.]
Time [µs]


(c)
T=300K
T=77K
C_in=220pF
target at 90K
1000
measured
simulated whole front-end
simulated input MOSFET
ENC (electrons r.m.s.)
Peaking Time (µs)


(d)
Gain 25 mV/fC
Peaking time 1µs
77 K
300 K
Amplitude [V]
Time [µs]