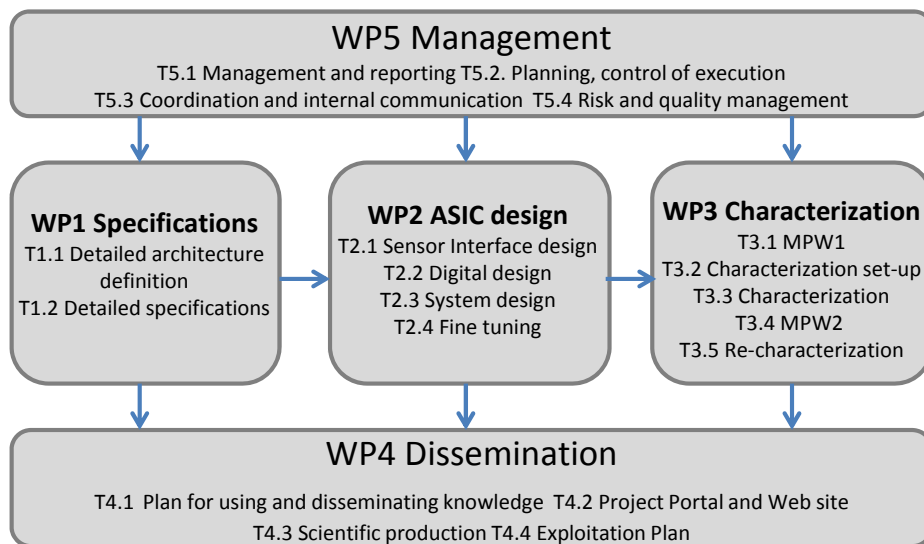


Table 1: Specifications

Parameter	Value
Range	+/- 80 g
Bandwidth	>1 kHz
Resonant frequency	46 kHz
Noise	0.2 mg in 100 Hz bandwidth
Temperature range	-45 °C to +125 °C
Long term stability	<0.1 mg
Power consumption	<100 mW, ideally 20 mW
Area	<5x5 mm ²

**Figure 1: WP breakdown**

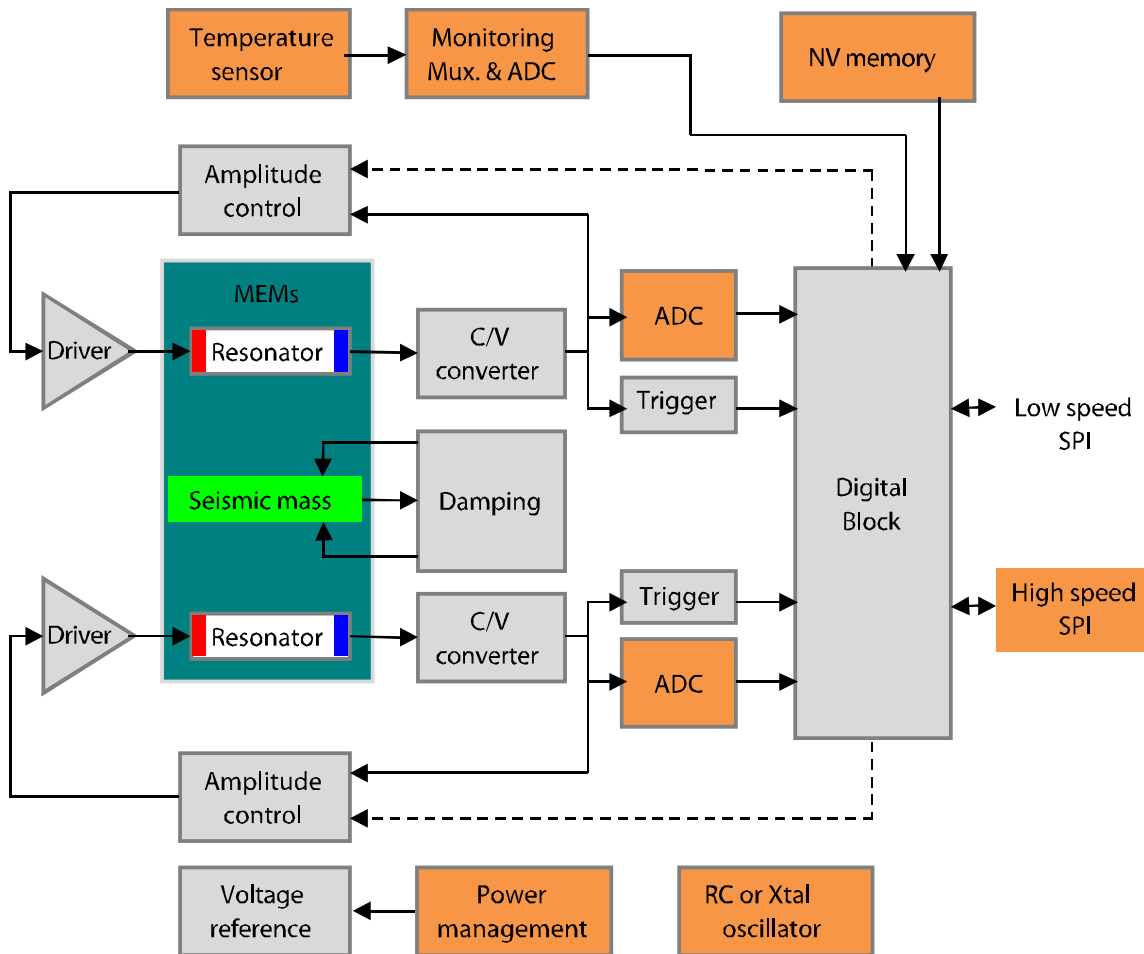


Figure 2: Block diagram of the system

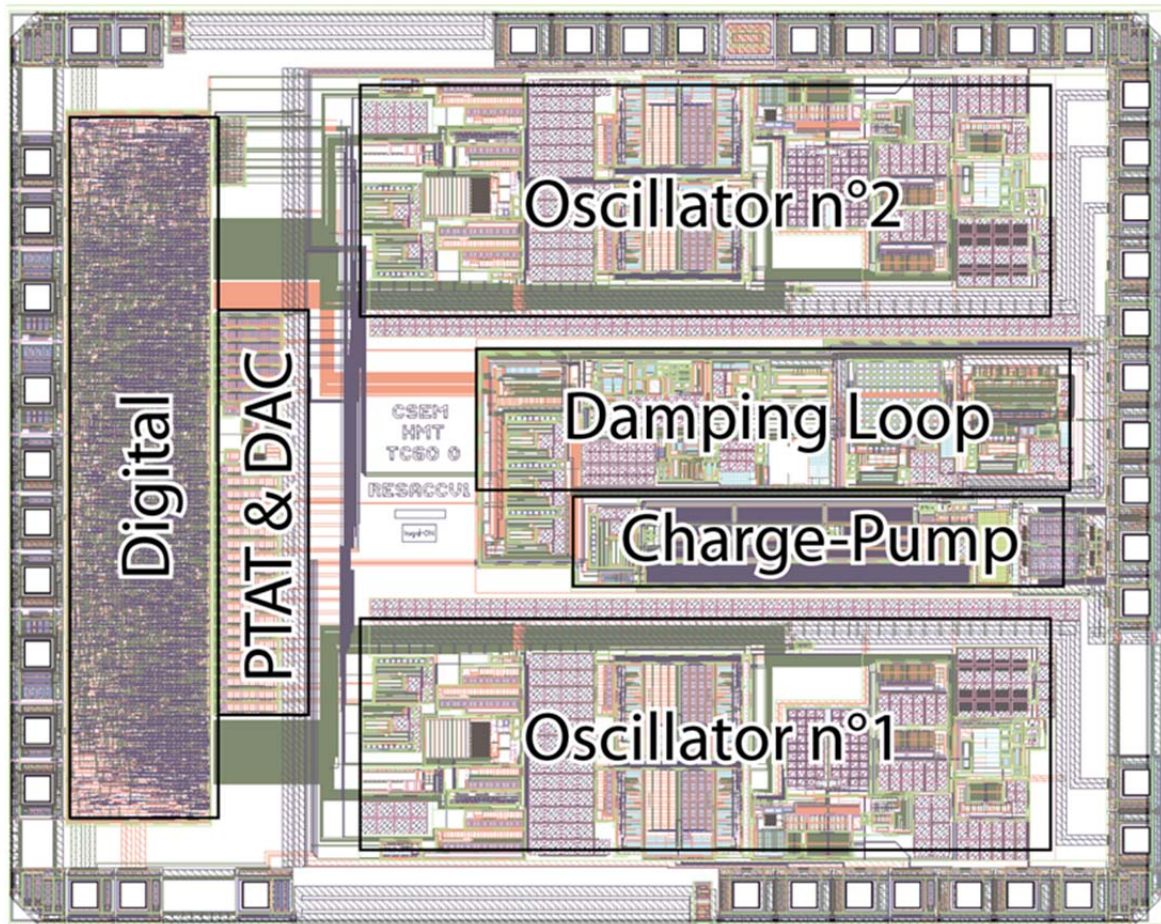


Figure 3: Layout of the chip

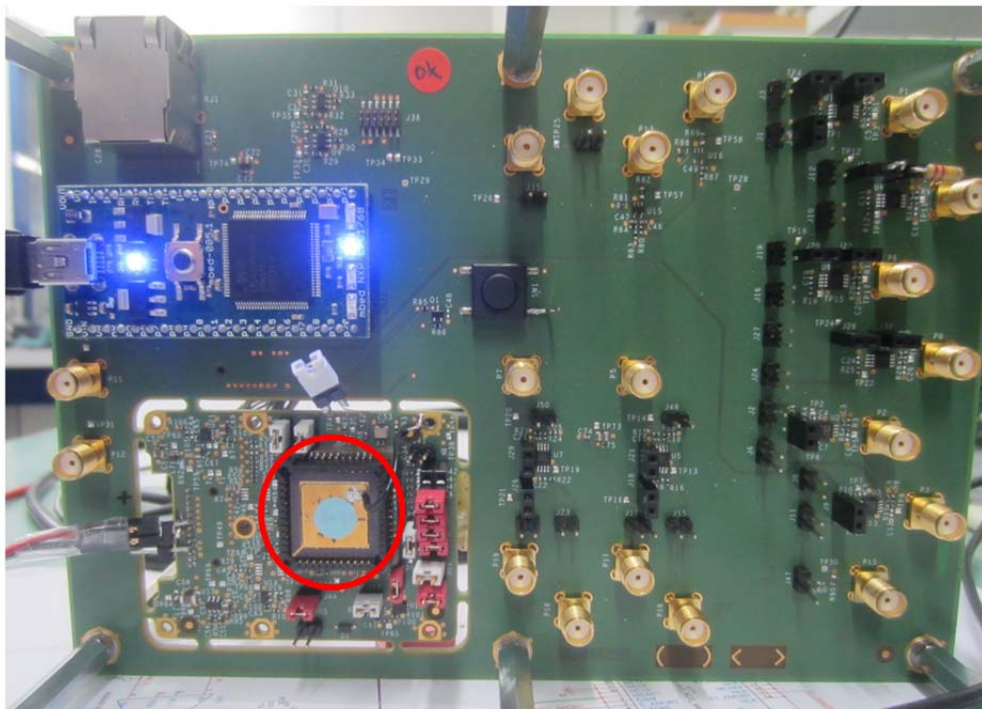


Figure 4: PCB frontside with the ResAcc ASIC

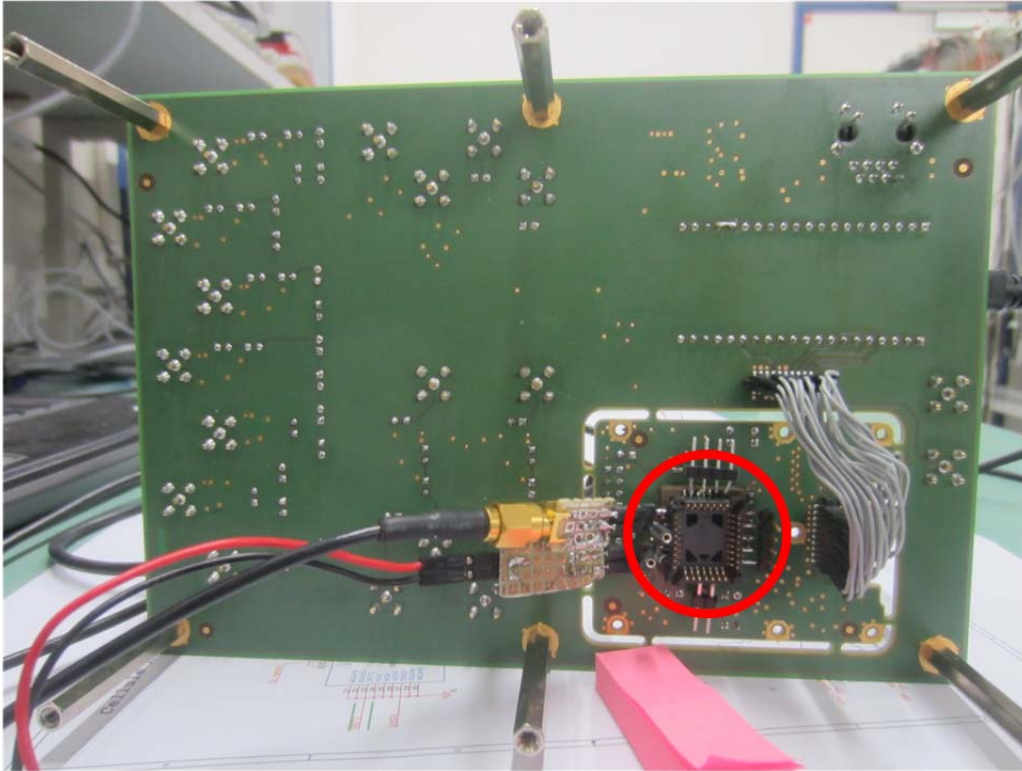


Figure 5: PCB backside with the socket for the Thales accelerometer cell

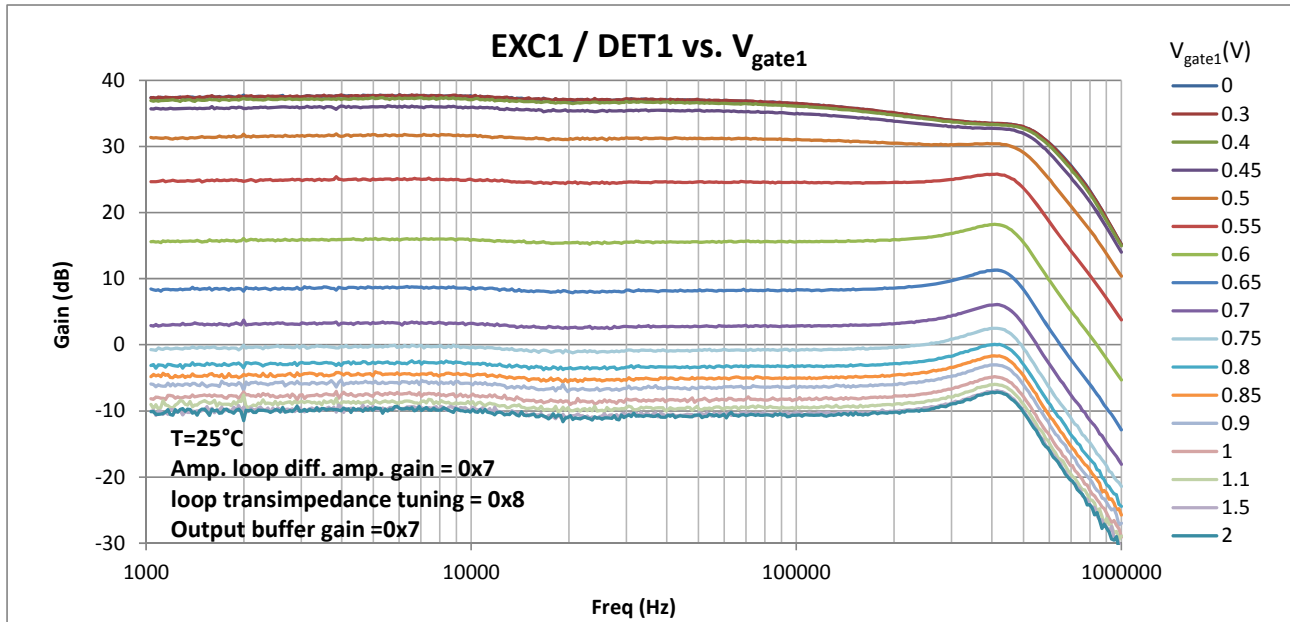


Figure 6: Transfer function of the main oscillator loop versus V_{gate} .

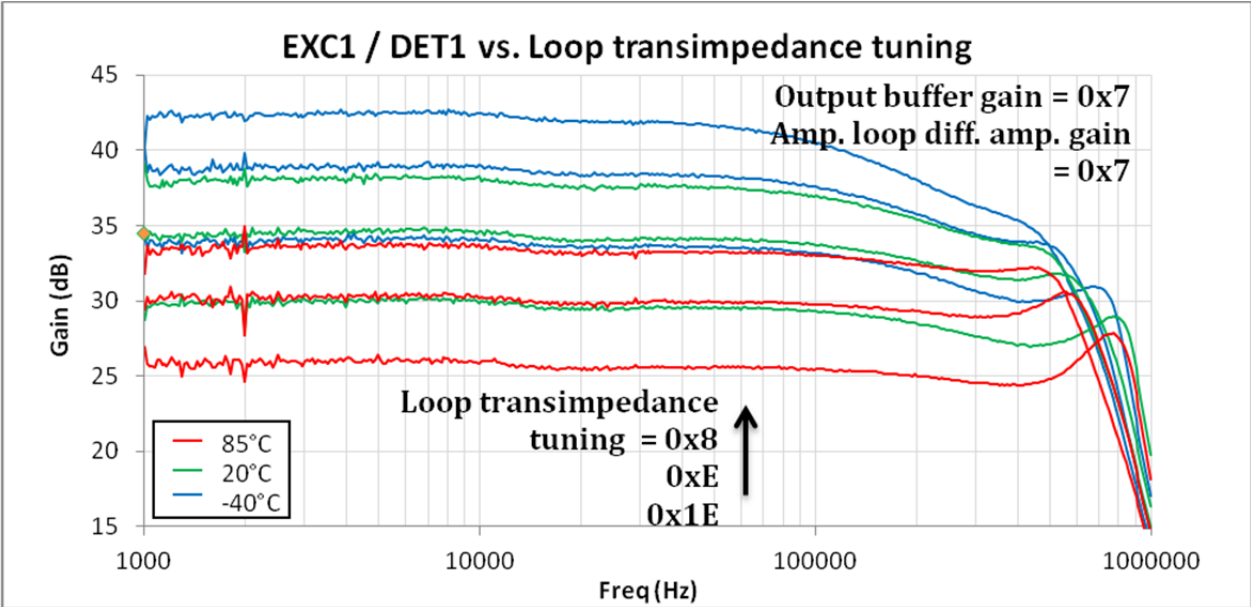


Figure 7: Transfer function (top: gain, bottom: phase) of the main oscillator loop

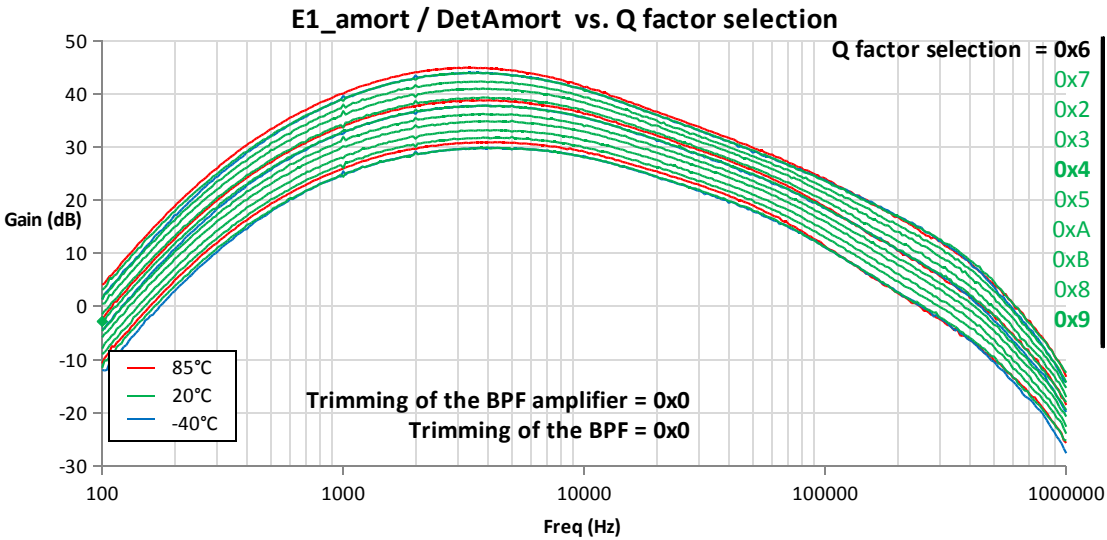


Figure 8: Transfer function of the damping loop

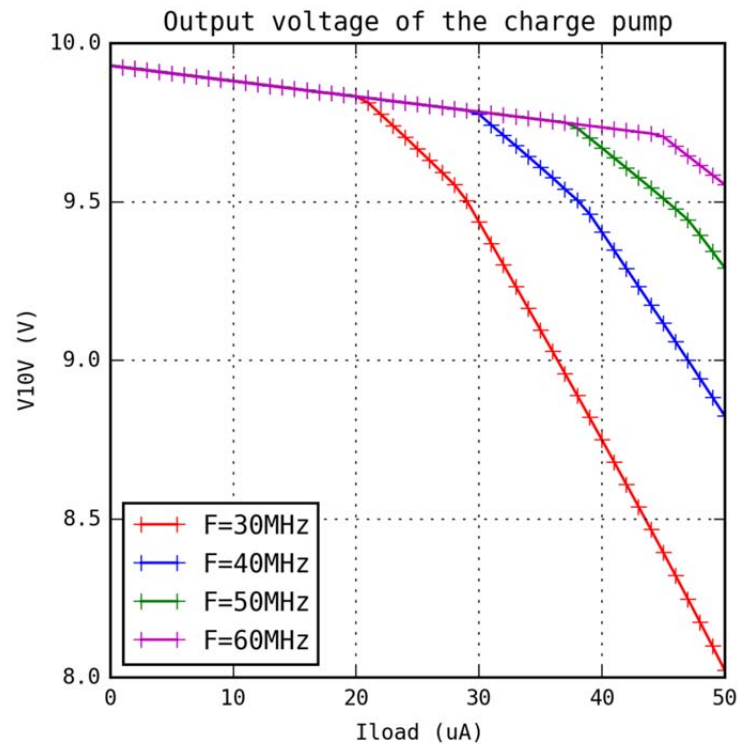


Figure 9: Charge pump and high voltage regulator function

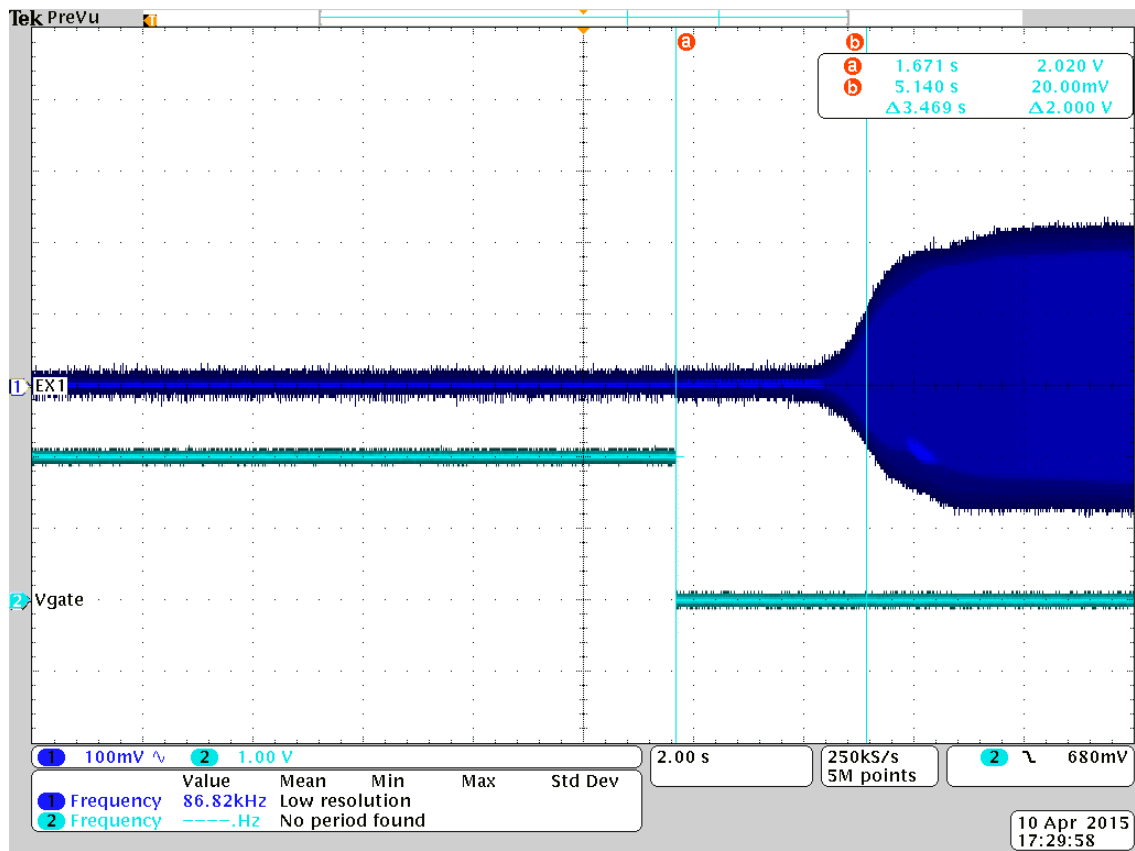


Figure 10: Oscillator start-up

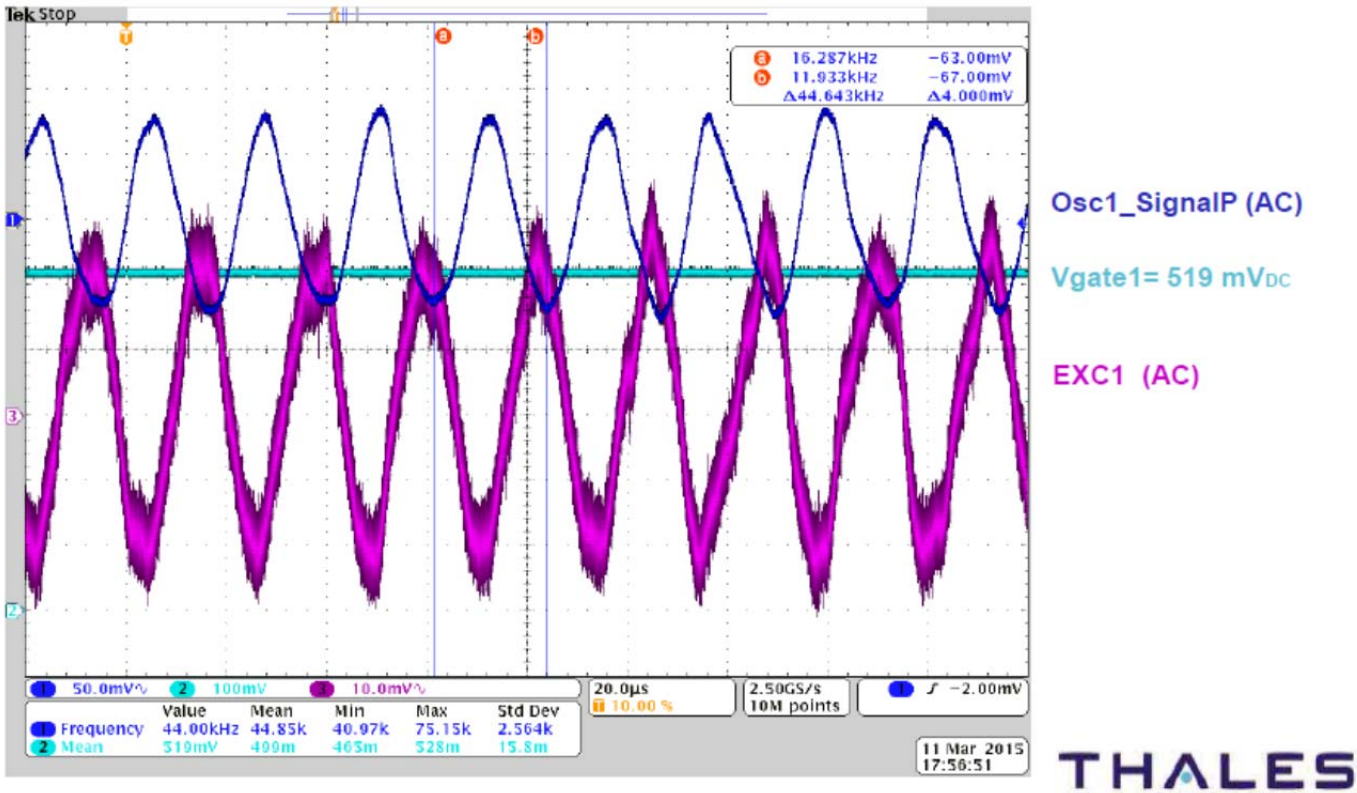


Figure 11: Waveform on pads EXC1 et OSC1P1

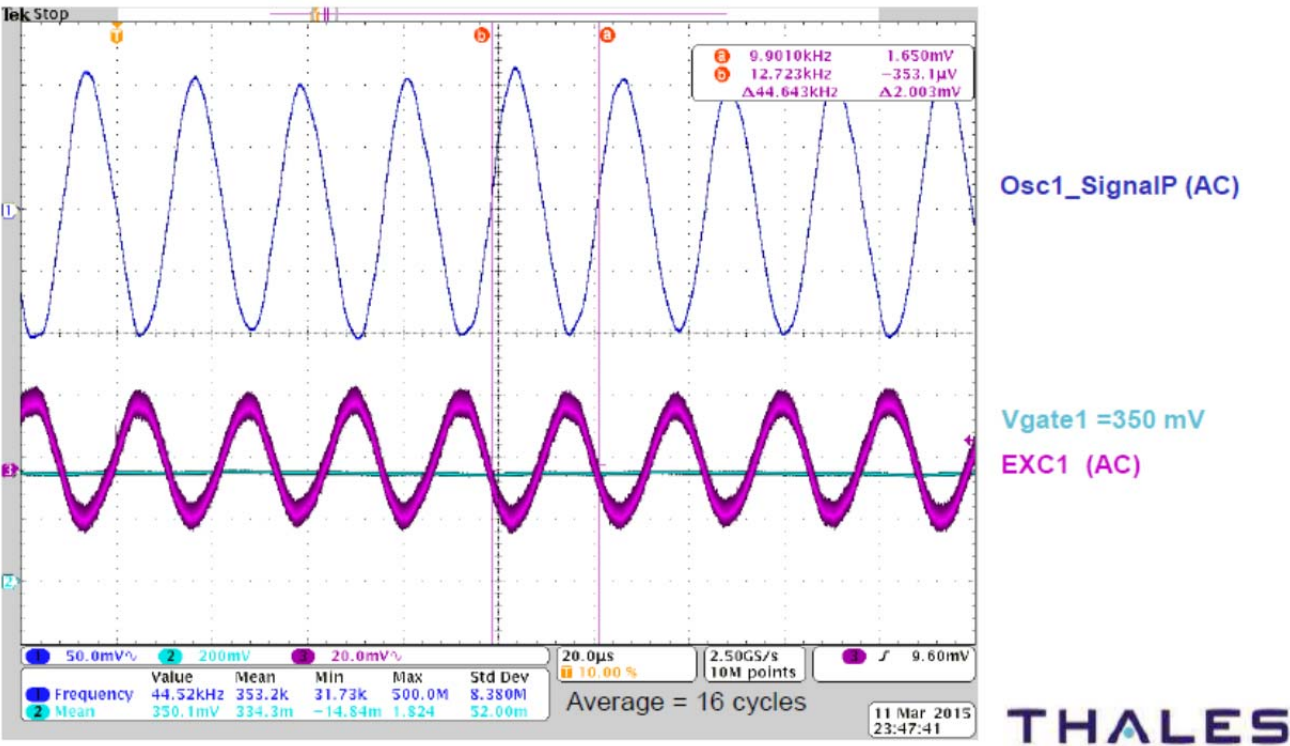
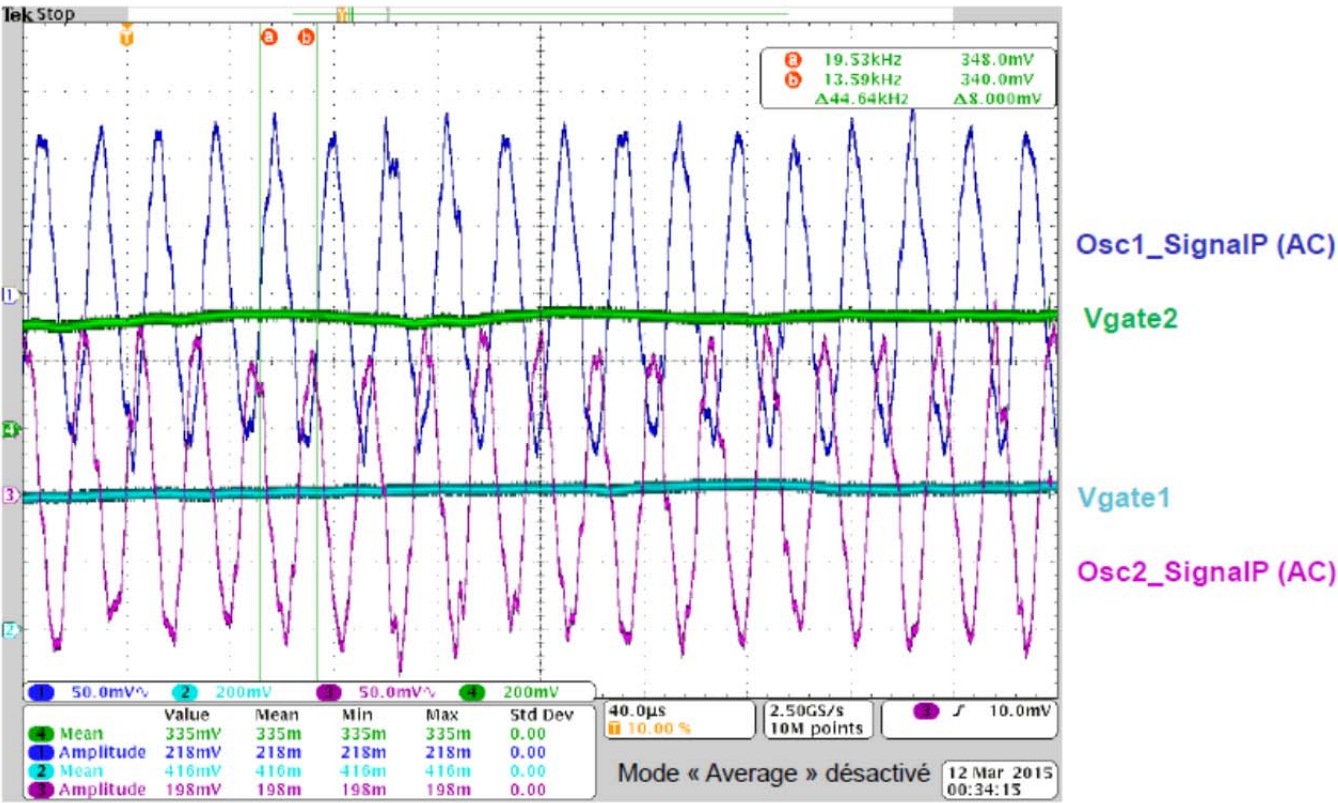


Figure 12: Waveform with internal amplitude control



THALES

Figure 13: Waveforms of the 2 oscillators with internal amplitude control