

Fig 1. Frequency deviation around turnover temperature 285 $^{\circ}\text{C}$. Solid line is Quartz, and dotted line is Langasite case.

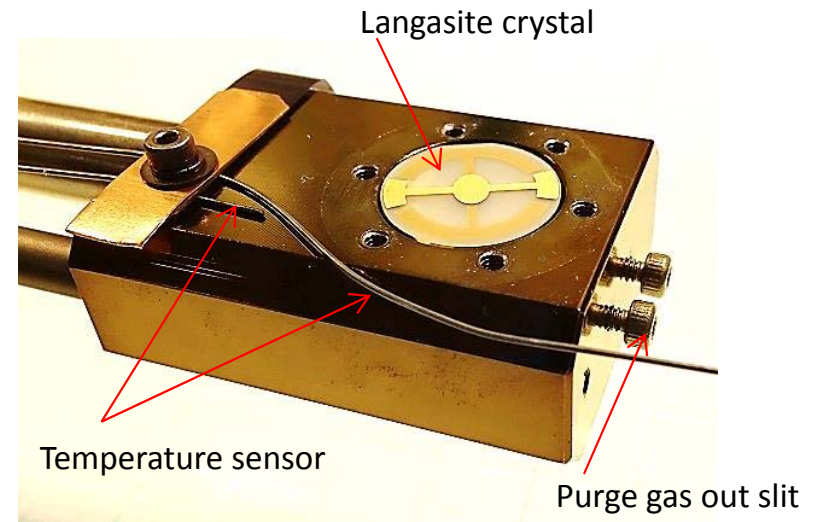


Fig 2. Front view of the Langasite crystal sensor set on the holder. Both of holder body and purge gas flow temperatures are monitored.

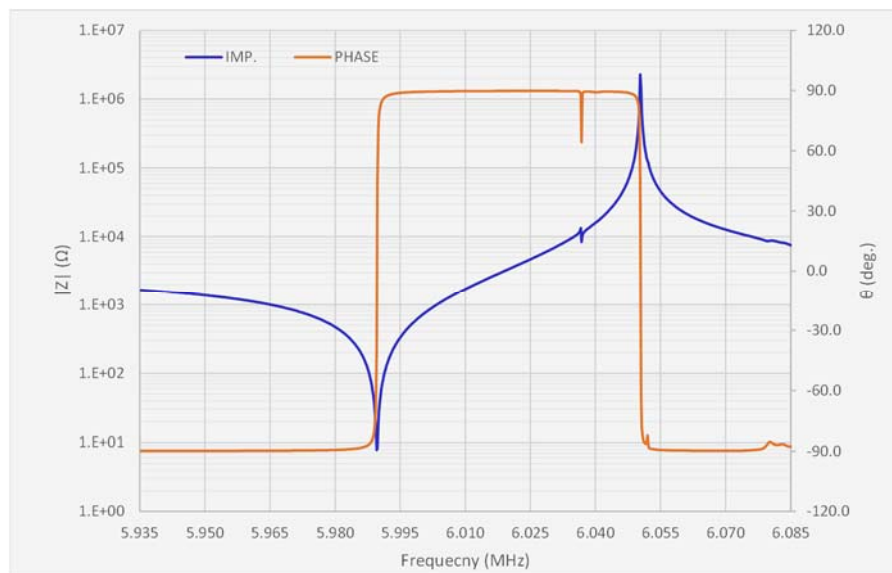


Fig 3. High frequency impedance characteristics. Fr : 5.98966625MHz, CI : 6.76 Ω

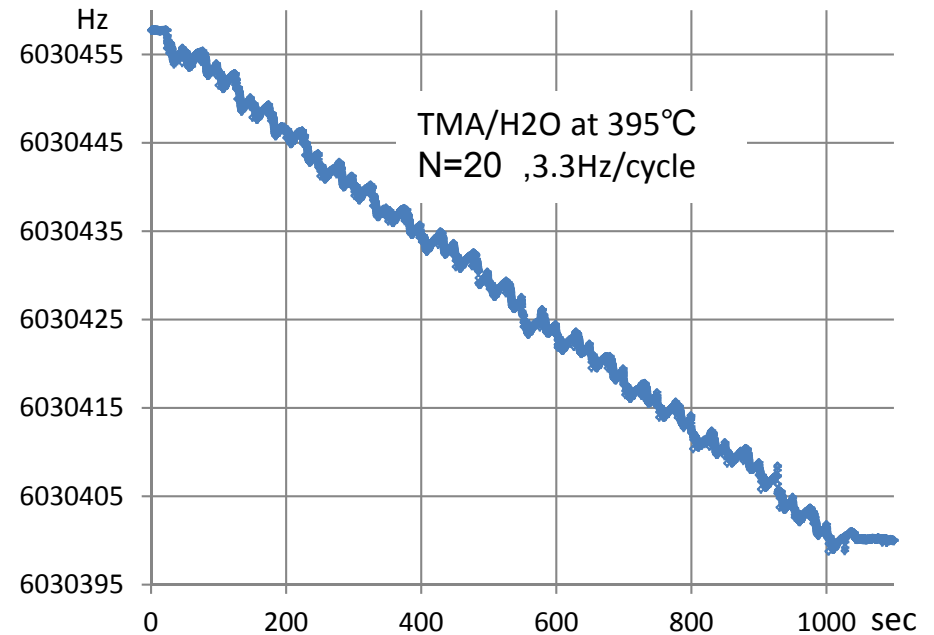


Fig 4. Al_2O_3 ALD response under exposure mode and pulsed purge condition. Each step shows 3.3Hz/cycle.