

Figure 1: XRR density of ALD-AlSiO<sub>x</sub> layers vs Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub> layers (as-deposited and after annealing@850°C, 3mn)



Figure 2: Dielectric constant of ALD-AlSiO<sub>x</sub> layers vs  $Al_2O_3$  and SiO<sub>2</sub> layers (as-deposited and after annealing@850°C, 3mn)



Figure 4: Leakage current of ALD-AlSiO<sub>x</sub> layers vs  $Al_2O_3$  (as-deposited using  $H_2O$  or  $O_3$ oxidant and after annealing@850°C, 3mn)



Figure 3: GIXRD structures of ALD-AlSiO<sub>x</sub> layers vs Al<sub>2</sub>O<sub>3</sub> layers (as-deposited using H<sub>2</sub>O or O<sub>3</sub> oxidant and after annealing@850°C, 3mn)