

Table 1: Thermal noise of capacitors at 300 K ( $\sim 27^\circ\text{C}$ )

Capacitance	$V_{\text{rms}} = \sqrt{\frac{k_{\text{B}}T}{C}}$	Noise charge $Q_n = \sqrt{k_{\text{B}}TC}$ in coulombs	Noise charge in electrons
1 fF	2 mV	2 aC	13 e <sup>-</sup>
10 fF	640 $\mu\text{V}$	6 aC	40 e <sup>-</sup>
100 fF	200 $\mu\text{V}$	20 aC	125 e <sup>-</sup>
1000 fF	64 $\mu\text{V}$	64 aC	400 e <sup>-</sup>