Johnson Noise Power Spectral Density Theoretical 1 kHZ  $10^3$  – 2.5 kHZ 6 kHZ Power Spectral Density  $S_V \left[ \text{nV}^2/\text{Hz} \right]$ 1 kHz:  $k = 1.3408(28) \times 10^{-23} \text{ J/K}$ 2.5 kHz:  $k = 1.3937(28) \times 10^{-23} \text{ J/K}$ 6 kHz:  $k = 1.4746(29) \times 10^{-23} \text{ J/K}$ Average:  $k = 1.4030(16) \times 10^{-23} \text{ J/K}$ Actual: k =  $1.3806 \times 10^{-}23 \text{ J/K}$  $10^{0}$ Error: 1.6 %  $10^{3}$  $10^2$  $10^{5}$  $10^{4}$ Resistance  $R_L$   $[\Omega]$