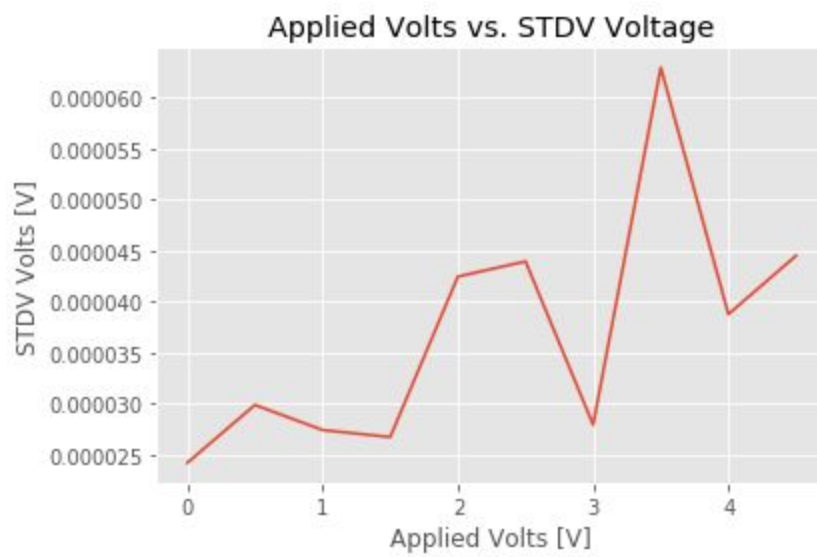
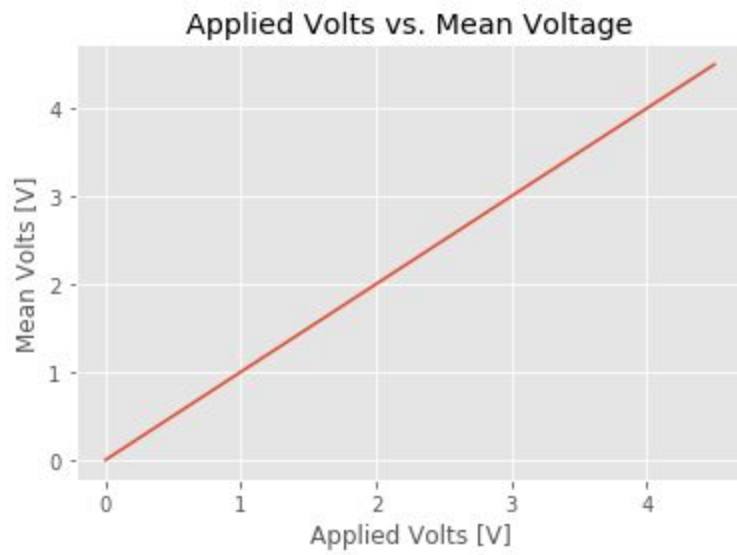
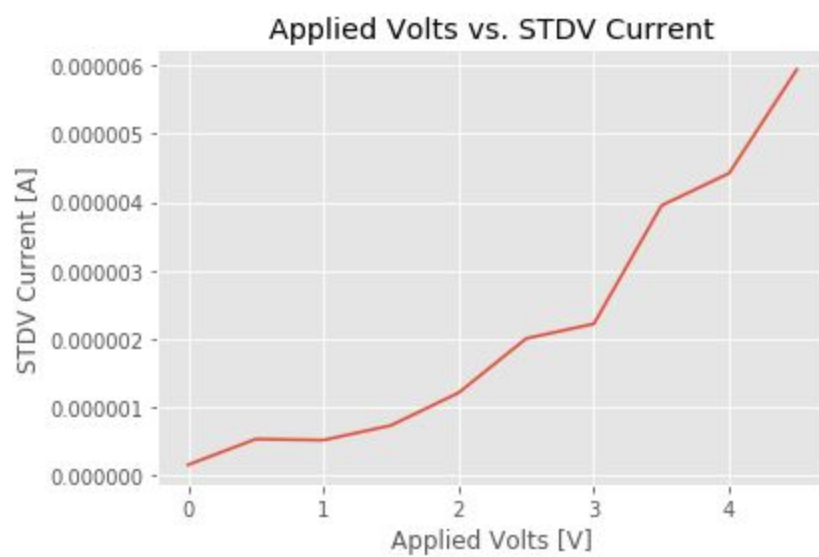
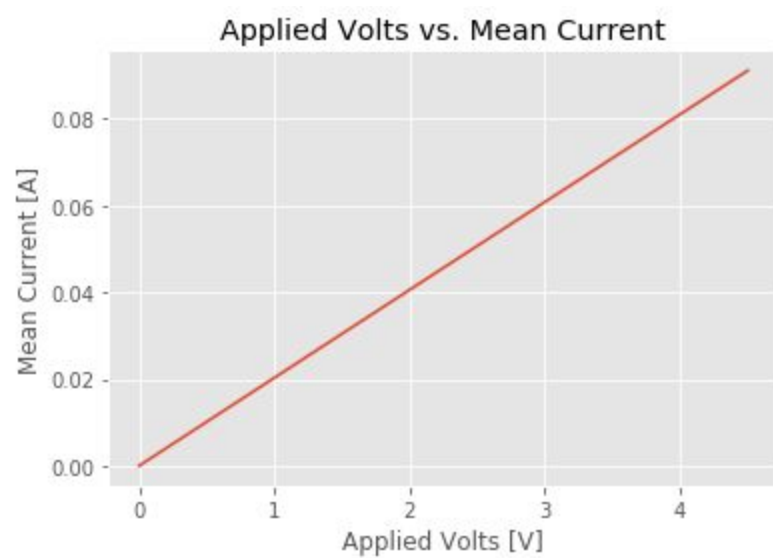
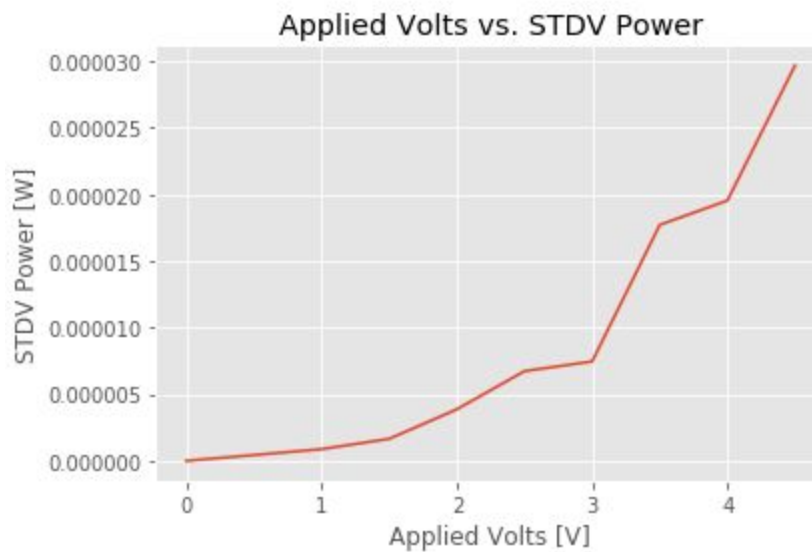
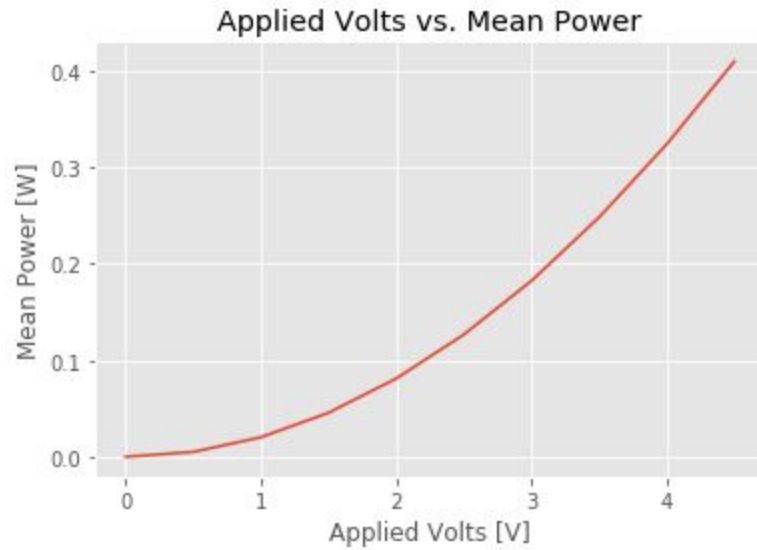


## Checkpoint 1

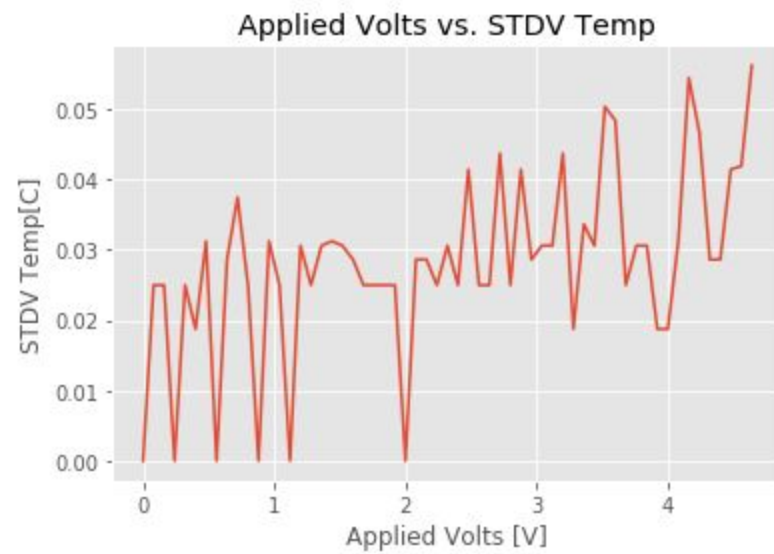
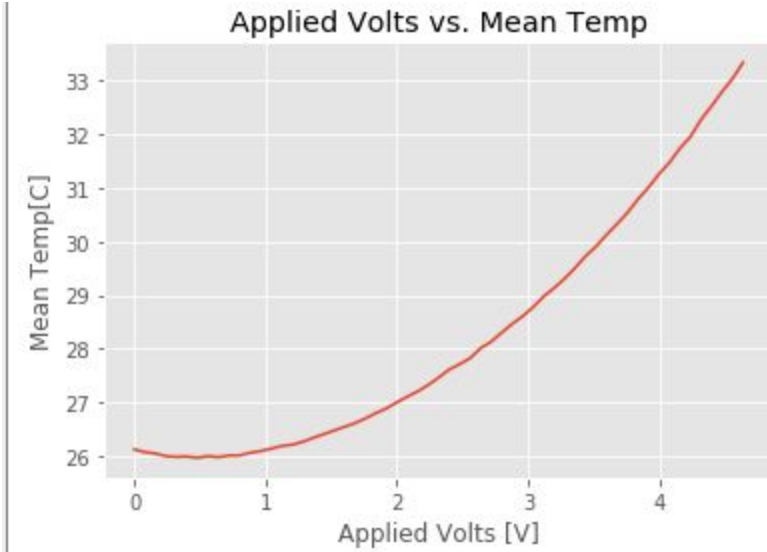




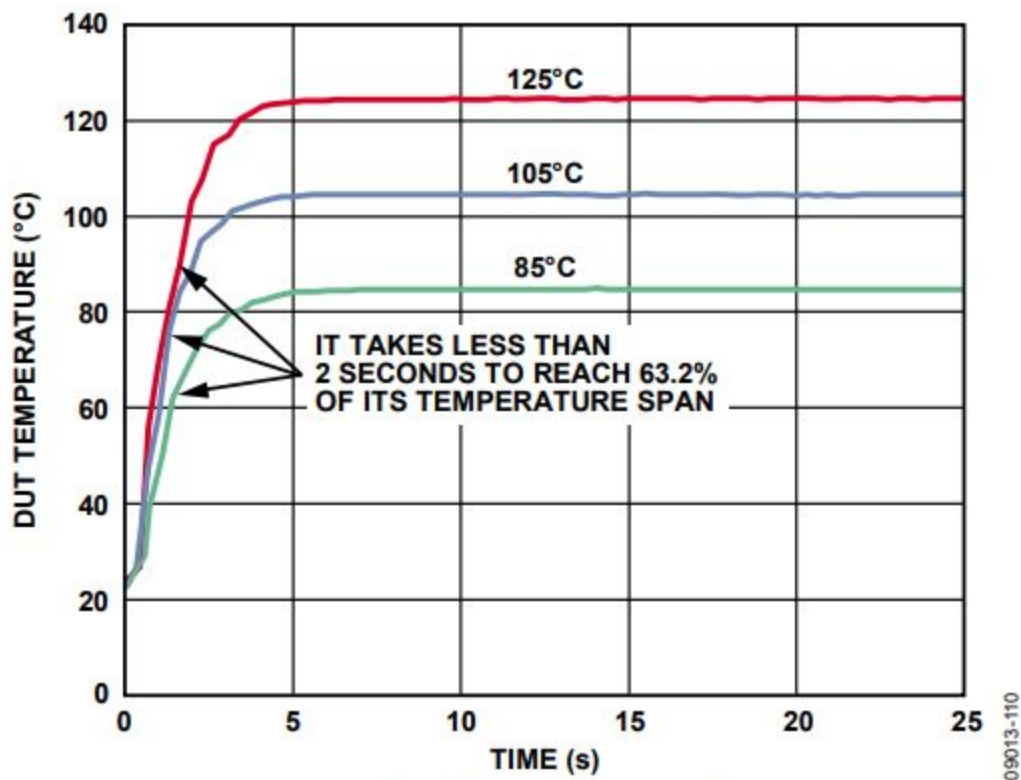


Since standard deviation for all graphs is pretty low ( $\sim 10^{-4}$ ) this tells us that the average values are consistent within a range we expect. The graphs for the mean readings match our theoretical understanding since both the current and voltage are linear and the power is quadratic)

Checkpoint 2



Standard deviation appears to increase for larger voltage values (i.e. higher temperature). This is the case due to the temperature never achieving equilibrium for each voltage value with the exception of the initial state since while sweeping through a voltage value the temperature continues to change.



*Figure 10. Thermal Response Time*

This shows why there is error in temperature as shown in the standard deviation curve since it takes about 7 seconds before the temperature sensor stabilizes at a constant temperature. Since we are constantly increasing voltage (therefore temperature) the temperature sensor never settles to a value which explains the increasing standard deviation.