| **Resistor values:** | | |
| --- | --- | --- |
|  | Resistance (nom) | Resistance (measured) |
| R1 | 43ohm | 43.702ohm |
| R2 | 100ohm | 99.935ohm |
| R3 | 220ohm | 218.560ohm |
| R4 | 470ohm | 463.62ohm |

**Current**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Measured in lab | Tinkercad | Theoretical (nom) | Theoretical (measured) |
| R1 | 14.895mA | 15.3mA | 15.35mA | 15.285mA |
| R2 | 13.084mA | 13.4mA | 13.4mA | 13.33mA |
| R3 | 1.9003mA | 1.94mA | 1.94227mA | 1.9527mA |
| R4 | 1.9215mA | 1.94mA | 1.9423mA | 1.9527mA |

The variations in the theoretical currents obtained from the nominal values and the measured values of resistance exist as a result of the error between the measured resistance and the ideal nominal resistance.

The difference in currents obtained from the tinkercad model and the actual lab experiment or the theoretical nominal values exist as a result of internal resistance not accounted for in calculations. This resistance exists in the wires as well as the DC supply. Systematic error caused by improper handling and calibration of the devices is another source of error that contributes to the variations in current values between the measured and theoretical values.