Step 3 table: Using multimeter

|  |  |
| --- | --- |
| Direction | Resistance |
| Forward | 892.55 K ohm |
| Reverse | Over 10M ohm |

Step 4:

|  |  |  |
| --- | --- | --- |
| Bias | *Vdiode* (V) | *Idiode* (A) |
| Reverse | -5.750 | 00.3100 |
| Reverse | -5.500 | 00.1925 |
| Reverse | -5.250 | 00.0840 |
| Reverse | -5.000 | 00.0186 |
| Reverse | -4.500 | 00.0022 |
| Reverse | -4.000 | 00.0006 |
| Reverse | -3.000 | 00.0000 |
| Reverse | -2.000 | 00.0000 |
| Reverse | -1.000 | 00.0000 |
| Forward | 0.000 | 0 |
| Forward | 0.250 | 00.0000 |
| Forward | 0.500 | 00.0000 |
| Forward | 0.64 | 00.0001 |
| Forward | 0.66 | 00.0002 |
| Forward | 0.68 | 00.0004 |
| Forward | 0.70 | 00.0008 |
| Forward | 0.72 | 00.0015 |
| Forward | 0.74 | 00.0032 |
| Forward | 0.76 | 00.0061 |
| Forward | 0.78 | 00.0112 |

Step 6: (Need to calculate)

Nominal forward bias voltage: 0.7v

The Zener Voltage on our datasheet is 5.1v, this voltage is where the reverse bias starts to leak substantial current.

Ended on part 4

Step 25:

Each Zener Diode can be used as a 0.7v voltage regulator, so 4 in series will yield a 2.8v regulator.

Hand draw schematic and put in report

Step 27: Use excel to plot data

Step 31: The Pspice simulation is exactly like the