UNIVERSITY OF CALIFORNIA AT BERKELEY
College of Engineering
Department of Electrical Engineering and Computer Sciences

EE105 Lab Experiments

Report 2: Electronic Test Equipment

Name:

Lab Section:

3.1.1 Record the error in the power supply at +1 V, +5 V, and +9 V.

Voltage Setting	DMM Measurement	% Error
1 V		
5 V		
9 V		

3.1.2 What is the error (in percent)? What is another error factor that may cause deviation from the ideal?

3.1.3 Why are you not supposed to connect the DMM in current mode to the terminals of a voltage source?

3.1.4 Measure the current and compare the value to your hand calculation.

3.2.1 What is the error on the function generator output at 1 kHz, 1 V_{p-p} after taking the voltage division factor into account?

3.2.2 What is the highest frequency sinusoid that the generator can produce? What is the error in the panel according to the oscilloscope?

3.2.3 What is the smallest V_{p-p} that the function generator can produce? What is the error? Without averaging, does the oscilloscope **over-measure** or **under-measure** the V_{p-p} value? (circle one)

3.2.4 What is the shortest pulse that the function generator can produce at $500\,\mathrm{mV}$ height?

3.2.7 Calculate the value of $\left|\frac{v_o}{v_s}\right|$ at 1 kHz from your oscilloscope measurements..

3.3.1 Attach the printed plot of the $100\,\Omega$ I-V characteristic.

3.3.2 Attach the printed plot of the diode I-V characteristic.

3.3.3 What is the V_O value calculated from your load-line? Does it match the value measured with the DMM?