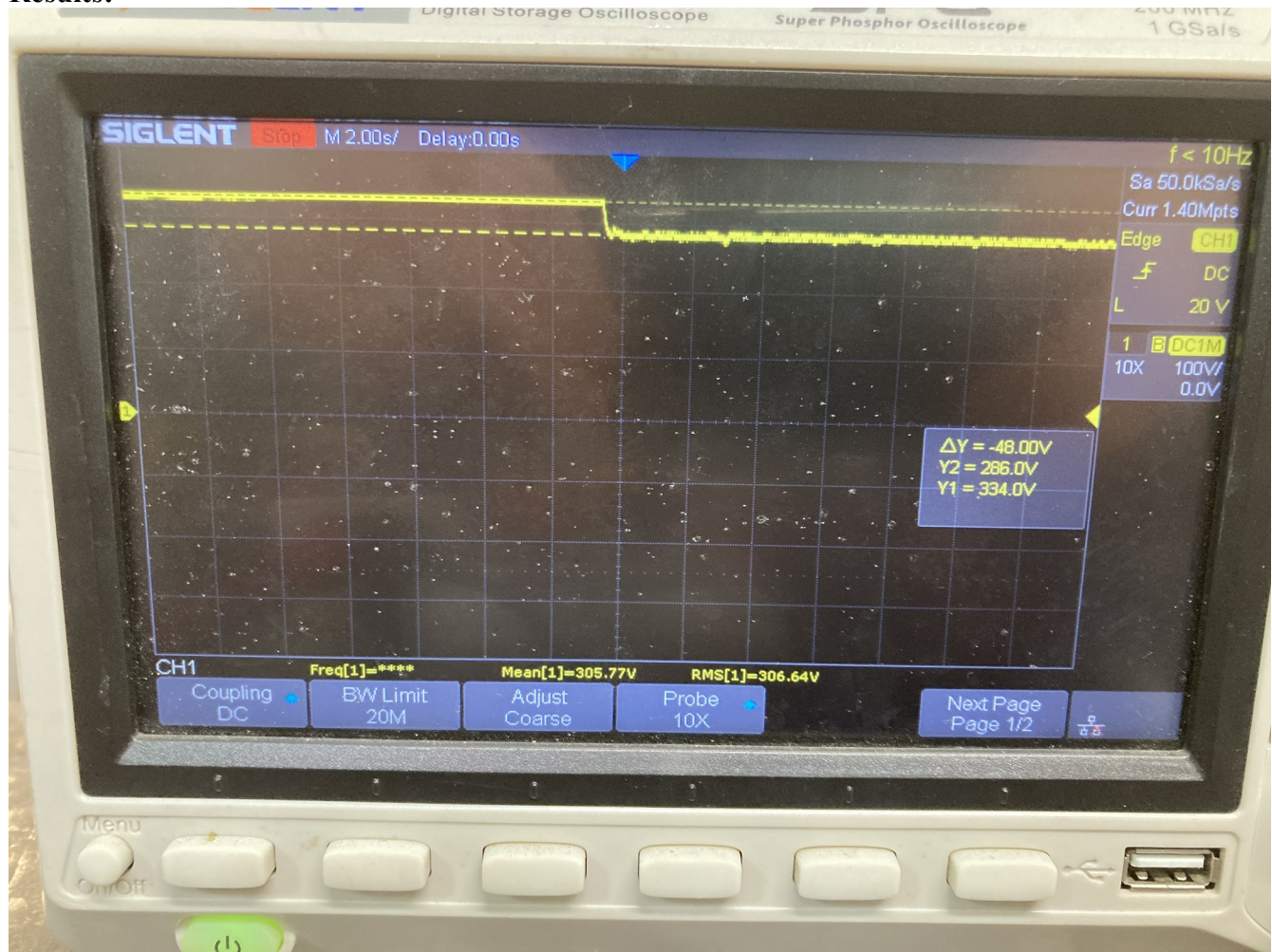# Full Throttle Output Test (7/19/2023)

Firmware Rev: 4

Purpose: This tests the maximum open circuit output voltage of the system, the accuracy of the voltage sensor, and the load regulation of the system.

Description: The system is put in full throttle test mode. This disables voltage control of the system and voltage level monitoring. Once in charge mode the open circuit output voltage is measured using an oscilloscope and the built in voltage sensor. Next, a 250Ω step load is applied and the voltage is measured using both methods again.

Results:

	Open Circuit	250Ω Load
Oscilloscope (V)	334	286
Voltage Sensor ADC Code	472	408
Voltage Sensor (V)	326.3	282.3
Error (%)	2.3	1.3

The output power when the 250 ohm load is connected is 327W and the voltage drop when the 250Ω load is connected is 48V.

Analysis: The actual measured transfer function must be used to obtain an accurate result from the voltage sensor. That is, the theoretical transfer function cannot be used.