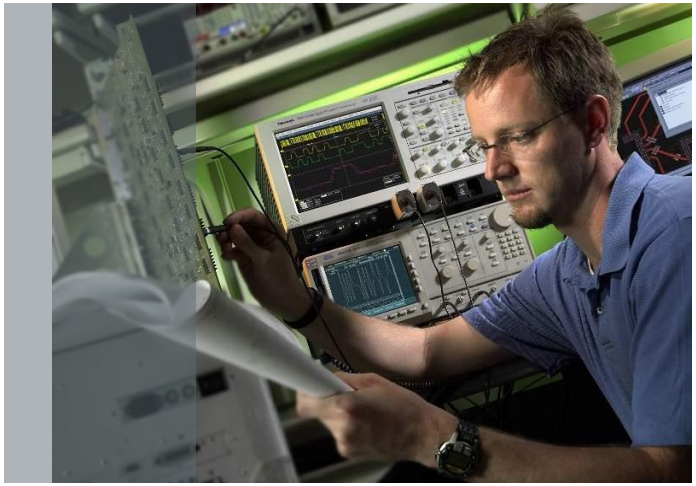
Using the Model 2461 SourceMeter

Pulse Sweep I Digitize V Example



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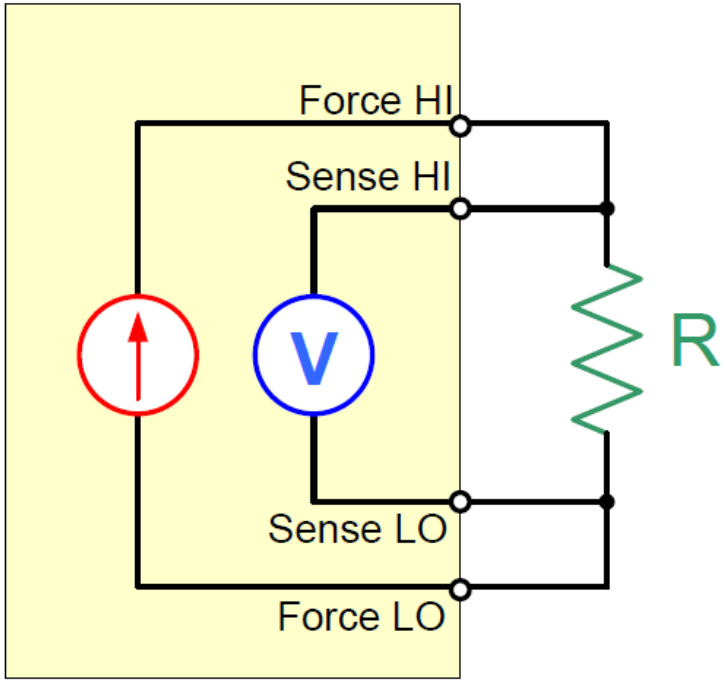
Circuit Diagram for Pulse Sweep I Digitize V



Model 2461 SourceMeter set up for sourcing current and digitizing voltage in a four-wire configuration

This test generates 201, 500µs current pulses that sweep in value from -10ma to 10ma. The entire voltage waveform is captured by the digitizing A/D converter at a sample rate of 500,000 samples per second.

The results shown later were performed with a 110Ω resistor as a load, but this same method can be used to test the pulse response of any device you need to analyze.

Using the 2461_PulseSweepI_DigitizeV.tsp file

Based on your test requirements, you can change the test parameters that are programmed in the code. The pulse sweep command accepts many arguments so the code has variables assigned to each one. Here is a list of some of the default test parameters.

Test Parameter	Command or Variable	Default
Sample rate	smu.digitize.samplerate	500000
Start of sweep	start	-10e3
Stop of sweep	stop	10e-3
Points in sweep	points	201
Pulse width	pulse_width	500e-6
Off time	offTime	500e-6
Voltage limit during pulse	xPulseLimit	20

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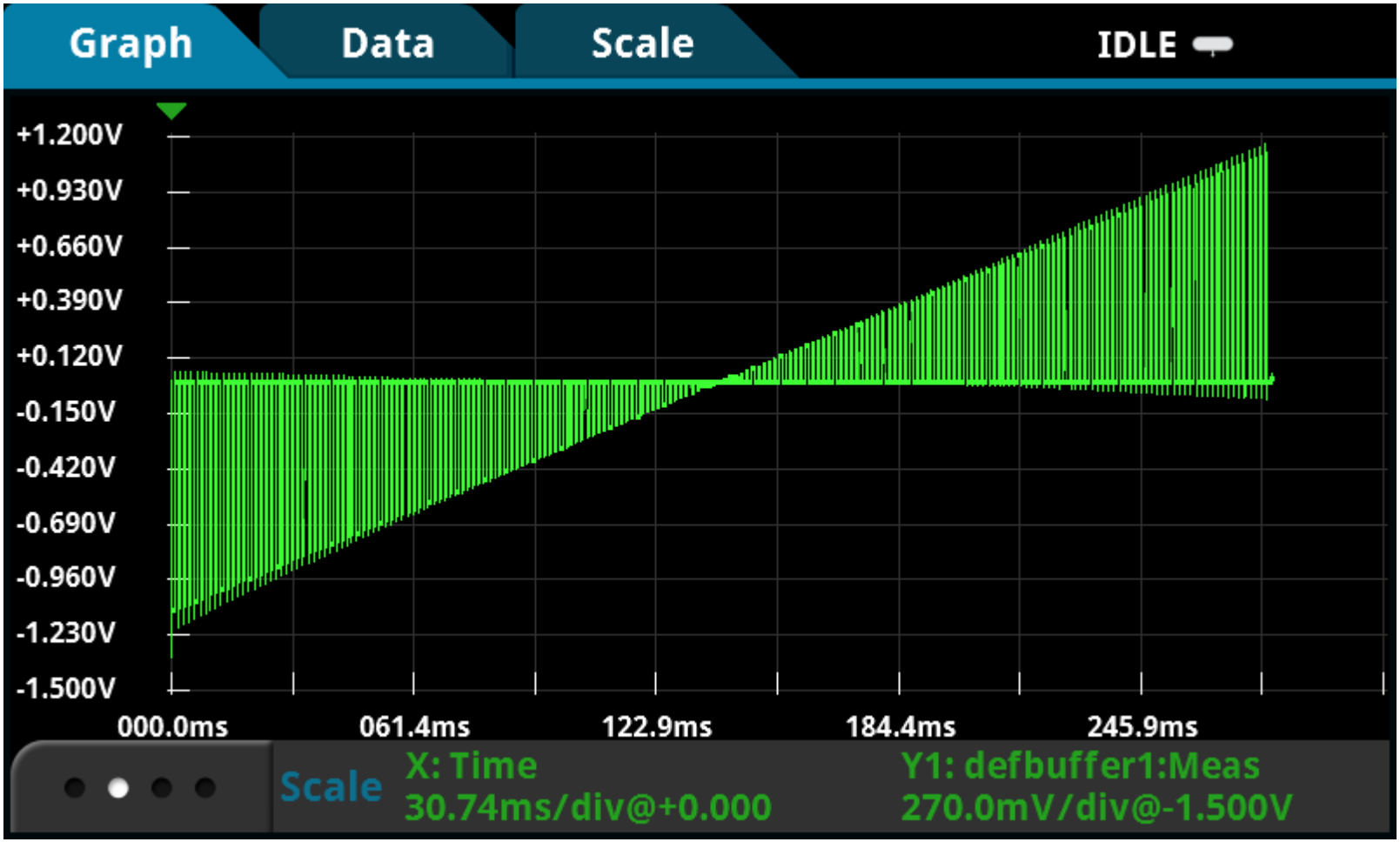
Results – All pulses



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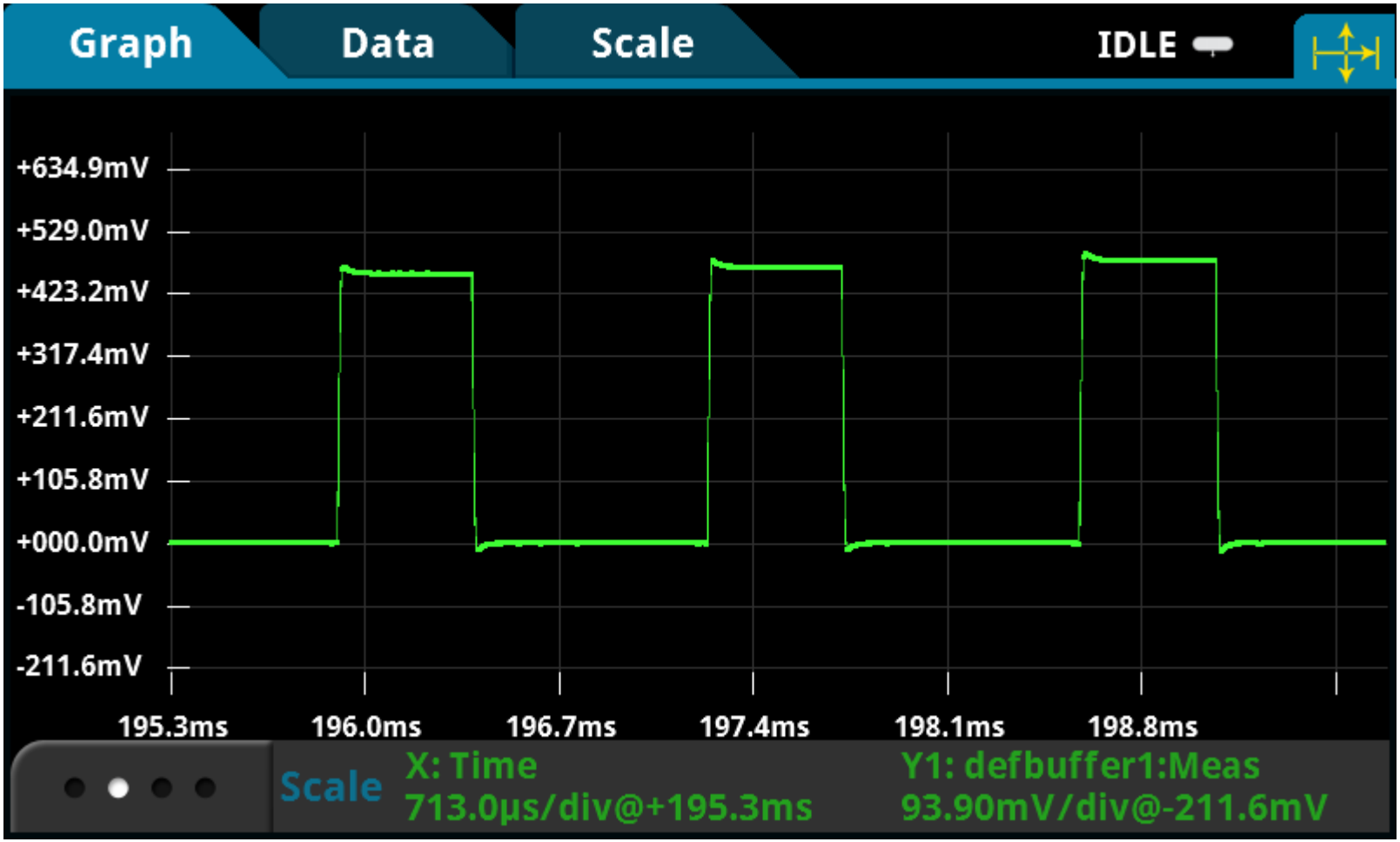
Results – Zoomed in



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