Step #20: Define Phasors for fundamental waveform. Note we shifted the phase angles to assume generator voltage has an angle of zero.

Step #21: Complex Power

Step #22:

When comparing the power calculated in step #21 and #16, the results to do not match up. This is because we are only considering the first harmonic in #21. While #16 has the sum of all harmonics.

Step #23:

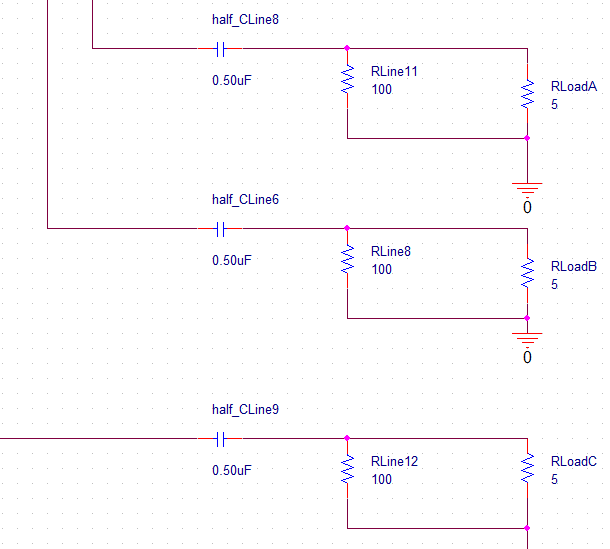


Figure 12: Filter Design for Load

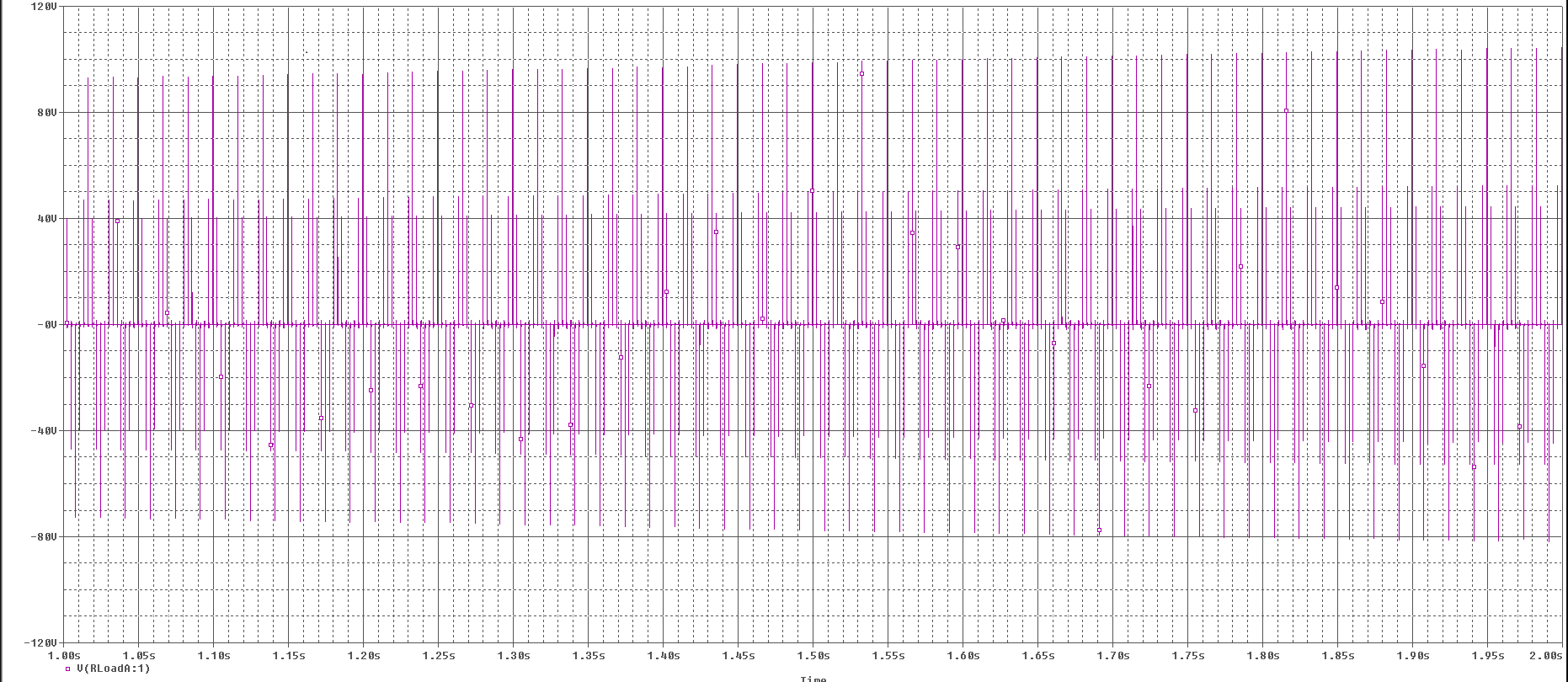


Figure 13: Load Voltages (A) vs. Time with Filter

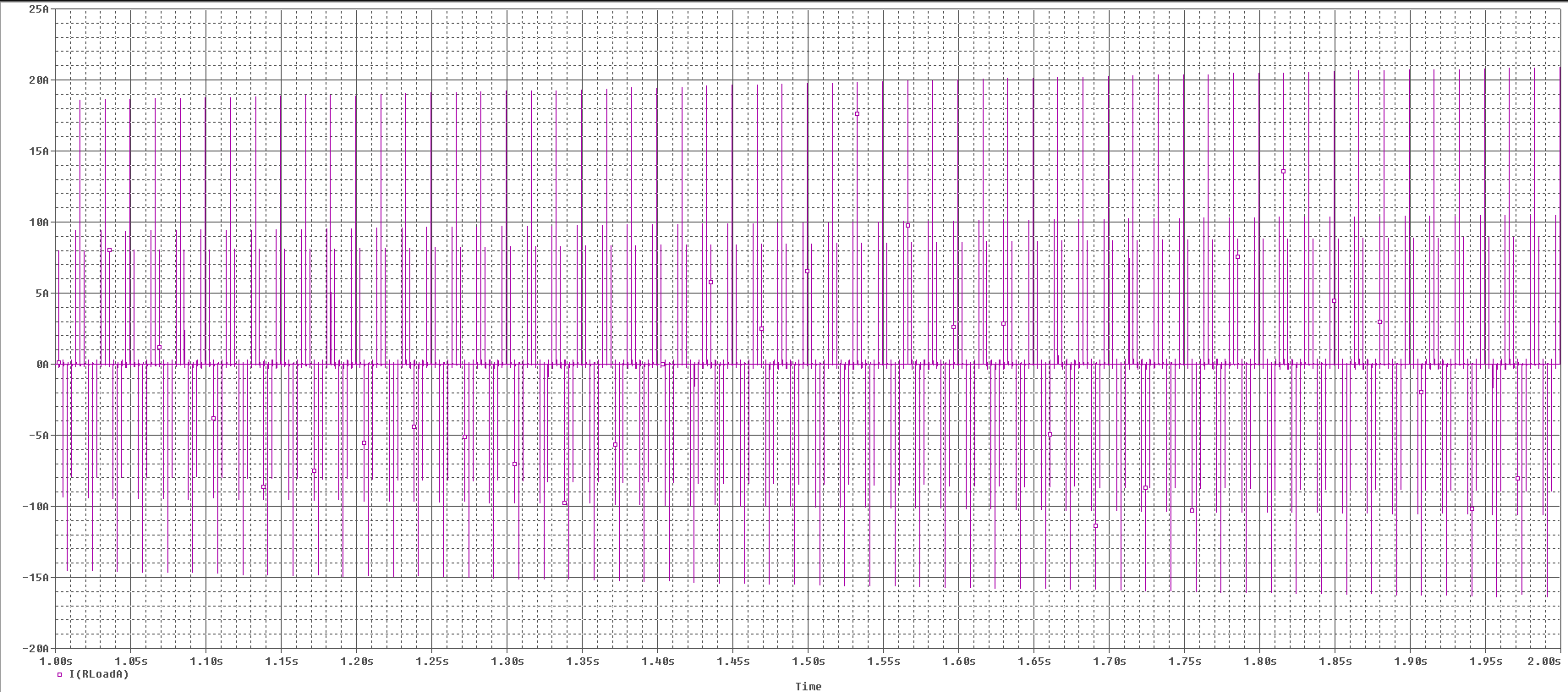


Figure 14: Load Current (A,) vs. Time with Filter