

Maximum Power Transfer in AC Circuit

Monday, November 15, 2021 6:32 PM

Objective:

- Design a lab to investigate maximum power transferred in AC circuits

Procedure:

1. Wire circuit designed in figure 2 with the standard values
2. Adjust the power supply on the function wave generator to be at 10 volts and 200 Hz
3. Calculate power dissipated through the load
4. Change out the load to have various resistor and capacitor loads
5. Calculate power dissipated through the load for the various resistor values and capacitor values
6. Record current and voltage for various load values

Pre-Lab:

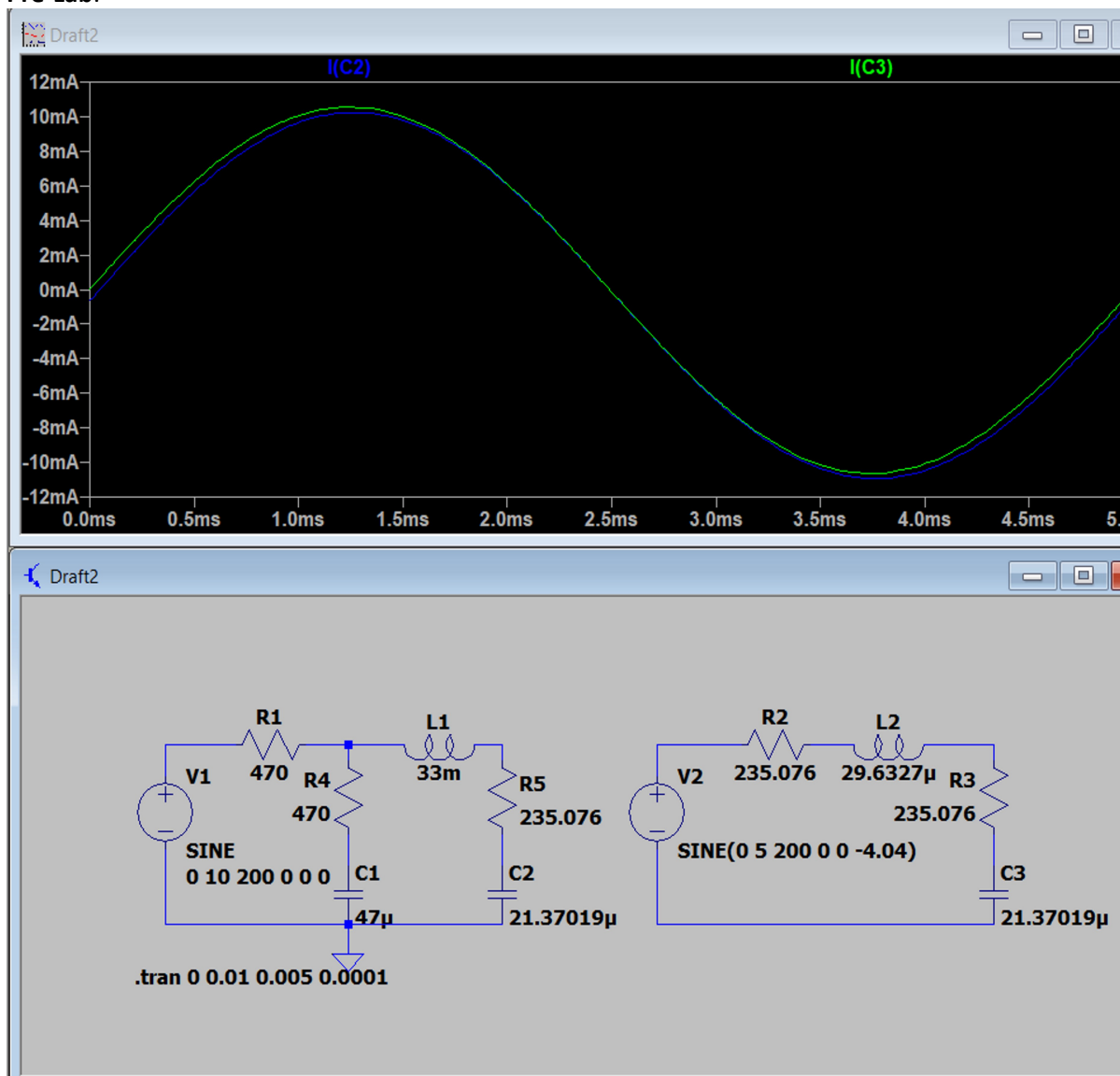


Figure 1: Initial AC max power design(left) with simplified equivalent(right)

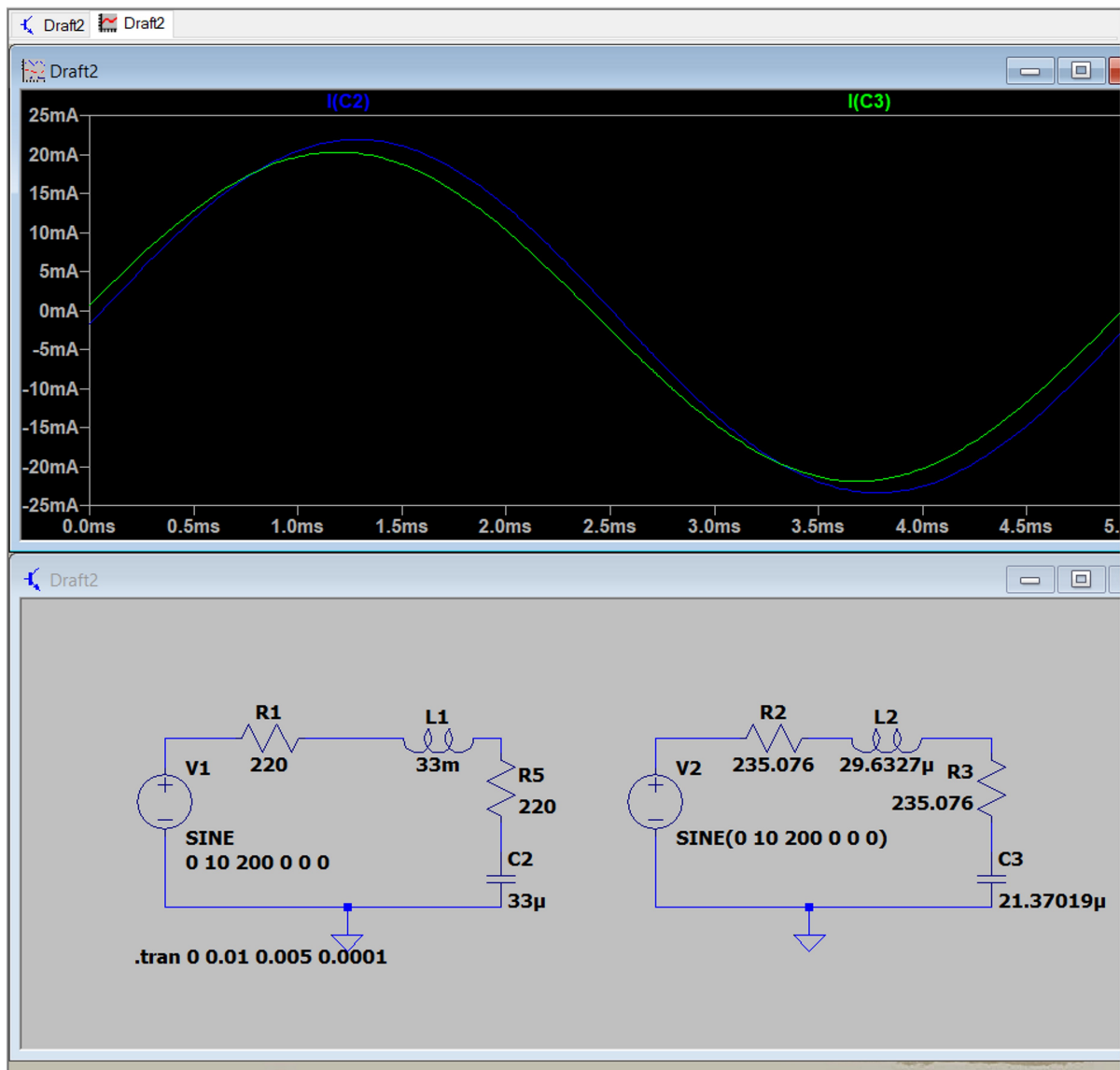


Figure 2: Previous max power simplified equivalent design(right) with standard values design(left)