

Answer on Question #58135 - Physics - Electric Circuits

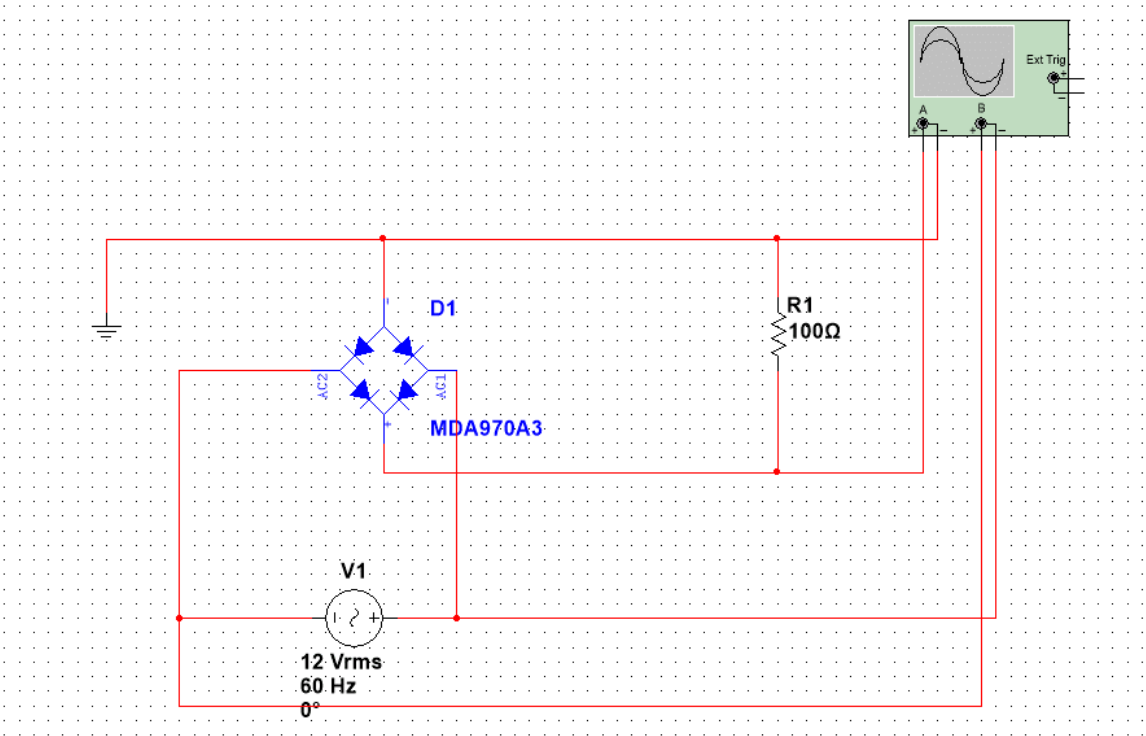
Question:

In a full wave rectifier the output signal is filtered using a capacitor, C in parallel with the load resistor RL. What is the effect of doubling the period of the input ac signal on the peak-to-peak ripple voltage, Vr(pp)

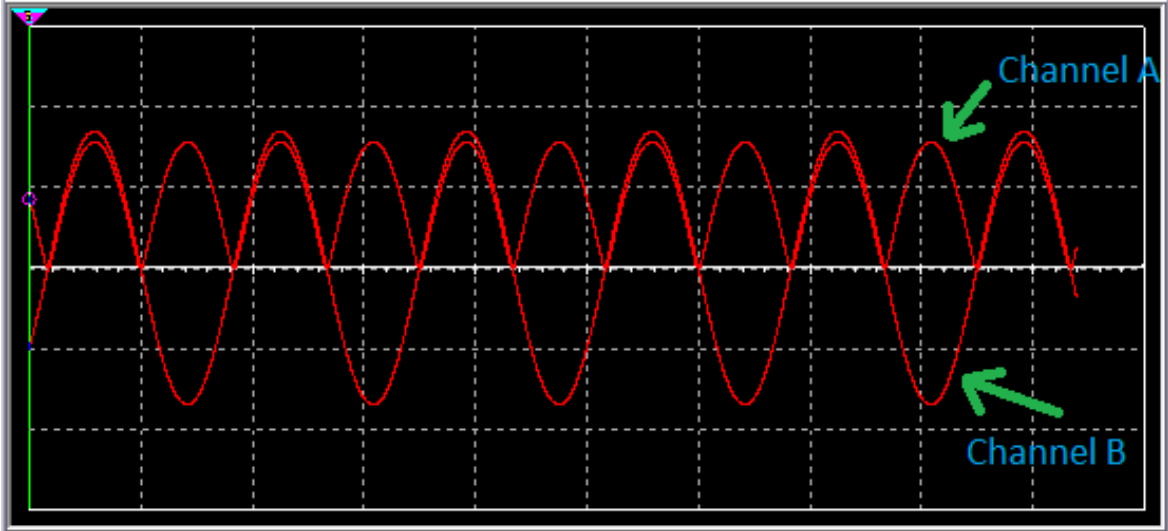
Answer:

Amplitude of ripple voltage decreases.

Scheme in multisim:

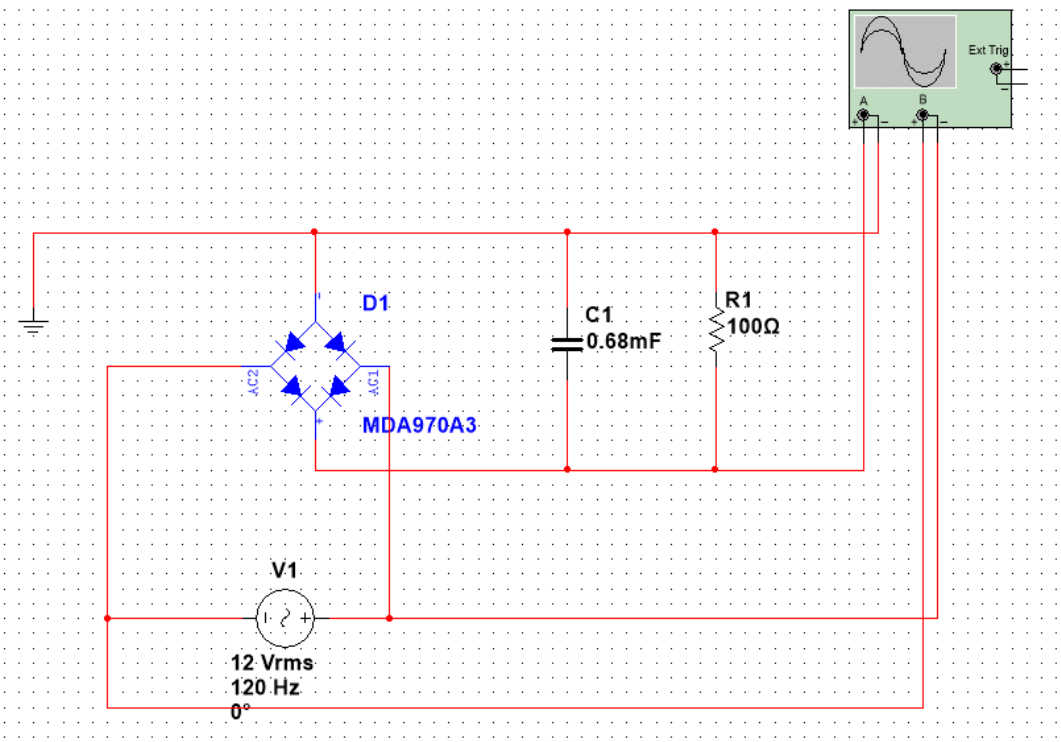


Oscillogram:



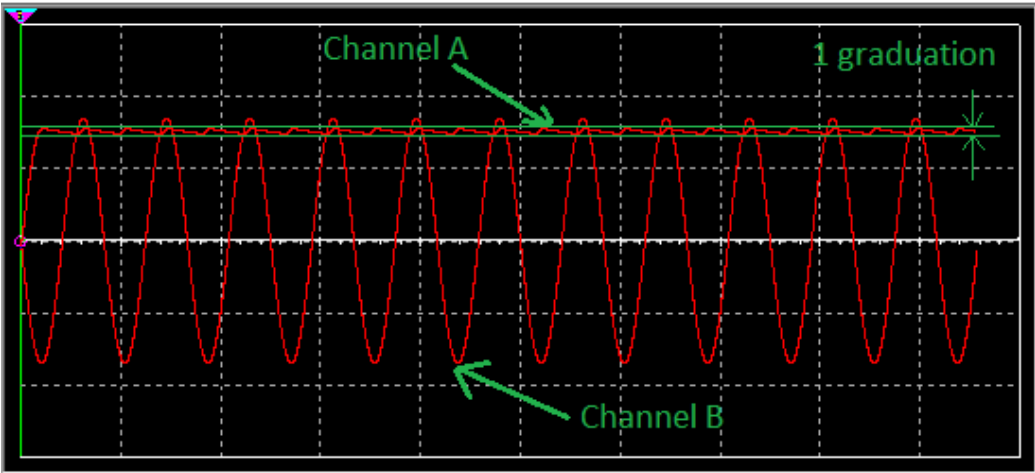
(Figure 1)

Include capacitor in parallel load resistance:



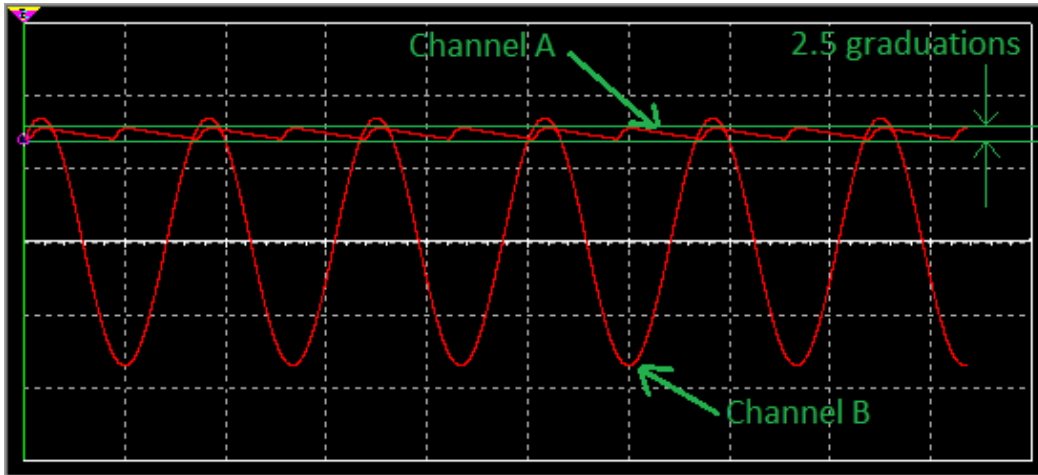
(Figure 2)

Oscillogram:



(Figure 3)

Doubling the period of the input AC signal(decreasing frequency):



(Figure 4)

Increasing of the period cause increasing of ripple voltage amplitude.