THE THREE BASIC TYPES OF CIRCUIT

AC CIRCUITS



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Electronics Engineer











TOPIC OUTLINE

The R-Circuit

The C-Circuit

The L-Circuit

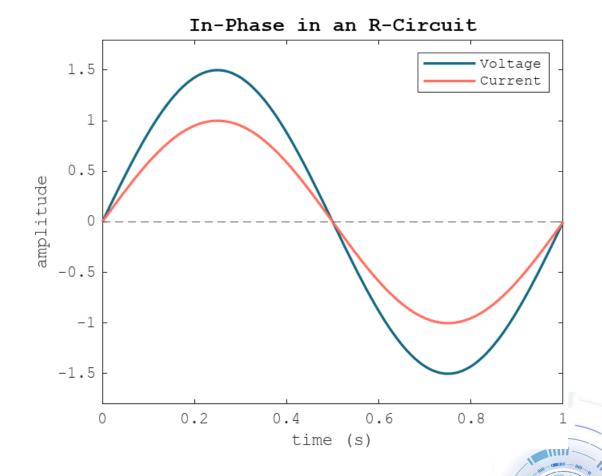


THE THREE BASIC TYPES OF CIRCUIT

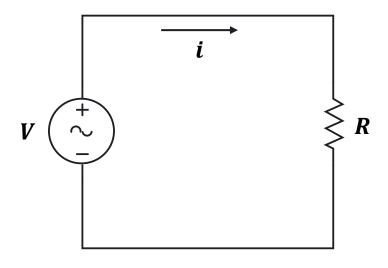


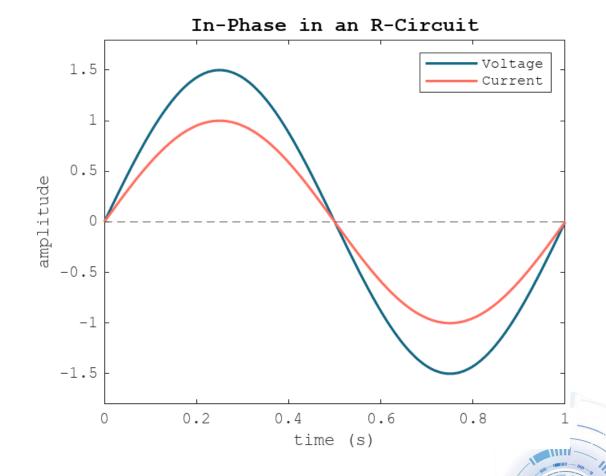
THE R-CIRCUIT

In a purely <u>resistive circuit</u>, the voltage and current are <u>in phase</u>. Resistors are frequency-independent components, their behavior remains the same for both DC and AC circuits.



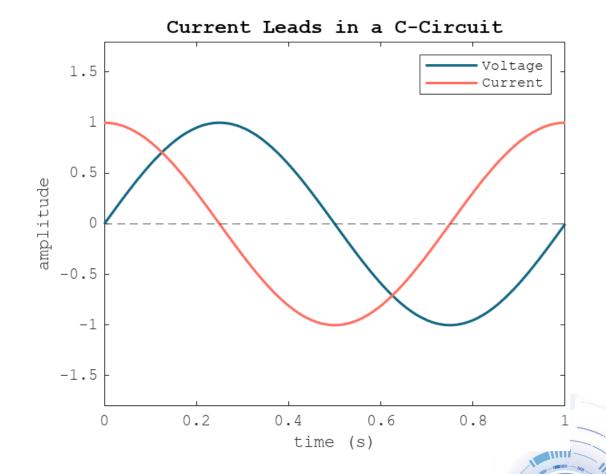
THE R-CIRCUIT



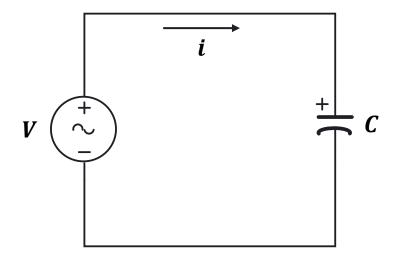


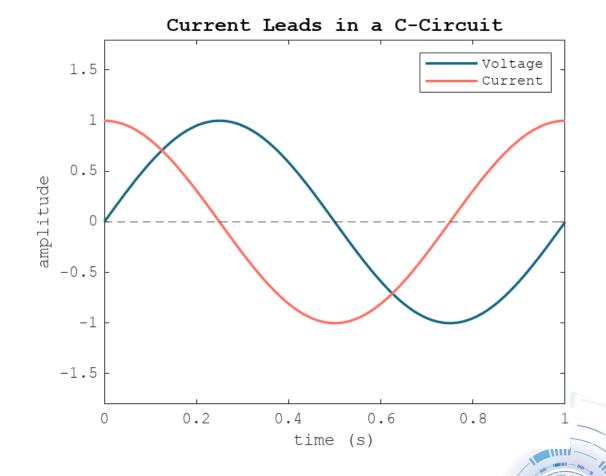
THE C-CIRCUIT

In a purely **capacitive circuit**, the <u>current leads</u> the voltage by 90 degrees. This phase difference occurs because the capacitor resists changes in voltage.



THE C-CIRCUIT

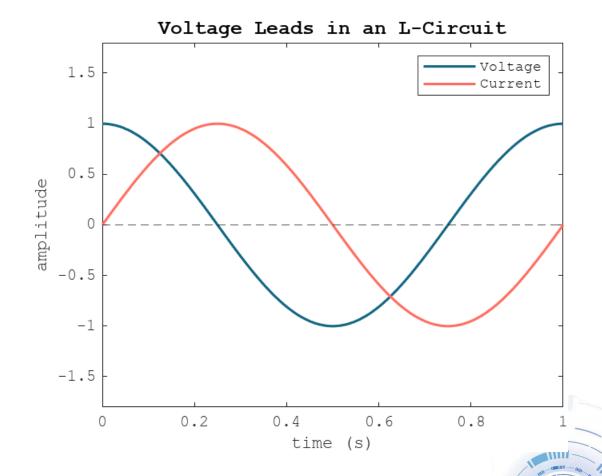




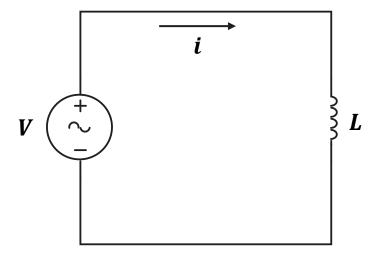
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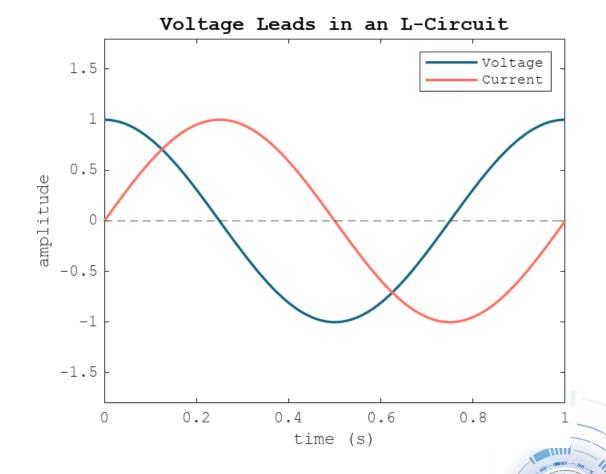
THE L-CIRCUIT

In a purely <u>inductive circuit</u>, the <u>voltage leads</u> the current by 90 degrees. This phase difference occurs because the inductor resists changes in current.



THE L-CIRCUIT





LABORATORY

