



Electric Circuits

Lecture 11 Sinusoidal Steady State

EE2210, Fall 2022

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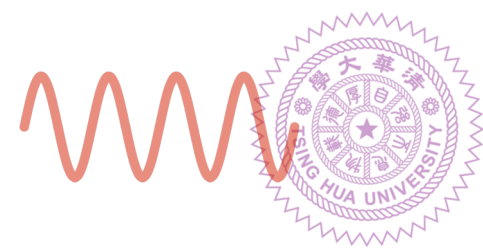
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Lecture Outline

- Chapter 10 in the textbook

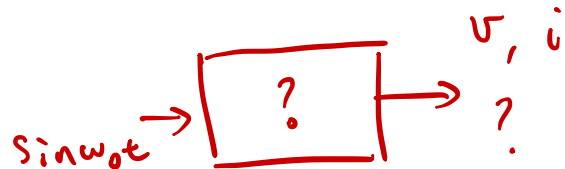


The Sinusoidal Source



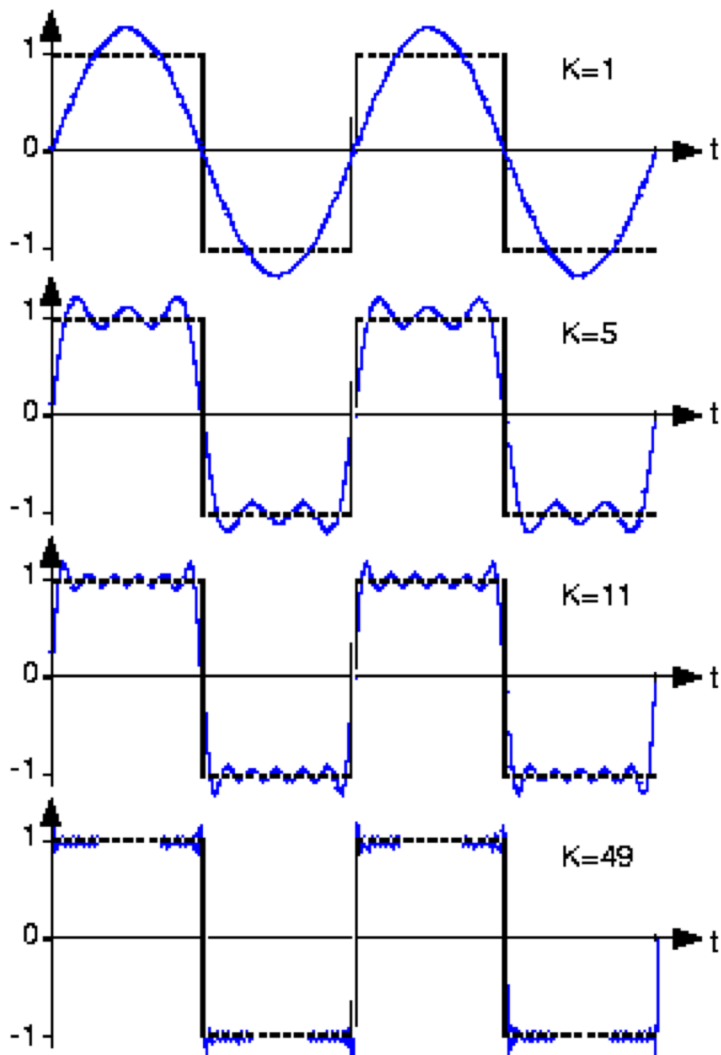
- We would like to look at response of networks to sinusoidal drive.
 - Sinusoidal source produces a voltage/current that varies sinusoidally with time.
 - Sinusoids are important because signals can be represented as a sum of sinusoids.
 - Response to sinusoids of various frequencies – aka **frequency response** – tells us a lot about the system.

magnitude and phase of the output as a function of input freq.





Square Wave



- For example, a square wave can be constructed by multiple (ideally infinite) sine waves at different frequencies.

Frequency Response

Filter

