

EN-3212 Electronics Worksheet 5

AC Circuit Analysis

Graph the following function

$$V(t) = V_{\max} \sin(2\pi ft)$$

Where $V_{\max} = 170\text{V}$ and $f = 60\text{Hz}$

Label

V_{peak} , $V_{\text{peak to peak}}$, and the period.

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AC Circuit Analysis

Draw the circuit for a low pass filter

Write the equation for the low pass filter and capacitive reactance

Sketch a graph of voltage vs frequency and explain why the graph looks the way it does.

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AC Circuit Analysis

Draw the circuit for a high pass filter

Write the equation for the low pass filter and capacitive reactance

Sketch a graph of voltage vs frequency and explain why the graph looks the way it does.