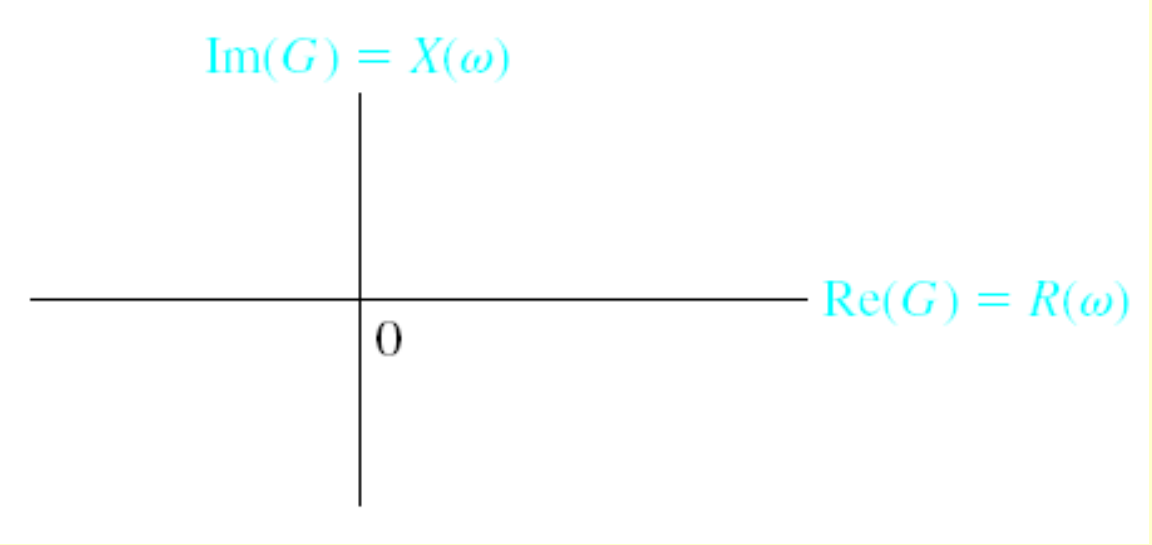
UNIT-5

(Lecture-6)

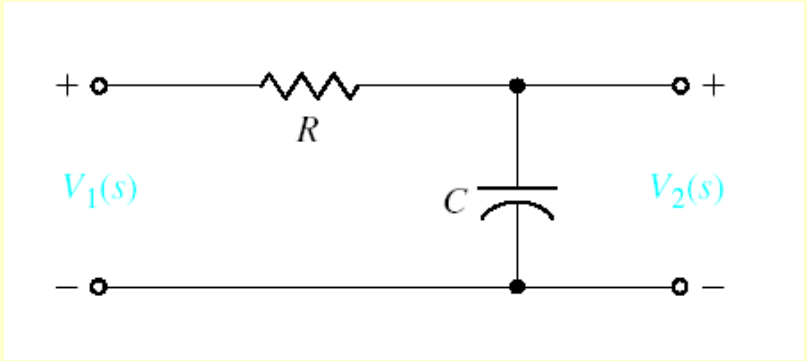
Polar Plots

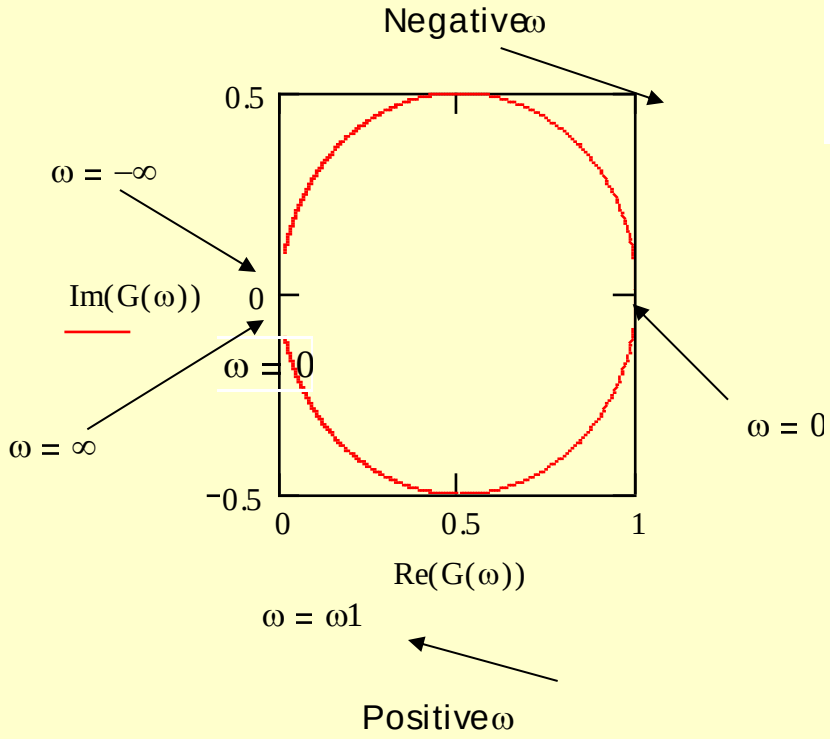
Frequency Response Plots
Polar Plots



$\omega := -1000, -999..1000 \qquad j := \sqrt{-1} \qquad R := 1 \qquad C := 0.01 \qquad \omega 1 := \frac{1}{R \cdot C}$

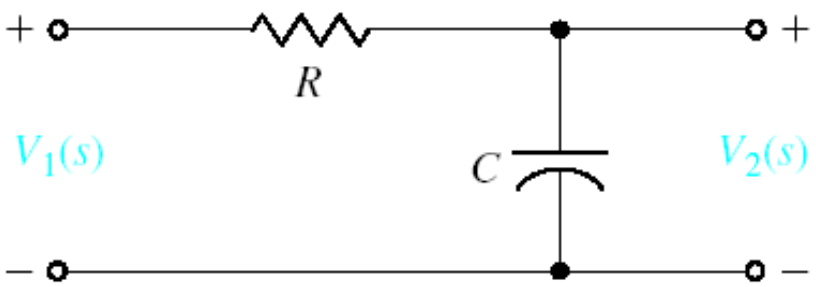
$$G(\omega) := \frac{1}{\left(j \cdot \frac{\omega}{\omega 1}\right) + 1}$$





Frequency Response Plots

Polar Plots



$\omega := -1000, -999..1000 \qquad j := \sqrt{-1} \qquad R := 1 \qquad C := 0.01 \qquad \omega 1 := \frac{1}{R \cdot C}$

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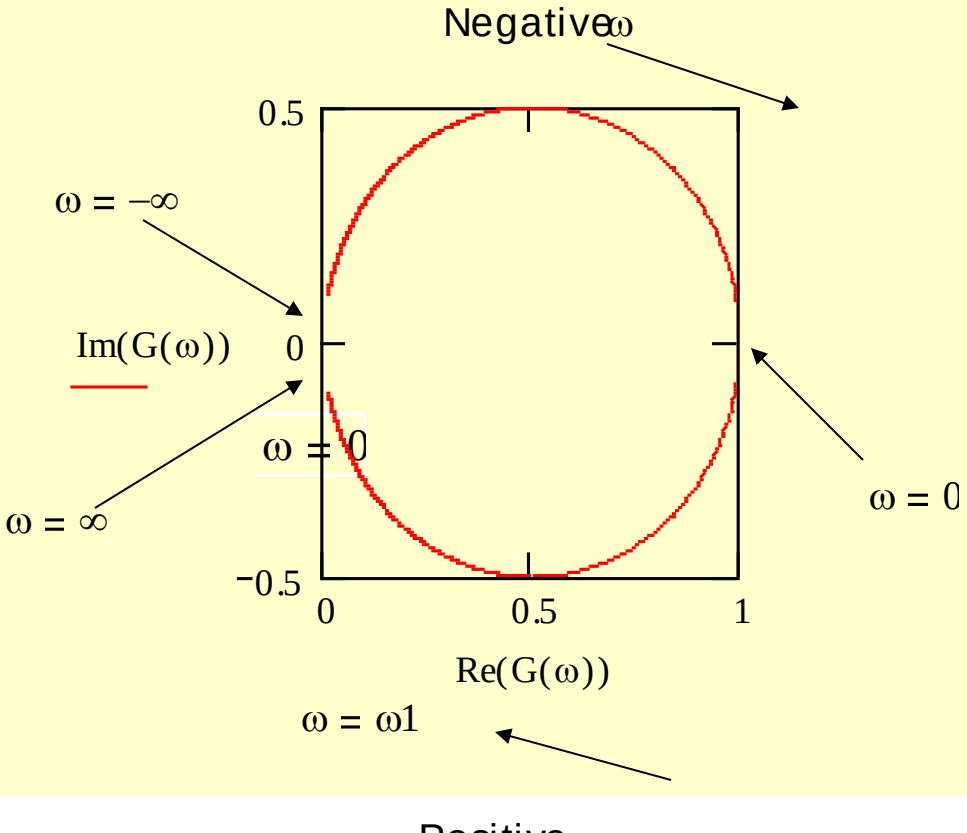
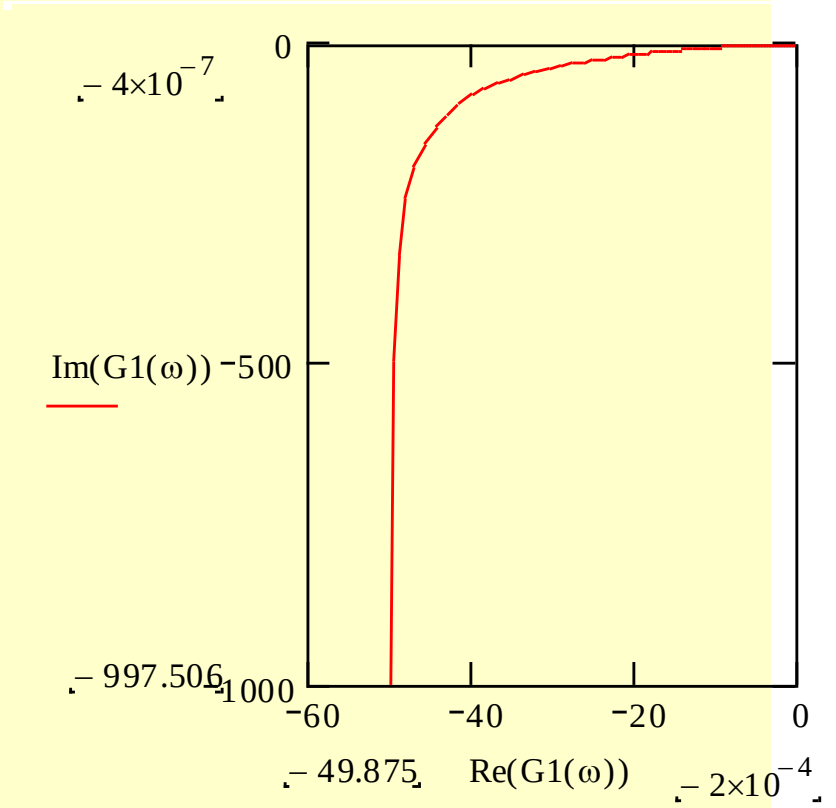


Frequency Response Plots

Polar Plots

$\omega := 0, .1 .. 1000 \qquad \tau := 0.5 \qquad K := 100$

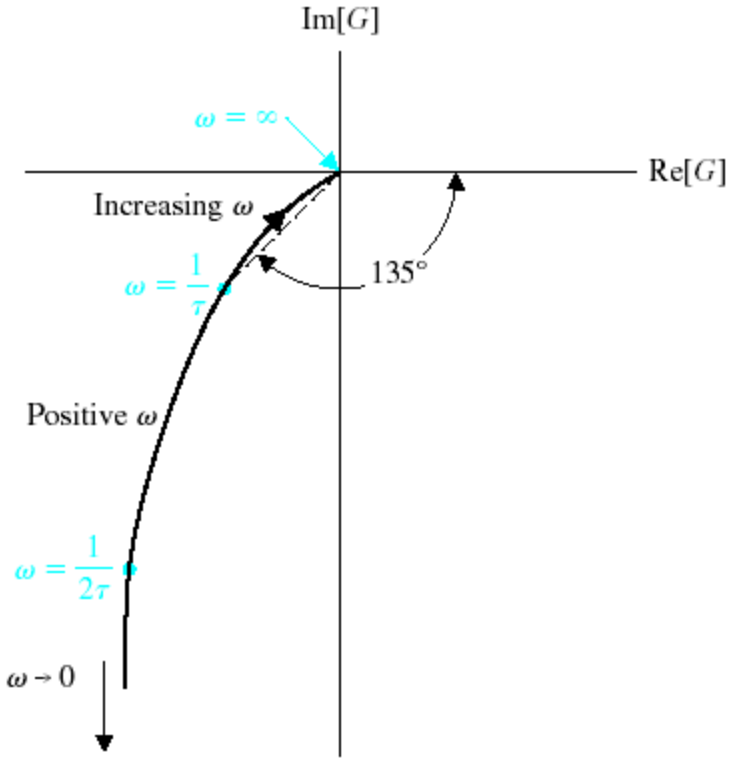
$$G1(\omega) := \frac{\frac{K}{\tau}}{j\cdot\omega\cdot\left(j\cdot\omega + \frac{1}{\tau}\right)}$$



Polar plot for $G(j\omega) = K/j\omega(j\omega\tau + 1)$. Note that $\omega = \infty$ at the origin.

Frequency Response Plots

Polar Plots



Polar plot for $G(j\omega) = K/j\omega(j\omega\tau + 1)$. Note that $\omega = \infty$ at the origin.