

Network Theory Notes

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1 Crash course on signals

Signals can be modeled as functions of time $x(t) = Ce^{\alpha t}$ where, $\alpha, C \in \mathbb{C}$

If $\alpha \in j\mathbb{R}$:

$$x(t) = Ce^{j\omega t} \tag{1}$$

$$x(t + T) = x(t) \Rightarrow T = \frac{2\pi k}{\omega} \tag{2}$$