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Electronics

In this section we'll discuss the three basic electronic components:

Name	Unit	Symbol
Resistor (R)	Ohm (Ω)	
Inductor (L)	Henry (H)	
Capacitor (C)	Farad (F)	

Ohm's Law

RLC Impedance



Impedance (Ω)	Low Frequency	Medium Frequency	High Frequency
Resistance, R	Doesn't depend on frequency		
Inductive Reactance $X_L = 2\pi f L$	Low	Medium	High
Capacitive Reactance $X_C = \frac{1}{2\pi f C}$	High	Medium	Low

RLC Addition

	Series	Parallel
Resistor, R [Ω]	$R = R_1 + R_2$	$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2}$
Inductor, L [H]	$L = L_1 + L_2$	$\frac{1}{L} = \frac{1}{L_1} + \frac{1}{L_2}$
Capacitor, C [F]	$\frac{1}{C} = \frac{1}{C_1} + \frac{1}{C_2}$	$C = C_1 + C_2$

Questions

