

LC VOLTAGE

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$$X_L = 2\pi FL$$

The Resonant Frequency (F) of an LC circuit in series is given by

$$F = \frac{1}{2\pi \sqrt{LC}}$$

Ohm's Law for LC circuit in series is given by

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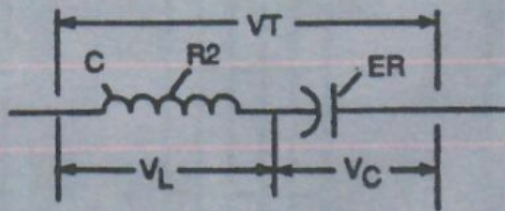


FIGURE 1 - 2. LC CIRCUIT SCHEMATIC

The voltage across the **inductor** (c) or

capacitor (ER of t) is greater than the **applied voltage** (h).

At frequency close to resonance, the voltage across the individual components is higher than the **applied voltage** (h), and, at resonant frequency, the voltage VT across both the inductor and the capacitor are theoretically infinite.

However, physical constraints of components and circuit interaction prevent the voltage from reaching infinity.

The **voltage** (VL) across the **inductor** (C) is given by the equation:

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$$V_L = \frac{V_T X_L}{(X_L - X_C)}$$

Revision #2

Created 26 October 2024 15:12:27 by Chris Bake

Updated 26 October 2024 15:24:49 by Chris Bake