EE314 Name Haadi Majeed
Fall 2021

Game 2 8/25/21 Units

Note that

unit of inductance L is H (henry). And unit of Capacitance C is F (farad)

Also

You know the units of

v electric potential is v

i electric current is A

t time is in s

We have the two famous equation $v(t) = L\frac{di(t)}{dt}$ and i(t)= $C\frac{dv(t)}{dt}$

a) Using the equations for $v(t)\ and$ i(t) Find the units of L and C (H and F) in terms of V, A, and s

$$L = \frac{V * S}{A}$$

$$C = \frac{A * S}{V}$$

b) Find the units for LC and L/C and show your work

$$L * C = s^2$$

$$\frac{L}{C} = \frac{V^2}{A^2}$$

c) what are the units for A and B and discuss your answers?

$A = \frac{1}{2}Li^2$

$B = \frac{1}{2}CV^2$ $A = ASV = B$

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