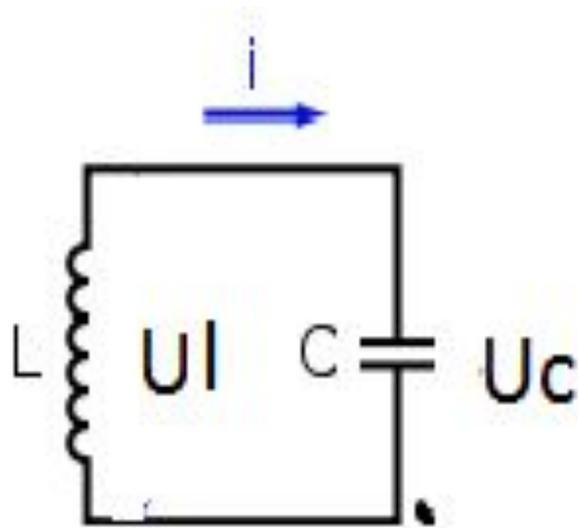


Радиотехнический контур (электрический осциллятор)



$$u_L = \frac{d(Li_L)}{dt} \quad i_C = \frac{d(Cu_C)}{dt}$$

$$u_C + u_L = u \quad i_L + i_C = 0$$

$$-i_L(t) = C \frac{du}{dt} \quad LC \frac{d^2 i_L(t)}{dt^2} + i_L(t) = 0$$

$$\omega_0^2 = \frac{1}{LC} \quad \frac{d^2 i_L(t)}{dt^2} + \omega_0^2 i_L(t) = 0$$

$$\frac{d^2 y(t)}{dt^2} + \omega_0^2 y(t) = 0$$