

1. LC-Schaltkreis mit/ohne Wechselstrom

(a)

$$\frac{q(t)}{C} = L \frac{d^2 q}{dt^2}$$
$$q(t) = q_0 \cos\left(\frac{1}{\sqrt{LC}} t\right)$$

(b)

2. Serienschwingkreis

$$L = 0.1 \text{ H}; \quad R = 100 \, \Omega; \quad C = 0.47 \, \mu\text{F}; \quad U_0 = 3 \text{ V}$$

(a)

(b)

(c)

3. Elektrische Verschiebung

(a)

(b)

(c)

(d)

(e)

(f)