



$$e(t) = 100\sqrt{2} \sin(2\pi \cdot 50t + 0^\circ) \text{ V} \Rightarrow$$

$$E = 100\sqrt{2} \cdot e^{j0^\circ} \text{ V}$$

$$I = \frac{E}{R + j\omega L + \frac{1}{j\omega C}} \quad (\text{OHMS LAG})$$

$$I = \frac{100\sqrt{2} e^{j0^\circ}}{8 + j2\pi \cdot 50 \cdot 31,8 \cdot 10^{-3} - j \cdot \frac{1}{2\pi \cdot 50 \cdot 1590 \cdot 10^{-6}}} =$$

$$= \frac{100\sqrt{2} \cdot e^{j0^\circ}}{8 + j8} = \frac{100\sqrt{2} \cdot e^{j0^\circ}}{8\sqrt{2} e^{j45^\circ}} =$$

$$= 12,5 \cdot e^{-j45^\circ} \text{ A} \rightarrow$$

$$i(t) = 12,5 \sin(2\pi \cdot 50t - 45^\circ) \text{ A}$$

$$\hat{I} = 12,5 \text{ A} \Rightarrow I = \frac{\hat{I}}{\sqrt{2}} \approx 8,8 \text{ A}$$