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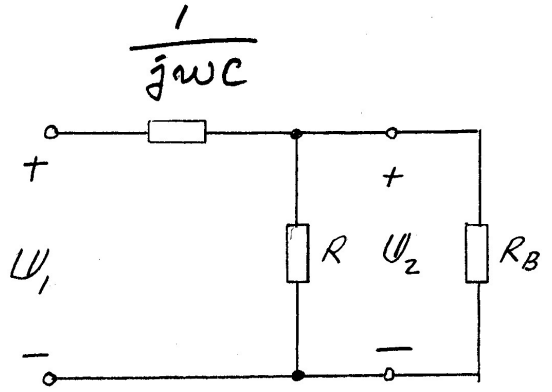

$C = 0{,}10\,\mu F \quad R = 20\,k\Omega \quad R_B = 20\,k\Omega$

$U_1 = 10\,V \Rightarrow \hat{U}_1 = 10\sqrt{2}\,V$

$f = 100\,Hz \Rightarrow \omega = 2\pi \cdot 100\ ^{RAD}/_{S}$

$\Rightarrow u_1(t) = 10\sqrt{2}\sin(2\pi \cdot 100 + \varphi)\,V$

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$\Rightarrow \underline{U}_1 = 10\sqrt{2} \cdot e^{j\varphi}\,V$

$$\underline{U}_2 = \underline{U}_1 \cdot \frac{\frac{R \cdot R_B}{R + R_B}}{\frac{1}{j\omega C} + \frac{R \cdot R_B}{R + R_B}} \Rightarrow$$

$$\underline{U}_2 = 10\sqrt{2}\, e^{j\varphi} \cdot \frac{10000}{-j15915{,}5 + 10000} =$$

$$= \frac{100000\sqrt{2}\, e^{j\varphi}}{18796{,}4 \cdot e^{-j57{,}9^\circ}} \approx 5{,}3\sqrt{2}\, e^{j(\varphi + 57{,}9^\circ)}\,V$$

$$\hat{U}_2 = 5{,}3\sqrt{2}\ V$$

$$U_2 = \frac{\hat{U}_2}{\sqrt{2}} \Rightarrow \underline{U_2 = 5{,}3\ V}$$

$$\arg U_2 - \arg U_1 = (\varphi + 57{,}9^\circ) - \varphi = 57{,}9^\circ$$

u_2 LIGGER $57{,}9^\circ$ FÖRE u_1

VISARDIAGRAM :