

Дано:

$$\psi(\omega) = -45^\circ$$

$$\alpha = 10^6 \text{ с}^{-1}$$

 ω - ?

Решение:

$$\psi(\omega) = -\arctg\left(\frac{\omega}{\alpha}\right)$$

$$-\arctg\left(\frac{\omega}{\alpha}\right) = -45^\circ$$

$$\frac{\omega}{\alpha} = 1 \Rightarrow \omega = \alpha = 10^6 \text{ с}^{-1}$$

$$f = \frac{\omega}{2\pi} \approx 0,16 \text{ Гц} = 160 \text{ кГц}$$