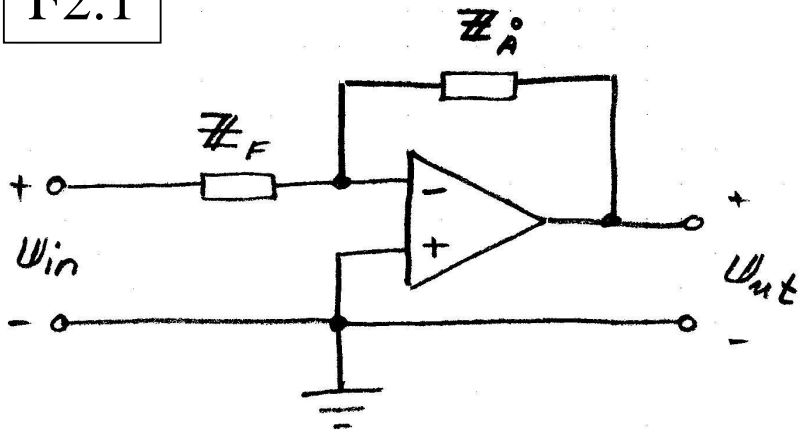


F2.1



$$F = \frac{U_{out}}{U_{in}} = - \frac{Z_A}{Z_F} \dots (1)$$

$$Z_A = R_A$$

$$Z_F = \frac{1}{j\omega C_F} + R_F = \frac{1 + j\omega C_F R_F}{j\omega C_F}$$

INS 1 (1)  $\rightarrow$

$$F = - \frac{j\omega C_F R_A}{1 + j\omega C_F R_F}$$

$$|F| = \frac{\omega C_F R_A}{\sqrt{1^2 + (\omega C_F R_F)^2}}$$

$$C_F = 0,10 \mu F$$

$$R_F = 10 k\Omega$$

$$\Rightarrow |F| = \frac{\omega \cdot 10^{-7} R_A^\circ}{\sqrt{1^2 + \left(\frac{\omega}{1000}\right)^2}}$$

$$\omega \rightarrow \infty \Rightarrow |F| \rightarrow \frac{\omega \cdot 10^{-7} R_A^\circ}{\omega / 1000}$$

$$\text{OM } |F| \rightarrow 1 \text{ DÅ } \omega \rightarrow \infty \Rightarrow \underline{R_A^\circ = 10 k\Omega}$$

ALLTSÅ :

$$\omega \gg 1000 \frac{\text{RAD}}{\text{S}} \Rightarrow |F| = 1$$

$$\omega \ll 1000 \frac{\text{RAD}}{\text{S}} \Rightarrow |F| = \frac{\omega}{1000}$$

BODEDIAGRAM (AMPLITUDKURVA) :

