

$$V_o = -A_{m0} Z_o V_i = -A_{m0} Z_o \frac{jR_i C_i \omega}{1+jR_i C_i \omega} V_s$$

$$\frac{V_o}{V_s} = -A_{m0} \frac{R_o}{1+jR_o C_o \omega} \times \frac{R_i C_i j\omega}{1+jR_i C_i \omega}$$

$$\left\{ \begin{aligned} A_{m0} &= 100 \\ R_i C_i &= \frac{1}{2\pi f_c} = \frac{1}{2\pi \times 100} \\ R_o C_o &= \frac{1}{2\pi f_H} = \frac{1}{2\pi \times 10^5} \end{aligned} \right.$$

$$\frac{V_o}{V_s} = -100 \times \frac{1}{2\pi \times 100} \frac{j\omega}{(1+j\frac{\omega}{2\pi \times 100})(1+j\frac{\omega}{2\pi \times 10^5})}$$

$$k = \frac{1}{2\pi}$$

$$T_1 = \frac{1}{2\pi \times 100}$$

$$T_2 = \frac{1}{2\pi \times 10^5}$$

