

$$R_F$$

$$i_s$$

$$C_D$$

$$v_o$$

$$V_1(f)$$

$$V_2(f)$$

$$I_1(f)$$

$$I_2(f)$$

$$G_v(f) = \frac{V_2}{V_1}$$

$$G_i(f) = \frac{I_2}{I_1}$$

$$Z(f) = \frac{V_2}{I_1}$$

$$G(f) = \frac{I_2}{V_1}$$

$$\begin{array}{c} + \\ v_1(t) \\ - \end{array}$$

$$i_1(t)$$

$$\begin{array}{c} + \\ v_2(t) \\ - \end{array}$$

$$i_2(t)$$

$$v_C(t)$$

$$i_C(t)$$

$$v_L(t)$$

$$i_L(t)$$

$$\begin{array}{c} + \\ v_C(t) \\ - \end{array}$$

$$\begin{array}{c} + \\ v_L(t) \\ - \end{array}$$

$$v_s(t)$$

$$R$$

$$C$$

$$v_o(t)$$

$$V_s$$

$$V_o$$

$$Z_R$$

$$Z_C$$

$$R_1$$

$$C_1$$

$$0.1/\tau$$

$$1/\tau$$

$$10/\tau$$

$$\omega = 1/\tau$$

$$|j\omega\tau|_{\text{dB}} + \left| \frac{1}{1 + j\omega\tau} \right|_{\text{dB}}$$

$$\omega \ll \frac{1}{\tau}$$

$$\omega \gg \frac{1}{\tau}$$