

sect 6-3 fig 11.xmcd

$$V_{\max} := 10 \quad R_o := 100 \quad \underline{T} := 100 \cdot 10^{-9} \quad R_g := 10 \quad R_L := 10^7 \quad \underline{c} := 3 \cdot 10^8$$

$$N_1 := 100 \quad \underline{dt} := \frac{T}{N_1} \quad N_2 := 30 \cdot N_1 \quad f := \frac{1}{2 \cdot T} \quad f = 5 \times 10^6 \quad 4 \cdot c \cdot T = 120$$

$$\text{send}(\text{INPUT}, V_{\text{gen}}) := \left| \begin{array}{l} \text{Ini} \leftarrow \text{INPUT}_2 \\ \text{Ina} \leftarrow \frac{2 \cdot R_o \cdot \text{Ini} + V_{\text{gen}}}{R_g + R_o} \\ \text{Inr} \leftarrow \text{Ina} - \text{Ini} \\ \left(\begin{array}{c} \text{Ina} \\ \text{Inr} \end{array} \right) \end{array} \right. \quad \text{recv}(\text{INPUT}) := \left| \begin{array}{l} \text{Ifi} \leftarrow \text{INPUT}_1 \\ \text{Ifa} \leftarrow \frac{2 \cdot R_o \cdot \text{Ifi}}{R_L + R_o} \\ \text{Ifr} \leftarrow \text{Ifa} - \text{Ifi} \\ \left(\begin{array}{c} \text{Ifa} \\ \text{Ifr} \end{array} \right) \end{array} \right.$$

$$\text{point}(n) := \left| \begin{array}{l} m \leftarrow \text{mod}(n, N_1) \\ m \leftarrow N_1 \quad \text{if } m = 0 \end{array} \right.$$

$$\text{Iline} := \left| \begin{array}{l} \text{data}_2, N_1 \leftarrow 0 \\ \text{for } i \in 1 \dots N_2 \\ \quad t \leftarrow i \cdot dt \\ \quad V_{\text{gen}} \leftarrow V_{\max} \cdot \sin(2 \cdot \pi \cdot f \cdot t) \\ \quad p \leftarrow \text{point}(i) \\ \quad \text{INPUT} \leftarrow \text{data}^{\langle p \rangle} \\ \quad \left(\begin{array}{c} \text{Ina} \\ \text{Inr} \end{array} \right) \leftarrow \text{send}(\text{INPUT}, V_{\text{gen}}) \\ \quad \left(\begin{array}{c} \text{Ifa} \\ \text{Ifr} \end{array} \right) \leftarrow \text{recv}(\text{INPUT}) \\ \quad \text{OUTPUT} \leftarrow \left(\begin{array}{c} \text{Inr} \\ \text{Ifr} \end{array} \right) \\ \quad \text{data}^{\langle p \rangle} \leftarrow \text{OUTPUT} \\ \quad I_i \leftarrow \text{Ina} \end{array} \right. \\ \text{I}$$

$$n := 1 \dots N_2 \quad t_n := (n - 1) \cdot dt$$

$$V_{\max} = 10$$

