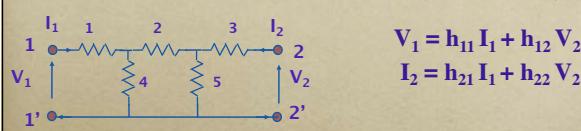


Esercitazione 12

45

Esercizi: Matrici ibride e di trasmissione



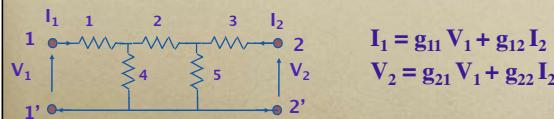
$$\begin{aligned} V_1 & \quad I_1 \quad 1 \quad 2 \quad 3 \quad I_2 \quad 2 \\ | & \quad | \quad | \quad | \quad | \\ 1' & \quad 4 \quad 5 \quad 6 \quad 2' \end{aligned}$$

$$\begin{aligned} V_1 &= h_{11} I_1 + h_{12} V_2 \\ I_2 &= h_{21} I_1 + h_{22} V_2 \end{aligned}$$

$$h_{12} = \frac{R_4 R_5}{(R_2 + R_4 + R_6)(R_3 + R_5) + R_3 R_5}$$

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Esercizi: Matrici ibride e di trasmissione



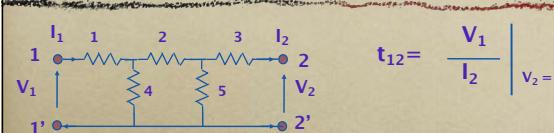
$$\begin{aligned} V_1 & \quad I_1 \quad 1 \quad 2 \quad 3 \quad I_2 \quad 2 \\ | & \quad | \quad | \quad | \quad | \\ 1' & \quad 4 \quad 5 \quad 6 \quad 2' \end{aligned}$$

$$\begin{aligned} I_1 &= g_{11} V_1 + g_{12} I_2 \\ V_2 &= g_{21} V_1 + g_{22} I_2 \end{aligned}$$

$$g_{12} = -\frac{R_5}{(R_2 + R_5 + R_6)(R_1 + R_4) + R_1 R_4} + \frac{R_4}{R_1 + R_4}$$

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Esercizi: Matrici ibride e di trasmissione



$$\begin{aligned} V_1 & \quad I_1 \quad 1 \quad 2 \quad 3 \quad I_2 \quad 2 \\ | & \quad | \quad | \quad | \quad | \\ 1' & \quad 4 \quad 5 \quad 6 \quad 2' \end{aligned}$$

$$t_{12} = \left| \frac{V_1}{I_2} \right| \Big|_{V_2 = 0}$$

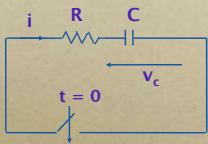
$$t_{12} = - \left[R_1 + \frac{R_4(R_2 + R_e + R_6)}{R_0} \right] \frac{(R_2 + R_e + R_6)(R_3 + R_5)}{R_5 R_4}$$

$$R_e = \frac{R_5 R_3}{(R_5 + R_3)}$$

$$R_0 = R_2 + R_e + R_6 + R_4$$

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Esercizi



$$v_c(0) = V_0$$

Scrivere l'equazione risolvente in termini dell'incognita corrente.

