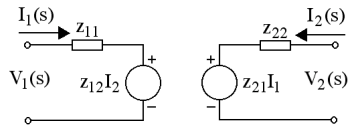


Parámetros de redes de dos puertos

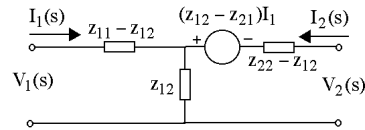
1.- Parámetros de impedancia de circuito abierto [z]:

$$\begin{bmatrix} V_1(s) \\ V_2(s) \end{bmatrix} = \begin{bmatrix} z_{11}(s) & z_{12}(s) \\ z_{21}(s) & z_{22}(s) \end{bmatrix} \begin{bmatrix} I_1(s) \\ I_2(s) \end{bmatrix}$$



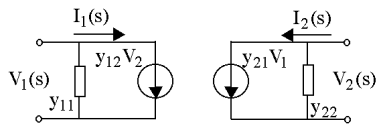
Red recíproca: $z_{12} = z_{21}$

Red simétrica: $z_{11} = z_{22}$



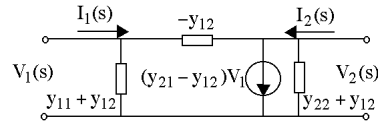
2.- Parámetros de admitancia de corto-circuito [y]:

$$\begin{bmatrix} I_1(s) \\ I_2(s) \end{bmatrix} = \begin{bmatrix} y_{11}(s) & y_{12}(s) \\ y_{21}(s) & y_{22}(s) \end{bmatrix} \begin{bmatrix} V_1(s) \\ V_2(s) \end{bmatrix}$$



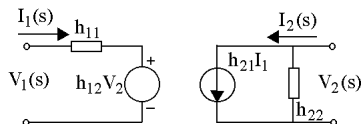
Red recíproca: $y_{12} = y_{21}$

Red simétrica: $y_{11} = y_{22}$



3.- Parámetros híbridos [h]:

$$\begin{bmatrix} V_1(s) \\ I_2(s) \end{bmatrix} = \begin{bmatrix} h_{11}(s) & h_{12}(s) \\ h_{21}(s) & h_{22}(s) \end{bmatrix} \begin{bmatrix} I_1(s) \\ V_2(s) \end{bmatrix}$$

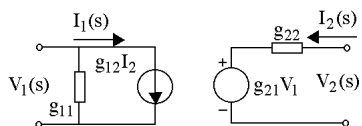


Red recíproca: $h_{12} = -h_{21}$

Red simétrica: $|h| = 1$

4.- Parámetros híbridos inversos [g]:

$$\begin{bmatrix} I_1(s) \\ V_2(s) \end{bmatrix} = \begin{bmatrix} g_{11}(s) & g_{12}(s) \\ g_{21}(s) & g_{22}(s) \end{bmatrix} \begin{bmatrix} V_1(s) \\ I_2(s) \end{bmatrix}$$



Red recíproca: $g_{12} = -g_{21}$

Red simétrica: $|g| = 1$

5.- Parámetros de transmisión [T]:

$$\begin{bmatrix} V_1(s) \\ I_1(s) \end{bmatrix} = \begin{bmatrix} A(s) & B(s) \\ C(s) & D(s) \end{bmatrix} \begin{bmatrix} V_2(s) \\ I_2(s) \end{bmatrix}$$

Red recíproca: $|T| = 1$

Red simétrica: $A = D$

6.- Parámetros de transmisión inversos [ABCD]:

$$\begin{bmatrix} V_2(s) \\ I_2(s) \end{bmatrix} = \begin{bmatrix} A(s) & B(s) \\ C(s) & D(s) \end{bmatrix} \begin{bmatrix} V_1(s) \\ I_1(s) \end{bmatrix}$$

Red recíproca: $|ABCD| = 1$

Red simétrica: $A = D$