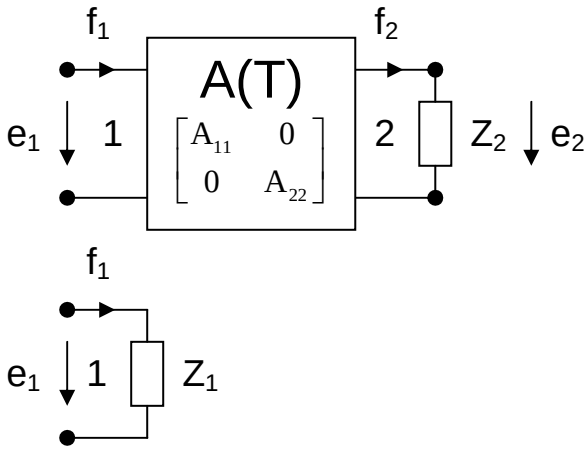
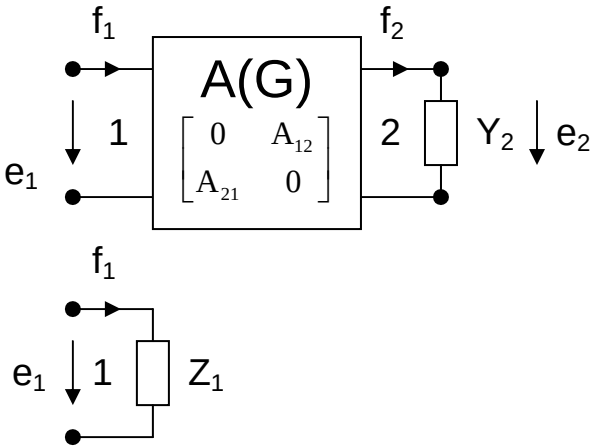
Transformationseigenschaften eines idealen Transformators

Bauelement	Kettenform A	Hybridform H	Schaltung / Ersatzschaltung
Z	$Z_1 = \frac{A_{11}}{A_{22}} \cdot Z_2$	$Z_1 = H_{12} \cdot H_{21} \cdot Z_2$	Kettenpfeilsystem 
R	$R_1 = \frac{A_{11}}{A_{22}} \cdot R_2$	$R_1 = H_{12} \cdot H_{21} \cdot R_2$	
L	$L_1 = \frac{A_{11}}{A_{22}} \cdot L_2$	$L_1 = H_{12} \cdot H_{21} \cdot L_2$	
C	$C_1 = \frac{A_{22}}{A_{11}} \cdot C_2$	$C_1 = \frac{1}{H_{12} \cdot H_{21}} \cdot C_2$	
Reihen-Schaltung	$Z_1 = \frac{A_{11}}{A_{22}} \cdot \left(Z_2^1 + Z_2^2 \right)$	$Z_1 = H_{12} \cdot H_{21} \cdot \left(Z_2^1 + Z_2^2 \right)$	
Parallel-Schaltung	$Y_1 = \frac{A_{22}}{A_{11}} \cdot \left(Y_2^1 + Y_2^2 \right)$	$Y_1 = \frac{1}{H_{12} \cdot H_{21}} \cdot \left(Y_2^1 + Y_2^2 \right)$	
f	$f_2 = \frac{1}{A_{22}} \cdot f_1$	$f_2 = H_{21} \cdot f_1$	**Umrechnung Tor1 / Tor2**
e	$e_2 = \frac{1}{A_{11}} \cdot e_1$	$e_2 = \frac{1}{H_{12}} \cdot e_1$	**Umrechnung Tor1 / Tor2**

J. Grabow / 07.2010

Transformationseigenschaften eines idealen Gyrators

Bauelement	Kettenform A	Admittanzform Y	Schaltung / Ersatzschaltung
Z	$Z_1 = \frac{A_{12}}{A_{21}} \cdot Y_2$	$Z_1 = \frac{1}{Y_{12} \cdot Y_{21}} \cdot Y_2$	Kettenpfeilsystem 
R	$R_1 = \frac{A_{12}}{A_{21}} \cdot G_2$	$R_1 = \frac{1}{Y_{12} \cdot Y_{21}} \cdot G_2$	
L	$L_1 = \frac{A_{12}}{A_{21}} \cdot C_2$	$L_1 = \frac{1}{Y_{12} \cdot Y_{21}} \cdot C_2$	
C	$C_1 = \frac{A_{21}}{A_{12}} \cdot L_2$	$C_1 = Y_{12} \cdot Y_{21} \cdot L_2$	
Reihen-Schaltung	$Y_1 = \frac{A_{21}}{A_{12}} \cdot \left(Z_2^1 + Z_2^2 \right)$	$Z_1 = \frac{1}{Y_{12} \cdot Y_{21}} \cdot \left(Y_2^1 + Y_2^2 \right)$	
Parallel-Schaltung	$Z_1 = \frac{A_{12}}{A_{21}} \cdot \left(Y_2^1 + Y_2^2 \right)$	$Y_1 = Y_{12} \cdot Y_{21} \cdot \left(Z_2^1 + Z_2^2 \right)$	
f	$f_2 = \frac{1}{A_{12}} \cdot e_1$	$f_2 = Y_{21} \cdot e_1$	**Umrechnung Tor1 / Tor2**
e	$e_2 = \frac{1}{A_{21}} \cdot f_1$	$e_2 = \frac{1}{Y_{12}} \cdot f_1$	**Umrechnung Tor1 / Tor2**

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