# Pretvorbe parametara dvoprolazne mreže

| | [S] | [Z] | [Y] | [ABCD] |
|---|---|---|---|---|
| $S_{11}$ | $S_{11}$ | $\dfrac{(z_{11}-Z_0)(z_{22}+Z_0)-z_{12}z_{21}}{(z_{11}+Z_0)(z_{22}+Z_0)-z_{12}z_{21}}$ | $\dfrac{(Y_0-y_{11})(Y_0+y_{22})+y_{12}y_{21}}{(Y_0+y_{11})(Y_0+y_{22})-y_{12}y_{21}}$ | $\dfrac{A+B/Z_0-CZ_0-D}{A+B/Z_0+CZ_0+D}$ |
| $S_{12}$ | $S_{12}$ | $\dfrac{2z_{12}Z_0}{(z_{11}+Z_0)(z_{22}+Z_0)-z_{12}z_{21}}$ | $\dfrac{-2y_{12}Y_0}{(Y_0+y_{11})(Y_0+y_{22})-y_{12}y_{21}}$ | $\dfrac{2(AD-BC)}{A+B/Z_0+CZ_0+D}$ |
| $S_{21}$ | $S_{21}$ | $\dfrac{2z_{21}Z_0}{(z_{11}+Z_0)(z_{22}+Z_0)-z_{12}z_{21}}$ | $\dfrac{-2y_{21}Y_0}{(Y_0+y_{11})(Y_0+y_{22})-y_{12}y_{21}}$ | $\dfrac{2}{A+B/Z_0+CZ_0+D}$ |
| $S_{22}$ | $S_{22}$ | $\dfrac{(z_{11}+Z_0)(z_{22}-Z_0)-z_{12}z_{21}}{(z_{11}+Z_0)(z_{22}+Z_0)-z_{12}z_{21}}$ | $\dfrac{(Y_0+y_{11})(Y_0-y_{22})+y_{12}y_{21}}{(Y_0+y_{11})(Y_0+y_{22})-y_{12}y_{21}}$ | $\dfrac{-A+B/Z_0-CZ_0+D}{A+B/Z_0+CZ_0+D}$ |
| $z_{11}$ | $Z_0\dfrac{(1+S_{11})(1-S_{22})+S_{12}S_{21}}{(1-S_{11})(1-S_{22})-S_{12}S_{21}}$ | $z_{11}$ | $\dfrac{y_{22}}{y_{11}y_{22}-y_{12}y_{21}}$ | $\dfrac{A}{C}$ |
| $z_{12}$ | $Z_0\dfrac{2S_{12}}{(1-S_{11})(1-S_{22})-S_{12}S_{21}}$ | $z_{12}$ | $\dfrac{-y_{12}}{y_{11}y_{22}-y_{12}y_{21}}$ | $\dfrac{AD-BC}{C}$ |
| $z_{21}$ | $Z_0\dfrac{2S_{21}}{(1-S_{11})(1-S_{22})-S_{12}S_{21}}$ | $z_{21}$ | $\dfrac{-y_{21}}{y_{11}y_{22}-y_{12}y_{21}}$ | $\dfrac{1}{C}$ |
| $z_{22}$ | $Z_0\dfrac{(1-S_{11})(1+S_{22})+S_{12}S_{21}}{(1-S_{11})(1-S_{22})-S_{12}S_{21}}$ | $z_{22}$ | $\dfrac{y_{11}}{y_{11}y_{22}-y_{12}y_{21}}$ | $\dfrac{D}{C}$ |
| $y_{11}$ | $Y_0\dfrac{(1-S_{11})(1+S_{22})+S_{12}S_{21}}{(1+S_{11})(1+S_{22})-S_{12}S_{21}}$ | $\dfrac{z_{22}}{z_{11}z_{22}-z_{12}z_{21}}$ | $y_{11}$ | $\dfrac{D}{B}$ |
| $y_{12}$ | $Y_0\dfrac{-2S_{12}}{(1+S_{11})(1+S_{22})-S_{12}S_{21}}$ | $\dfrac{-z_{12}}{z_{11}z_{22}-z_{12}z_{21}}$ | $y_{12}$ | $\dfrac{BC-AD}{B}$ |
| $y_{21}$ | $Y_0\dfrac{-2S_{21}}{(1+S_{11})(1+S_{22})-S_{12}S_{21}}$ | $\dfrac{-z_{21}}{z_{11}z_{22}-z_{12}z_{21}}$ | $y_{21}$ | $-\dfrac{1}{B}$ |
| $y_{22}$ | $Y_0\dfrac{(1+S_{11})(1-S_{22})+S_{12}S_{21}}{(1+S_{11})(1+S_{22})-S_{12}S_{21}}$ | $\dfrac{z_{11}}{z_{11}z_{22}-z_{12}z_{21}}$ | $y_{22}$ | $\dfrac{A}{B}$ |
| $A$ | $\dfrac{(1+S_{11})(1-S_{22})+S_{12}S_{21}}{2S_{21}}$ | $\dfrac{z_{11}}{z_{21}}$ | $-\dfrac{y_{22}}{y_{21}}$ | $A$ |
| $B$ | $Z_0\dfrac{(1+S_{11})(1+S_{22})-S_{12}S_{21}}{2S_{21}}$ | $\dfrac{z_{11}z_{22}-z_{12}z_{21}}{z_{21}}$ | $-\dfrac{1}{y_{21}}$ | $B$ |
| $C$ | $\dfrac{1}{Z_0}\dfrac{(1-S_{11})(1-S_{22})-S_{12}S_{21}}{2S_{21}}$ | $\dfrac{1}{z_{21}}$ | $\dfrac{y_{12}y_{21}-y_{11}y_{22}}{y_{21}}$ | $C$ |
| $D$ | $\dfrac{(1-S_{11})(1+S_{22})+S_{12}S_{21}}{2S_{21}}$ | $\dfrac{z_{22}}{z_{21}}$ | $-\dfrac{y_{11}}{y_{21}}$ | $D$ |