Stufe 1:

$a_D := 1$ dB $a_s := 40$ dB $f_{pb} := 12000$ $\omega_D := 2 \cdot \pi \cdot f_{pb}$

$\Omega_p := 1.2221$ $\Omega_z := 10.5103$ $Q_p := 0.5449$

$\omega_p := \Omega_p \cdot \omega_D = 92144.169$ Hz $R := 10000$

$C_5 := \frac{1}{3 \cdot R \cdot \omega_p \cdot Q_p} \rightarrow 0.66388686905818061823 \cdot 10^{-9}$ $C_5 := 680 \cdot 10^{-12}$

$C_1 := \frac{3 \cdot Q_p}{\omega_p \cdot R} \rightarrow 0.17740677622693270232 \cdot 10^{-8}$ $C_1 := 1.8 \cdot 10^{-9}$

$R_B := 1200$ $A_{oo} := 10^{\frac{-a_s}{20}} = 0.01$

$$[R_A \;\; A_1] := \begin{bmatrix} \frac{R_A}{R_B} = \left(\frac{\left(\frac{A_1}{A_{oo}} \right) - 2}{3} + 3 \cdot \frac{C_5}{C_1} \right) \\ \frac{A_1}{A_{oo}} \cdot \frac{R_B}{R_A + R_B} = 1.5487 \end{bmatrix} \xrightarrow{solve, R_A, A_1} [2438.1175497829532144 \;\; 0.046952938744573830359]$$

$K := \frac{A_1}{A_{oo}} = 4.695$

$R_6 := \frac{3 \cdot R}{K - 2} \rightarrow 11130.511698298428229$ $R_6 := 11 \cdot 10^3$

$R_A := R_B \cdot \left(\frac{K - 2}{3} + 3 \cdot \frac{C_5}{C_1} \right) \rightarrow 2438.11754978295332$ $R_A := 2.4 \cdot 10^3$

$A_{1dB} := 20 \cdot \log\left(K \cdot \frac{R_B}{R_A + R_B} \right) = 3.891$

Stufe 2:

$a_D := 1$ dB $a_s := 40$ dB $f_{pb} := 12000$ $\omega_D := 2 \cdot \pi \cdot f_{pb}$

$\Omega_p := 1.1840$ $\Omega_z := 4.3535$ $Q_p := 1.3577$

$\omega_p := \Omega_p \cdot \omega_D = 89271.497$ Hz $R := 10000$

$C_5 := \frac{1}{3 \cdot R \cdot \omega_p \cdot Q_p} \rightarrow 0.2750186275777359142 \cdot 10^{-9}$ $C_5 := 270 \cdot 10^{-12}$

$C_1 := \frac{3 \cdot Q_p}{\omega_p \cdot R} \rightarrow 0.45625985269397452553 \cdot 10^{-8}$ $C_1 := 4.3 \cdot 10^{-9}$

$R_B := 1200$ $A_{oo} := 10^{\frac{-a_s}{20}} = 0.01$ clear (R_A)

$$[R_A \ \ A_2] := \begin{bmatrix} \frac{R_A}{R_B} = \left(\frac{\left(\frac{A_2}{A_{oo}} \right) - 2}{3} + 3 \cdot \frac{C_5}{C_1} \right) \\ \frac{A_2}{A_{oo}} \cdot \frac{R_B}{R_A + R_B} = 1.7135 \end{bmatrix} \xrightarrow{solve, R_A, A_2} [259.88304304991910628 \ \ 0.020845913285550303238]$$

$K := \frac{A_2}{A_{oo}} = 2.085$

$R_6 := \frac{3 \cdot R}{K - 2} \rightarrow 354646.28009103407506$ $R_6 := 360 \cdot 10^3$

$R_A := R_B \cdot \left(\frac{K-2}{3} + 3 \cdot \frac{C_5}{C_1} \right) \rightarrow 259.88304304991913674$ $R_A := 240$

$A_{2dB} := 20 \cdot \log\left(K \cdot \frac{R_B}{R_A + R_B} \right) = 4.797$

$A_{0dB} := A_{1dB} + A_{2dB} = 8.688$