$f0 := 12 \cdot 10^{6}$ $\quad a := 2$ $\quad C3 := 39 \cdot 10^{-12}$

$RL := 50$ $\quad b := 5$ $\quad C4 := 10 \cdot 10^{-12}$

$Q0 := 100$ $\quad Cx := 100 \cdot 10^{-6}$

$L := 300 \cdot 10^{-9}$

$$Ceq := \frac{1}{\left(2 \cdot \pi \cdot f0\right)^{2} \cdot L} = 586.349 \cdot 10^{-12}$$

$$Ceq2 := \frac{Ceq}{2} = 293.175 \cdot 10^{-12} \qquad C' := \frac{C3 \cdot Cx}{C3 + Cx} = 39 \cdot 10^{-12}$$

$$Ceq1 := Ceq - Ceq2 = 293.175 \cdot 10^{-12}$$

$C2 := a \cdot Ceq1 = 586.349 \cdot 10^{-12}$ $\quad C4 := b \cdot Ceq2 = 1.466 \cdot 10^{-9}$

$$C1 := \frac{C2}{a-1} = 586.349 \cdot 10^{-12} \qquad C3 := \frac{C4}{b-1} = 366.468 \cdot 10^{-12}$$

$$Ceq1 := \frac{C1 \cdot C2}{C1 + C2} = 293.175 \cdot 10^{-12}$$

$$XC4 := \frac{1}{2 \cdot \pi \cdot f0 \cdot C4} = 9.048$$

$$C4' := \frac{1}{2 \cdot \pi \cdot f0 \cdot 5} = 2.653 \cdot 10^{-9} \qquad C3' := \frac{C4'}{b-1} = 663.146 \cdot 10^{-12}$$

$$Ceq2' := \frac{C3' \cdot C4'}{C3' + C4'} = 530.516 \cdot 10^{-12}$$

$$Ceq1' := Ceq - Ceq2' = 55.833 \cdot 10^{-12}$$

$$C2' := a \cdot Ceq1' = 111.666 \cdot 10^{-12} \qquad C1' := \frac{C2'}{a-1} = 111.666 \cdot 10^{-12}$$

$$XC4' := \frac{1}{2 \cdot \pi \cdot f0 \cdot C4'} = 5$$

$$Rt := Q0 \cdot 2 \cdot \pi \cdot f0 \cdot L = 2.262 \cdot 10^{3}$$

$$RL' := RL \cdot b^{2} = 1.25 \cdot 10^{3}$$

$$Rtot := \frac{Rt \cdot RL'}{Rt + RL'} = 805.09$$

$$IG := 2 \cdot 10^{-3}$$

$$Vcol := IG \cdot \frac{2}{\pi} \cdot Rtot = 1.025$$

$$Vsal := \frac{Vcol}{b} = 205.015 \cdot 10^{-3}$$