

$$R1 := 327,1 \text{ k}\Omega$$

$$C1 := 50 \text{ pF}$$

$$F0 := \frac{1}{2 \cdot \pi \cdot R1 \cdot C1} = 9731,2714 \text{ Hz}$$

$$\omega0 := 2 \cdot \pi \cdot F0 = 61143,3812 \text{ Hz}$$

$$T0 := \frac{1}{F0} = 0,1028 \text{ ms}$$

$$ZC1 := \frac{i}{\omega0 \cdot C1} = 327,1 \cdot i \text{ k}\Omega$$

$$ZLRG58 := \omega0 \cdot 250 \text{ nH} \cdot i = 15,2858 \cdot i \text{ m}\Omega$$

$$RRG58 := 1,5 \Omega$$

$$ZCRG58 := \frac{i}{\omega0 \cdot 101 \text{ pF}}$$

$$RCH1 := 10 \text{ M}\Omega$$

$$RCH2 := RCH1$$

$$ZC1RCH2 := \frac{ZC1 \cdot RCH2}{ZC1 + RCH2} = (0,0107 + 0,3268 \cdot i) \text{ M}\Omega$$

$$ZCH := \frac{(ZC1RCH2 + R1) \cdot RCH1}{ZC1RCH2 + R1 + RCH1} = (0,3364 + 0,3054 \cdot i) \text{ M}\Omega$$

$$Zg2 := \frac{ZCRG58 \cdot ZCH}{ZCRG58 + ZCH} = (0,0266 + 0,125 \cdot i) \text{ M}\Omega$$

$$Zg := ZLRG58 + RRG58 + Zg2 = (0,0266 + 0,125 \cdot i) \text{ M}\Omega$$

$$\text{phase} := \arg(Zg) = 77,983^\circ$$

$$VSpp := \sqrt{2} \text{ V} = 1,4142 \text{ V}$$

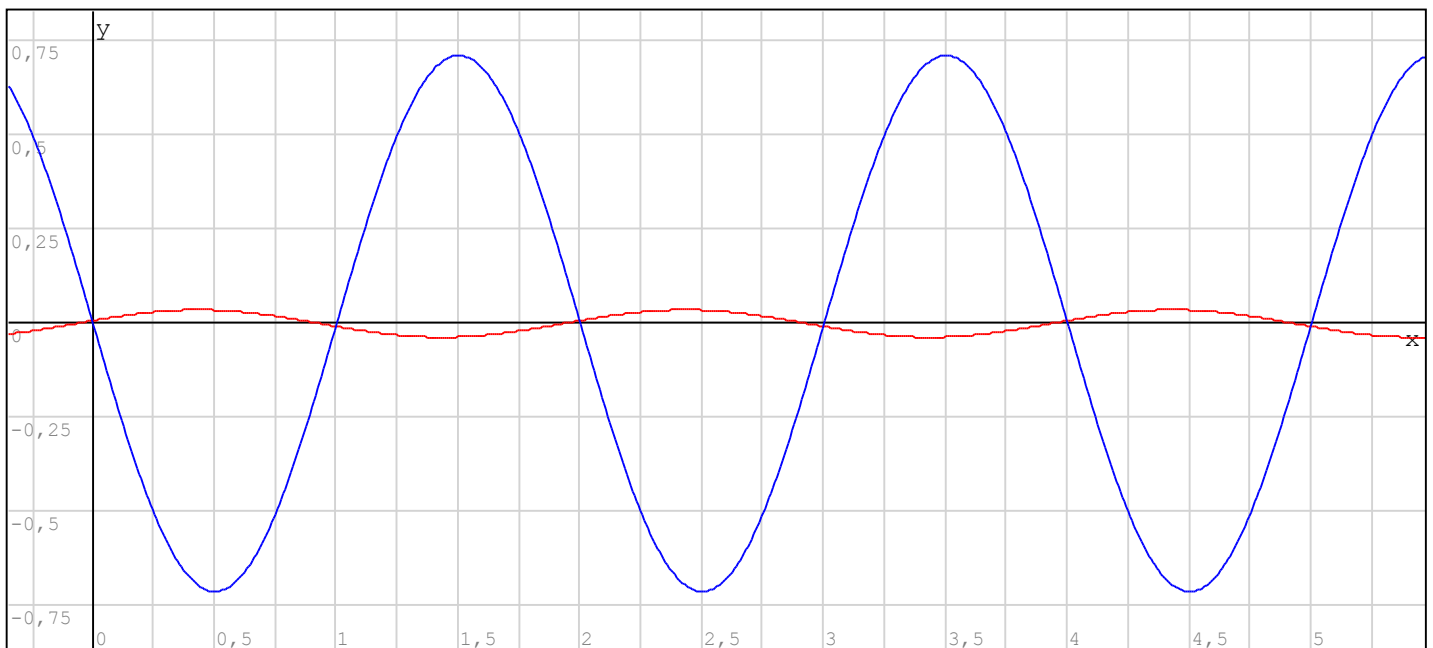
$$\varphi v := 90^\circ$$

$$VS(t) := \frac{VSpp}{2} \cdot e^{i \cdot (\omega0 \cdot t + \varphi v)}$$

$$Ig(t) := \frac{VS(t)}{Zg}$$

$$VRG58(t) := Ig(t) \cdot \left( \frac{1}{ZLRG58} + \frac{1}{RRG58} \right)$$

$$V1(t) := VS(t) - 100 \cdot VRG58(t)$$



$$\begin{cases} \text{Re} \left( VS \left( x \cdot \frac{T0}{2} \right) \right) \\ 100 \cdot \text{Re} \left( VRG58 \left( x \cdot \frac{T0}{2} \right) \right) \\ \text{Re} \left( V1 \left( x \cdot \frac{T0}{2} \right) \right) \end{cases}$$