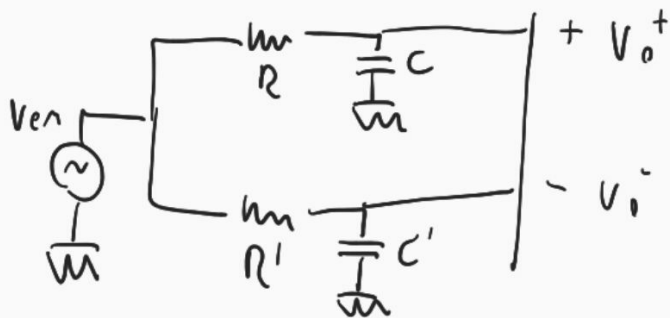


# NON CATEGORIZZATE

## Nessun titolo



$$V_o^+ = \frac{1}{1+sRC} V_{cm}$$

$$V_o^- = \frac{1}{1+sR'C'} V_{cm}$$

$$V_o^+ - V_o^- = \left[ \frac{1}{1+sRC} - \frac{1}{1+sR'C'} \right] V_{cm}$$

$$[sC \delta R = \phi]$$

$$R'C' = (R + \delta R)(C + \delta C) = RC + R\delta C + C\delta R$$

$$f_c = \frac{1}{2\pi RC} \quad \frac{f}{f_c} = \omega RC$$

$$\omega R \delta C = \omega RC \frac{\delta C}{C} \quad \omega C \delta R = \omega RC \frac{\delta R}{R}$$

$$\omega R \delta C = \frac{\delta C}{C} \frac{f}{f_c} \quad \omega C \delta R = \frac{\delta R}{R} \frac{f}{f_c}$$

$$sR'C' = SRC + sR\delta C + sC\delta R =$$

$$= i\omega RC + i\omega R\delta C + i\omega C\delta R =$$

$$= i\omega RC + i \left( \frac{\delta C}{C} + \frac{\delta R}{R} \right) \frac{f}{f_c} =$$

$$= SRC + i\omega RC \left( \frac{\delta C}{C} + \frac{\delta R}{R} \right) =$$

$$= SRC + sRC \left( \frac{\delta C}{C} + \frac{\delta R}{R} \right) =$$

$$= SRC \left[ 1 + \frac{\delta C}{C} + \frac{\delta R}{R} \right]$$

$$\frac{1}{1+sRC} - \frac{1}{1+sR'C'}$$

$$\frac{1+sR'C' - 1 - sRC}{(1+sRC)(1+sR'C')} =$$

$$sRC \left[ \frac{\delta C}{C} + \frac{\delta R}{R} \right]$$

$$= \frac{sRC \left[ \frac{\delta C}{C} + \frac{\delta R}{R} \right]}{1+sRC \left[ 2 + \frac{\delta C}{C} + \frac{\delta R}{R} \right] + s^2 RCR'C'}$$

DENOMINATOR

$$1 + sRC \left[ 2 + \frac{sC}{c} + \frac{sR}{R} \right] + s^2 R^2 C^2 \left[ 1 + \frac{sC}{c} + \frac{sR}{R} \right] =$$

$$= s^2 (RC)^2 \left[ 1 + \frac{sC}{c} + \frac{sR}{R} \right] + sRC \left[ 2 + \frac{sC}{c} + \frac{sR}{R} \right] + 1$$

$$sRC \left[ \frac{sR}{R} + \frac{sC}{c} \right]$$

---

$$s^2 (RC)^2 \left[ 1 + \frac{sR}{R} + \frac{sC}{c} \right] + sRC \left[ 2 + \frac{sR}{R} + \frac{sC}{c} \right] + 1$$

$$i\omega RC \left[ \frac{sR}{R} + \frac{sC}{c} \right]$$

---

$$= \frac{i\omega RC \left[ \frac{sR}{R} + \frac{sC}{c} \right]}{1 - (\omega RC)^2 \left[ 1 + \frac{sR}{R} + \frac{sC}{c} \right] + i\omega RC \left[ 2 + \frac{sR}{R} + \frac{sC}{c} \right]}$$

Ultima modifica: 09:54