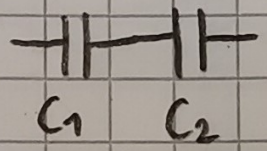
C 44

geg.: $C_1 = 0{,}1\ \mu F$

$C_2 = 2{,}2\ \mu F$



$C_{min} = C_1$

$U_{max} = 100\ V$ Nennspannung

Nennspannung $< 100\ V$ pro Kondensator

$$Q = U_1 \cdot C_1 = U_2 \cdot C_2 \rightarrow 0{,}1\ \mu F \cdot U_1 + 2{,}2\ \mu F \cdot U_2$$

$$Q_{max} = C_{min} \cdot U_{max} = 0{,}1\ \mu F \cdot 100\ V = \underline{\underline{10\ \mu C}}$$

$$U_2 = \frac{Q_{max}}{C_2} = \frac{10\ \mu C}{2{,}2\ \mu F} = \underline{\underline{4{,}\overline{54}\ V}}$$

$$U_{ges} = U_1 + U_2 = 100\ V + 4{,}\overline{54}\ V = \underline{\underline{104{,}\overline{54}\ V}}$$