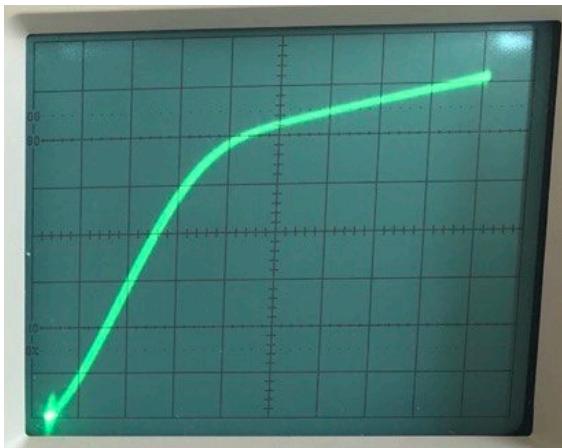
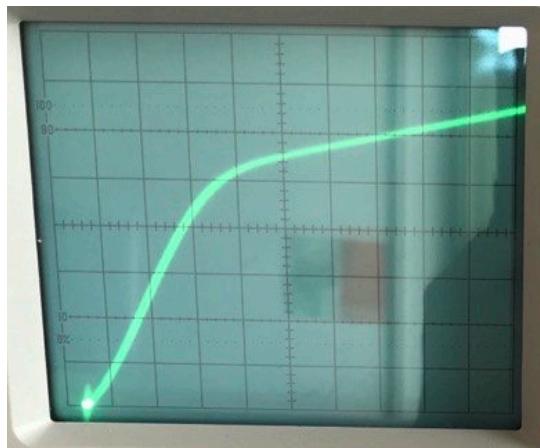


2.2

Widerstand:  $23\text{ k}\Omega$ , x:  $0,1\text{ V/Div}$ , y:  $10\text{ mV/Div}$



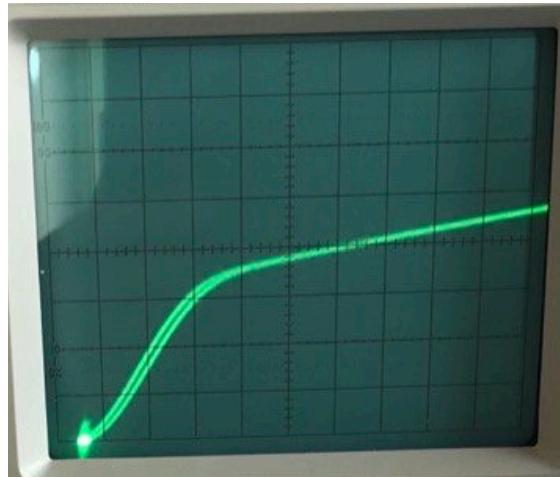
$$I_B = 0,5 \text{ mA} \quad U = 12,31 \text{ V}$$



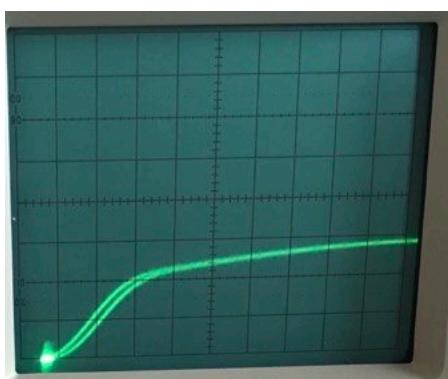
$$I_B = 0,4 \text{ mA} \quad U = 10,0 \text{ V}$$



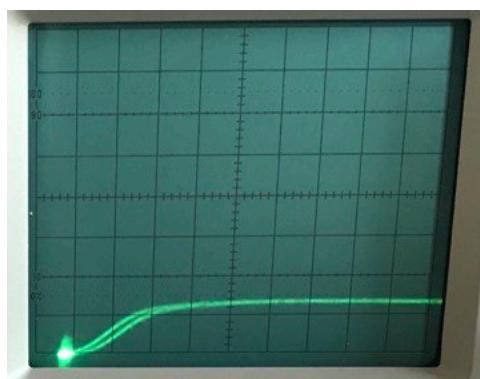
$$I_B = 0,3 \text{ mA} \quad U = 7,83 \text{ V}$$



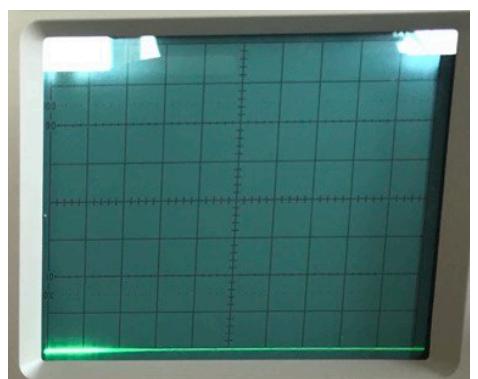
$$I_B = 0,2 \text{ mA} \quad U = 5,51 \text{ V}$$



$$I_B = 0,1 \text{ mA} \quad U = 3,09 \text{ V}$$

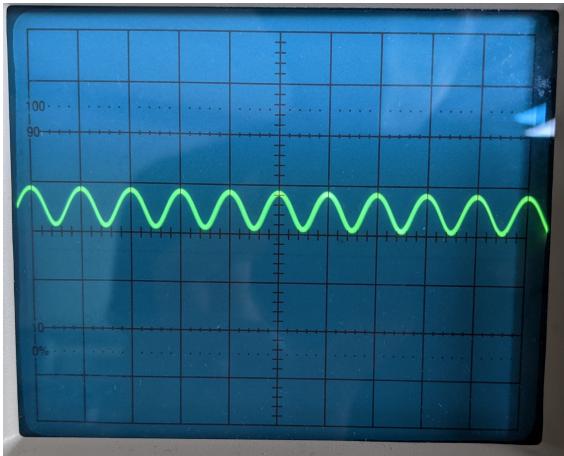


$$I_B = 0,05 \text{ mA} \quad U = 1,79 \text{ V}$$

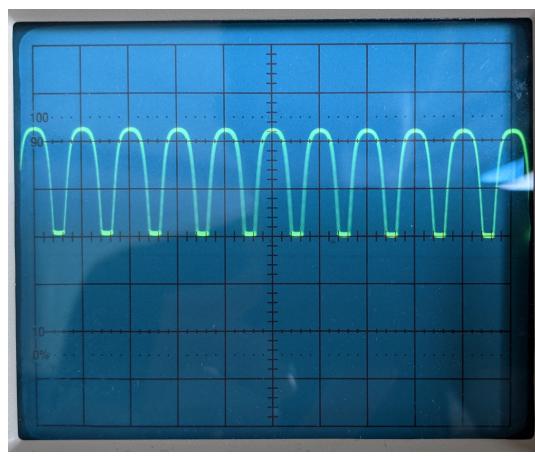


$$I_B = 0 \text{ mA} \quad U = 0 \text{ V}$$

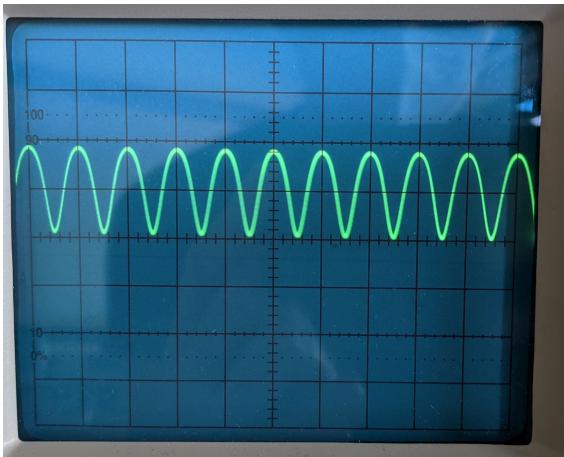
## 2.3.3



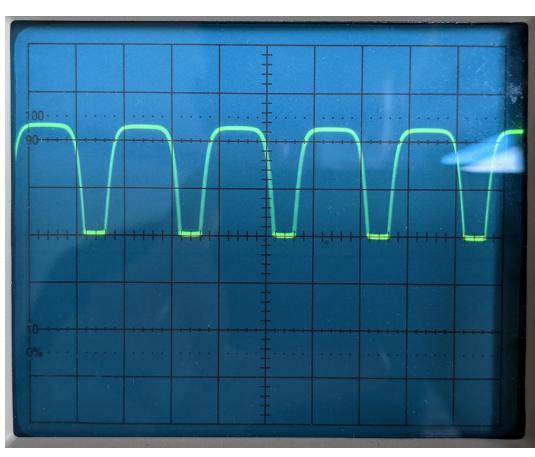
20 mV



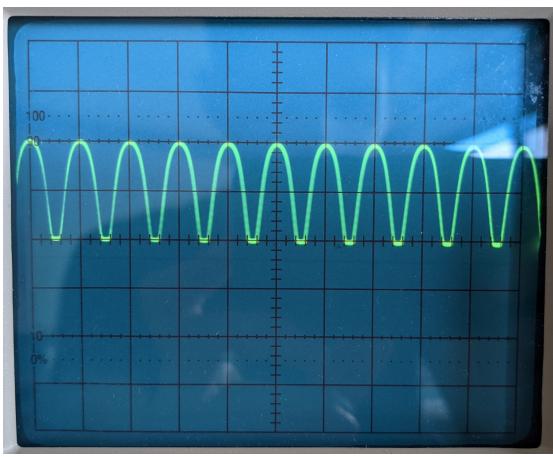
120 mV



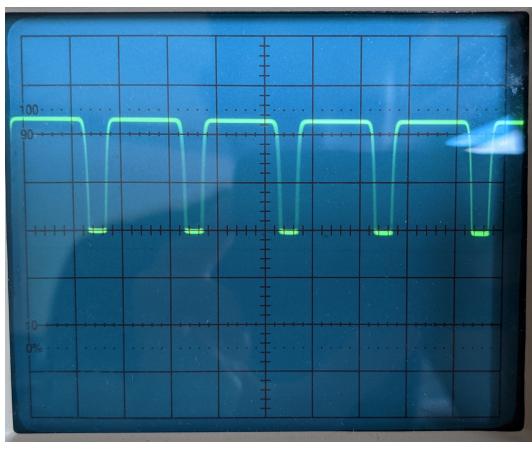
50 mV



200 mV



70 mV



800 mV

