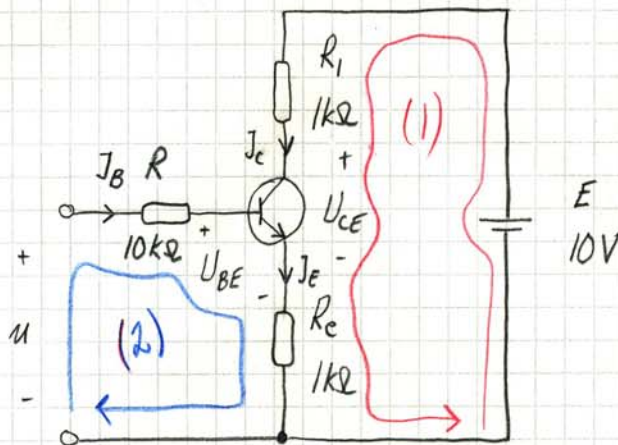
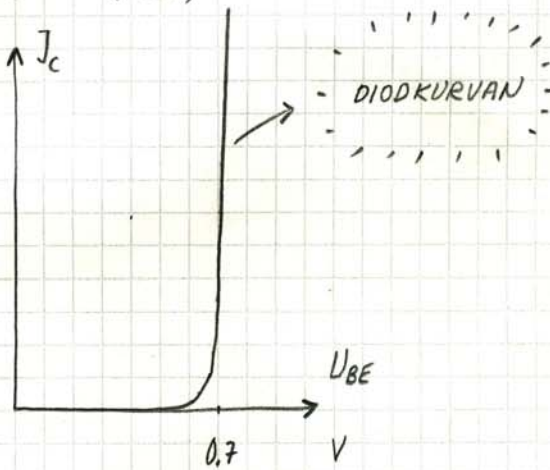


E6

TRANSISTOR SWITCH



STUDERA $J_c = f(U_{BE})$



TRANSISTORN BOTTNAR (LEDER), DVS $J_c > 0$ OM $U_{BE} \geq 0,7$ V

TRANSISTORN STRYPT (LEDER EJ), DVS $J_c \approx 0$ OM $U_{BE} \lesssim 0,7$ V

($U_{CE} \approx 0,2$ V DÅ TRANSISTORN ÄR BOTTNAD ($U_{CE_{sat}} \approx 0,2$ V))

ANTAG (FÖR ENKELHETENS SKULL) $U_{CE} = 0$.

$$+ E - R_1 \cdot J_c - U_{CE} - R_e \cdot J_c = 0 \dots (1)$$

$$+ u - R_B \cdot J_B - U_{BE} - R_e \cdot J_c = 0 \dots (2)$$

TRANSISTORN BOTTNAD :

$$\begin{cases} J_E = J_C + J_B \\ J_C = h_{FE} \cdot J_B \quad *) \end{cases}$$

$$+10 - 1000 \cdot J_C - 0 - 1000 \cdot J_C \left(1 + \frac{1}{20}\right) = 0 \dots (1)$$

$$+u - 10000 \cdot \frac{J_C}{20} - 0,7 - 1000 \cdot J_C \left(1 + \frac{1}{20}\right) = 0 \dots (2)$$

$$(1) \Rightarrow J_C = 4,88 \text{ mA}$$

$$(2) \Rightarrow \underline{u \geq 8,26 \text{ V}} \Rightarrow J_C > 4,88 \text{ mA}$$

TRANSISTORN STRYPT :

$$+10 - 1000 \cdot 0 - U_{CE} - 1000 \cdot 0 = 0 \dots (1)$$

$$+u - 10000 \cdot 0 - 0,7 - 1000 \cdot 0 = 0 \dots (2)$$

$$(1) \Rightarrow U_{CE} = 10 \text{ V} = E$$

$$(2) \Rightarrow \underline{u \leq 0,7 \text{ V}} \Rightarrow J_B \leq 0 \Rightarrow J_C = 0$$

$$*) J_C = h_{FE} \cdot J_B$$

"
GÄLLER ENDAST

LEDANDE TRANSISTOR.

SVAR : BOTTNING $\Rightarrow u \geq 8,3 \text{ V}$

STRYPNING $\Rightarrow u \leq 0,7 \text{ V}$