

geg.:  $U_B := 12\text{V}$ ,  $U_{LED} := 2\text{V}$ ,  $U_{BE} := 0.7\text{V}$ ,  $I_{Bias} := 0.01\text{A}$ ,  $I_{LED} := 0.01\text{A}$

**Bias Current:**

$$R_{LED} := \frac{U_B - U_{LED}}{I_{LED}} = 1000 \quad \text{Ohm}$$

$$R_E := \frac{U_{LED} - U_{BE}}{I_{Bias}} = 130 \quad \text{Ohm} \quad R_E := 120 \quad \text{Ohm}$$

$$R_C := 51 \quad \text{Ohm} \quad \rightarrow \text{simulated! } U_C := 0.5\text{V}$$