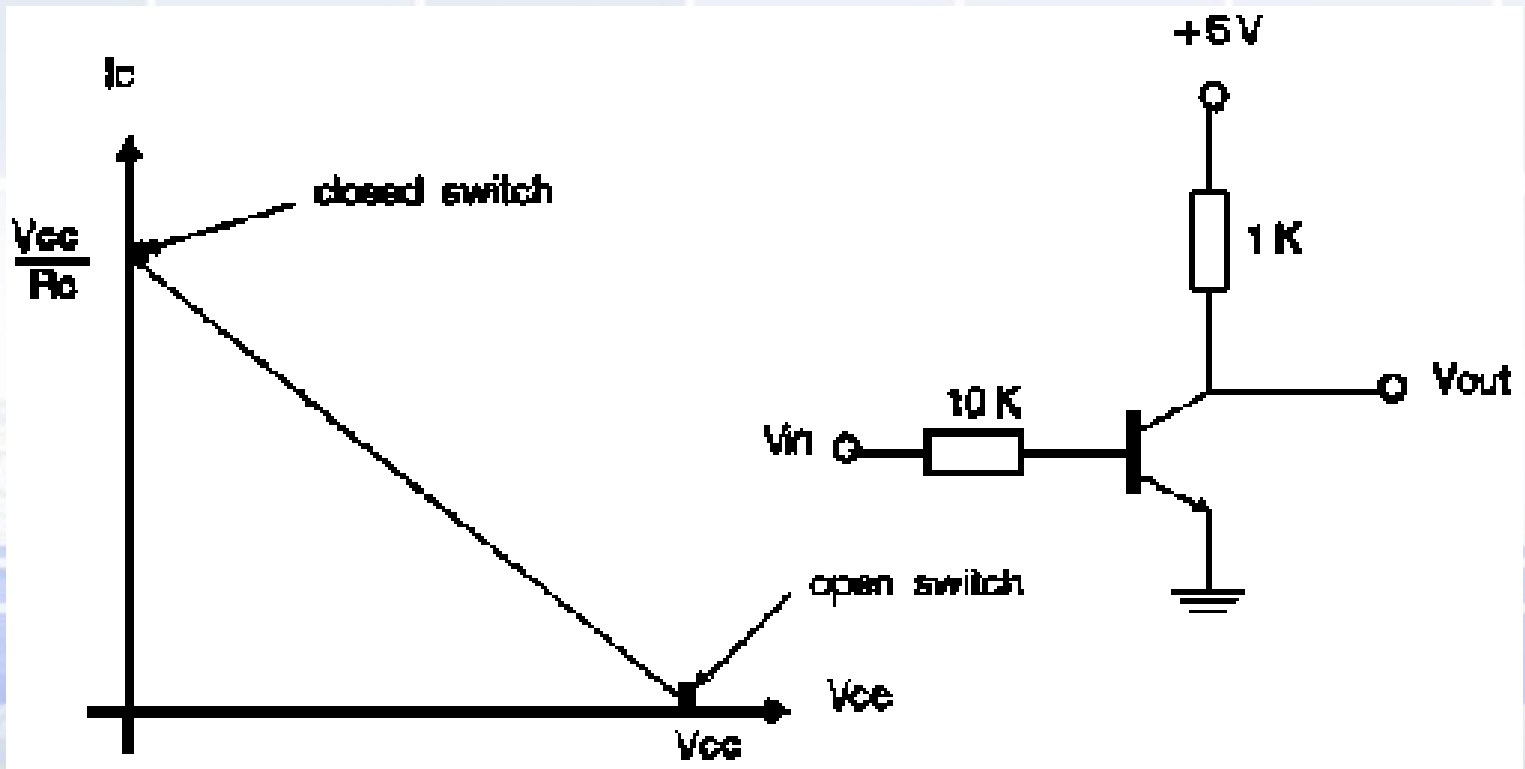


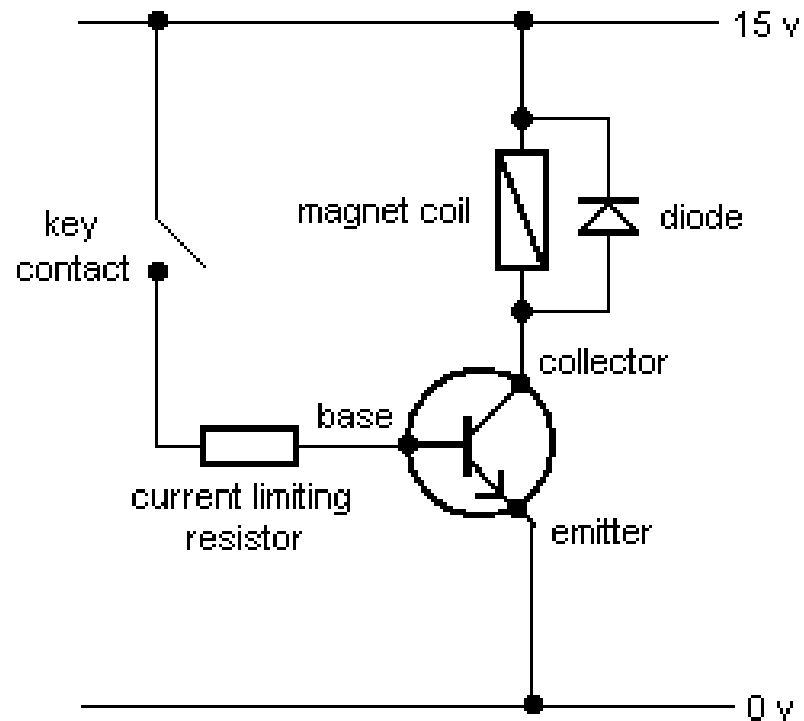
# Transistor Saklar

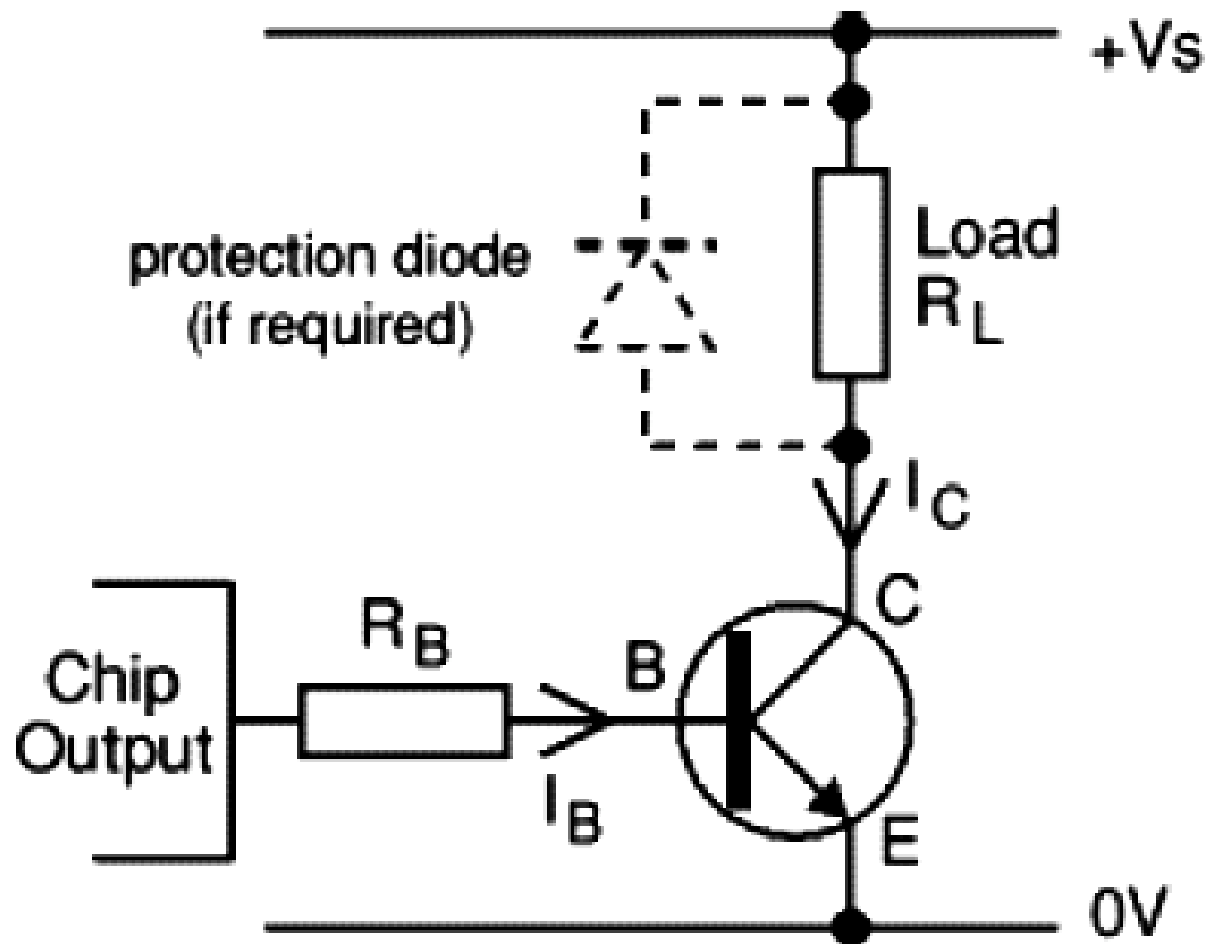
Menerapkan bias basis.  
Daerah saturasi dan cut off.



# Aplikasi transistor saklar.

Hard saturasi,  $V_{BB}=V_{CC}$ , 10:1  
 $V_{BB}$  dari sumber lain.





## **Tahapan perancangan :**

- 1. Tentukan resistansi beban kolektor.**
- 2. Hitung arus kolektor.**
- 3. Tentukan transistor.**
- 4. Hitung  $I_B$  mengacu  $H_{FE}$  transistor.**
- 6. Tentukan  $R_B$ .**

**Contoh :**

**Rangkaian digunakan untuk menggerakkan Relay, tegangan relay 12 V**

**Reistansi 1 k $\Omega$  (diukur)**

$$I_C = 12 / 1 \text{ k}\Omega = 12 \text{ mA}$$

**Dipilih transistor dengan**

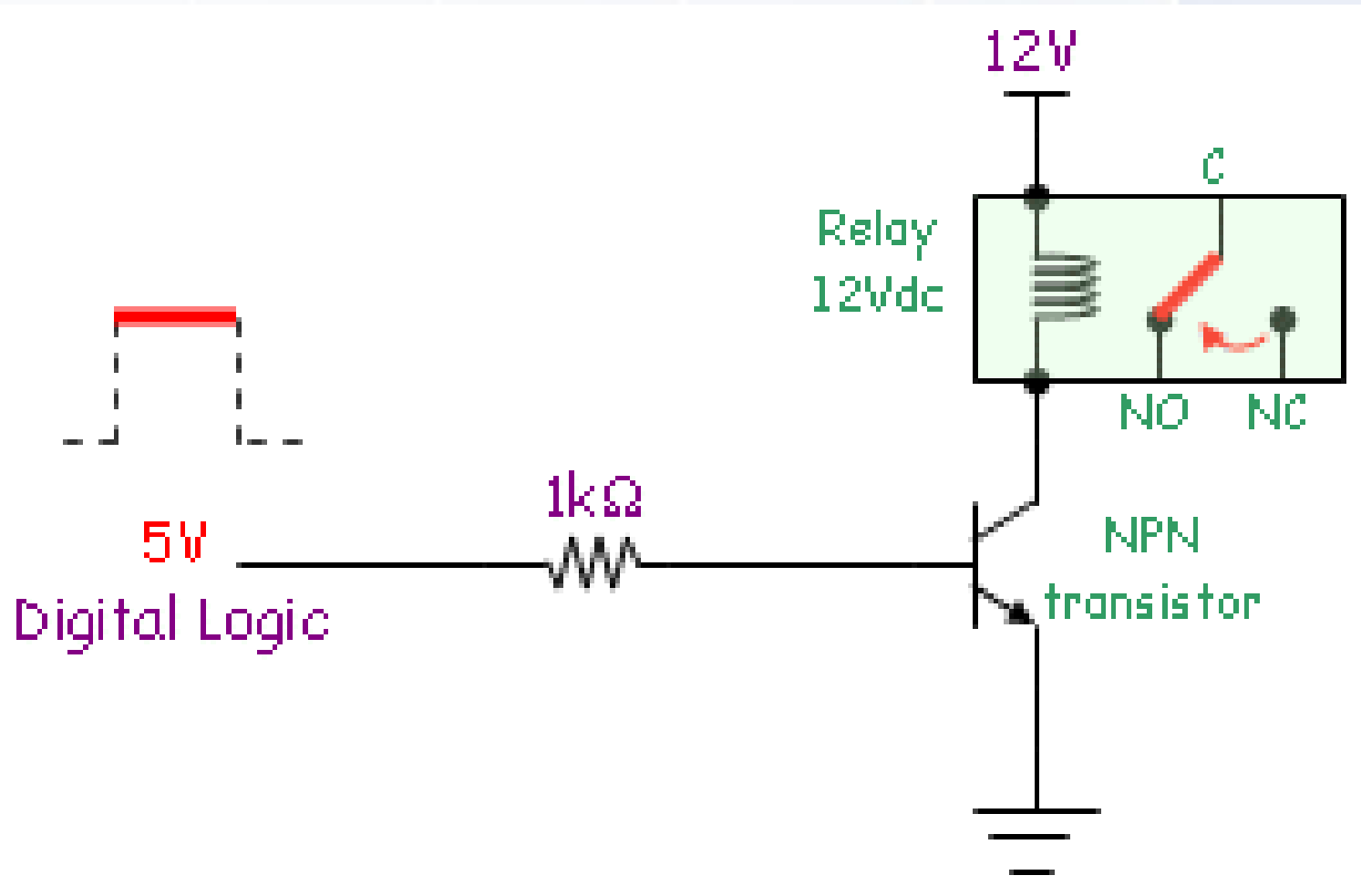
$$I_C = 100 \text{ mA} , H_{FE} = 50$$

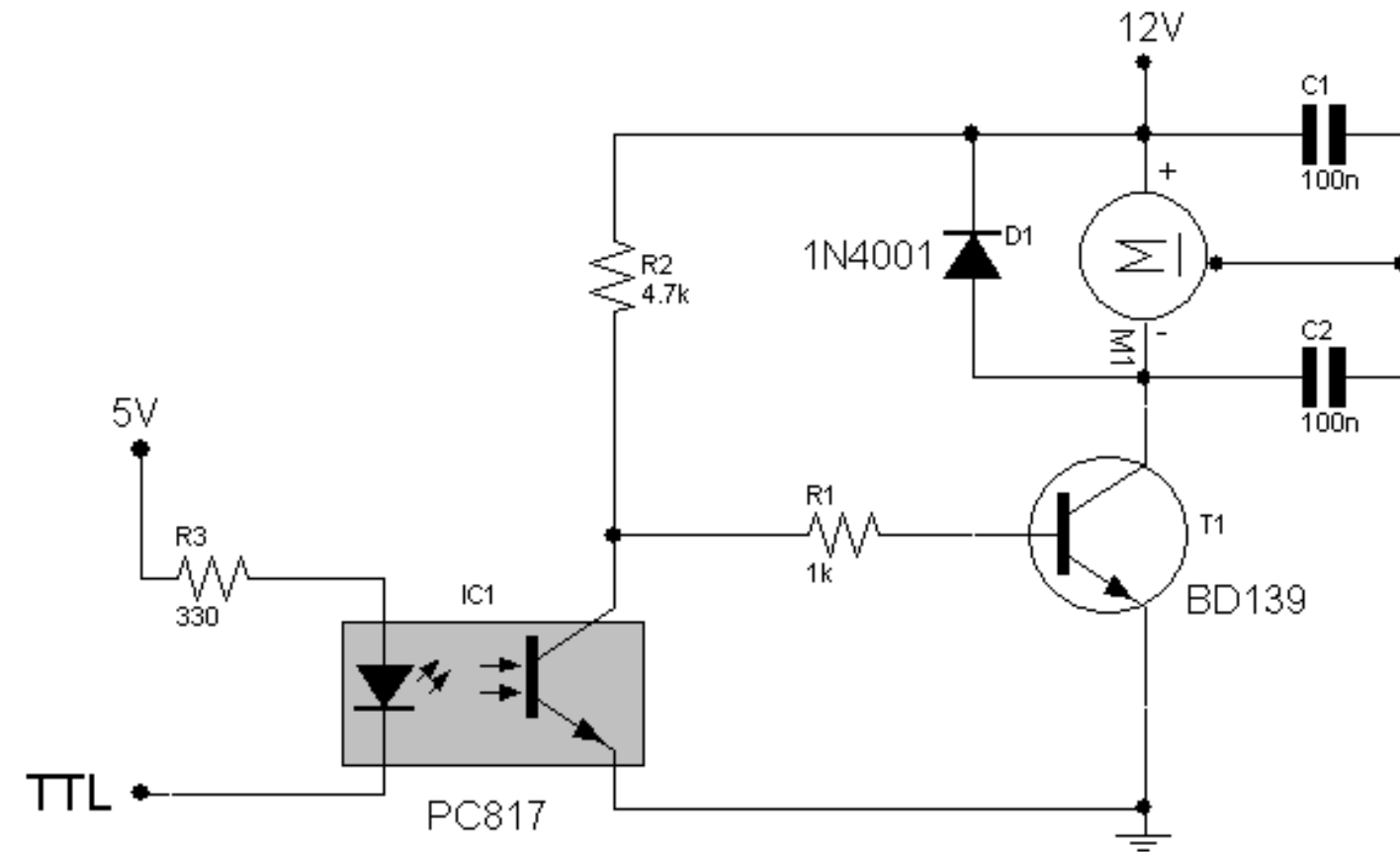
$$I_B = 100 \text{ mA}/50 = 2 \text{ mA}$$

$V_{BB}$  berasal dari sistem digital  
dengan output 5 V

$$R_B = 5/2\text{mA} = 2,7 \text{ k}\Omega$$

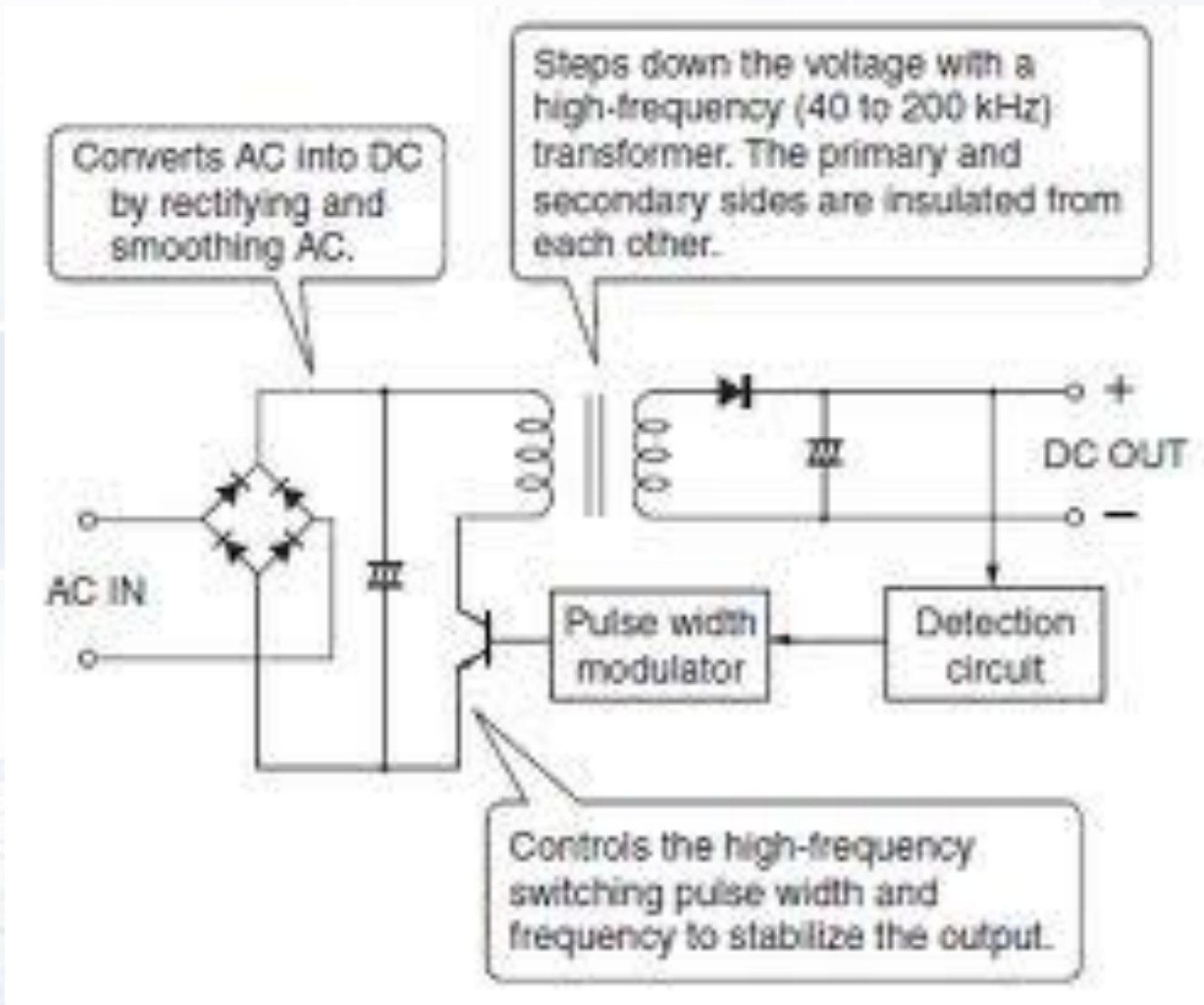
# Contoh aplikasi





1=ON  
0=OFF

(c)www.CoolCircuit.com



**end**

