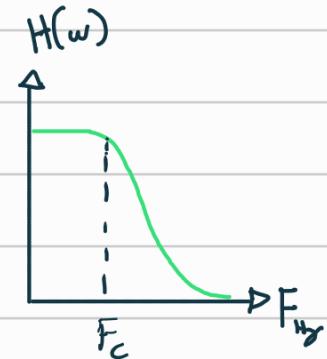
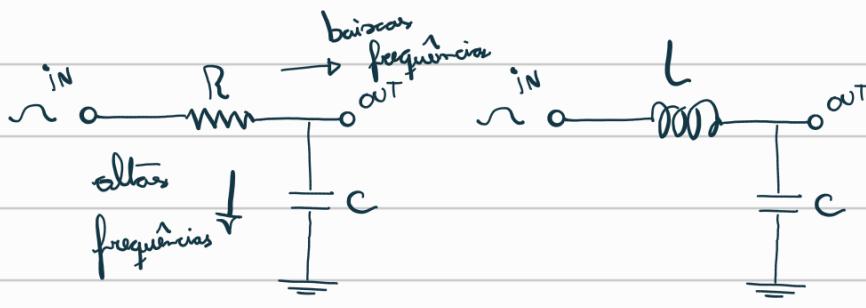


# Experimento 01

- Capacitor  → Frequências altas: curto circuito  $\rightarrow i(t) = C \frac{d\varphi(t)}{dt}$   
 → Frequências baixas: circuito aberto  $\rightarrow$

- Indutor  → Frequências altas: circuito aberto  $\rightarrow \varphi(t) = L \frac{di(t)}{dt}$   
 → Frequências baixas: curto circuito  $\rightarrow$

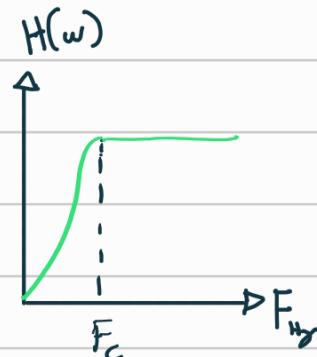
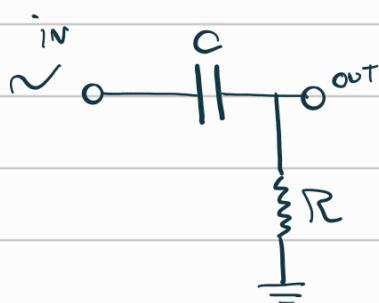
## ► Filtro Passa Baixa



$$F_c = \frac{1}{2\pi RC}$$

$$F_c = \frac{1}{2\pi\sqrt{LC}}$$

## ► Filtros Passa Alta



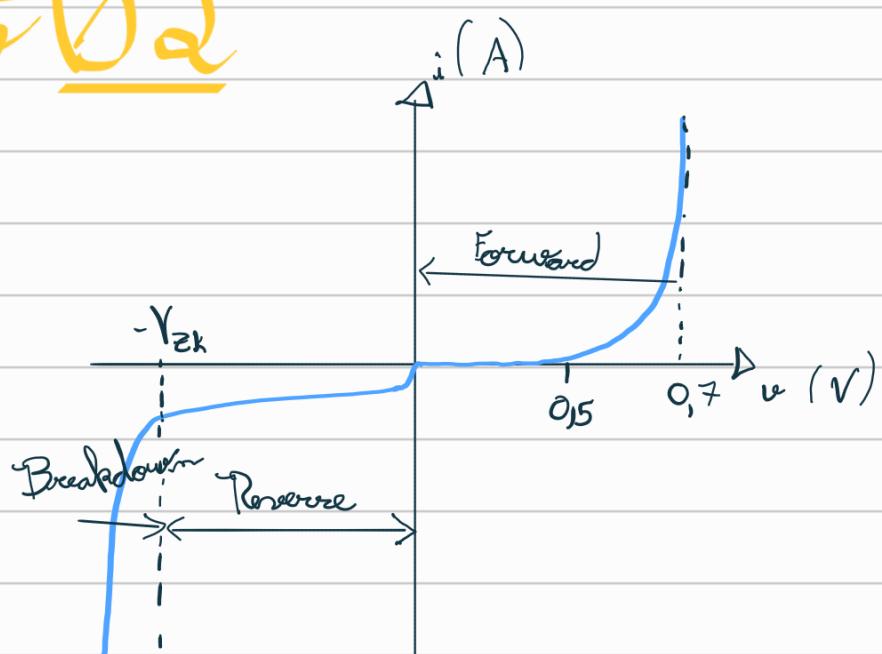
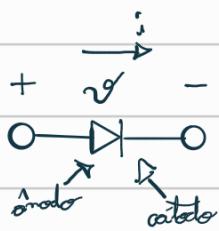
$$F_c = \frac{1}{2\pi RC}$$

$$R_1 // R_2 = \frac{6,8k \cdot 12k}{6,8k + 12k} = \frac{81,6k}{18,8k} = 4,34k\Omega$$

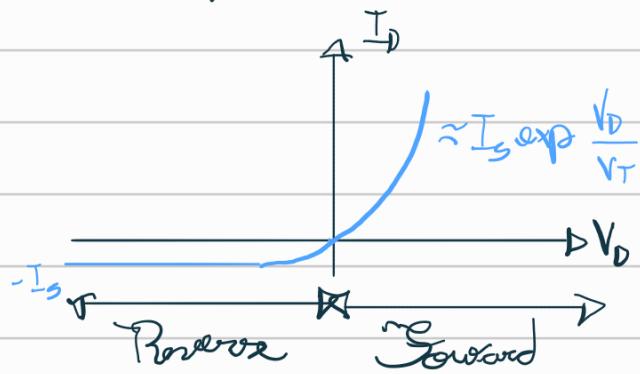
$$F_c = \frac{1}{2\pi \cdot 4,34k \cdot 0,02} = \cancel{\frac{1}{1,85k Hz}}$$

# Experimento 02

► Diodo



► Modelo exponencial



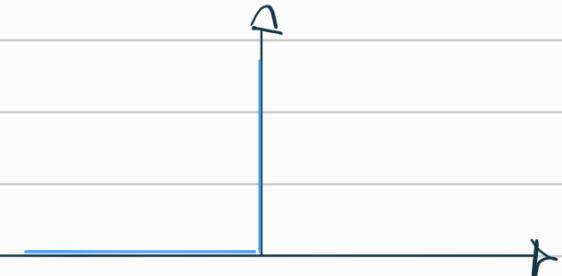
$$I_D = I_s \exp \frac{V_D}{V_T}$$

$$V_D = V_T \ln \frac{I_D}{I_s}$$

► Modelo Ideal

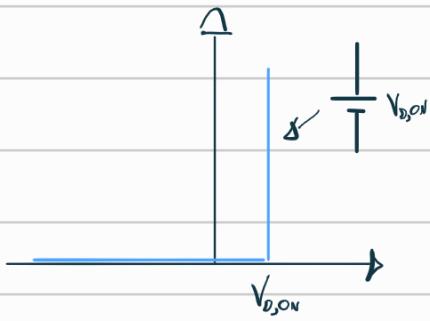


$$V_A > V_C$$

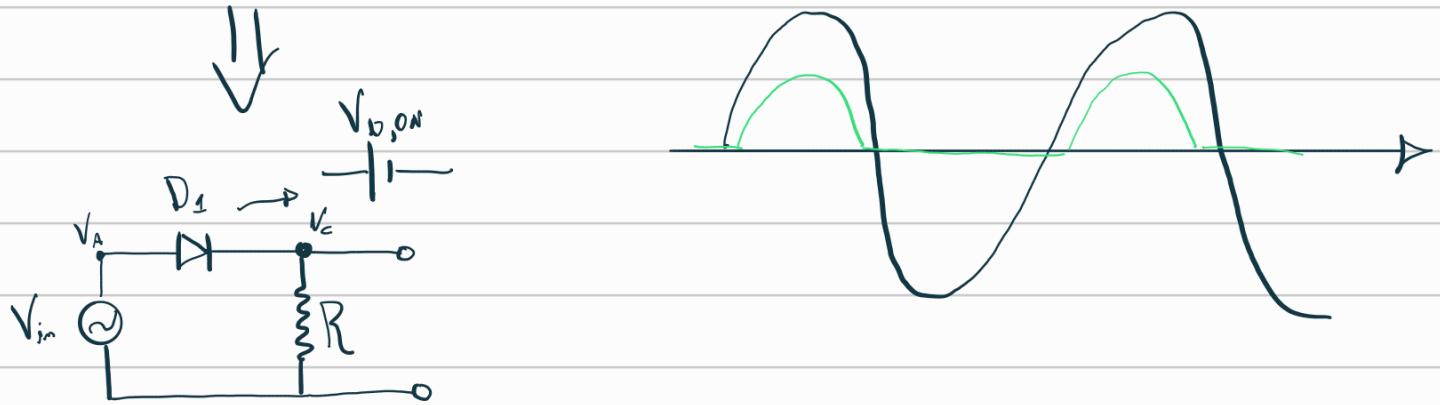
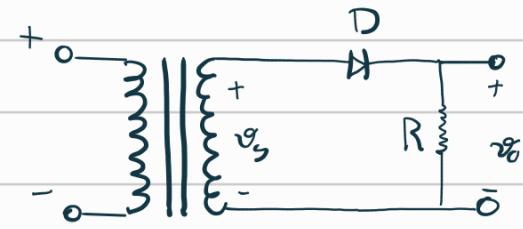


$$V_A < V_C$$

► Modelo de queda de tensão constante



► Retificador meia onda



$$V_A - V_C > V_{D,0}$$