- $V_j \simeq 1V$ (pointes importantes)
D'après fiche Technique :
- $U_Z = 14,8V$; $I_Z = 50mA$; $r_Z = 5\Omega$
$P_{max} = 1W$
- $U_{Z_0} = U_Z - r_Z I_Z = 14,8 - 5.50 = 14,55V$
- $U_{c,max} = \sqrt{2}\, U_1 - 2V_j = \sqrt{2}.18 - 2\times 1$
$= 23,46V$

- $U_{c,min} = U_{c,max} + (U_{Z_0} - U_{c,max})\left(1 - \exp\left(-\frac{0,4T_0}{C(R_S + r_Z)}\right)\right)$
$= 23,66 + (14,55 - 23,66)\left(1 - \exp\left(-\frac{8ms}{22ms}\right)\right)$
$U_{c,min} = 20,74V$

- $\Delta U_c = U_{c,max} - U_{c,min} = 2,72V$

- $U_{c,dc} \simeq U_{c,max} - \frac{\Delta U_c}{2}$
$= 23,46 - \frac{2,72}{2} = 22,1V$

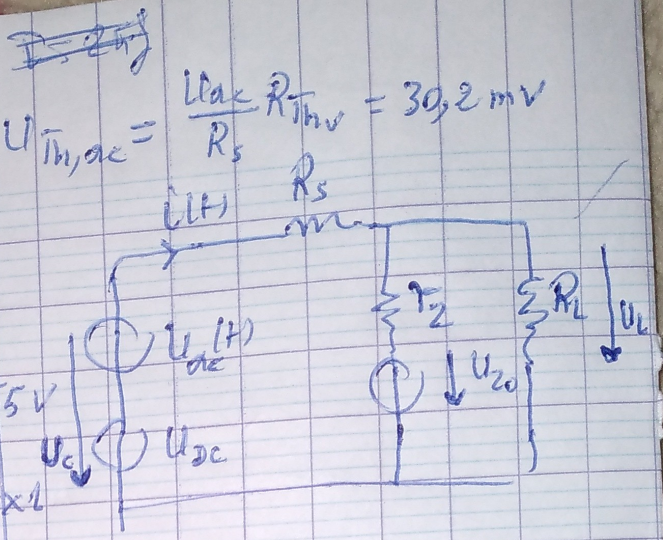
$U_{c,ac} = \frac{\Delta U_c}{2} = \frac{2,72}{2} = 1,36V$

- $R_{Th} = \frac{R_S r_Z}{R_S + r_Z} = 4,89\Omega$

- $U_{Th,dc} = \left(\frac{U_{0dc}}{R_S} + \frac{U_{Z_0}}{r_Z}\right) R_{Th_V} = 14,72V$

~~I = 2Th~~

$U_{Th,ac} = \frac{U_{ac}}{R_S} R_{Th_V} = 30,2mV$



- $U_{L,dc} = U_{Th,dc} \frac{R_L}{R_{Th} + R_L} = 14,65V$

- $U_{L,ac} = U_{Th,dc} \frac{R_L}{R_{Th} + R_L} = 30mV$

- Ondulation relative
$\frac{U_{L,ac}}{U_{L,dc}} = \frac{30mV}{14,65V} = 0,2\%$

- Puissance moyenne fournie à la charge :
$P_{L,dc} = \frac{U_{L,dc}^2}{R_L} \simeq 0,2W$

$$I_{Z,max} = \frac{U_{L,max} - U_{Z0}}{r_Z}$$

$$= \frac{U_{L,dc} + U_{L,ac} - U_{Z0}}{r_Z} = 25\,mA$$

$$I_{Z,min} = \frac{U_{L,min} - U_{Z0}}{r_Z}$$

$$= \frac{U_{L,dc} - U_{L,ac} - U_{Z0}}{r} = 13\,mA$$

$$P_{Z,moy} = U_{Z,moy} I_{Z,moy} = U_{L,dc} I_{Z,moy}$$

$$= U_{L,dc} \frac{I_{Z,max} + I_{Z,min}}{2} = 0,3W$$

$$I_{Dc} = I_Z + I_L = \frac{U_{L,dc} - U_{Z0}}{r_Z} + \frac{U_{L,dc}}{R_L}$$

$$(I_{Dc} = 34\,mA)$$

$$I_{C,max} = 2 I_{Dc} \frac{T - \Delta t}{\Delta t}$$

$$= 2 I_{Dc} \frac{0,8T}{0,2T} = 8 I_{Dc}$$

$$\simeq 270\,mA$$