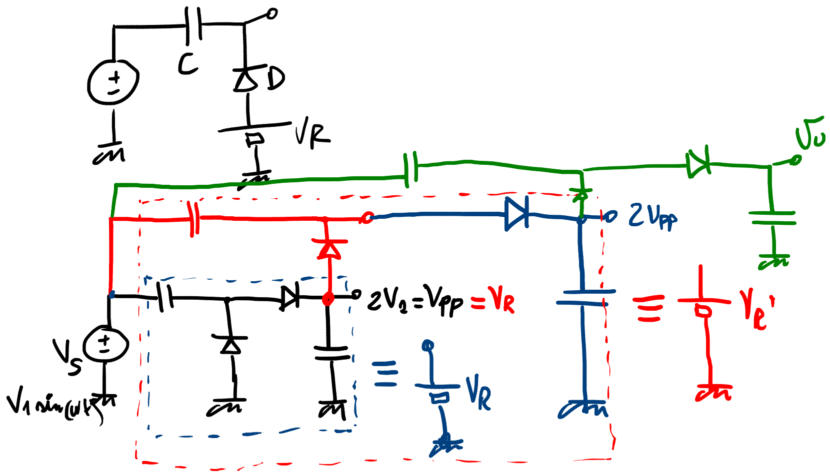
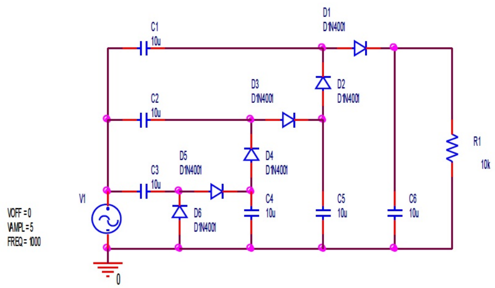
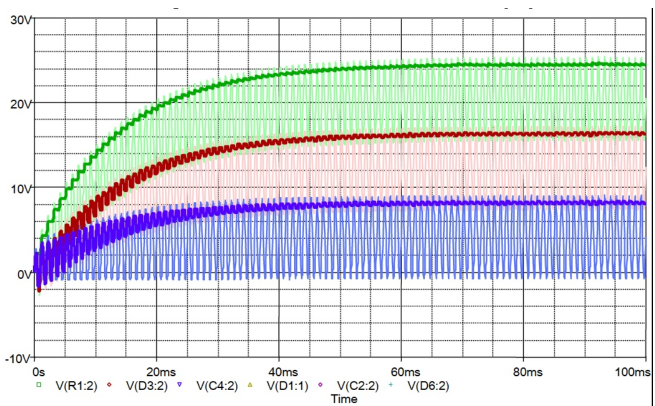
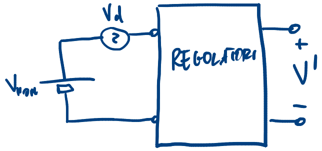

C
D
VR
Vu
2Vpp
2V1 = Vpp = VR
≡ VR
≡ Ve'
Vs
V1 sin(ωt)

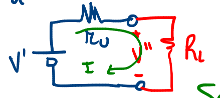

C1
10u
C2
10u
C3
10u
D1
D1N4001
D2
D1N4001
D3
D1N4001
D4
D1N4001
D5
D1N4001
D6
D1N4001
C4
10u
C5
10u
C6
10u
R1
10k
V1
VOFF = 0
VAMPL = 5
FREQ = 1000
0


30V
20V
10V
0V
-10V
0s
20ms
40ms
60ms
80ms
100ms
V(R1:2)
V(D3:2)
V(C4:2)
V(D1:1)
V(C2:2)
V(D6:2)
Time



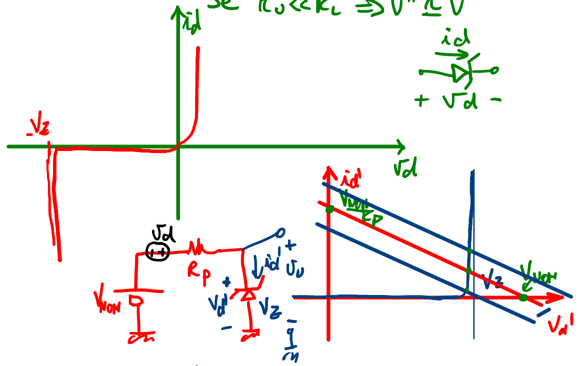
$V_{NOM} > V'$ $V_{NOM} \simeq V' + 2 \div 3\,V$

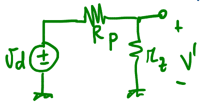
$S_V = \frac{\delta V'}{\delta V_d} < 0{,}1$; $S_T = \frac{\delta V'}{\partial T}$; $r_u = \frac{\partial V'}{\partial I_u}$



$V'' = R_L I = \frac{R_L}{r_u + R_L} V'$

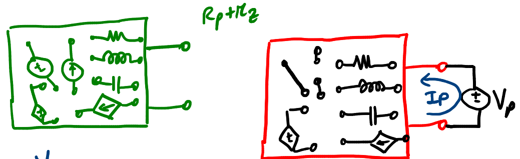
Se $r_u \ll R_L \Rightarrow V'' \simeq V'$



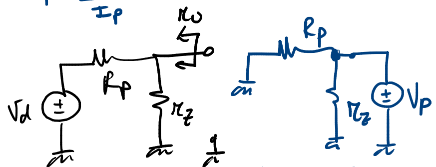


$\frac{\delta V'}{\delta V_d} = \frac{r_z}{R_p + r_z} = S_V$

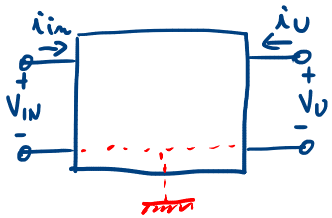
$V' = \frac{r_z}{R_p + r_z} V_d$



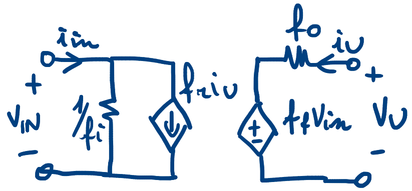
$Z_p = \frac{V_p}{I_p}$



$r_u = r_z \| R_p$

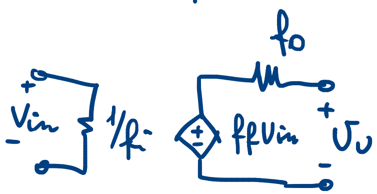


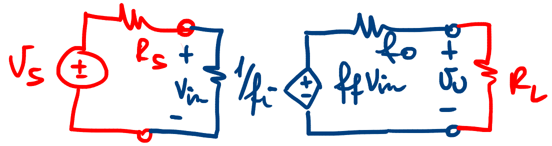
$$V_U = A_V V_{in} \qquad i_U = A_I i_{in}$$



$$\begin{cases} V_U = f_f V_{in} + f_o i_U \\ i_{in} = f_i V_i + f_r i_U \end{cases}$$

Se $f_r = 0$





$$V_U = f_f V_{in} \cdot \frac{R_L}{R_L + f_o} \qquad V_{in} = \frac{1/f_i}{1/f_i + R_S} V_S$$

$$V_U = \underbrace{\frac{R_L}{R_L + f_o} f_f \cdot \frac{1/f_i}{1/f_i + R_S}}_{A_V} \cdot V_S$$