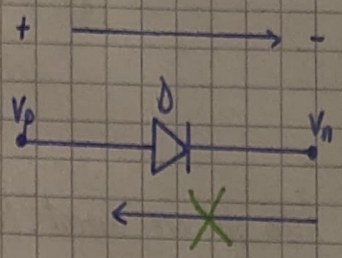
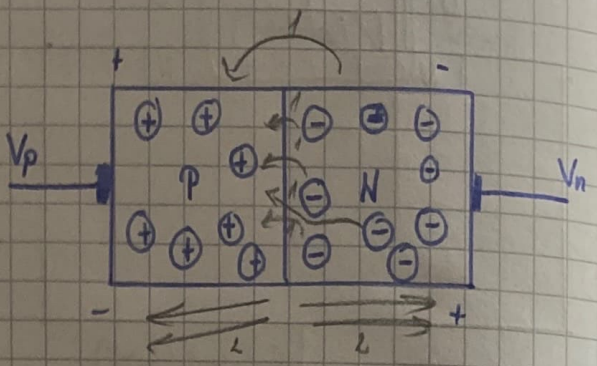
LABORATORUL 2

Dioda





Cazuri:

1. $\begin{cases} V_p > V_n \\ V > V_T \end{cases}$, T-prag

+ −

Polarizare directă

g neg merg către cele poz.

$V_T = 0,75$ siliciu

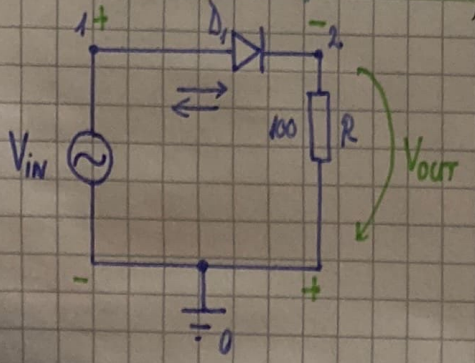
$V_T = 0,3$ germaniu

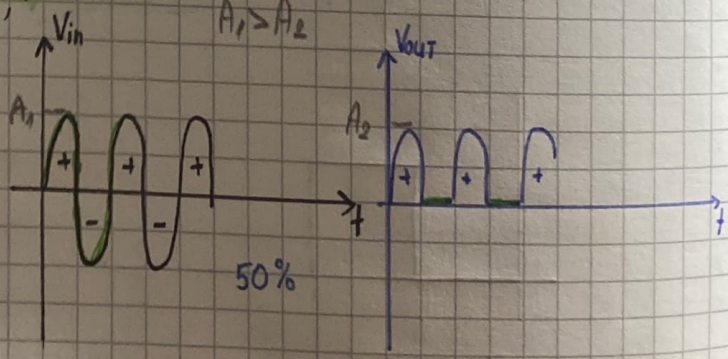
2. $V_p < V_n$

Polarizare indirectă

g în general merg spre extremități

REDRESOR MONOALTERNANȚĂ





AimSpace

```
1 | D1 1 2 DiodăSi
2 | .Model DiodăSi D IS = 1e-9
```

apoi 1e-9

6e-3

0.00001

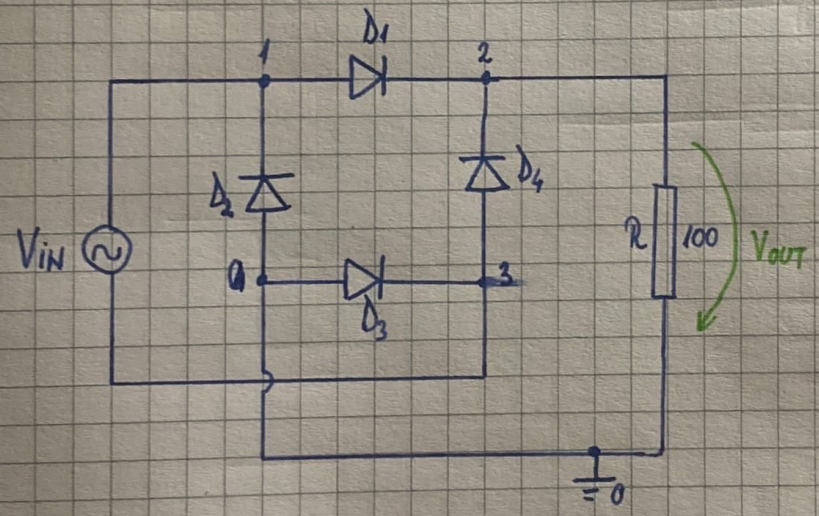
$V_{IN} = V(1) - V(0)$
$V(0) = 0$ (cât-i GND) $\Rightarrow V_{IN} = V(1)$

$V_{OUT} = V(2) - V(0)$
$V(0) = 0$ $\Rightarrow V_{OUT} = V(2)$

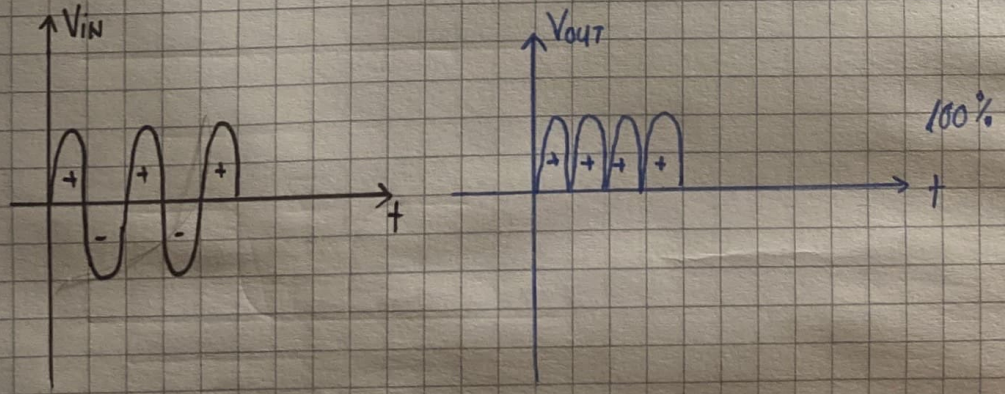
Codul final:

```
1  Redresor Monoalternanță
2  D1 1 2 DiodăSi
3  .Model DiodăSi D ttt = 1e-9
4  R 2 0 100
5  VIN 1 0 DC 5 SIN(0 10 1k 0 0)
```

REDRESOR DUBLĂ ALTERNANȚĂ



+ → − : $D_1 D_3$ / $D_2 D_4$
− → + : $D_2 D_4$ / $D_1 D_3$
deschise / închise



$V_{IN} = V(1) - V(3)$
$V_{OUT} = V(2) - V(0)$
$V(0) = 0$ $\Rightarrow V_{OUT} = V(2)$