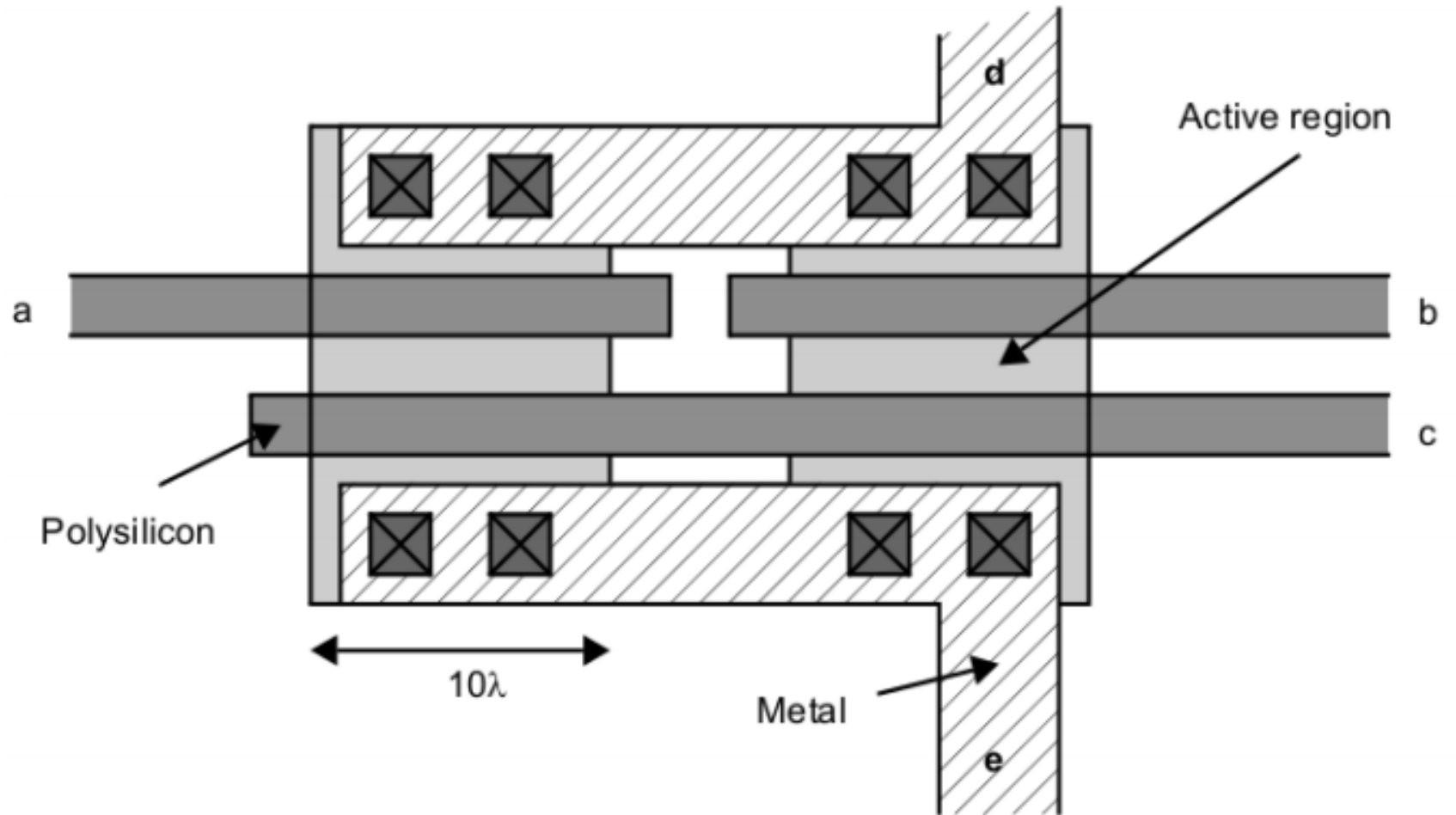
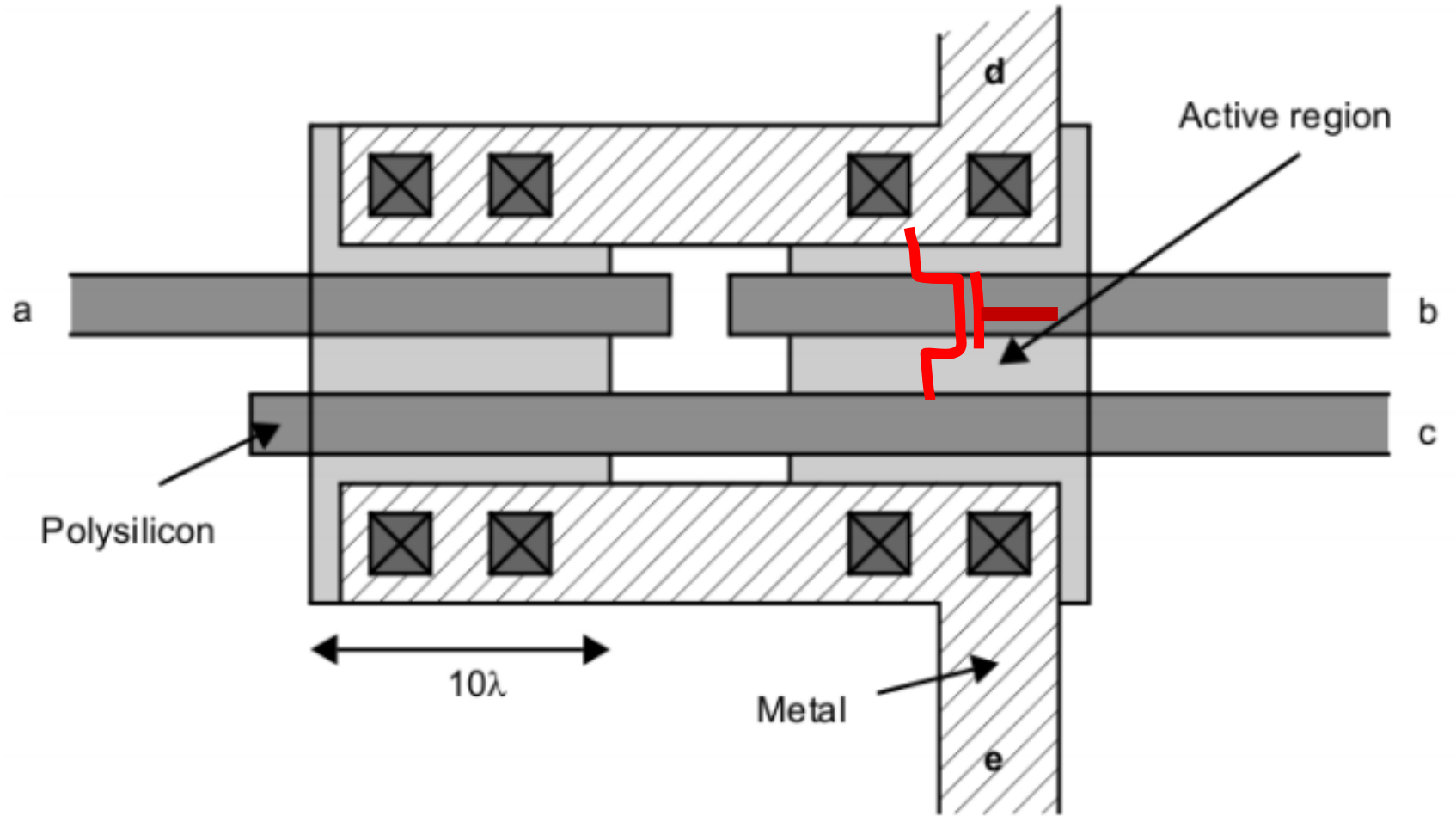


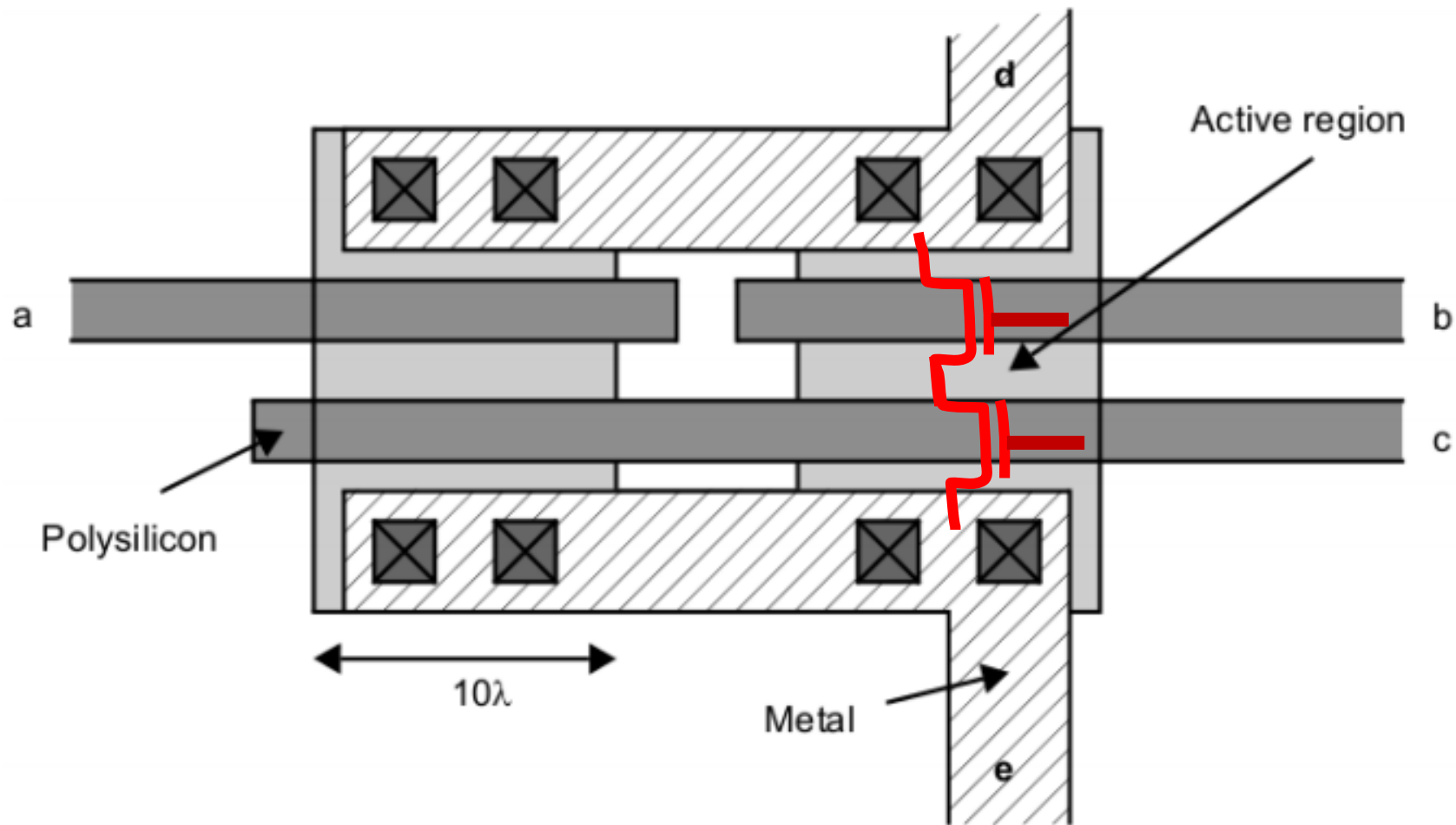
Exercise 1



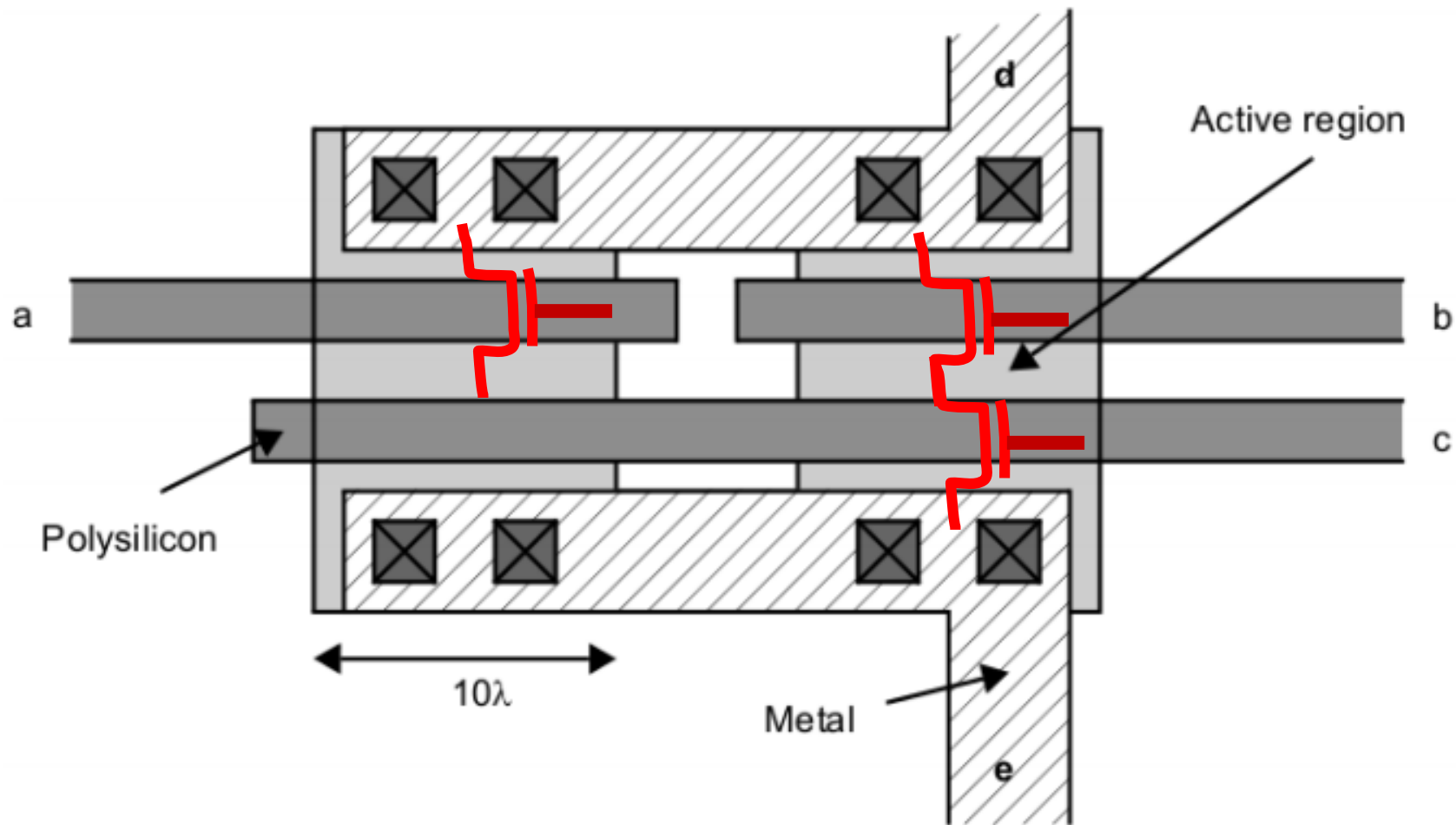
Exercise 1



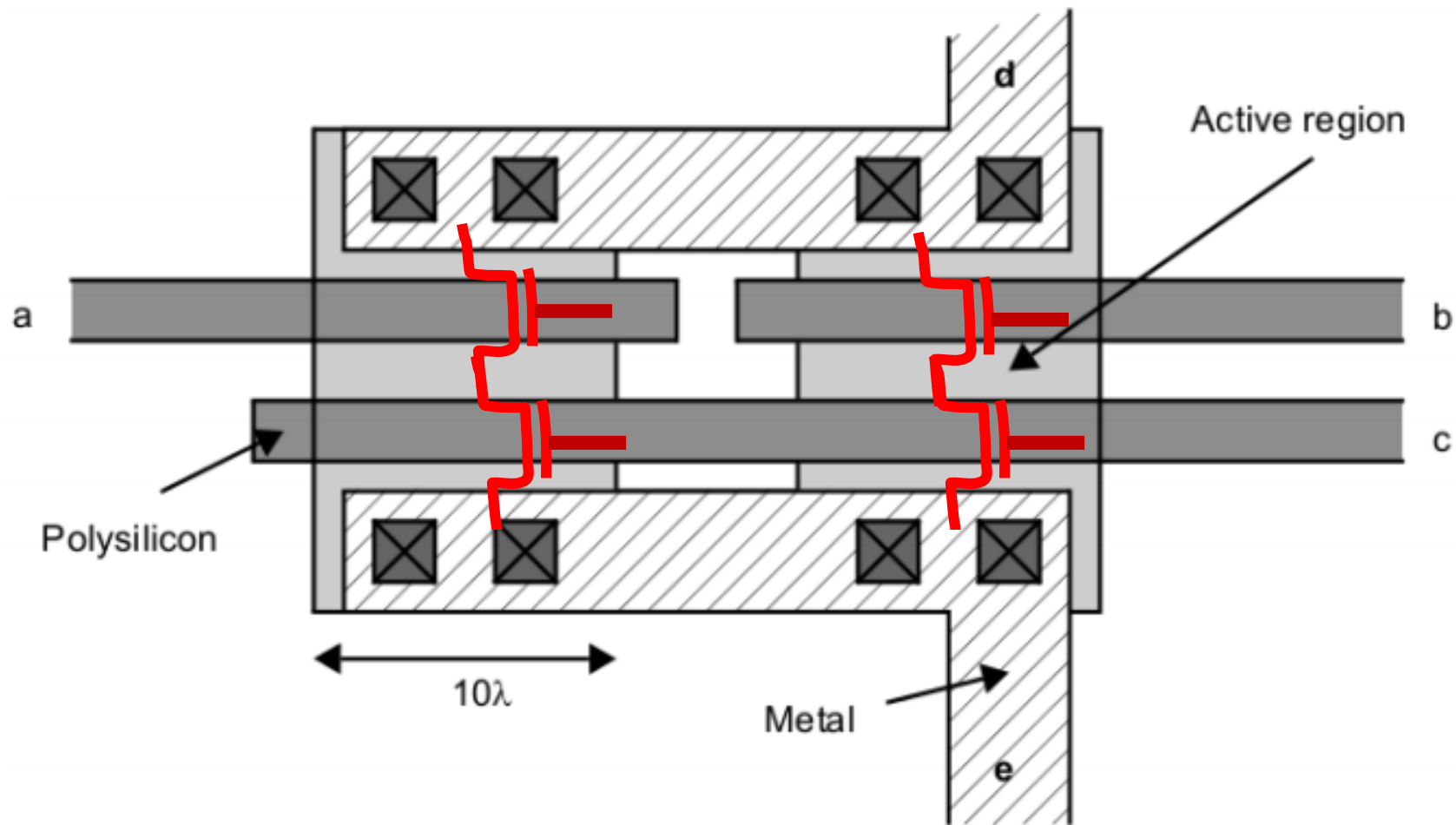
Exercise 1



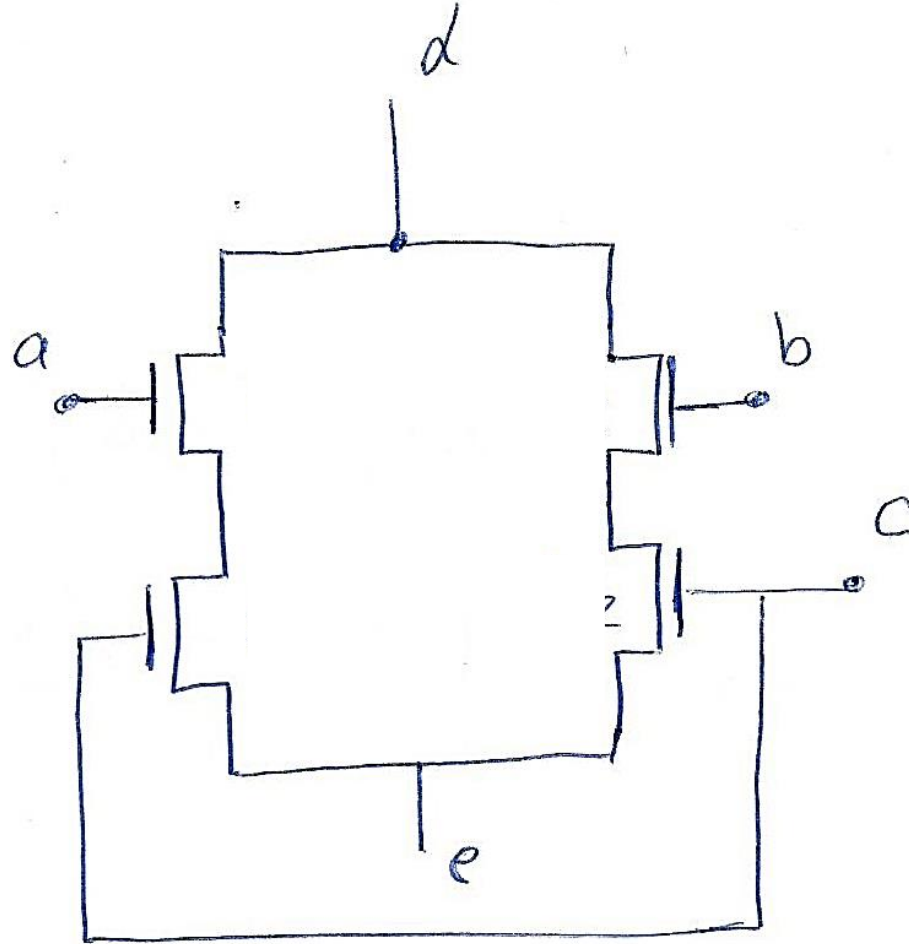
Exercise 1



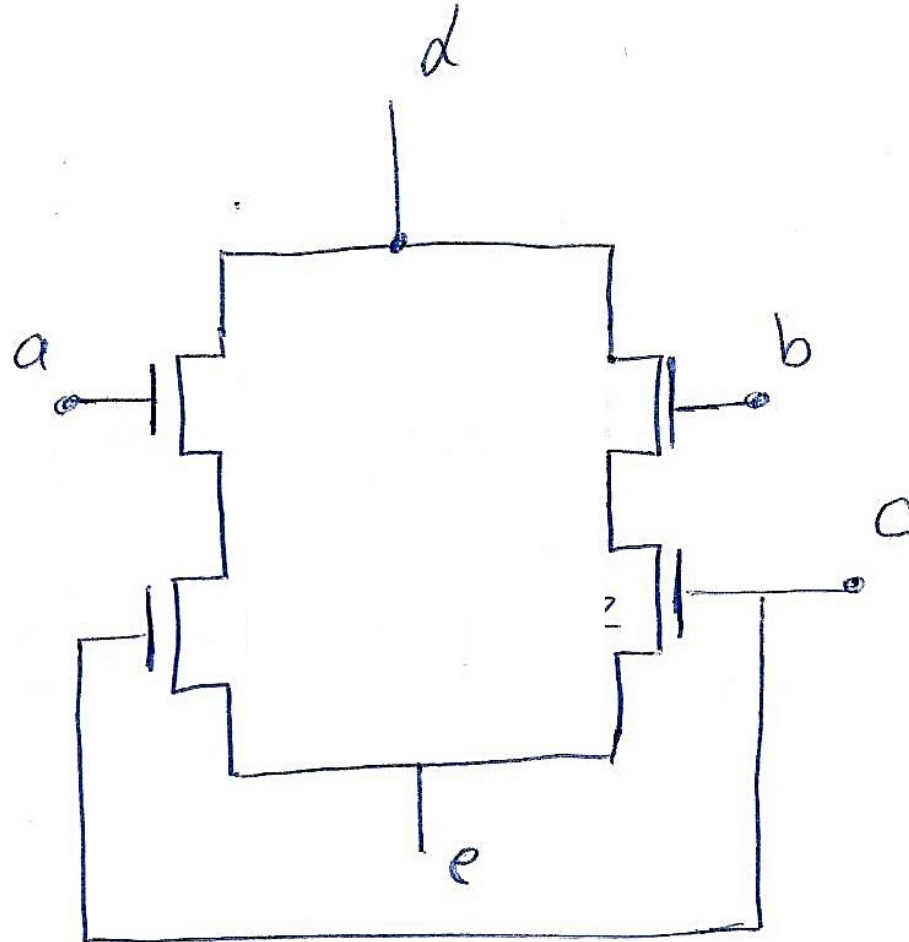
Exercise 1



Exercise 1

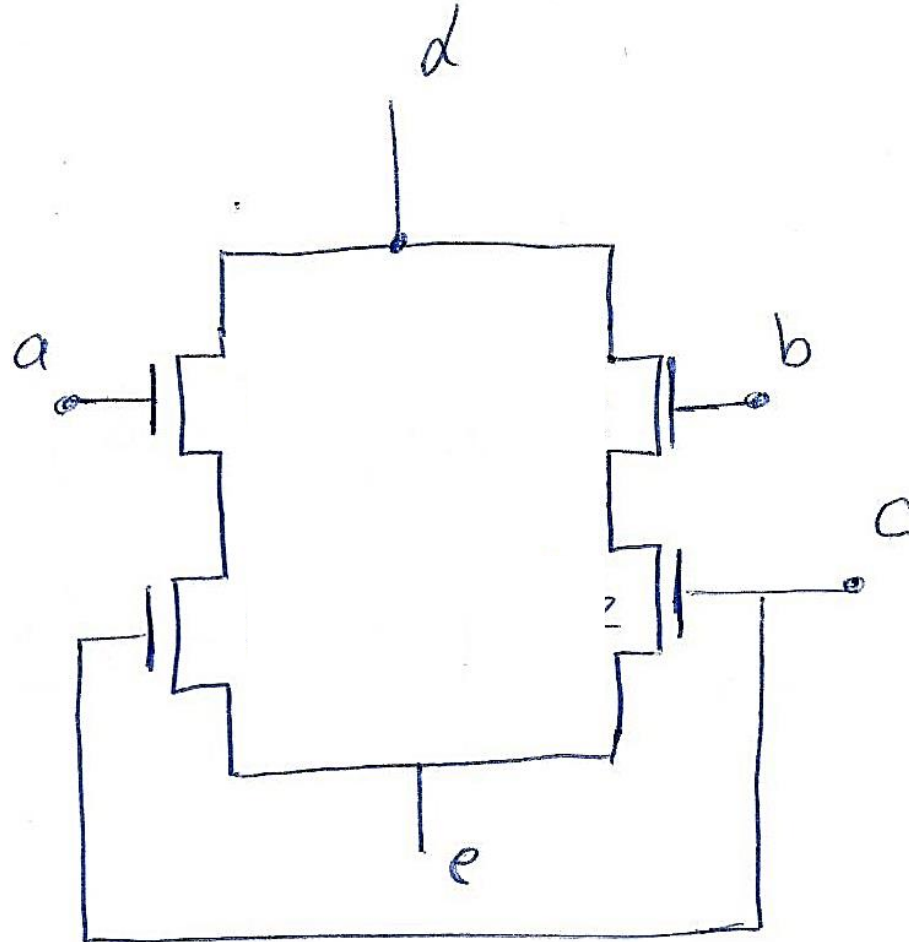


Exercise 1



$$(a+b) \cdot c$$

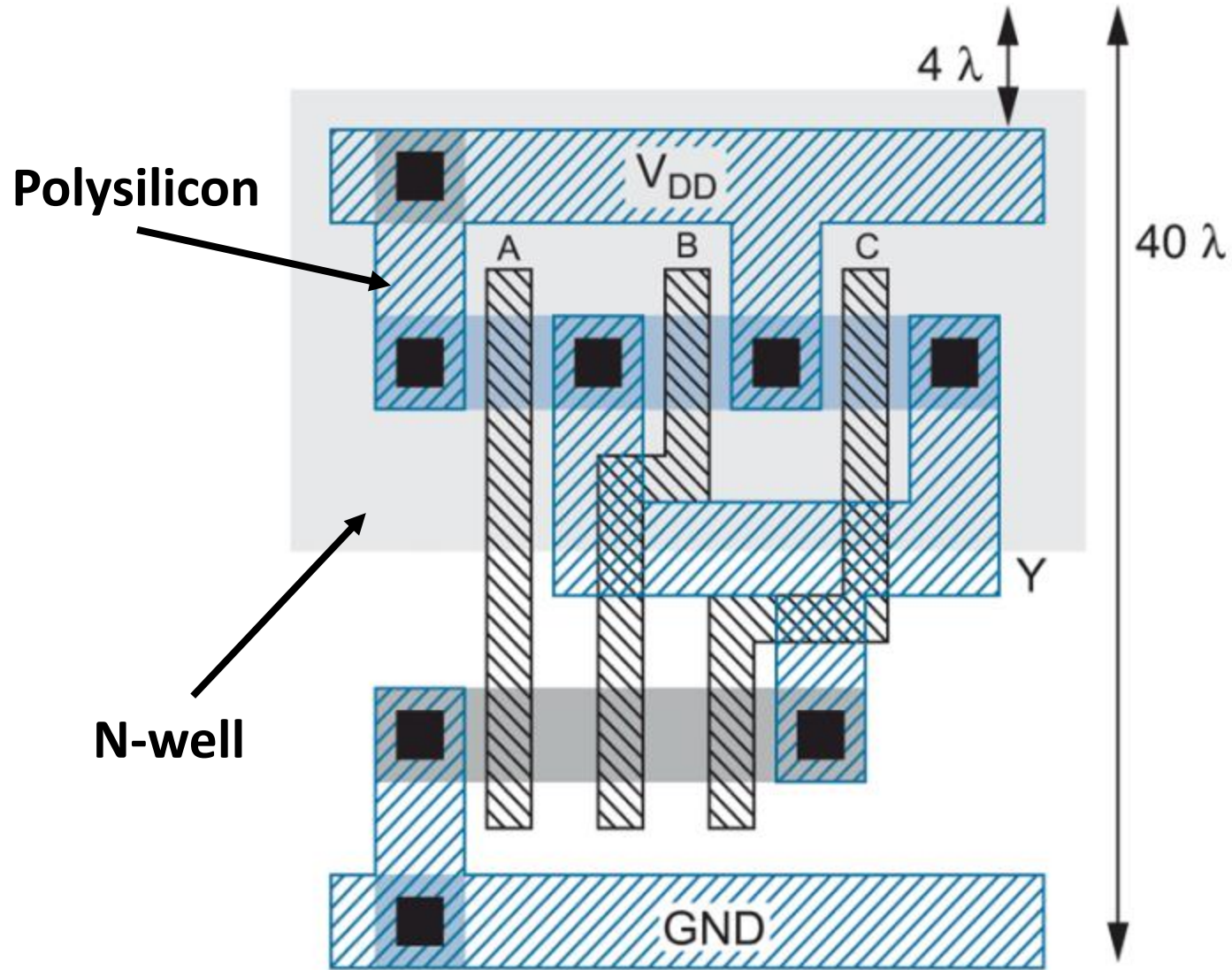
Exercise 1



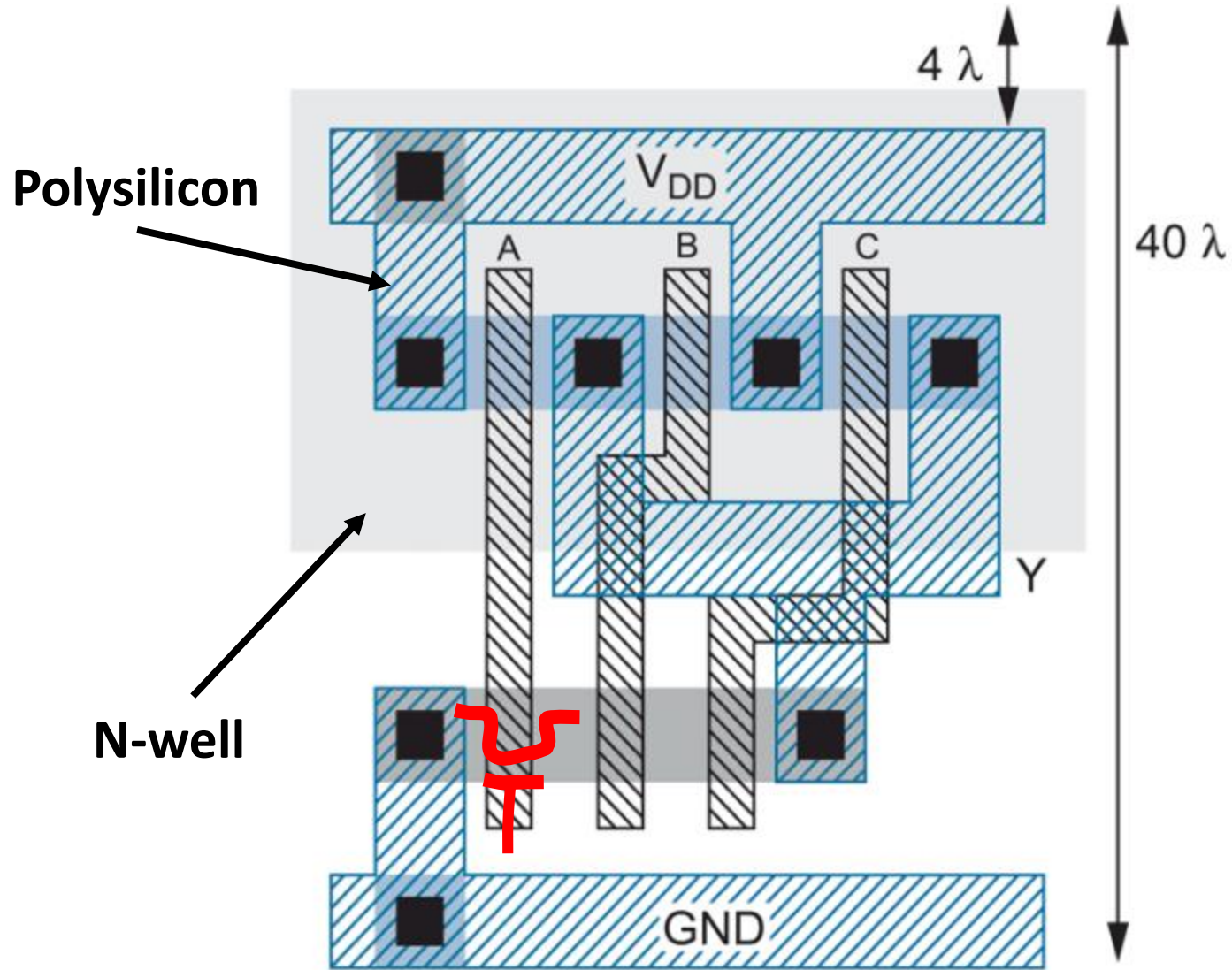
$$(a+b) \cdot c$$

pull-down

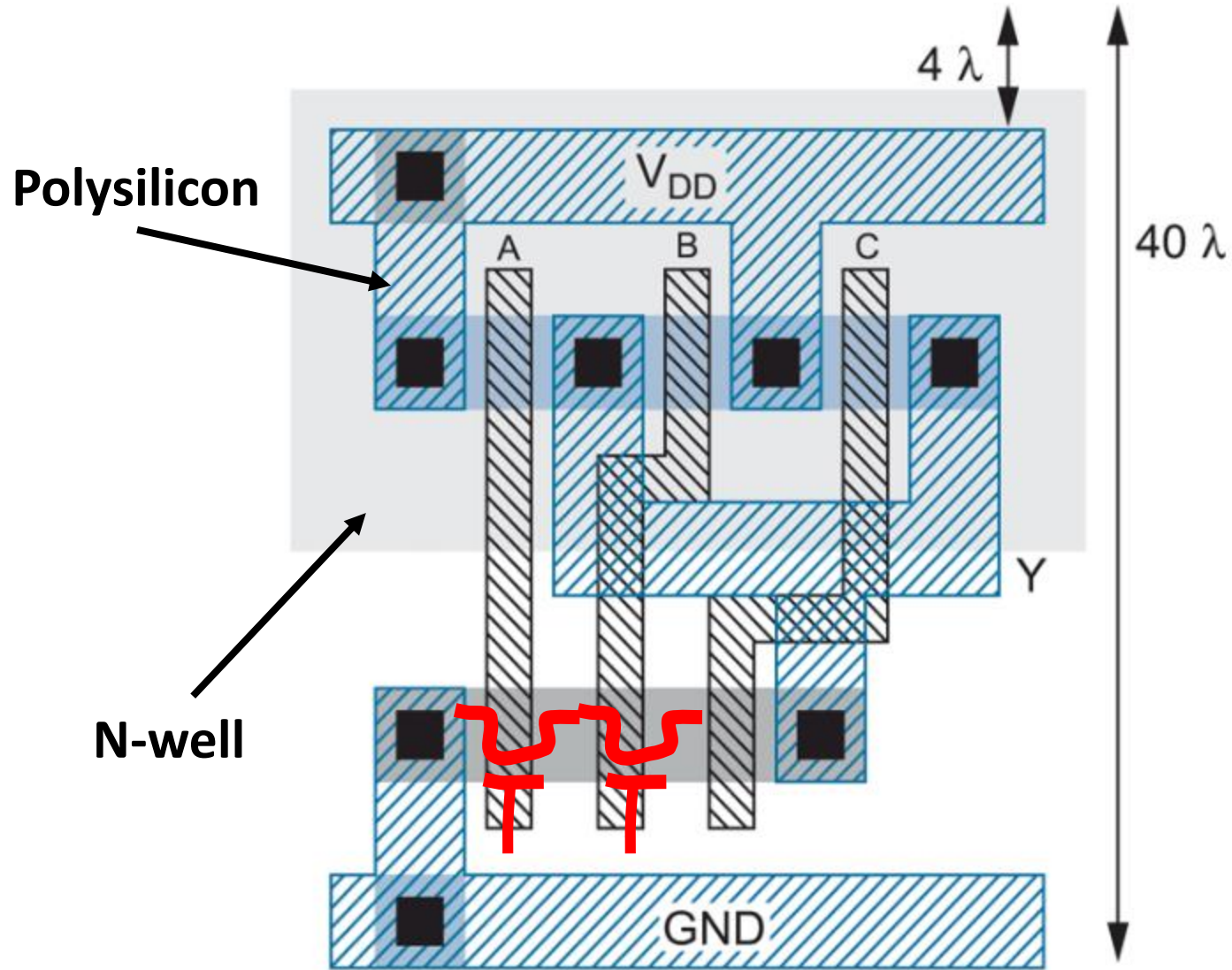
Question



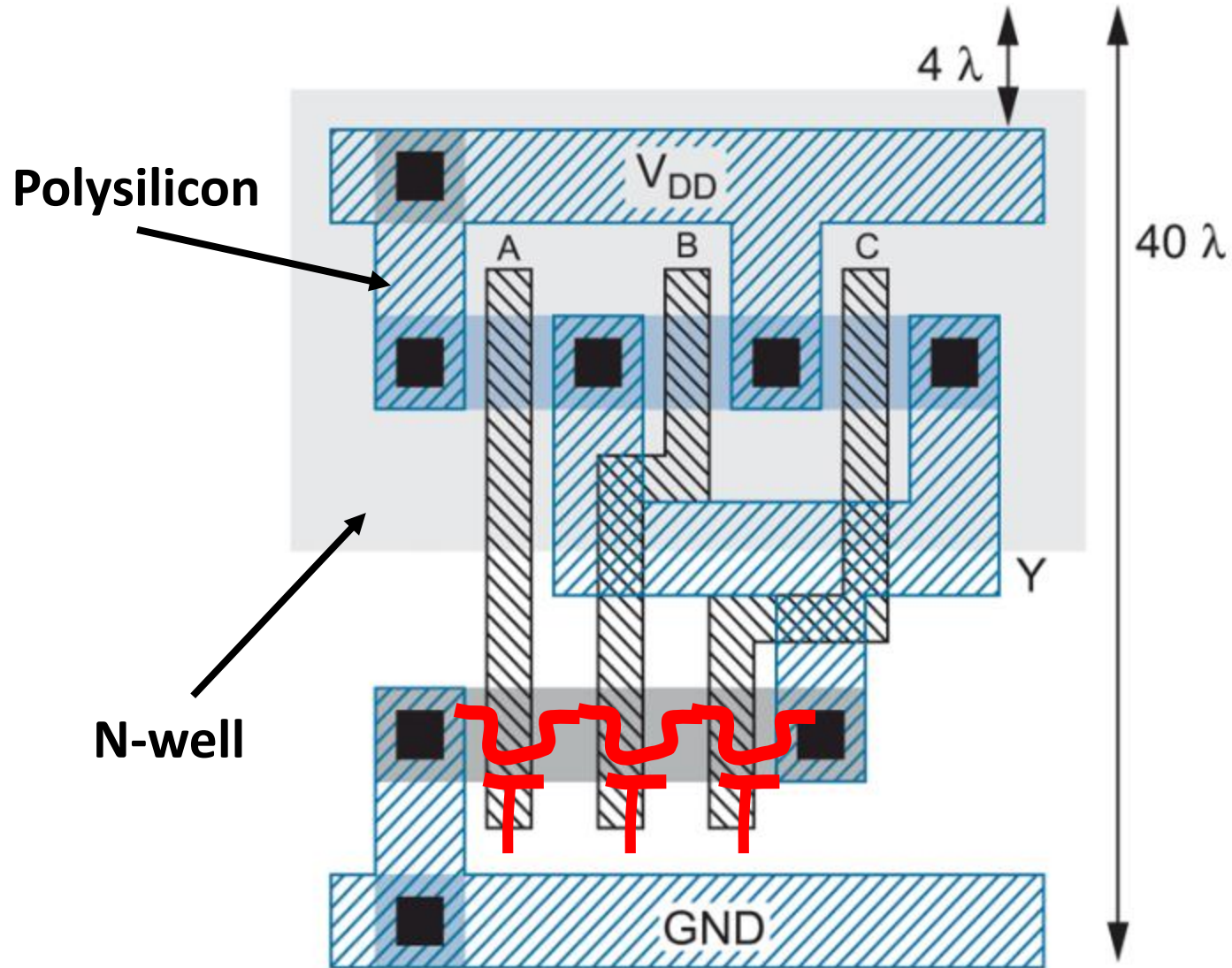
Question



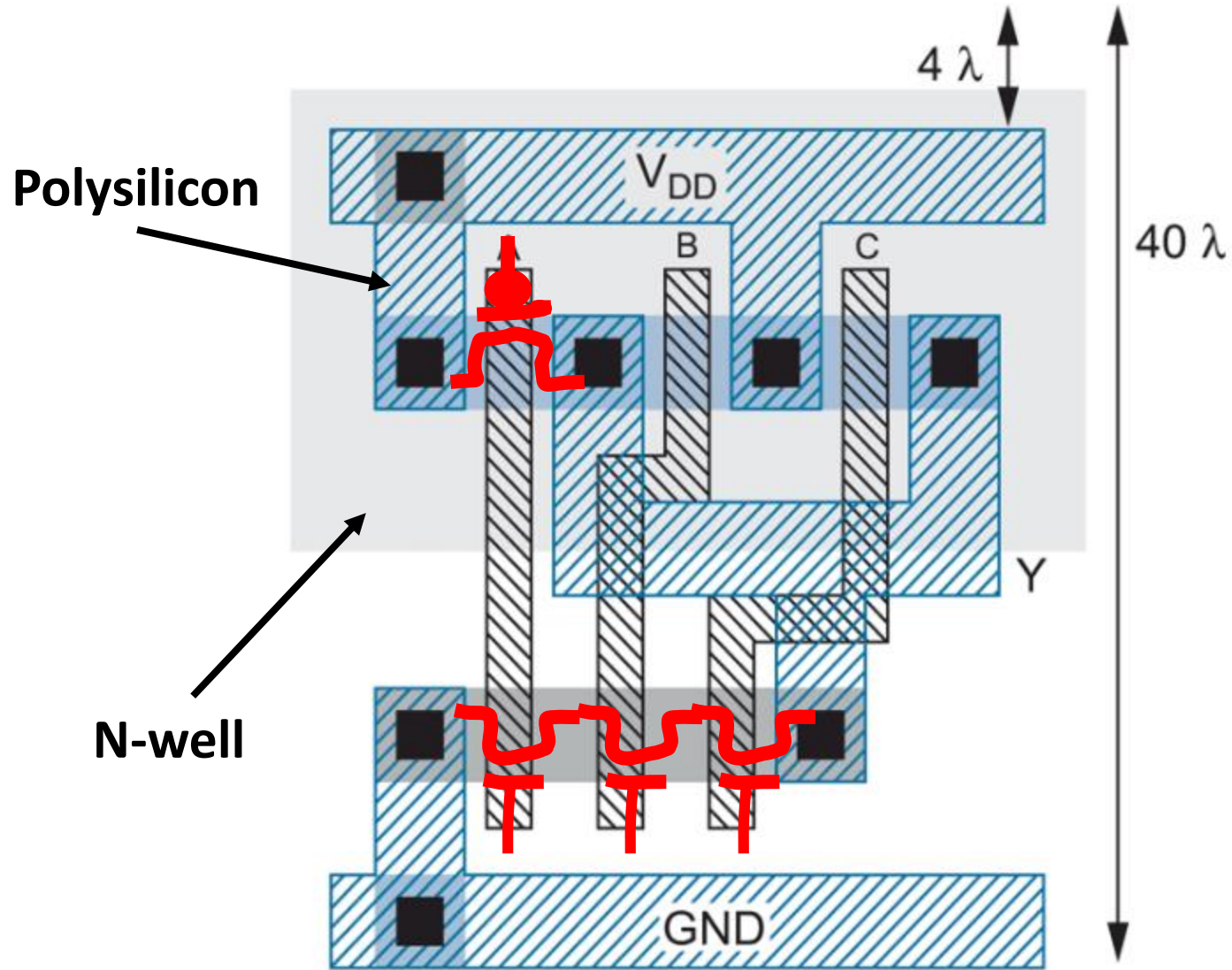
Question



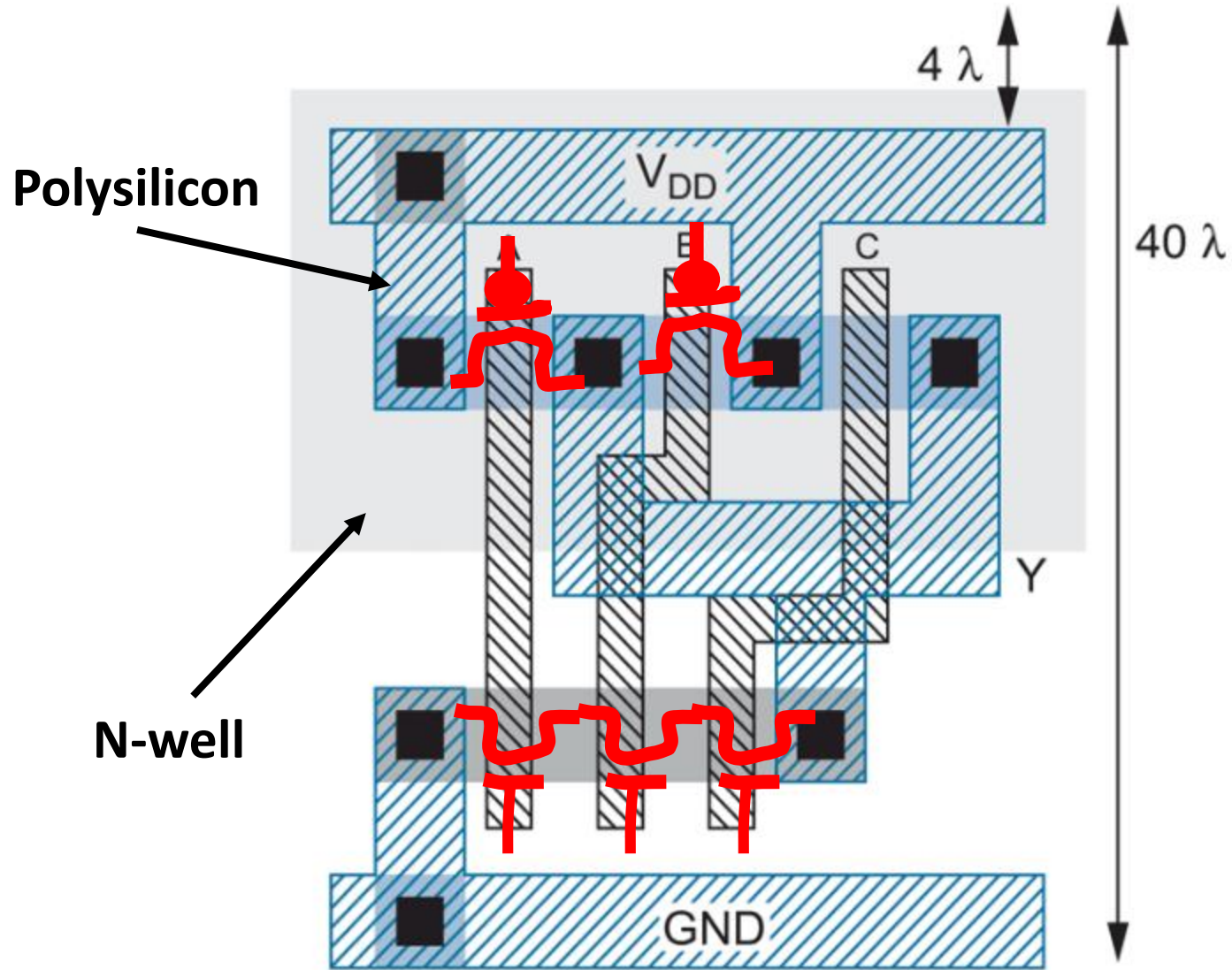
Question



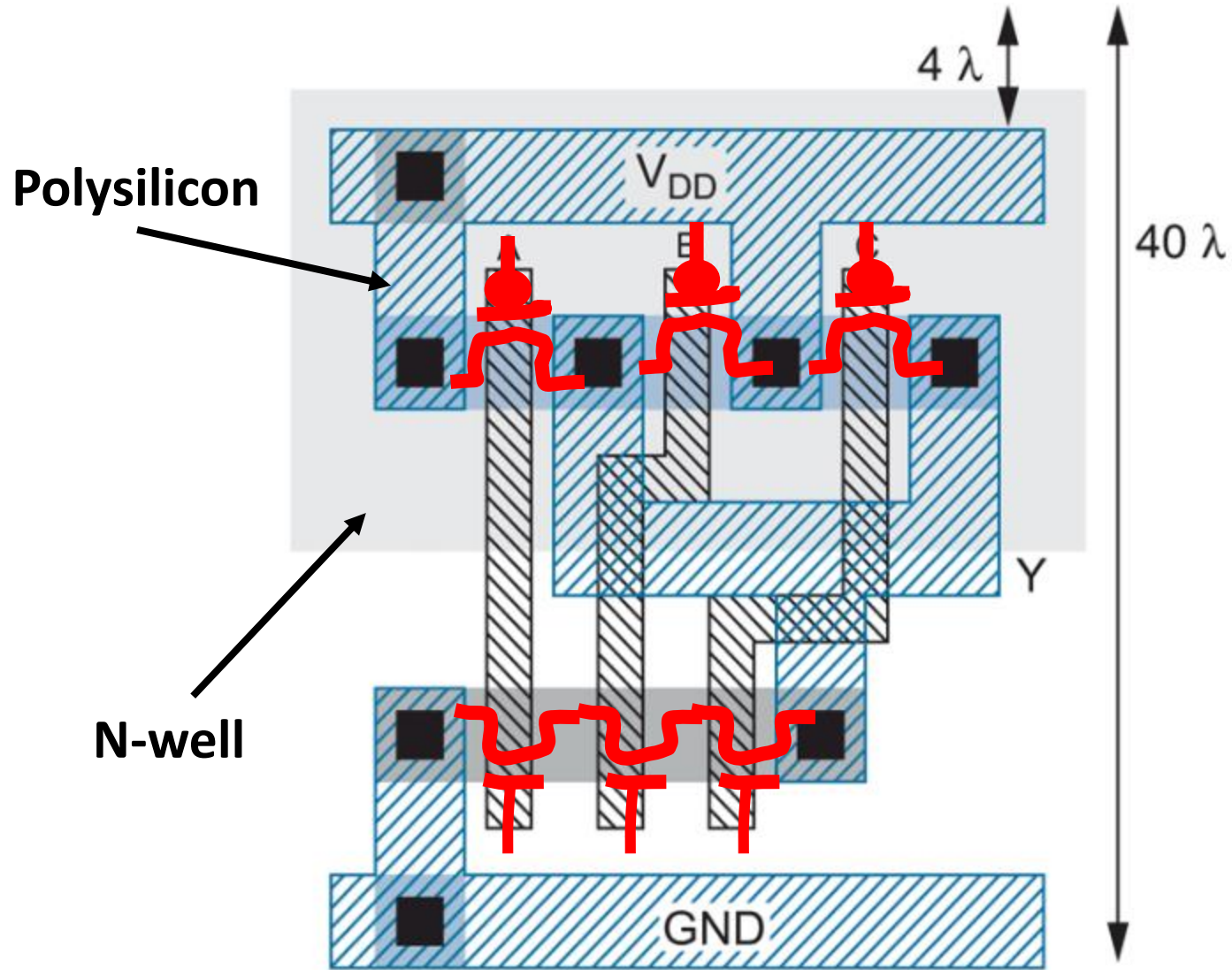
Question



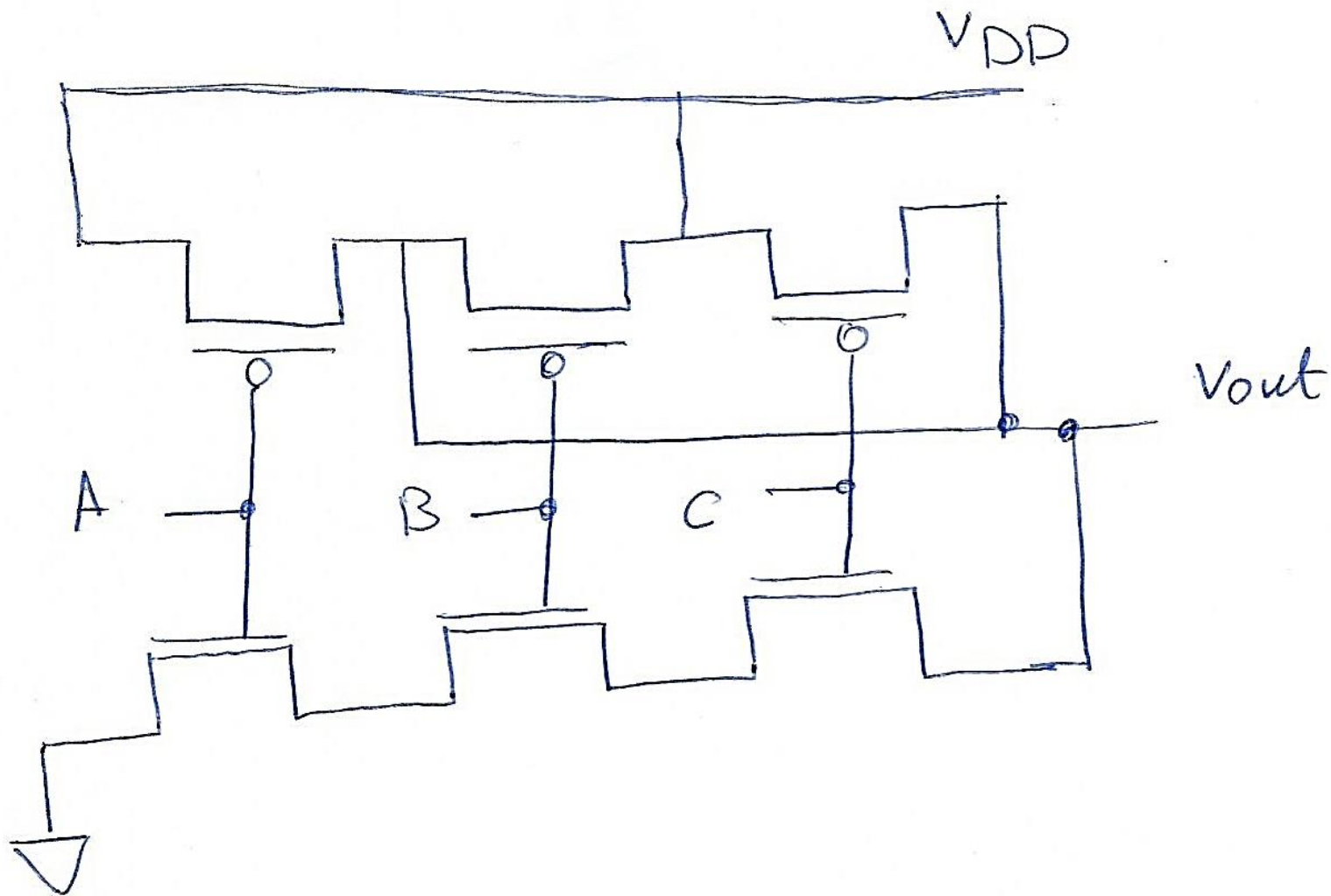
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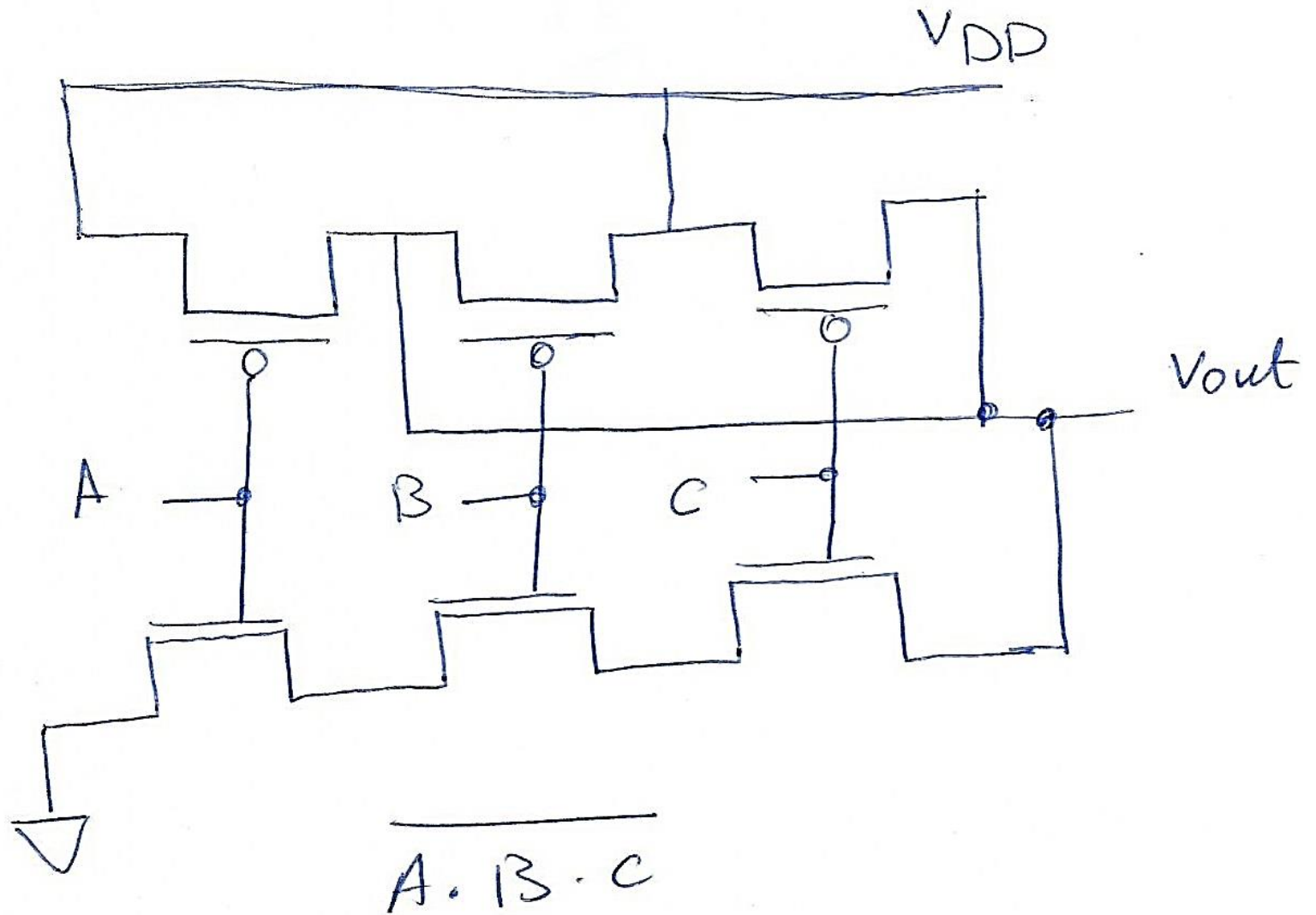
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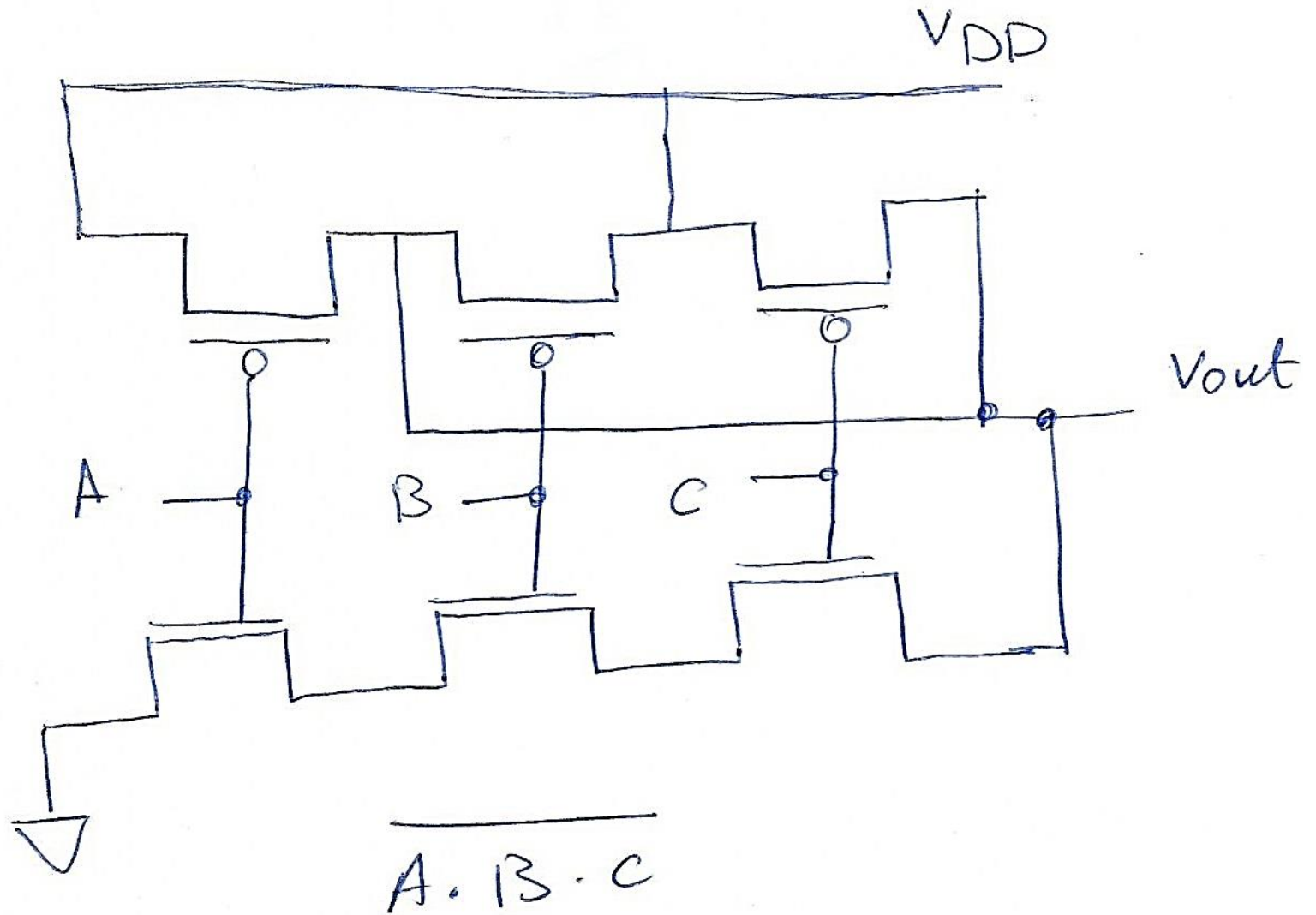
Question



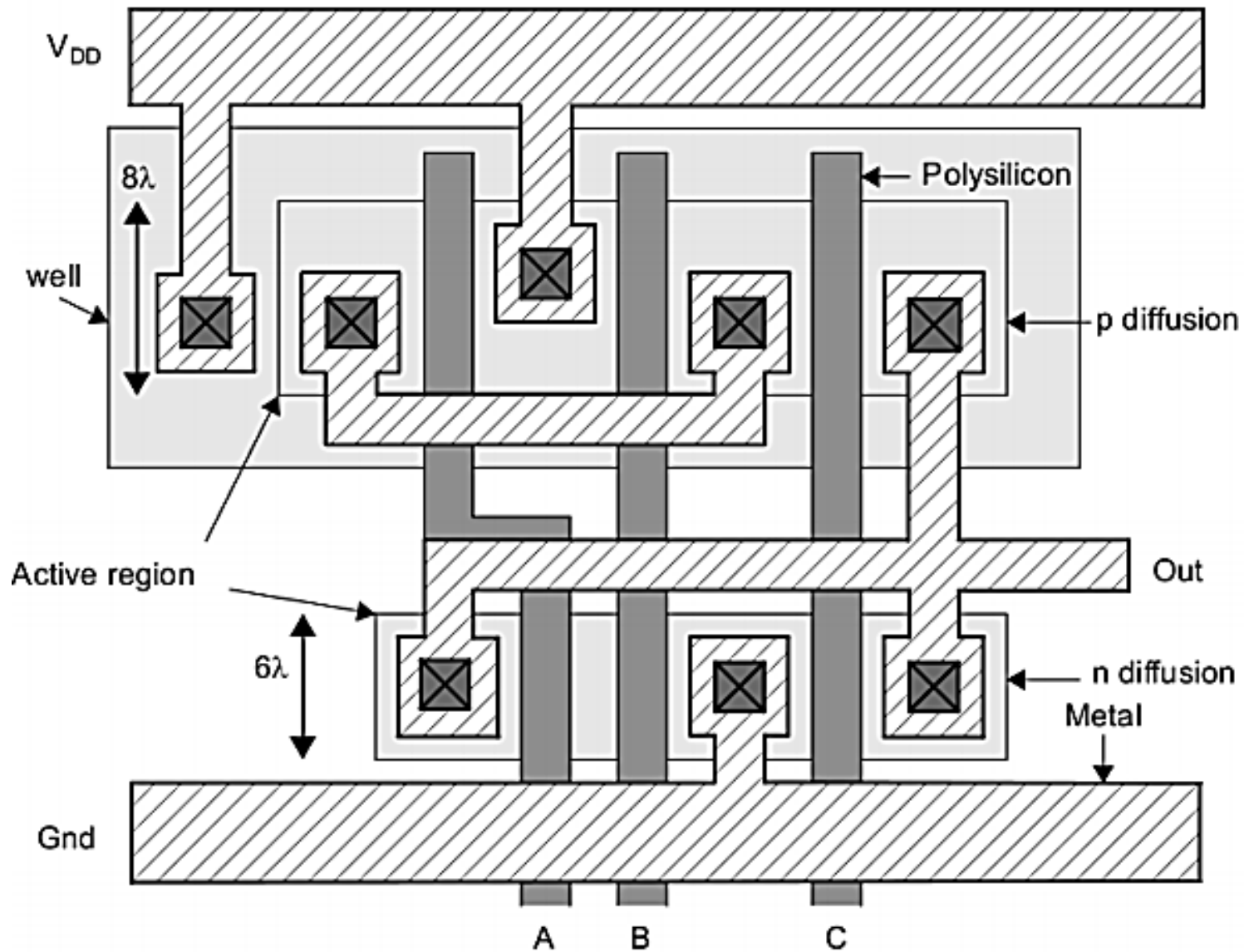
Question



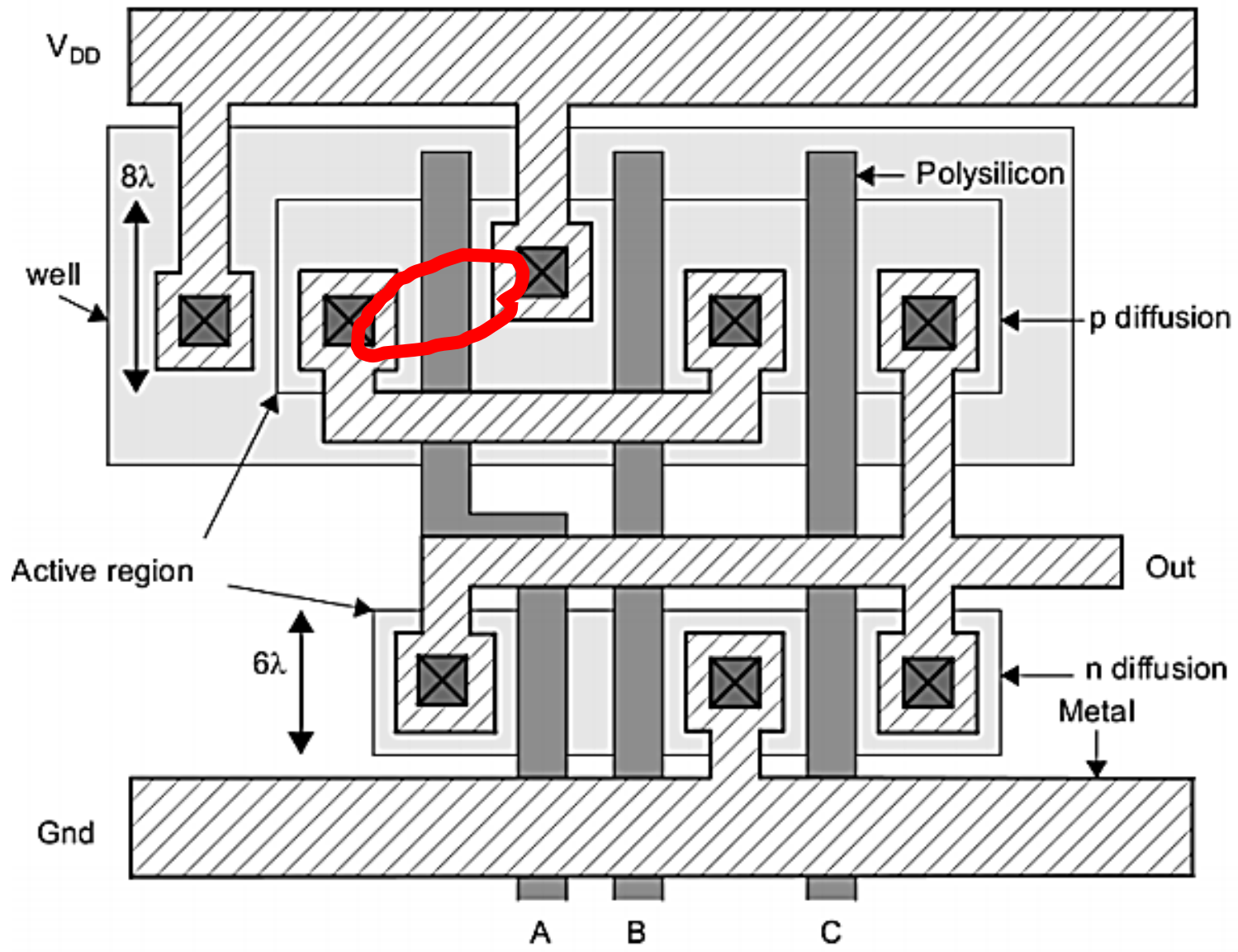
Question



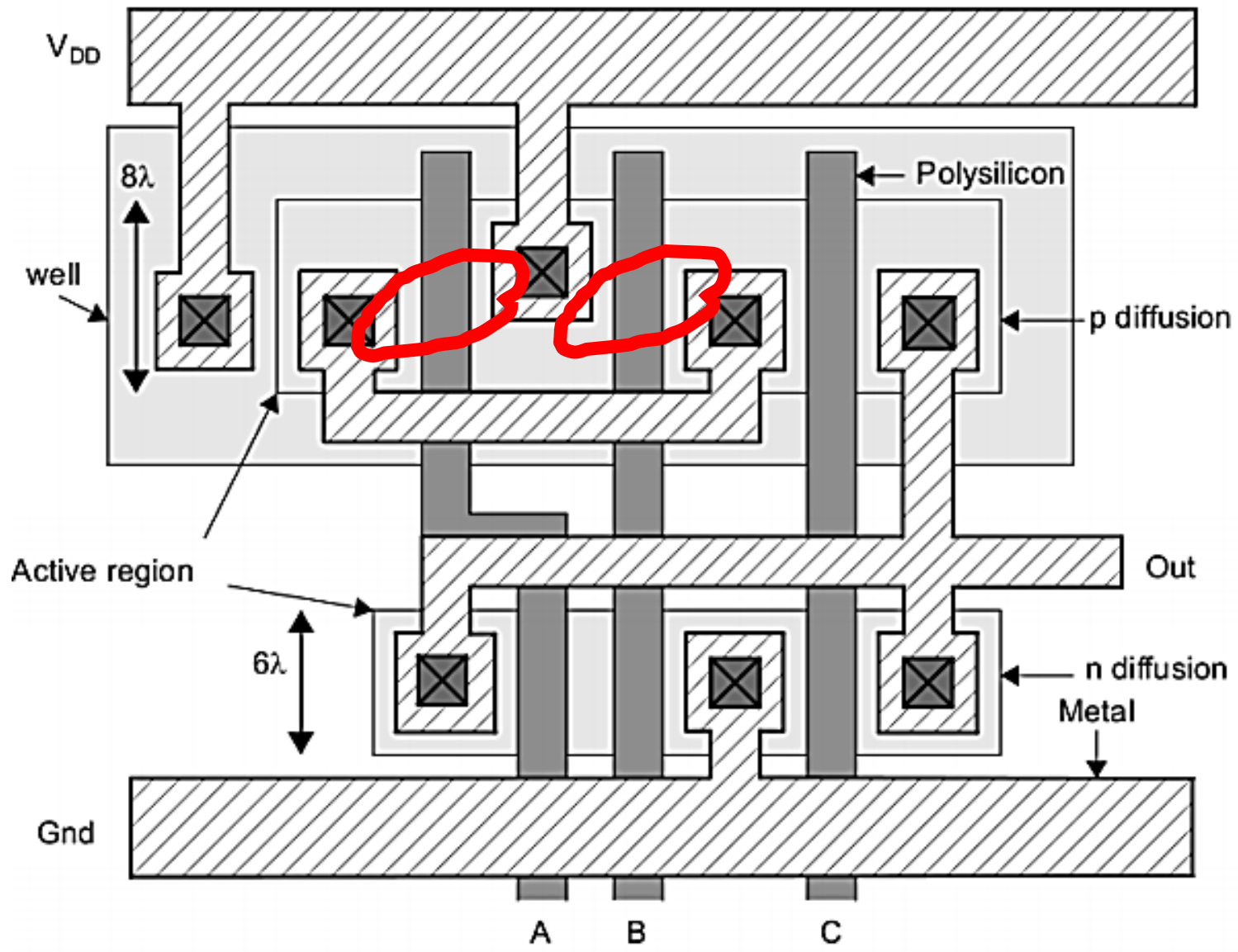
Exercise 2



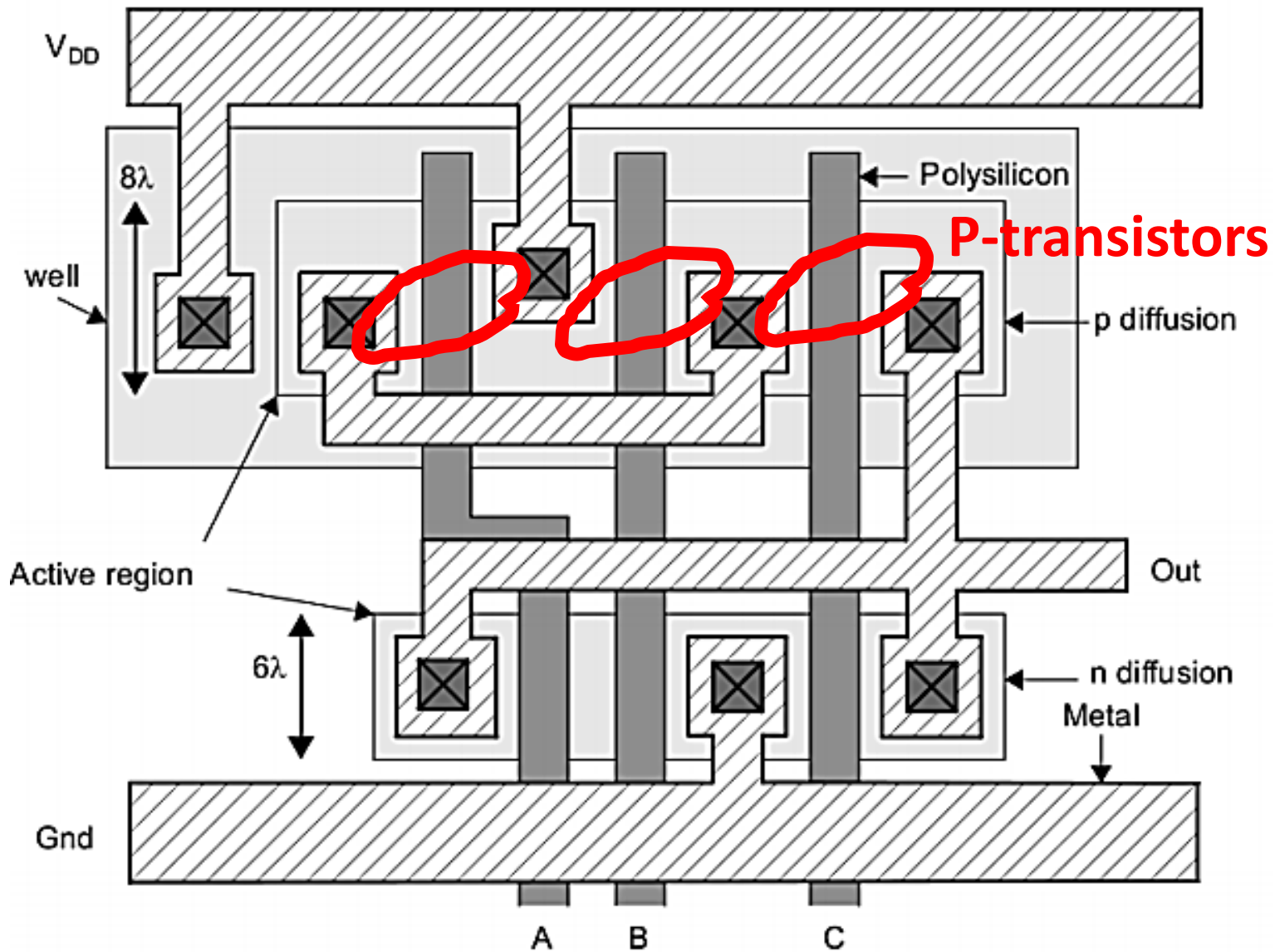
Exercise 2



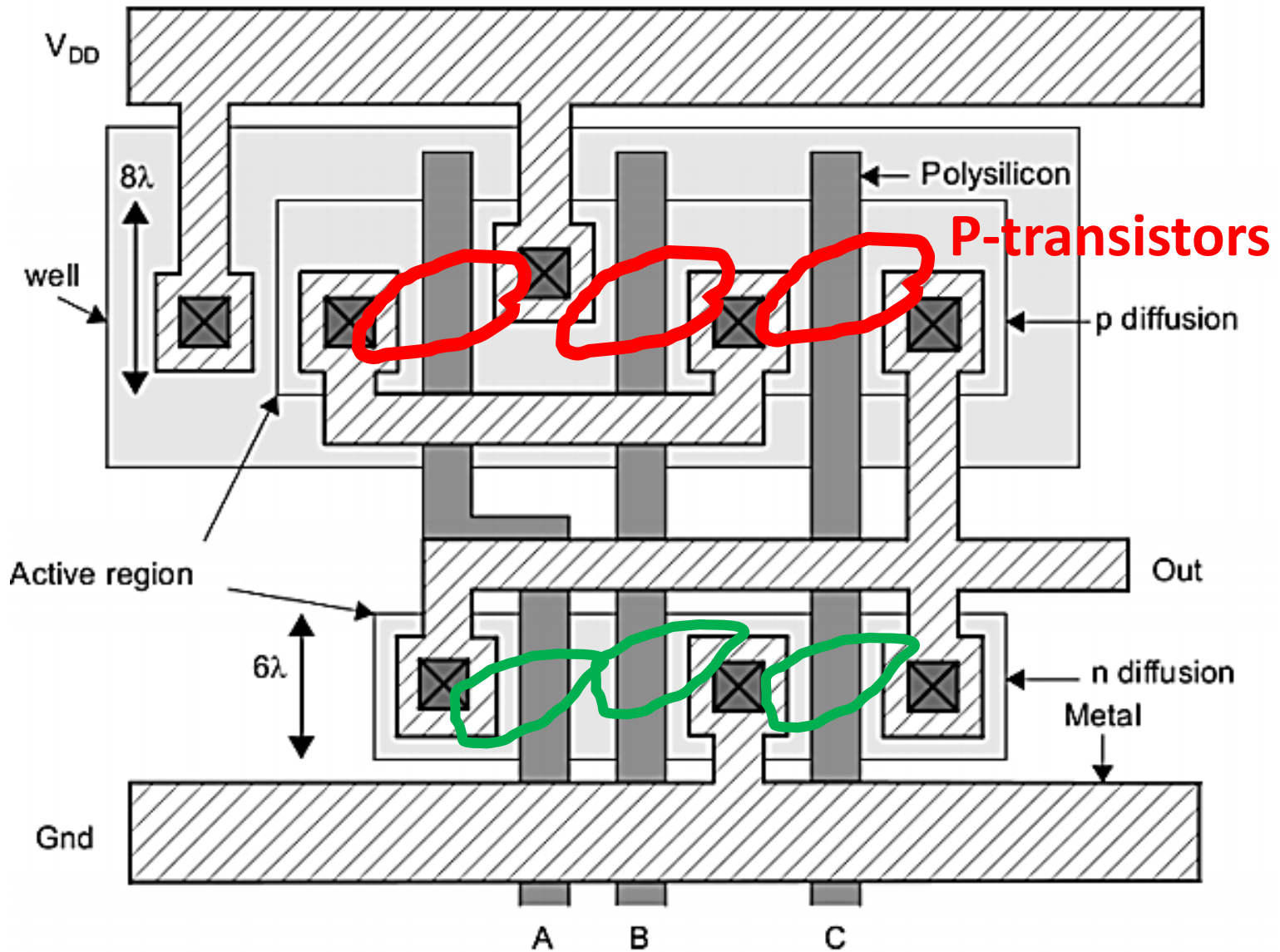
Exercise 2



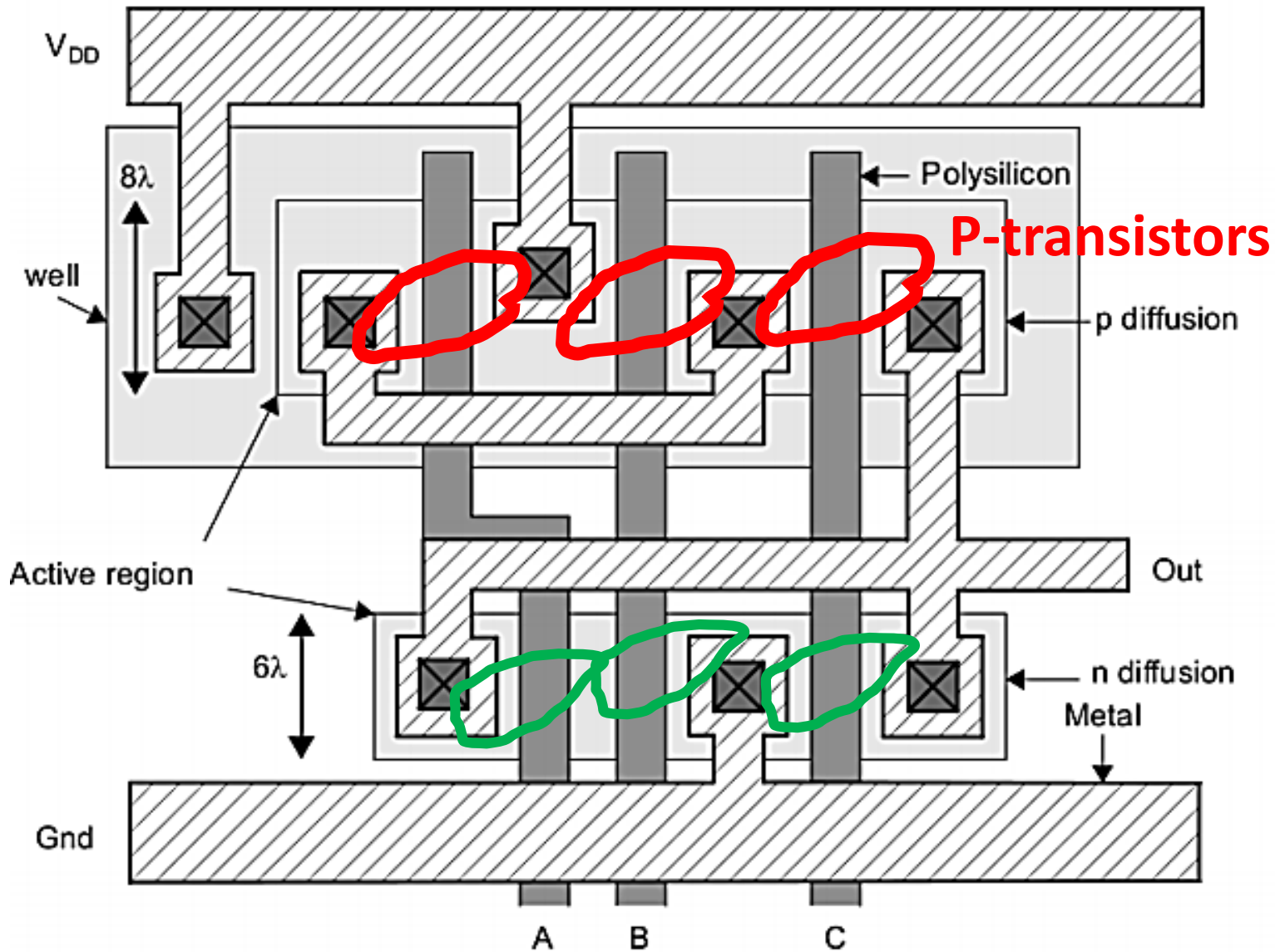
Exercise 2



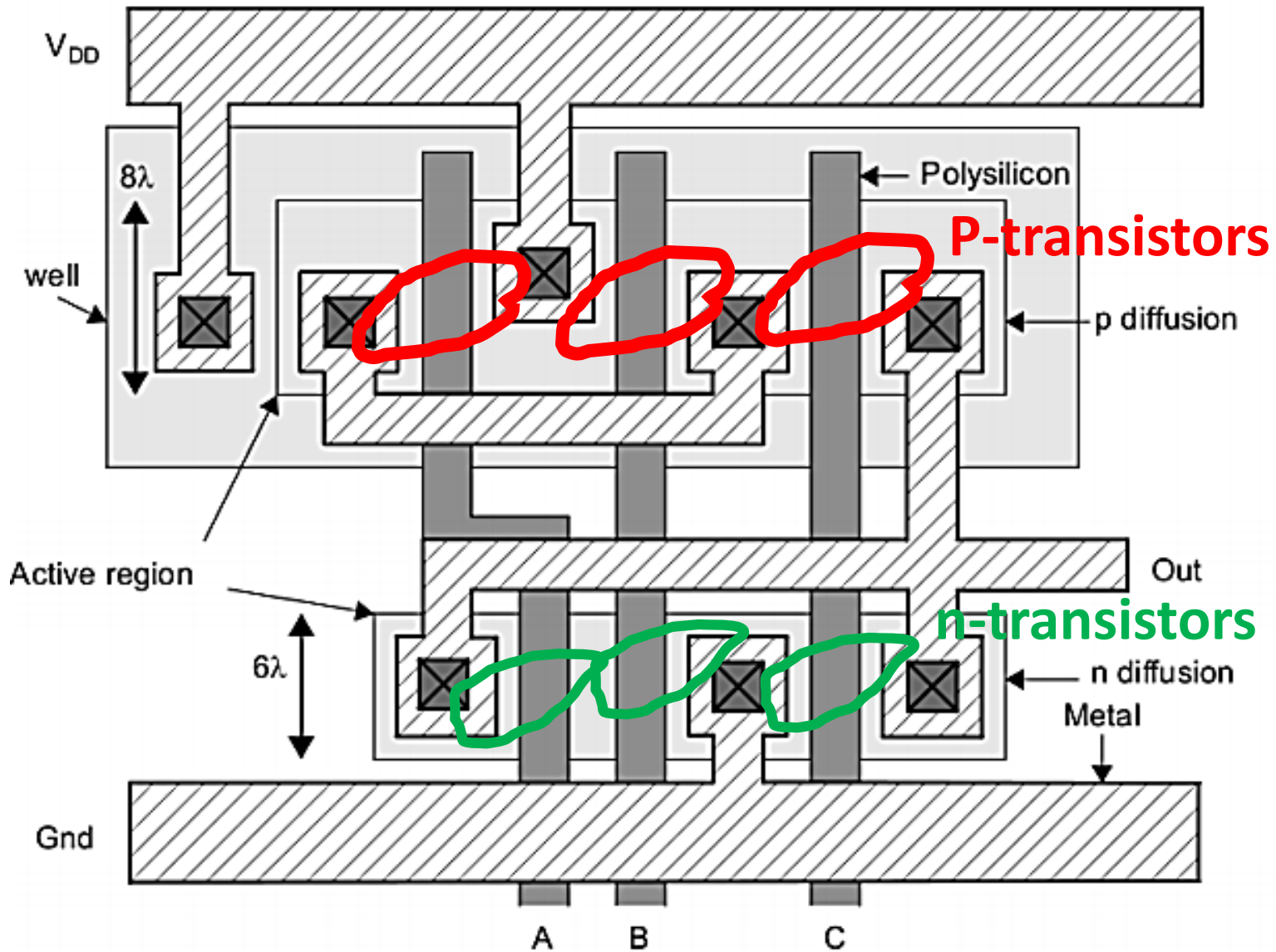
Exercise 2



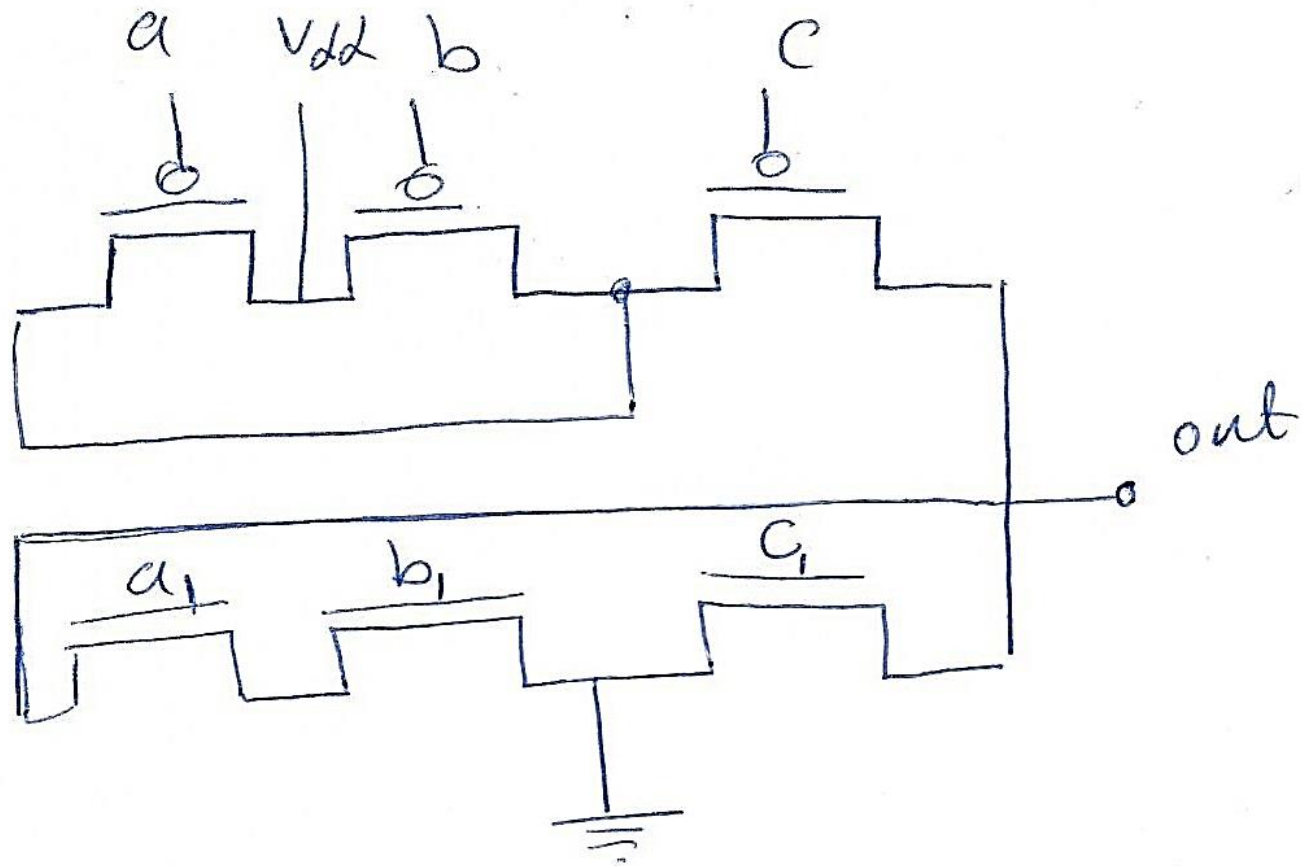
Exercise 2



Exercise 2



Exercise 2



Exercise 2

table of truth

a	b	c	out
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	0

Exercise 2

table of truth

a	b	c	out
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	0

a	bc		b	
	1	0	0	1
a	1	0	0	

Diagram illustrating a truth table structure with variables a, b, and c. The table has 4 columns and 2 rows. The first row is labeled 'a' on the left and 'bc' above the first two columns. The second row is labeled 'a' on the left. The third row is labeled 'a' on the left. The fourth column is labeled 'b' above it. Brackets indicate that the first two columns are grouped under 'bc' and the last two columns are grouped under 'b'. The values in the cells are: Row 1: (1,1)=1, (1,2)=0, (1,3)=0, (1,4)=1; Row 2: (2,1)=1, (2,2)=0, (2,3)=0, (2,4)=; Row 3: (3,1)=1, (3,2)=0, (3,3)=0, (3,4)=.

Exercise 2

table of truth

a	b	c	out
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	0

a \ bc	b		c	
0	1	0	0	1
1	1	0	0	

$$\text{out} = \overline{a} \overline{c} + \overline{b} \overline{c}$$

Exercise 2

table of truth

a	b	c	out
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	0

a	bc		
0	0	1	1
1	0	0	

Diagram illustrating the truth table for the function out, showing the relationship between variables a, b, c and the output out. The table is a 2x4 grid. The top row is labeled 'a' on the left and 'bc' above the first three columns. The first row of data has values 0, 0, 1, 1. The second row of data has values 1, 0, 0, and an empty cell. A bracket above the last two columns is labeled 'b', and a bracket below the last two columns is labeled 'c'.

$$\text{out} = \overline{a} \overline{c} + \overline{b} \overline{c}$$

$$\text{out} = (\overline{a} + \overline{b}) \overline{c}$$

Exercise 5: a)

R_{total} :

Exercise 5: a)

$$R_{\text{total}} = \frac{W}{L} \times R_{\square}$$

Exercise 5: a)

$$R_{\text{total}} = \frac{W}{L} \times R_{\square} = \frac{1000}{2} \times 7 = 3.5 \text{ k}\Omega.$$