FIG.1

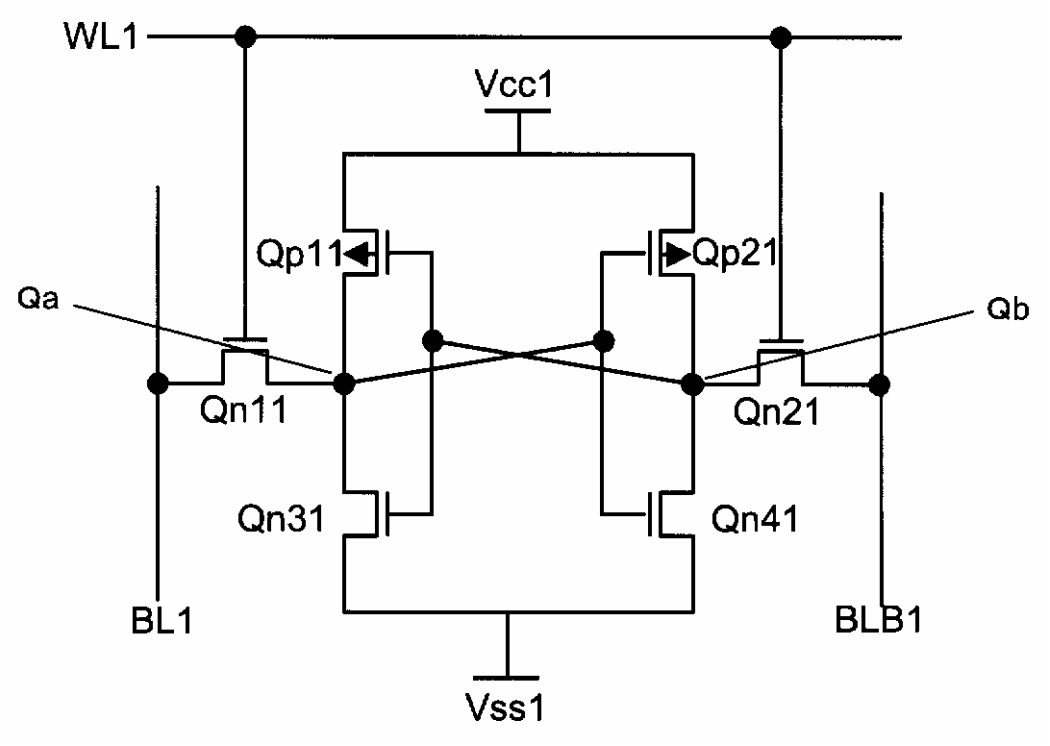


FIG.2

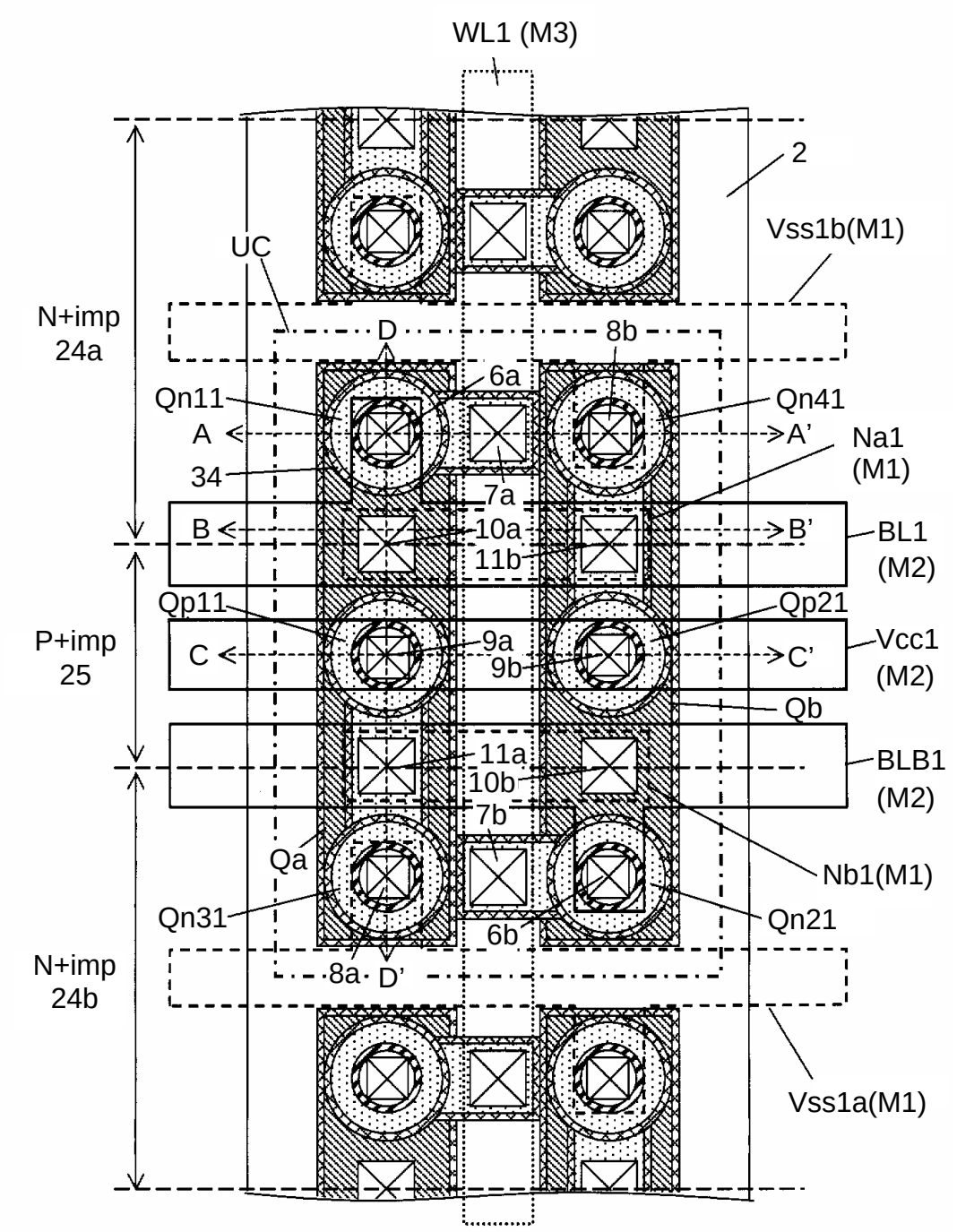

WL1 (M3)
2
Vss1b(M1)
UC
N+imp
24a
D
8b
6a
Qn11
Qn41
A
A'
Na1
(M1)
34
7a
B
10a
B'
BL1
(M2)
11b
Qp11
Qp21
P+imp
25
C
9a
C'
Vcc1
(M2)
9b
Qb
11a
BLB1
(M2)
10b
7b
Qa
Nb1(M1)
Qn31
Qn21
6b
N+imp
24b
8a
D'
Vss1a(M1)

FIG.3A

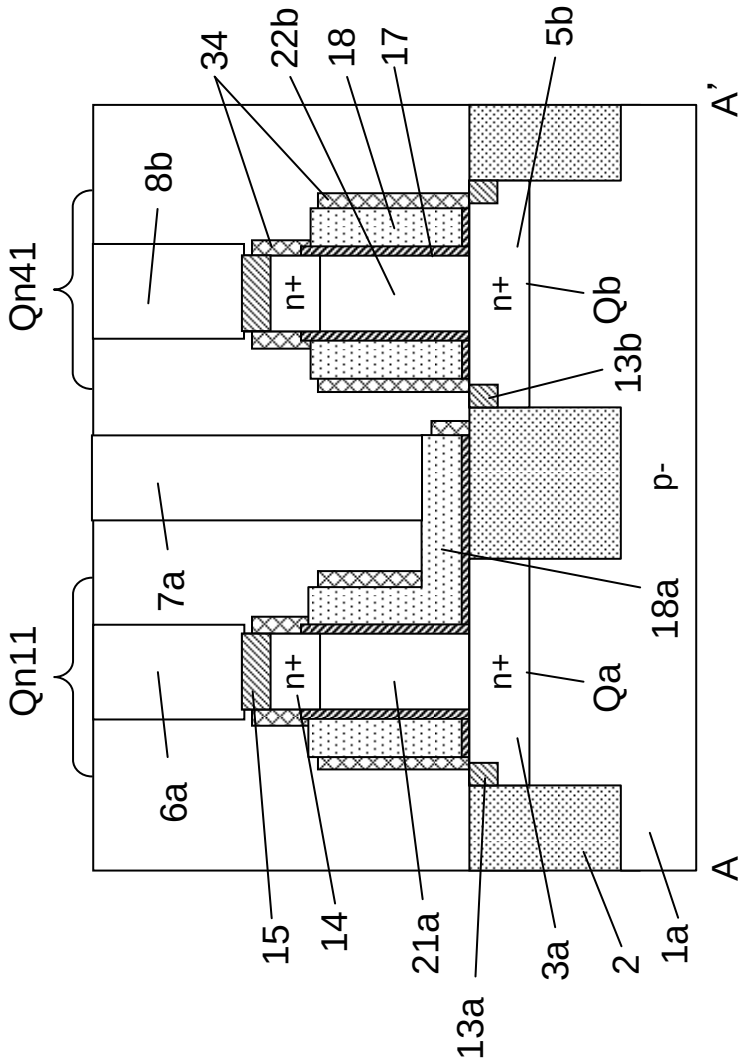

A'
A
Qn41
Qn11
8b
7a
6a
n+
n+
n+
Qb
Qa
p-
34
22b
18
17
5b
13b
18a
15
14
21a
13a
3a
2
1a

FIG.3B

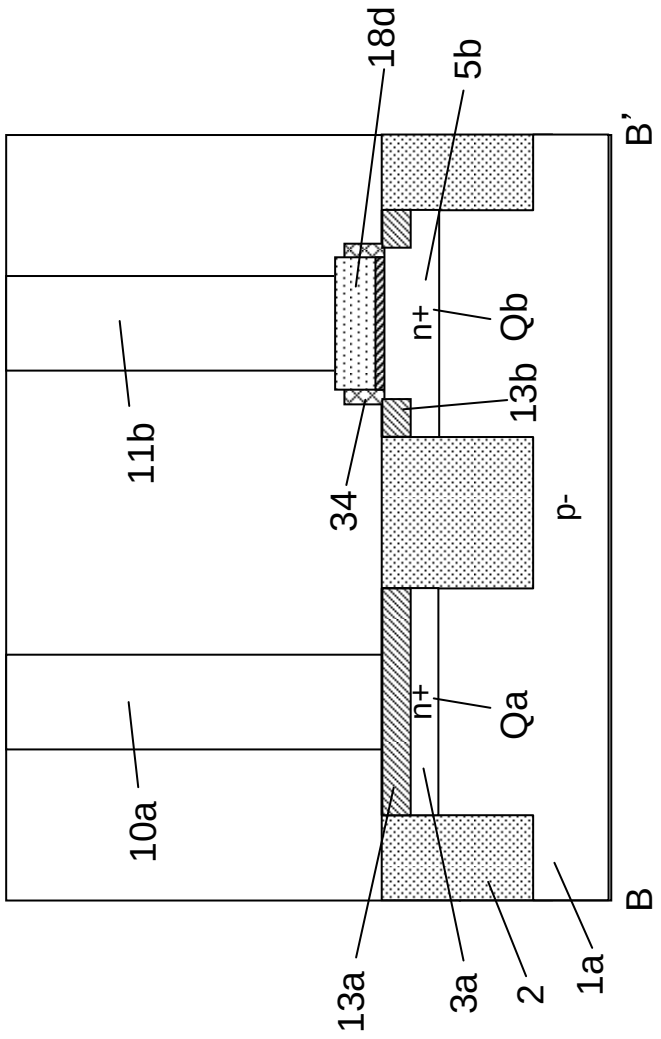


FIG.3C

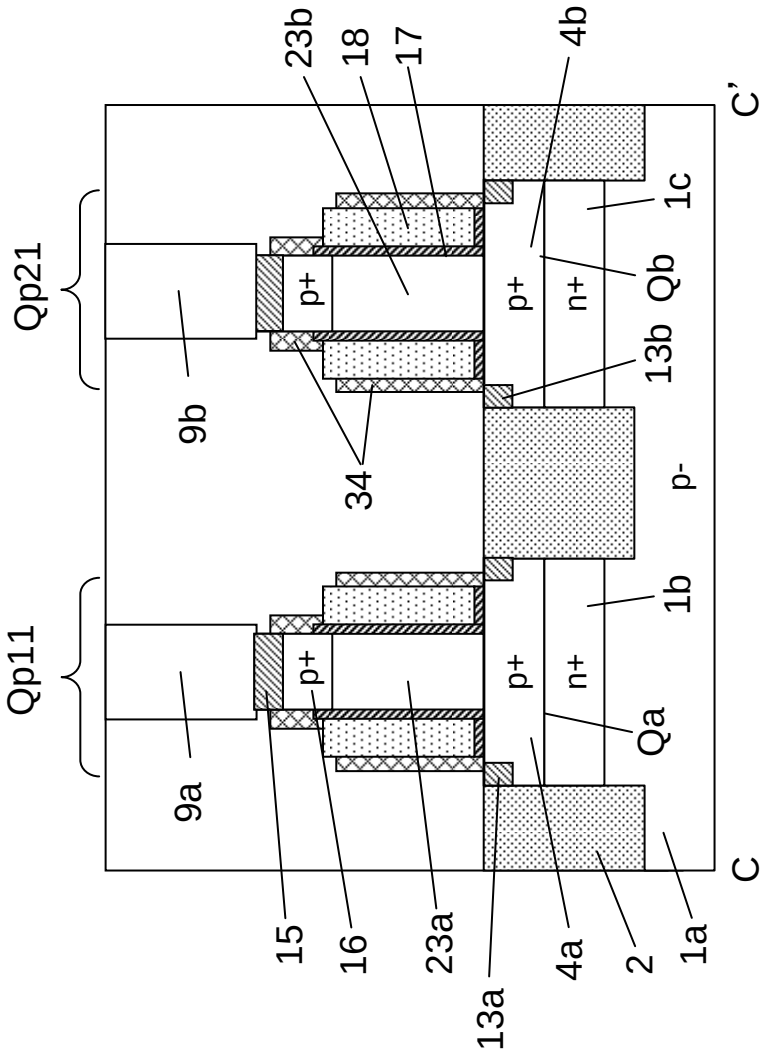

C'
C
Qp21
Qp11
9b
9a
34
23b
18
17
4b
1c
Qb
13b
p-
1b
Qa
p+
n+
15
16
23a
13a
4a
2
1a

FIG.3D

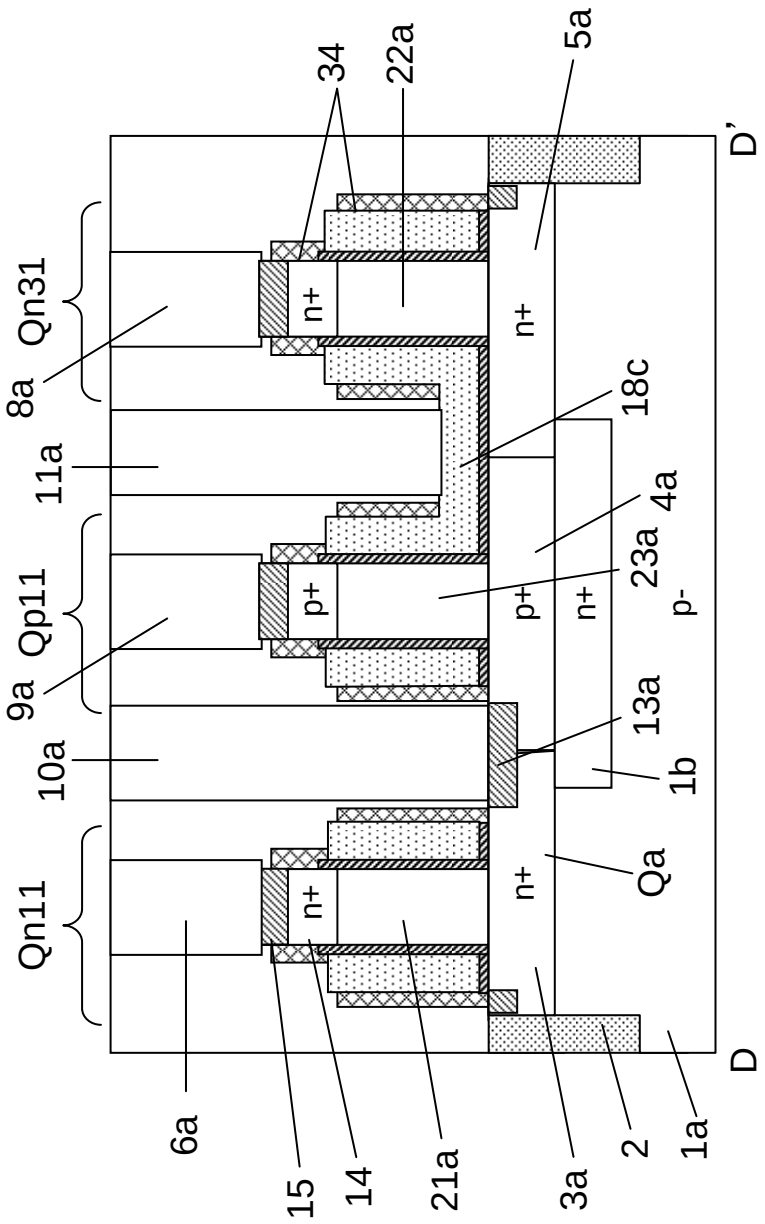

34
22a
5a
D'
Qn31
8a
n+
18c
11a
4a
Qp11
9a
p+
23a
p+
n+
p-
13a
10a
1b
Qn11
n+
Qa
n+
6a
15
14
21a
3a
2
1a
D

FIG.4A

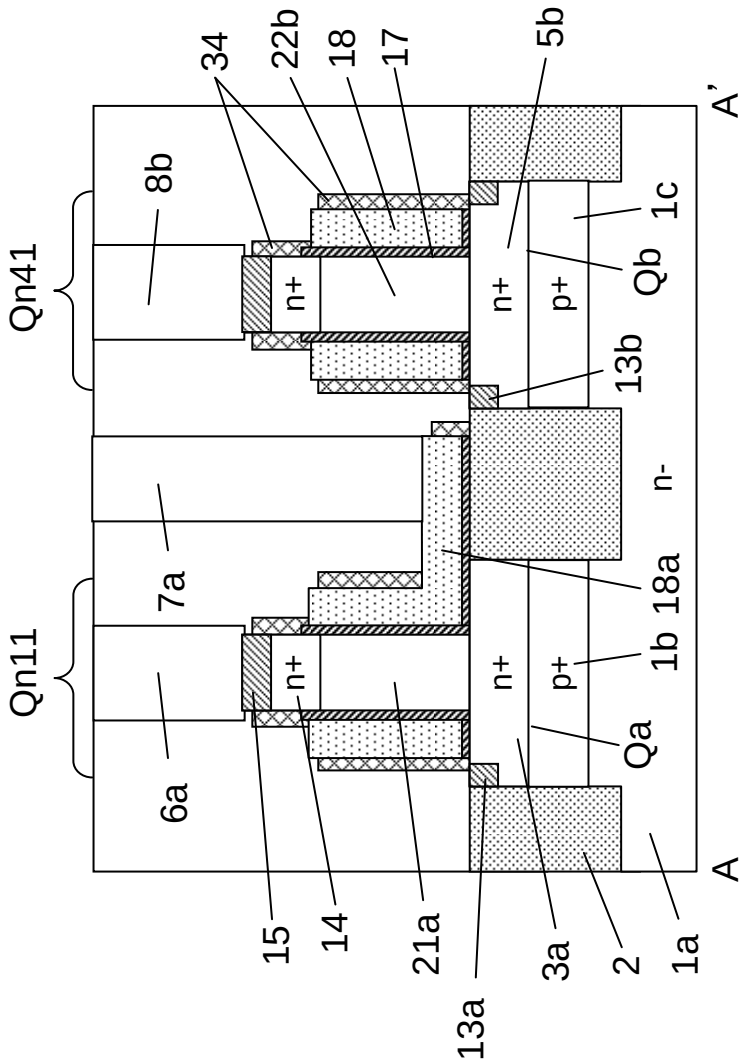

A'
A
Qn41
Qn11
8b
7a
6a
34
22b
18
17
5b
1c
Qb
13b
18a
1b
Qa
n+
p+
n-
15
14
21a
13a
3a
2
1a

FIG.4B

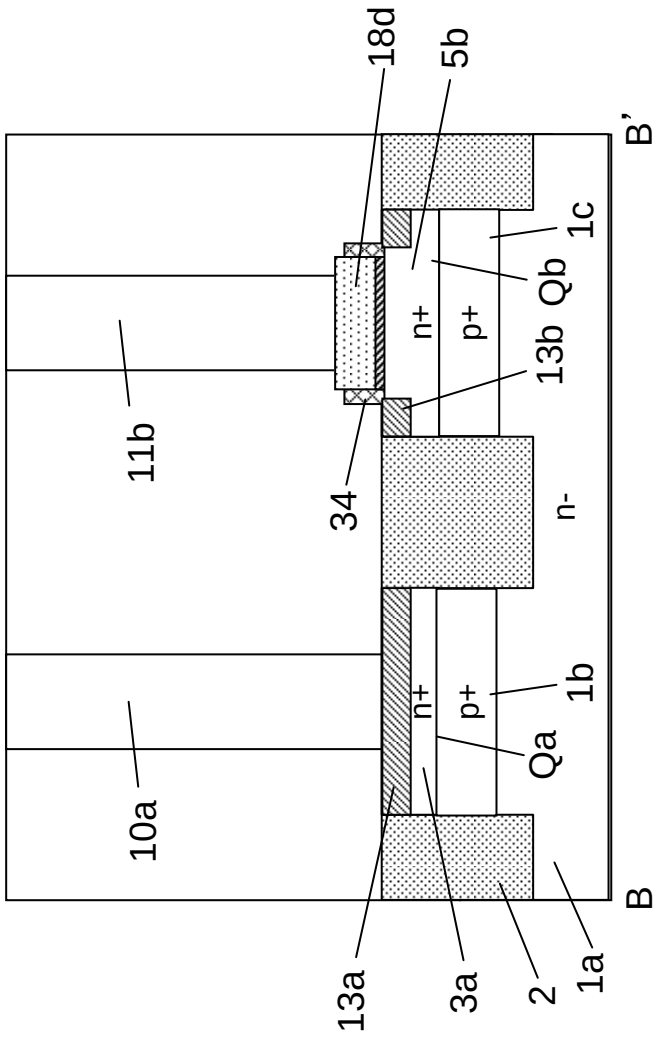


FIG.4C

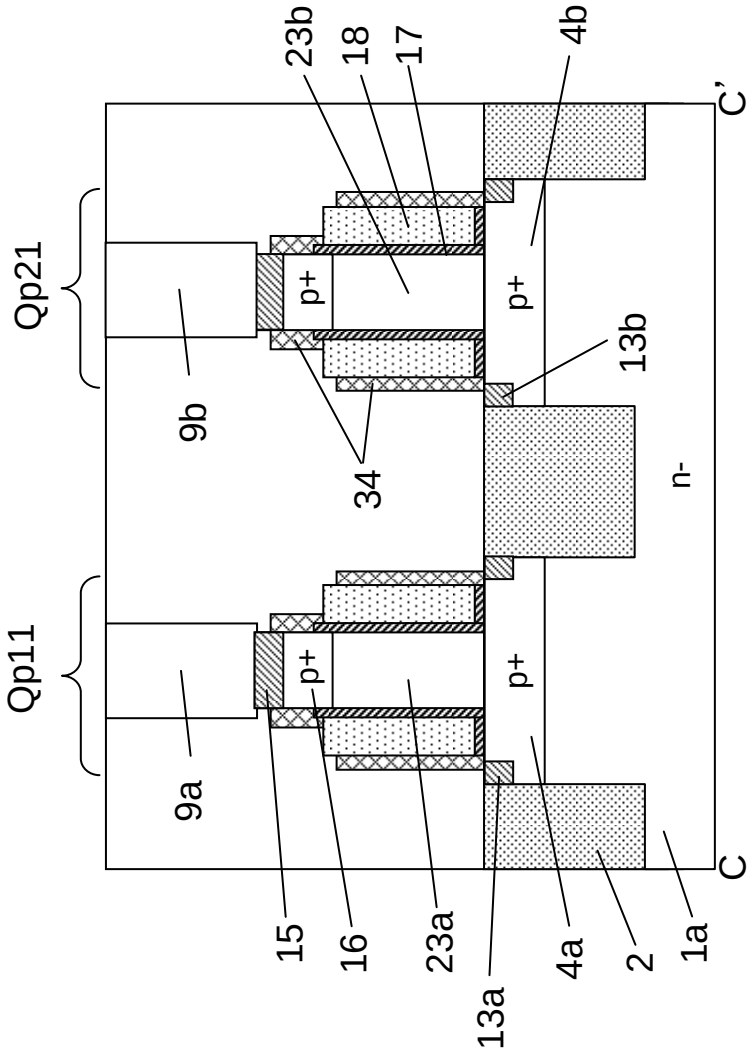


FIG.4D

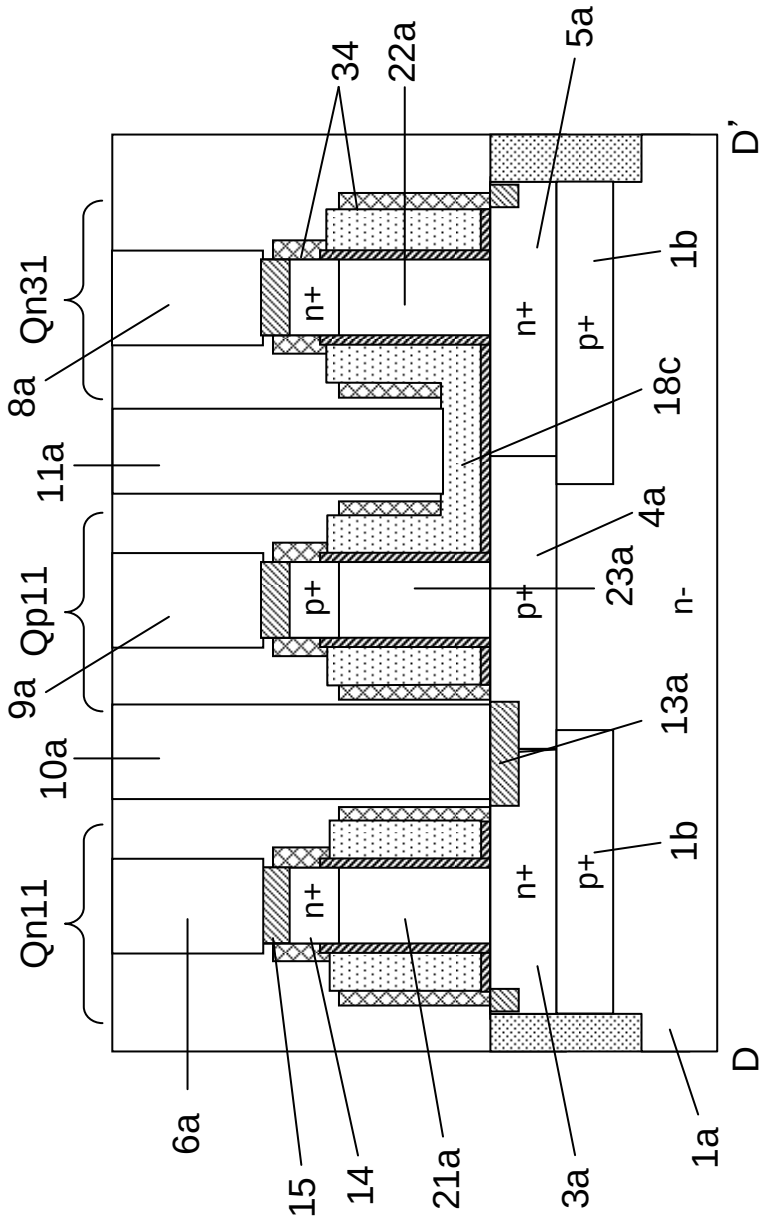

34
22a
5a
D'
Qn31
8a
n+
1b
p+
18c
11a
4a
Qp11
9a
p+
23a
p+
n-
13a
10a
Qn11
n+
1b
p+
6a
15
14
21a
3a
1a
D

FIG.5A

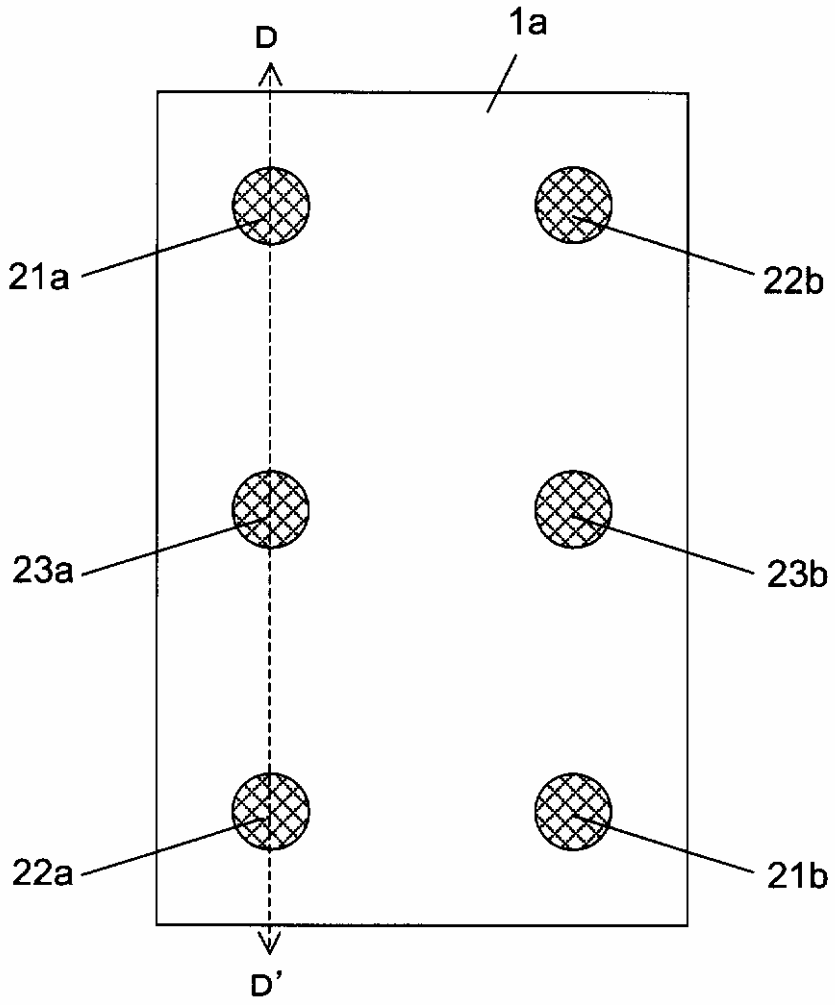


FIG.5B

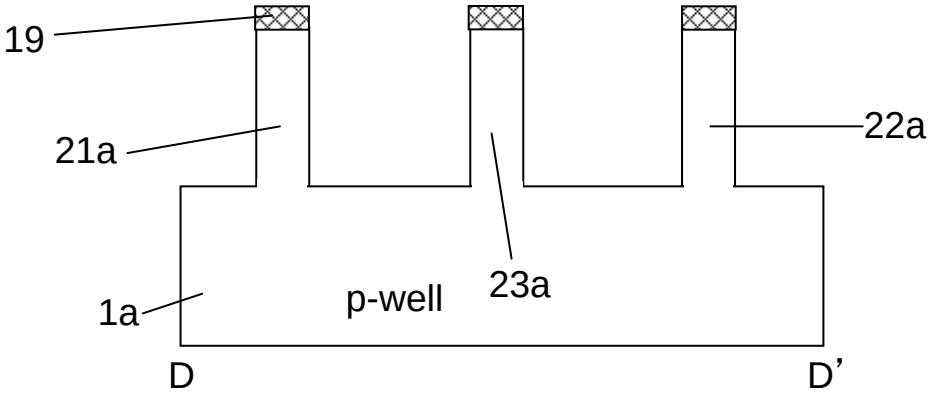


FIG.6A

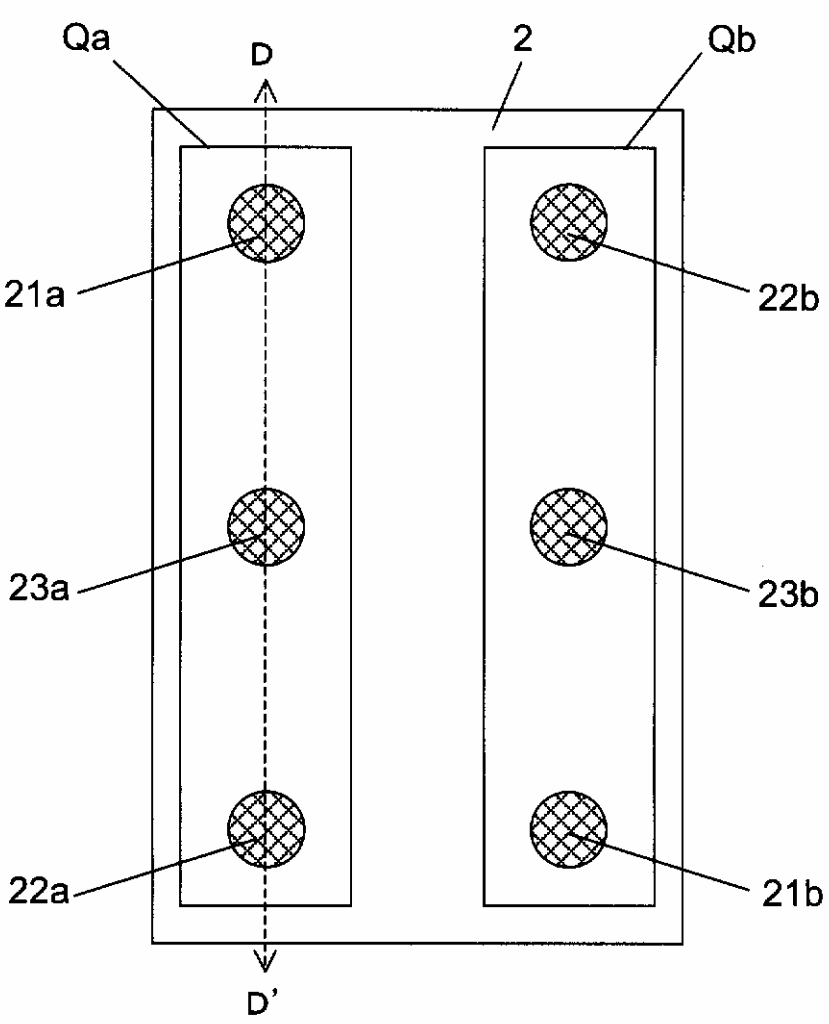


FIG.6B

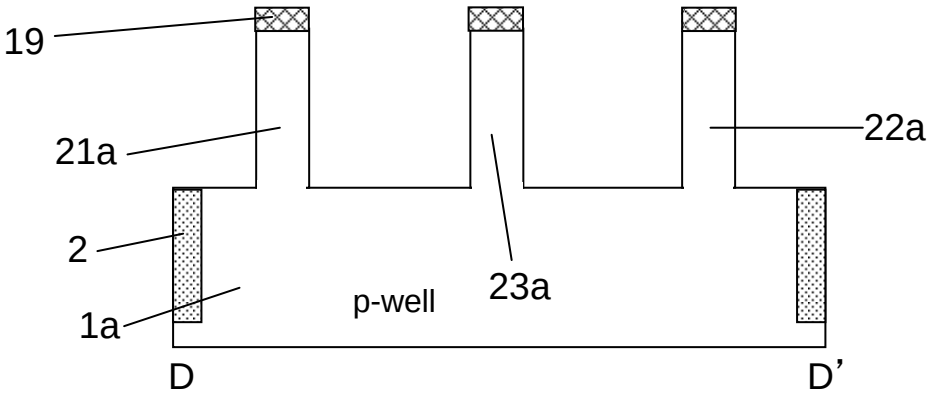


FIG.7A

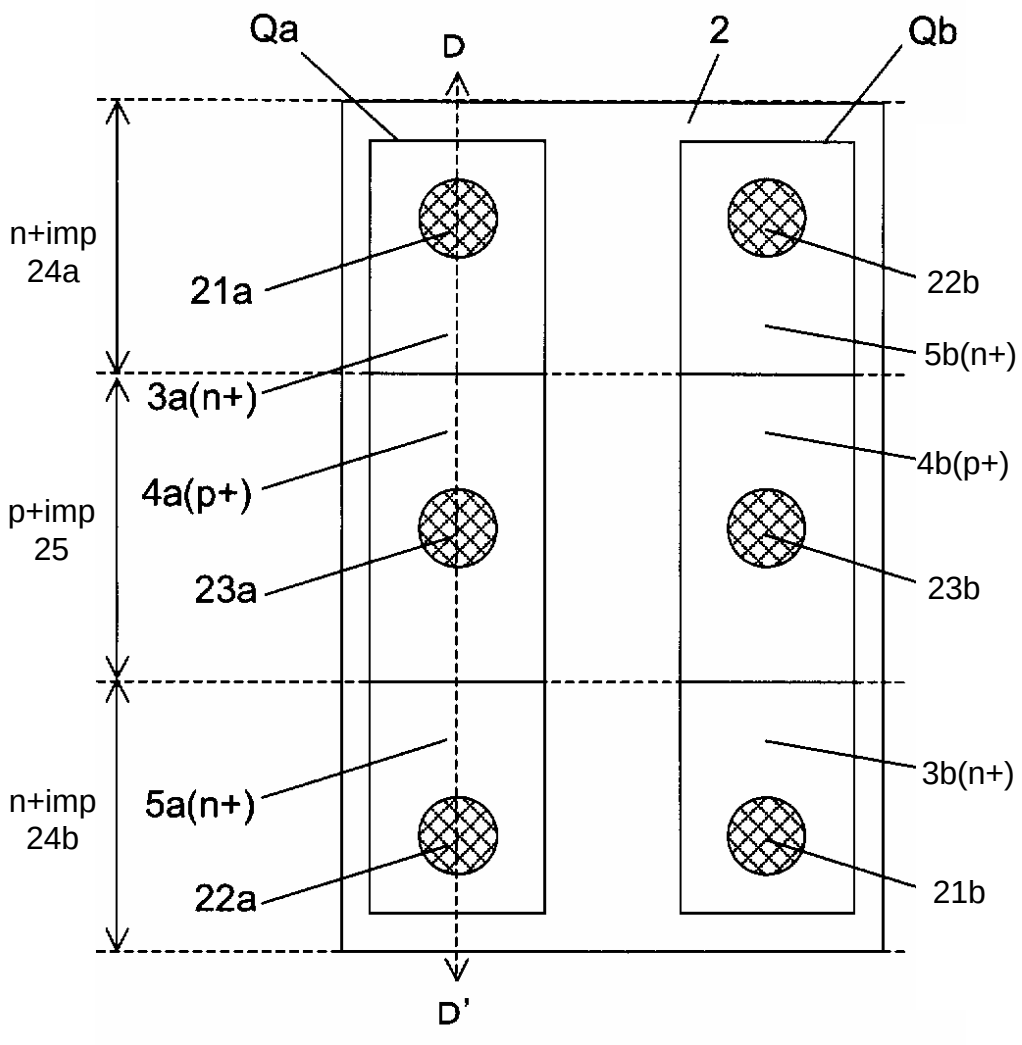

Qa
D
2
Qb
n+imp
24a
21a
22b
5b(n+)
3a(n+)
4b(p+)
p+imp
25
4a(p+)
23a
23b
n+imp
24b
5a(n+)
3b(n+)
22a
21b
D'

FIG.7B

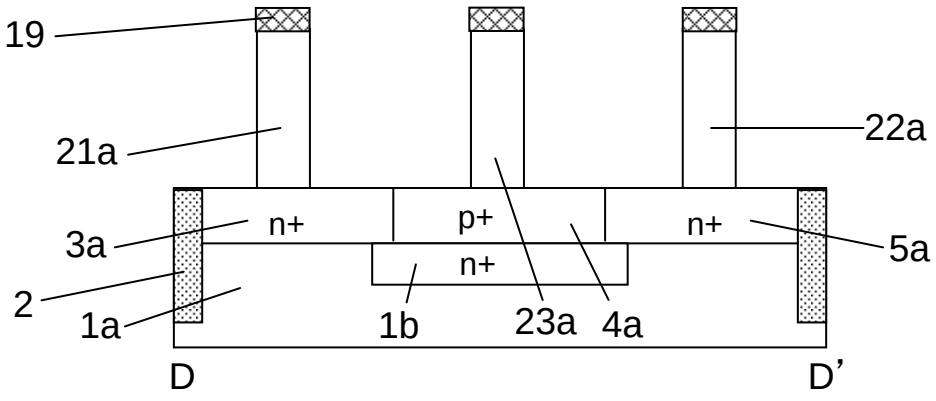


FIG.8A

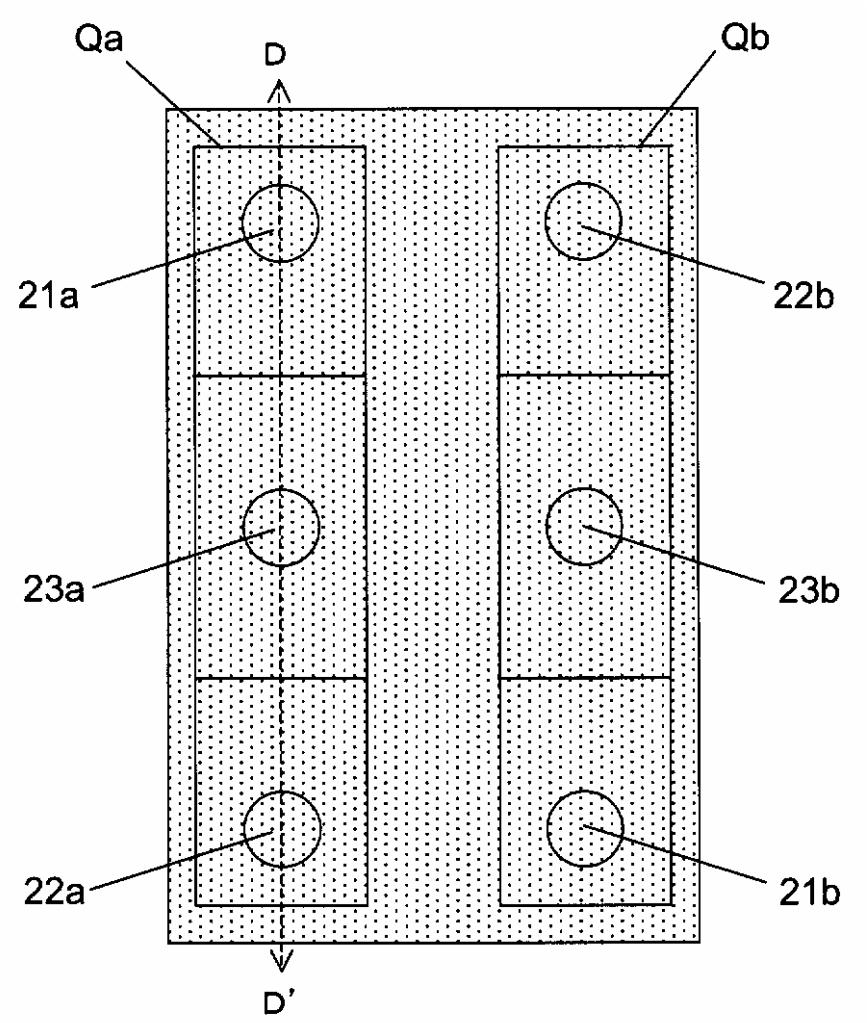


FIG.8B

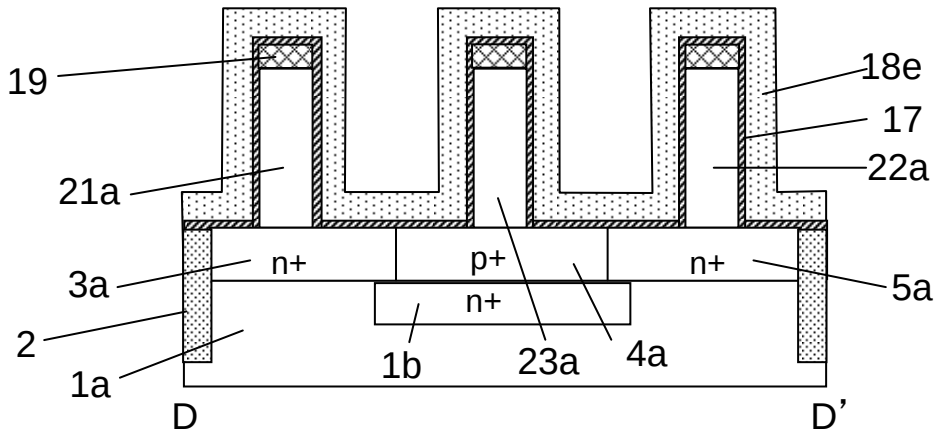


FIG.9A

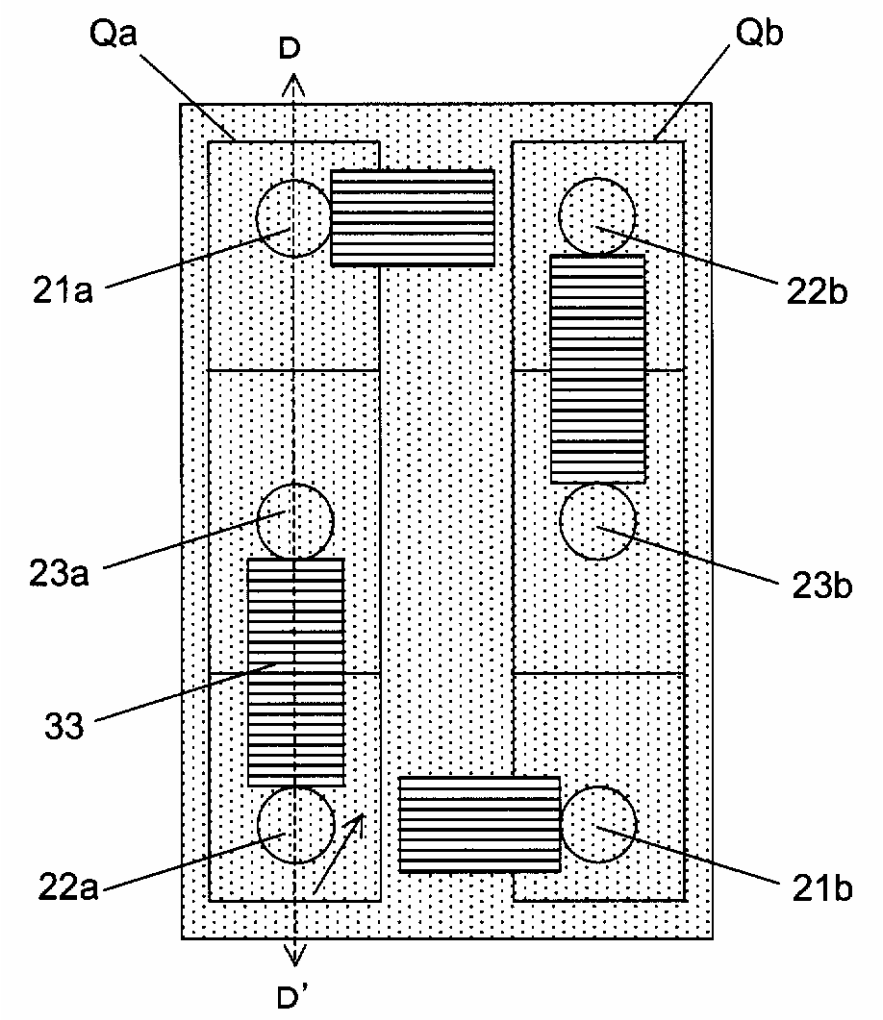


FIG.9B

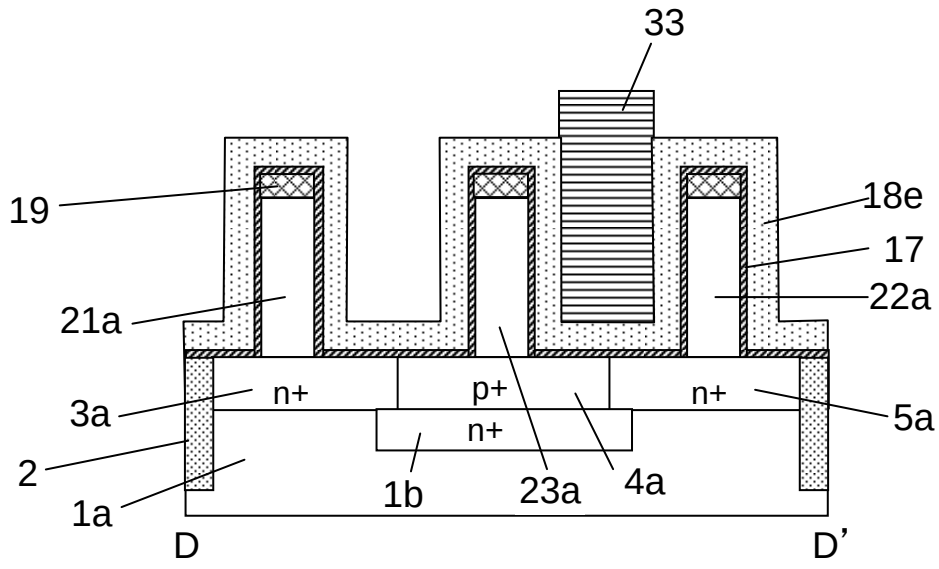


FIG.10A

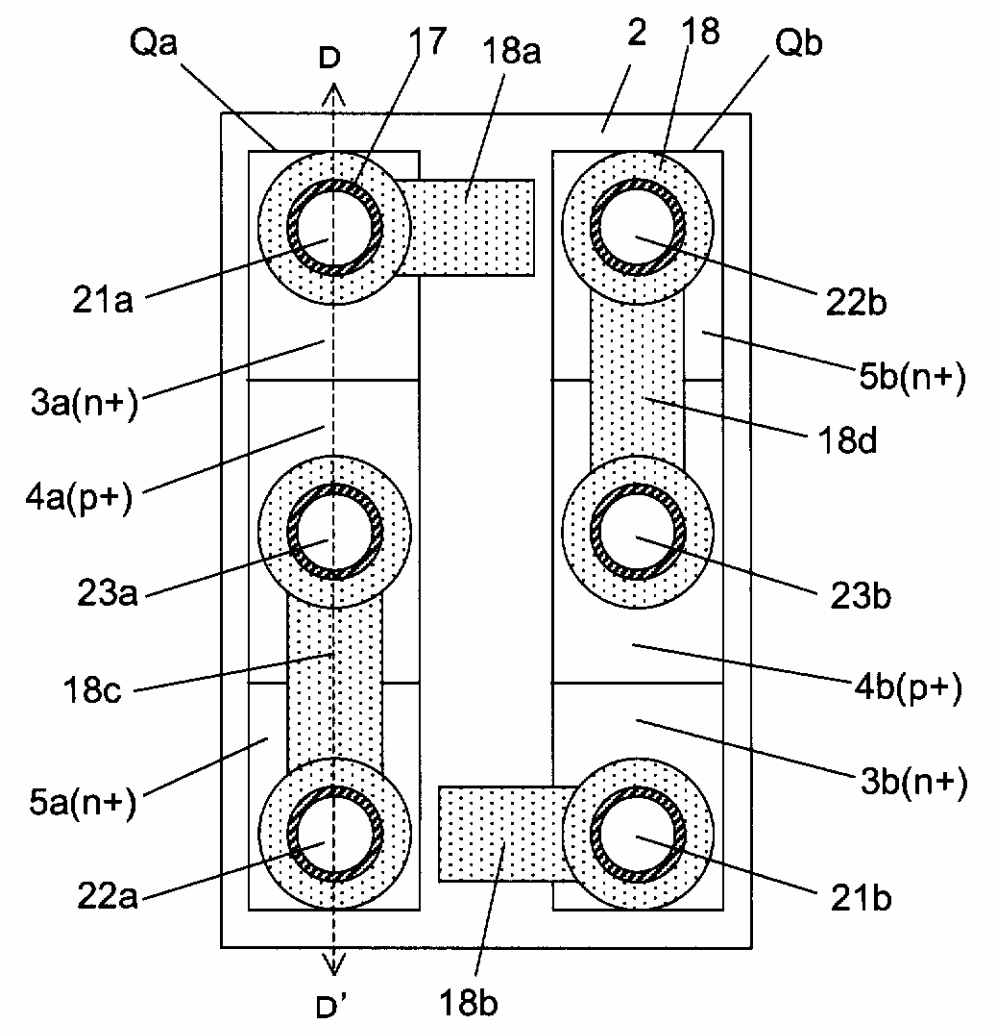

Qa
D
17
18a
2
18
Qb
21a
22b
5b(n+)
3a(n+)
18d
4a(p+)
23a
23b
18c
4b(p+)
3b(n+)
5a(n+)
22a
21b
D'
18b

FIG.10B

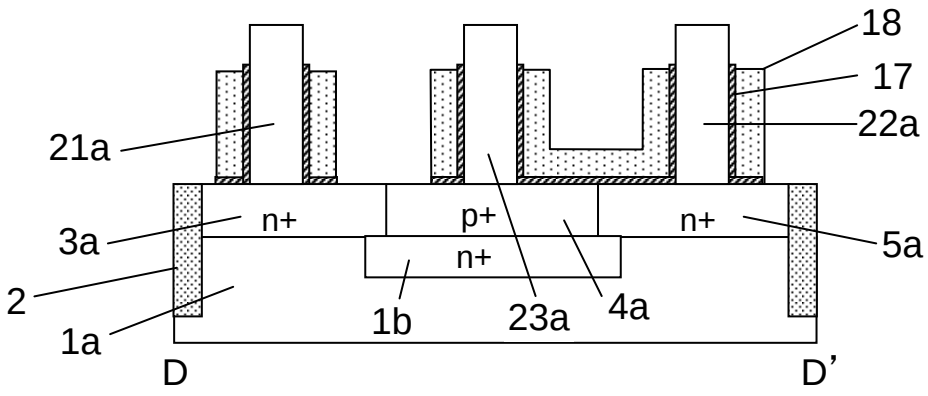


FIG.11A

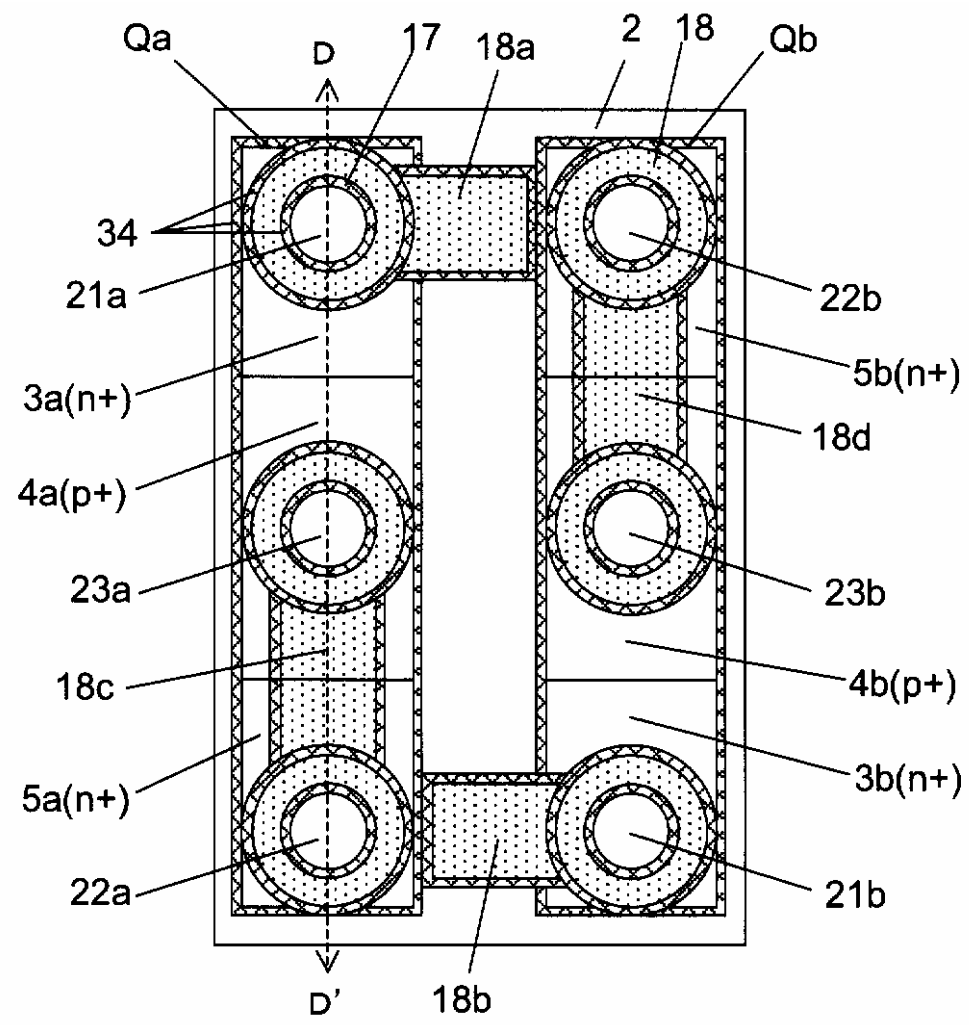

Qa
D
17
18a
2
18
Qb
34
21a
3a(n+)
4a(p+)
23a
18c
5a(n+)
22a
D'
18b
22b
5b(n+)
18d
23b
4b(p+)
3b(n+)
21b

FIG.11B

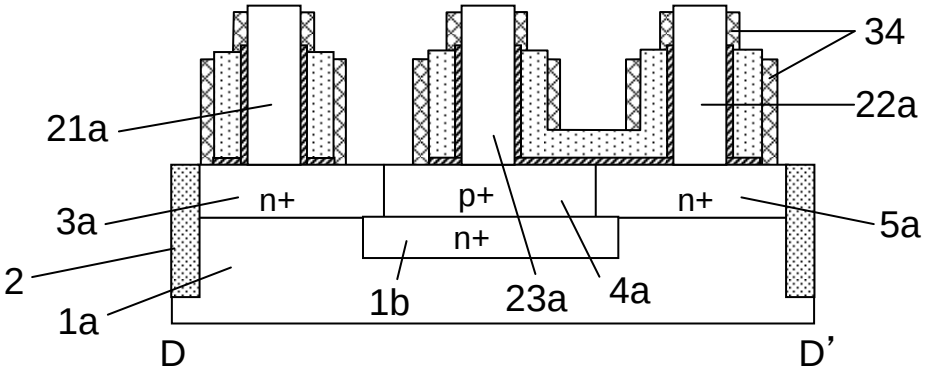


FIG.12A

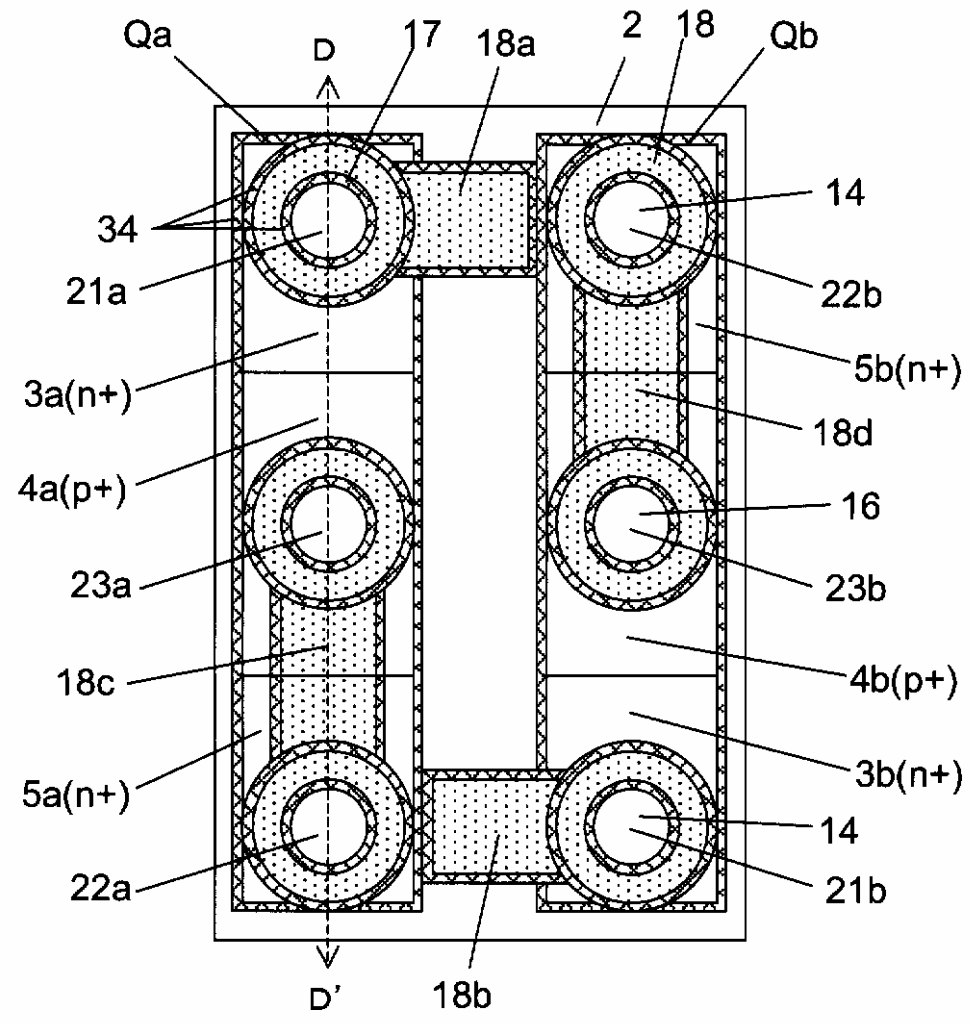

Qa
D
17
18a
2
18
Qb
14
34
22b
21a
5b(n+)
3a(n+)
18d
4a(p+)
16
23a
23b
18c
4b(p+)
3b(n+)
5a(n+)
14
22a
21b
D'
18b

FIG.12B

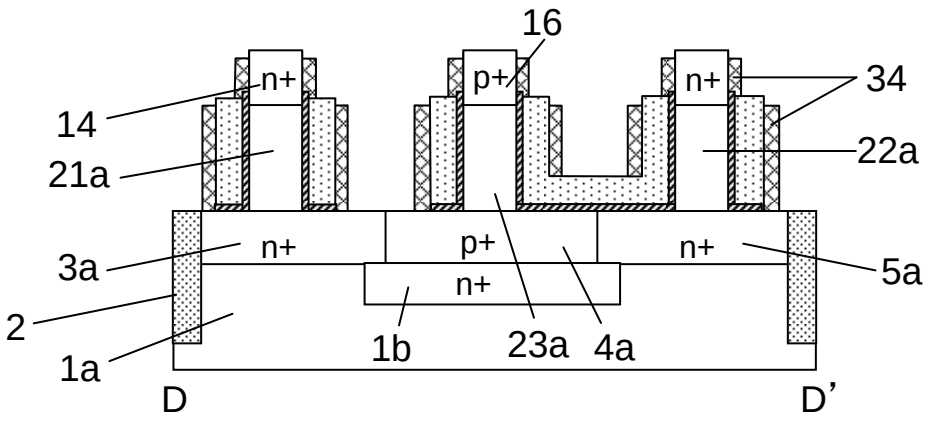


FIG.13A

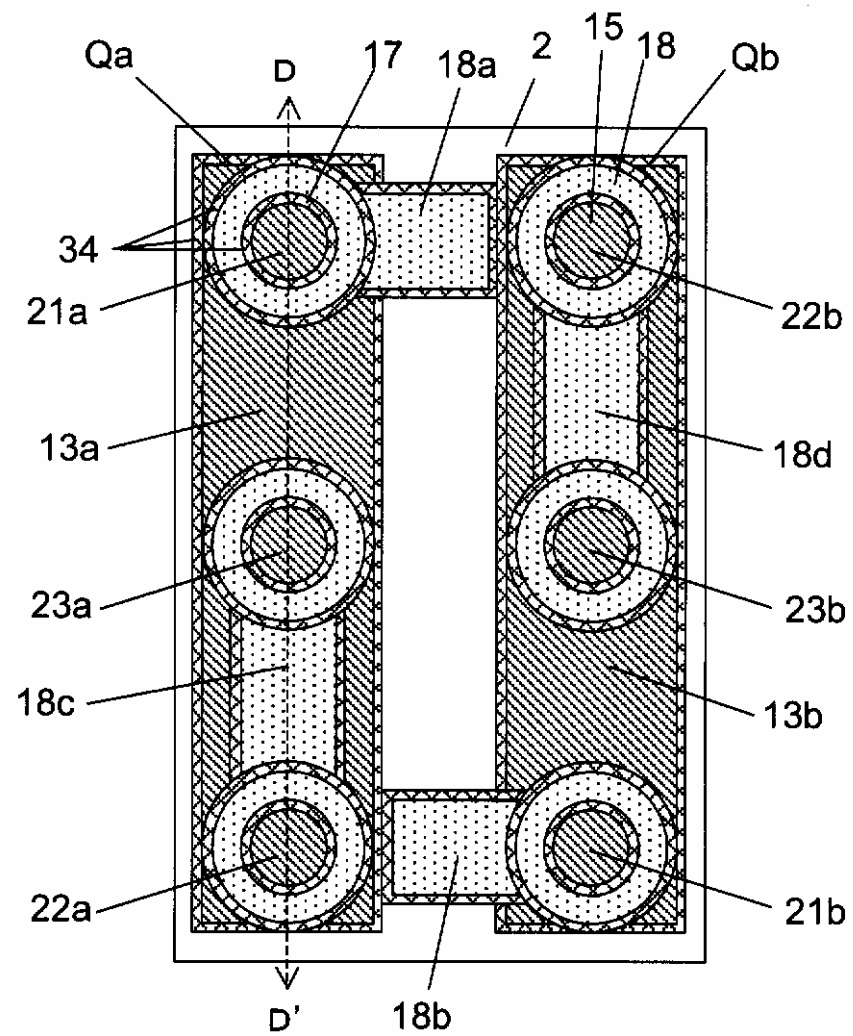

Qa
D
17
18a
2
15
18
Qb
34
21a
22b
13a
18d
23a
23b
18c
13b
22a
21b
D'
18b

FIG.13B

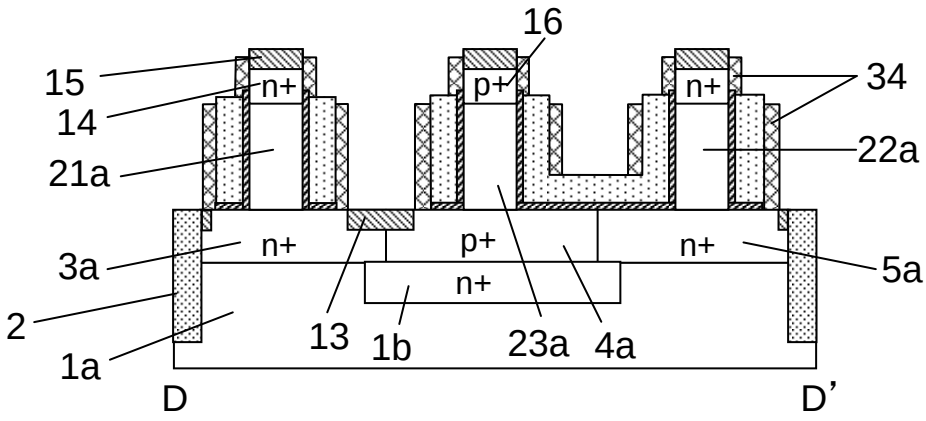


FIG.14A

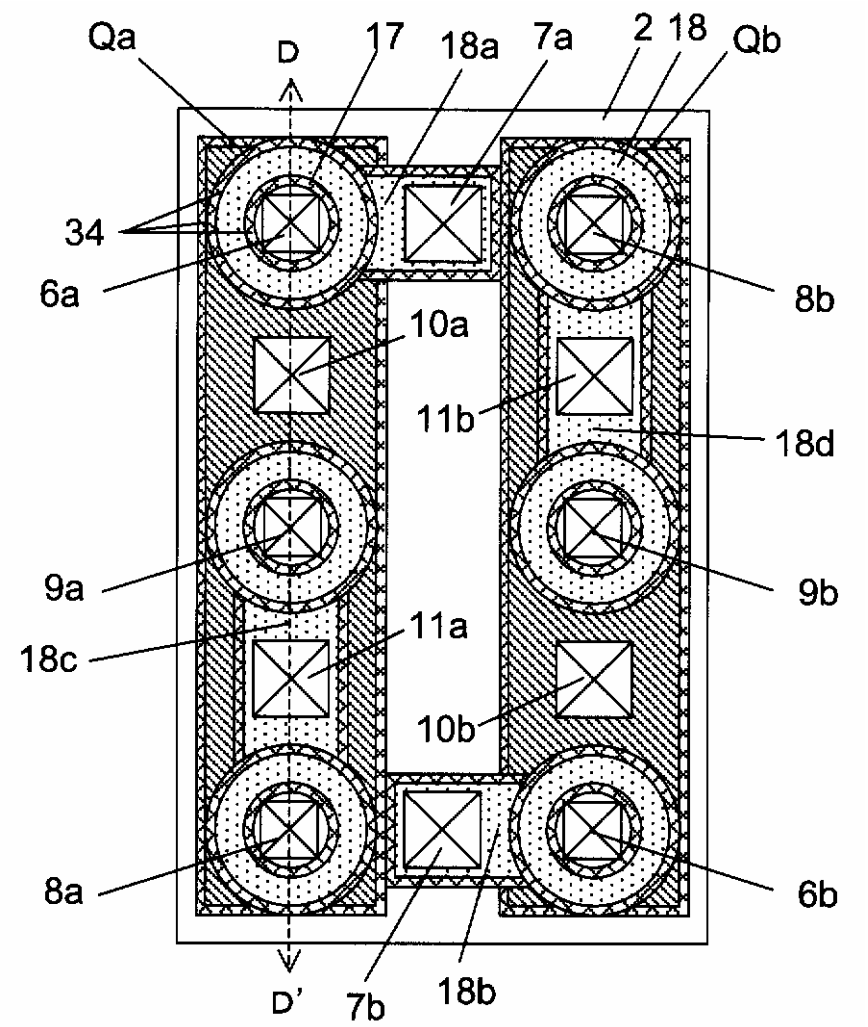

Qa
D
17
18a
7a
2
18
Qb
34
6a
8b
10a
11b
18d
9a
9b
18c
11a
10b
8a
6b
D'
7b
18b

FIG.14B

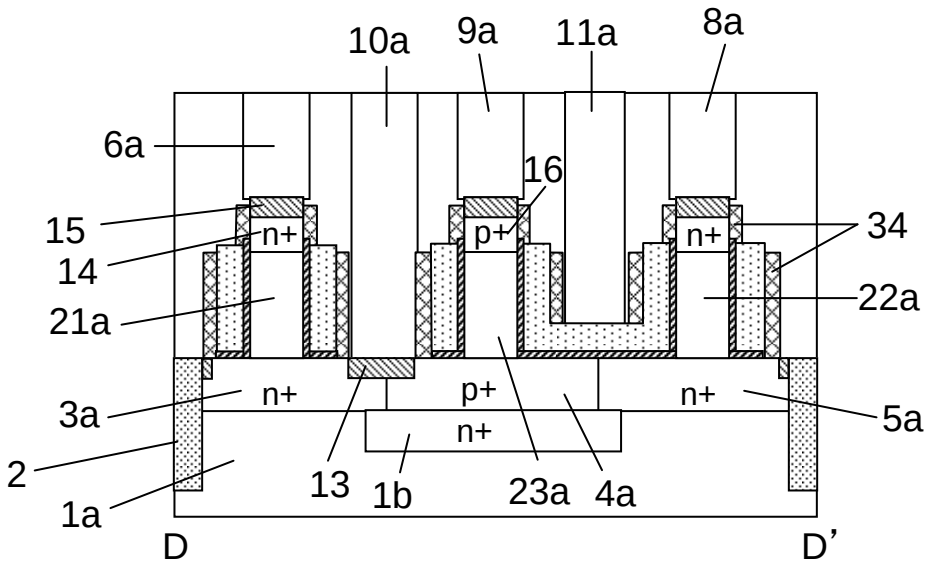

10a
9a
11a
8a
6a
16
15
n+
p+
n+
34
14
22a
21a
3a
n+
p+
n+
5a
n+
2
13
1b
23a
4a
1a
D
D'

FIG.15A

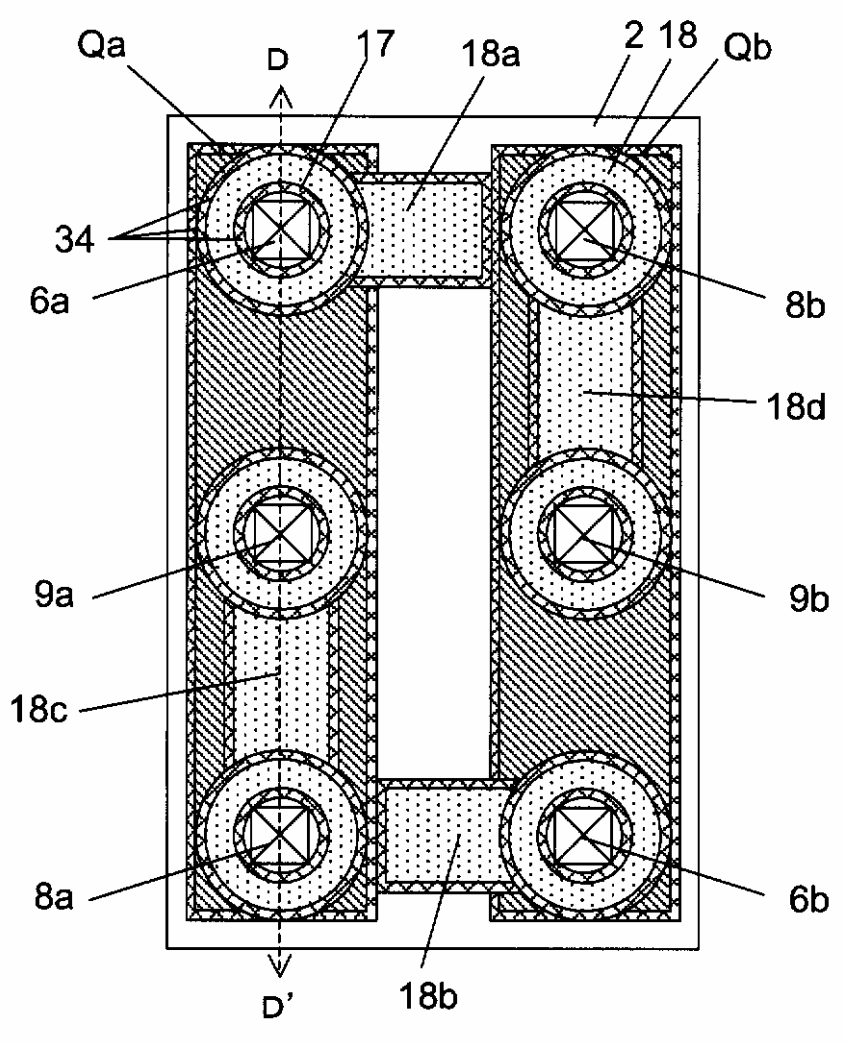


FIG.15B

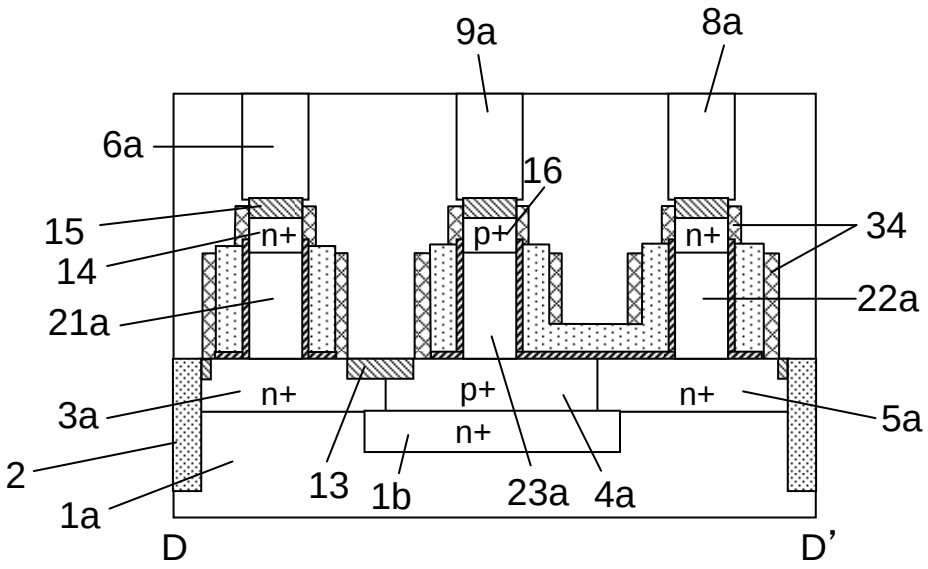


FIG.16A

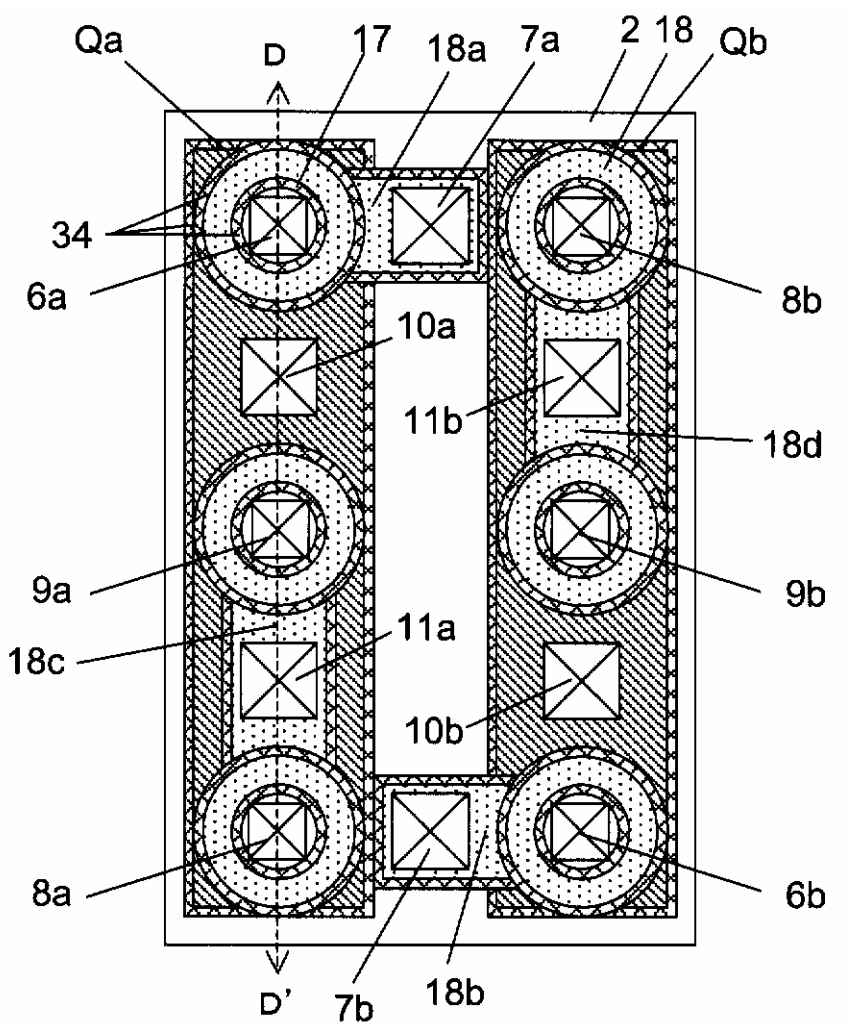

Qa
D
17
18a
7a
2
18
Qb
34
6a
8b
10a
11b
18d
9a
9b
18c
11a
10b
8a
6b
D'
7b
18b

FIG.16B

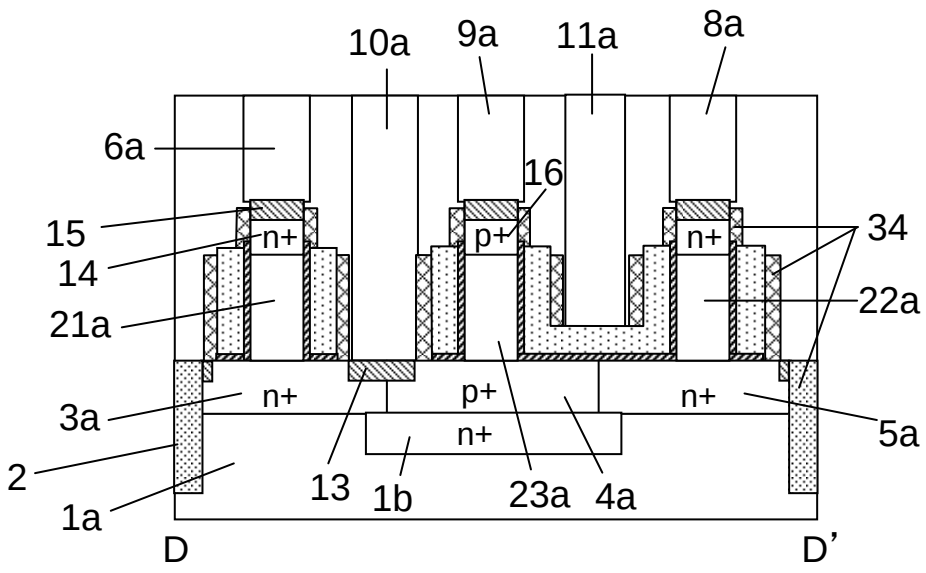

10a
9a
11a
8a
6a
16
15
n+
p+
n+
34
14
22a
21a
n+
p+
n+
3a
n+
5a
2
13
1b
23a
4a
1a
D
D’

FIG.17

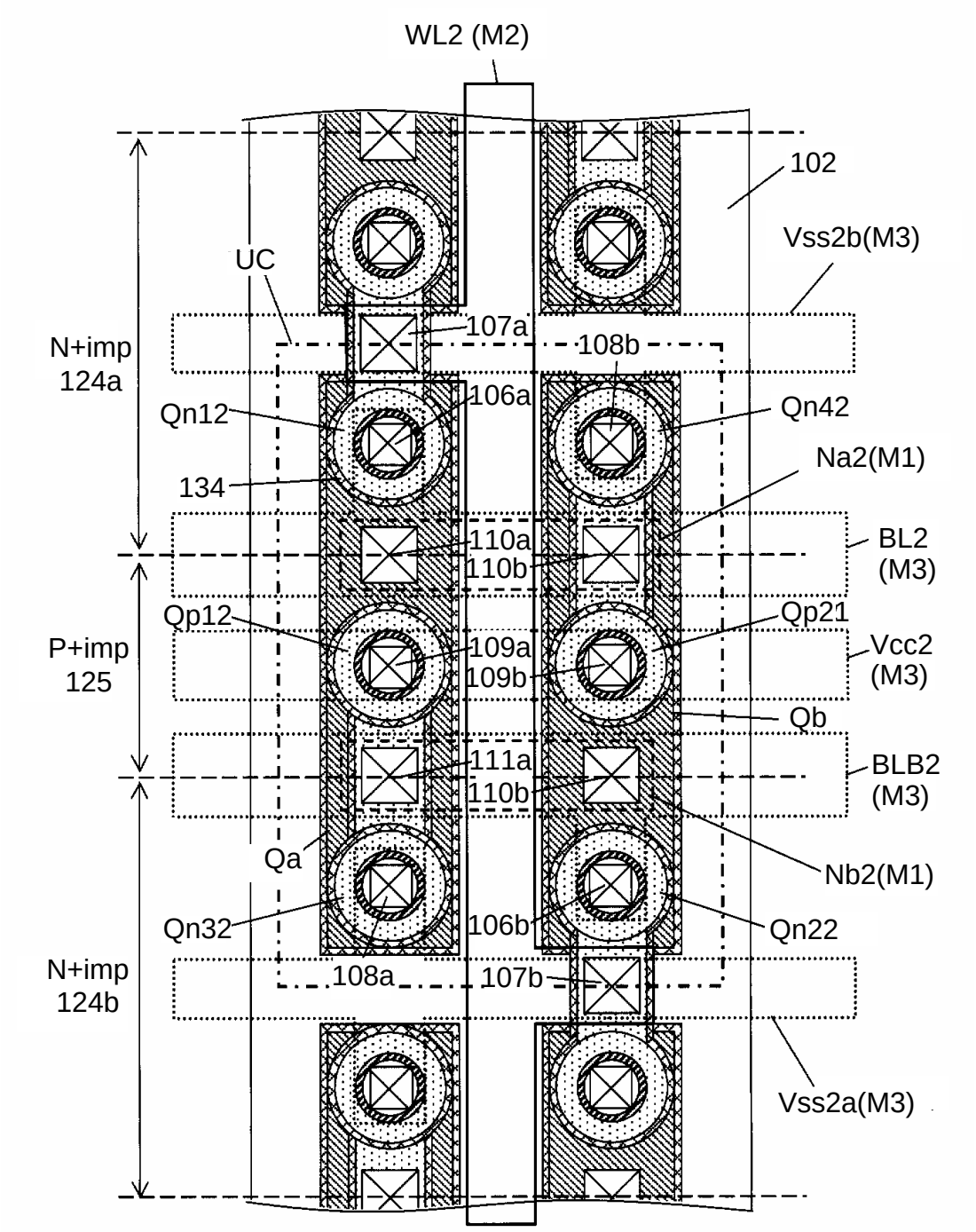

WL2 (M2)
102
Vss2b(M3)
UC
107a
108b
N+imp
124a
Qn12
106a
Qn42
134
Na2(M1)
110a
110b
BL2
(M3)
Qp12
Qp21
P+imp
125
109a
109b
Vcc2
(M3)
Qb
111a
110b
BLB2
(M3)
Qa
Nb2(M1)
Qn32
106b
Qn22
N+imp
124b
108a
107b
Vss2a(M3)

FIG.18

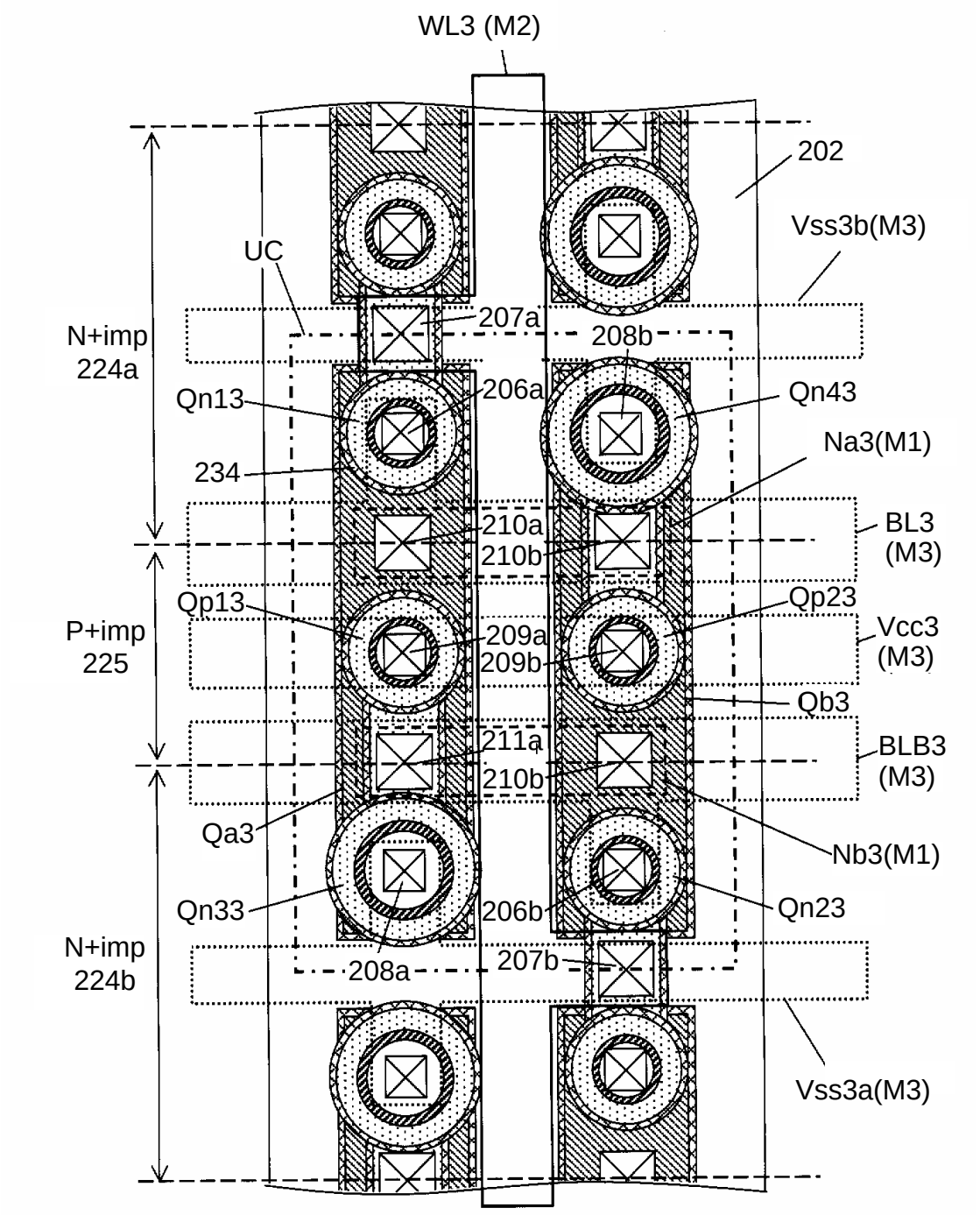

WL3 (M2)
202
Vss3b(M3)
UC
207a
208b
N+imp
224a
Qn13
206a
Qn43
Na3(M1)
234
210a
210b
BL3
(M3)
Qp13
Qp23
P+imp
225
209a
209b
Vcc3
(M3)
Qb3
211a
BLB3
(M3)
210b
Qa3
Nb3(M1)
Qn33
206b
Qn23
N+imp
224b
208a
207b
Vss3a(M3)

FIG.19

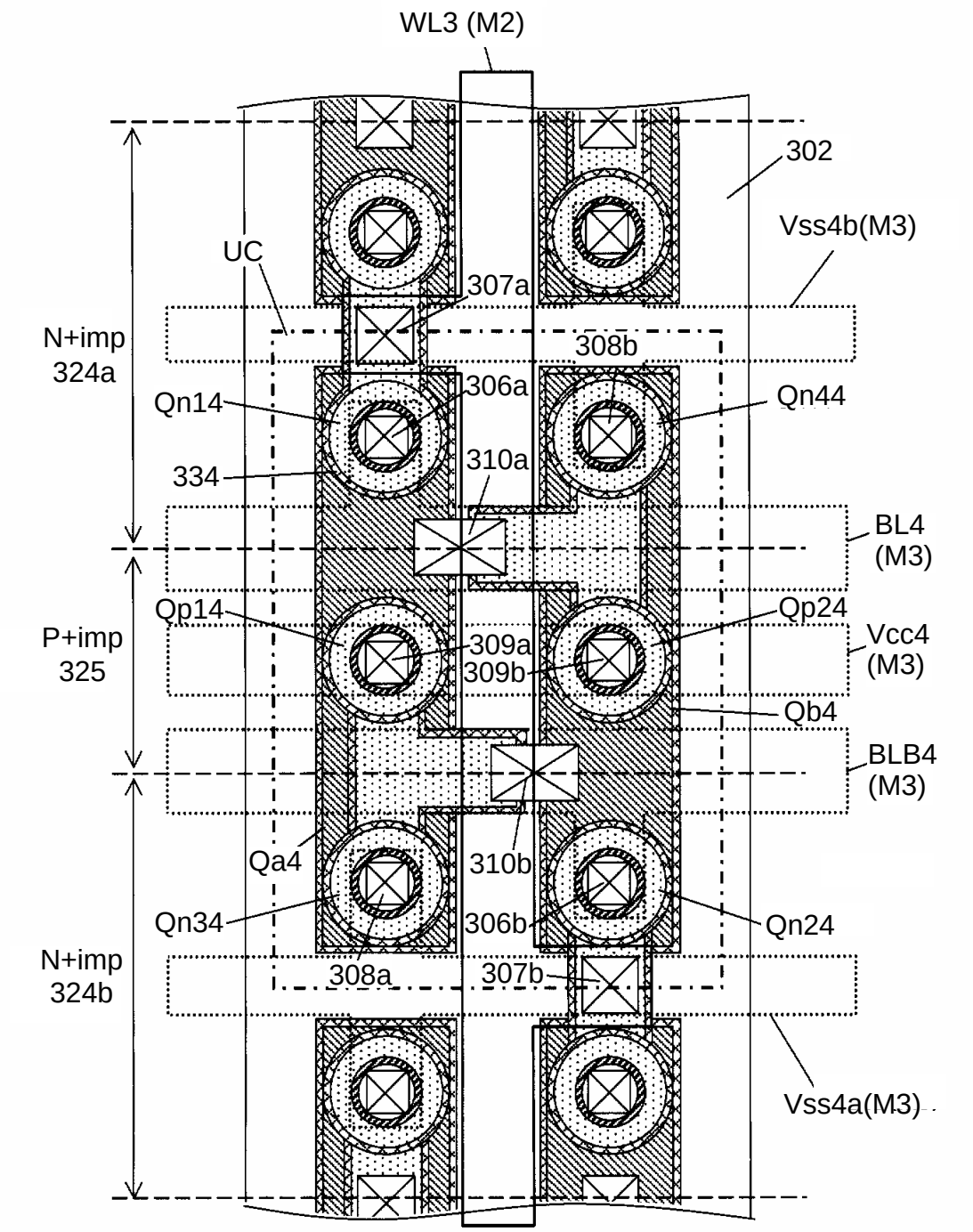

WL3 (M2)
302
Vss4b(M3)
UC
307a
N+imp
324a
308b
306a
Qn14
Qn44
334
310a
BL4
(M3)
Qp14
Qp24
P+imp
325
309a
309b
Vcc4
(M3)
Qb4
BLB4
(M3)
Qa4
310b
Qn34
306b
Qn24
N+imp
324b
308a
307b
Vss4a(M3)

FIG.20

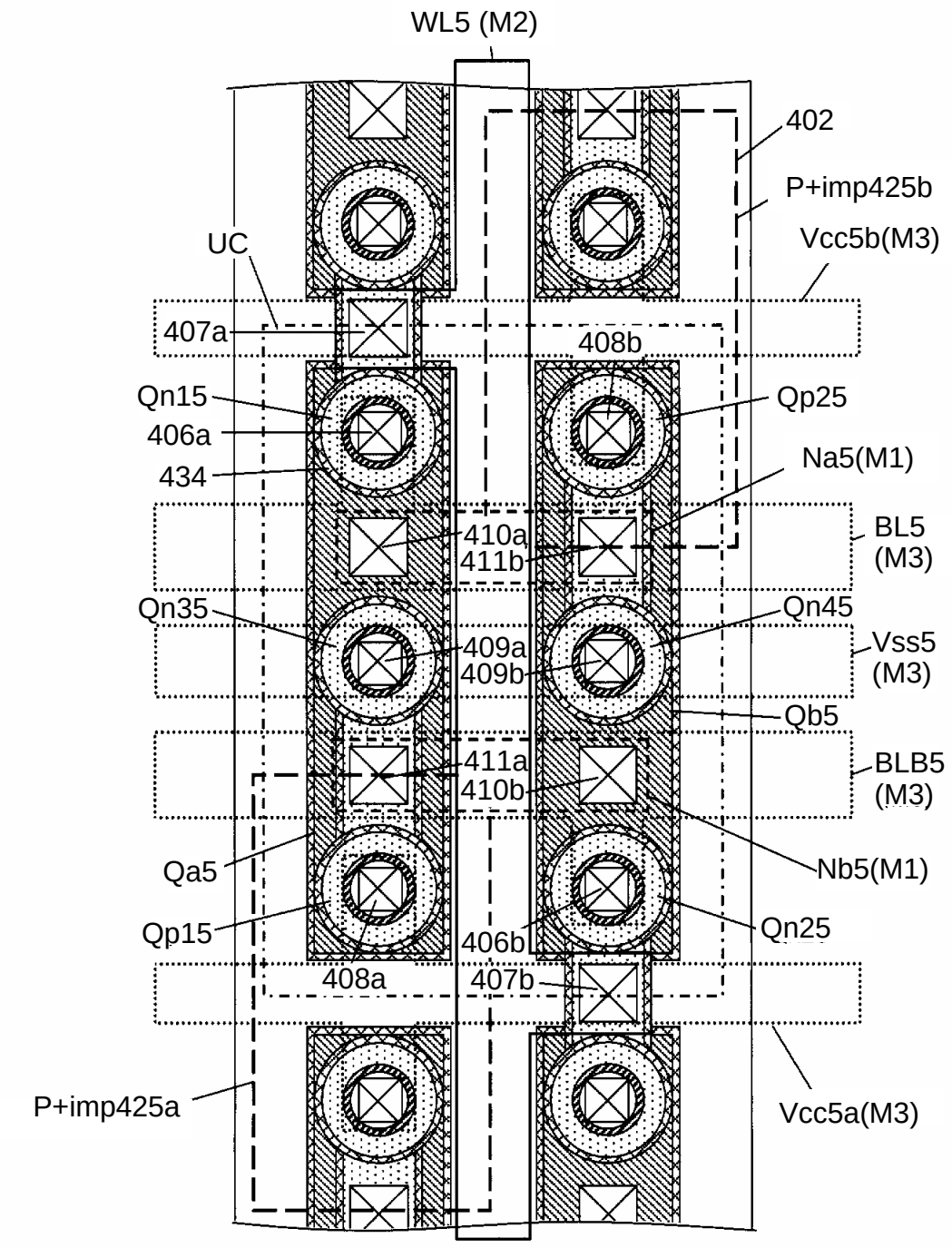

WL5 (M2)
402
P+imp425b
Vcc5b(M3)
UC
407a
408b
Qn15
Qp25
406a
434
Na5(M1)
410a
411b
BL5
(M3)
Qn35
Qn45
409a
409b
Vss5
(M3)
Qb5
411a
410b
BLB5
(M3)
Qa5
Nb5(M1)
Qp15
406b
Qn25
408a
407b
P+imp425a
Vcc5a(M3)

FIG.21

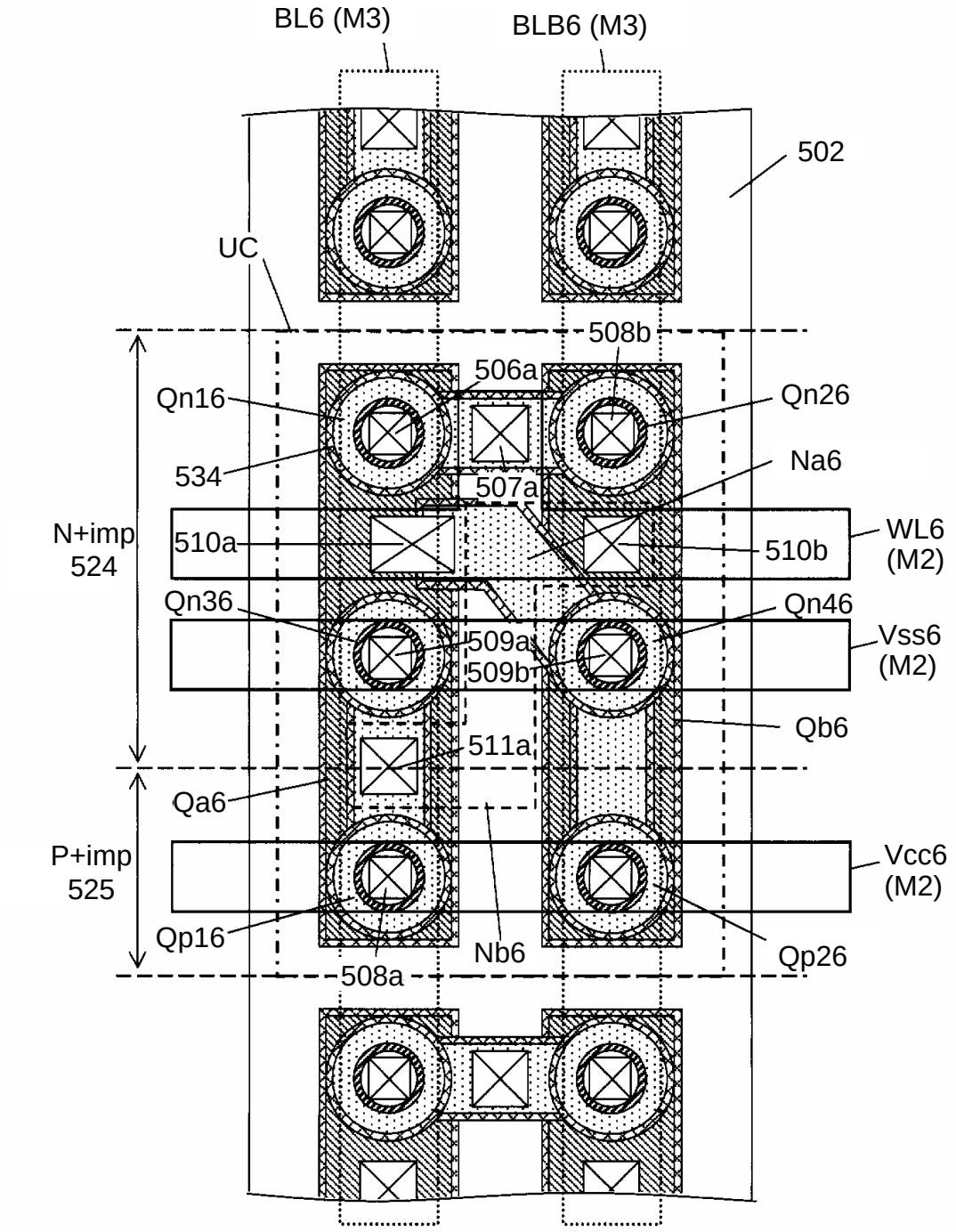

BL6 (M3)
BLB6 (M3)
502
UC
508b
506a
Qn16
Qn26
534
507a
Na6
N+imp
524
510a
510b
WL6
(M2)
Qn36
Qn46
509a
509b
Vss6
(M2)
Qb6
511a
Qa6
P+imp
525
Vcc6
(M2)
Qp16
Nb6
Qp26
508a

FIG.22

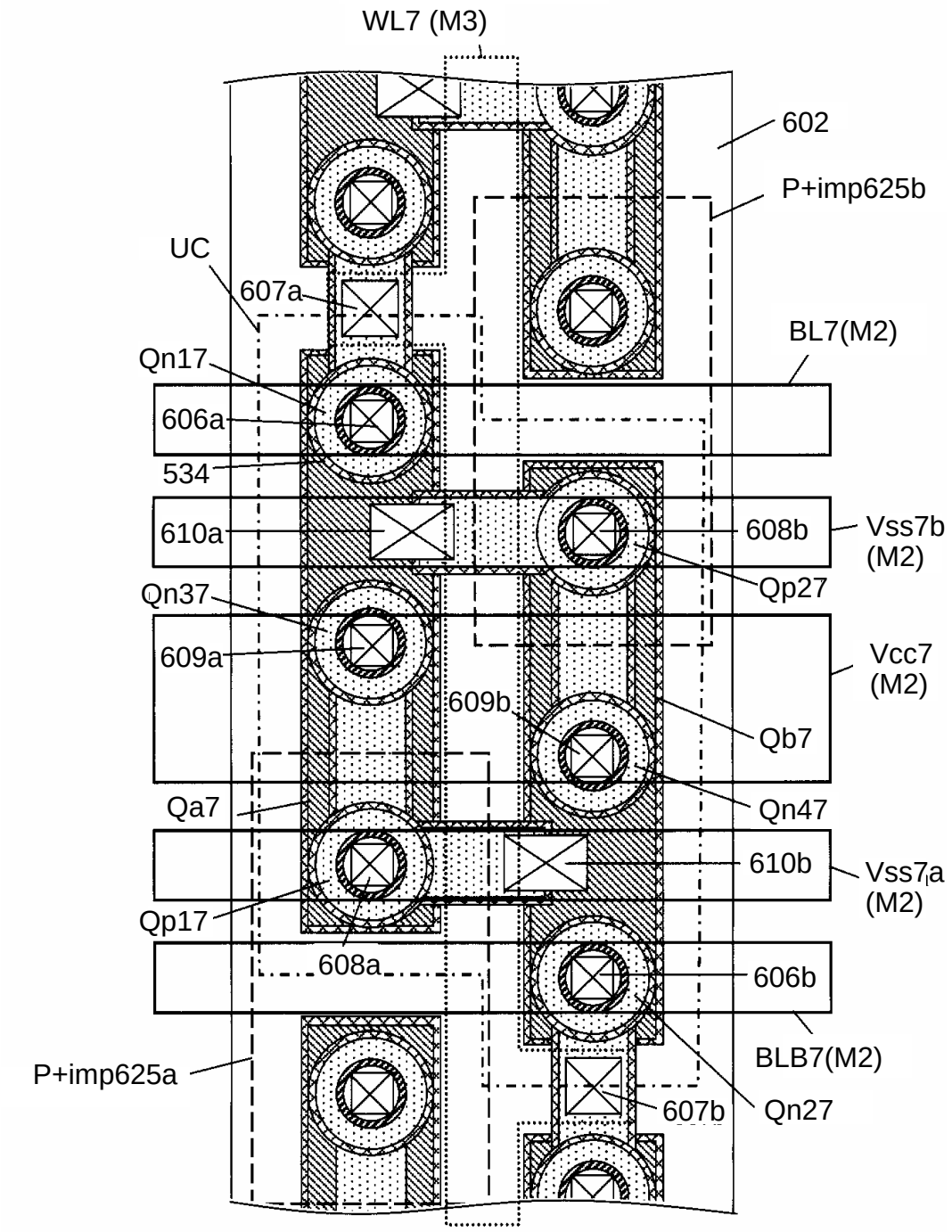

WL7 (M3)
602
P+imp625b
UC
607a
BL7(M2)
Qn17
606a
534
610a
608b
Vss7b
(M2)
Qp27
Qn37
609a
Vcc7
(M2)
609b
Qb7
Qn47
Qa7
610b
Vss7a
(M2)
Qp17
608a
606b
BLB7(M2)
P+imp625a
607b
Qn27

FIG.23

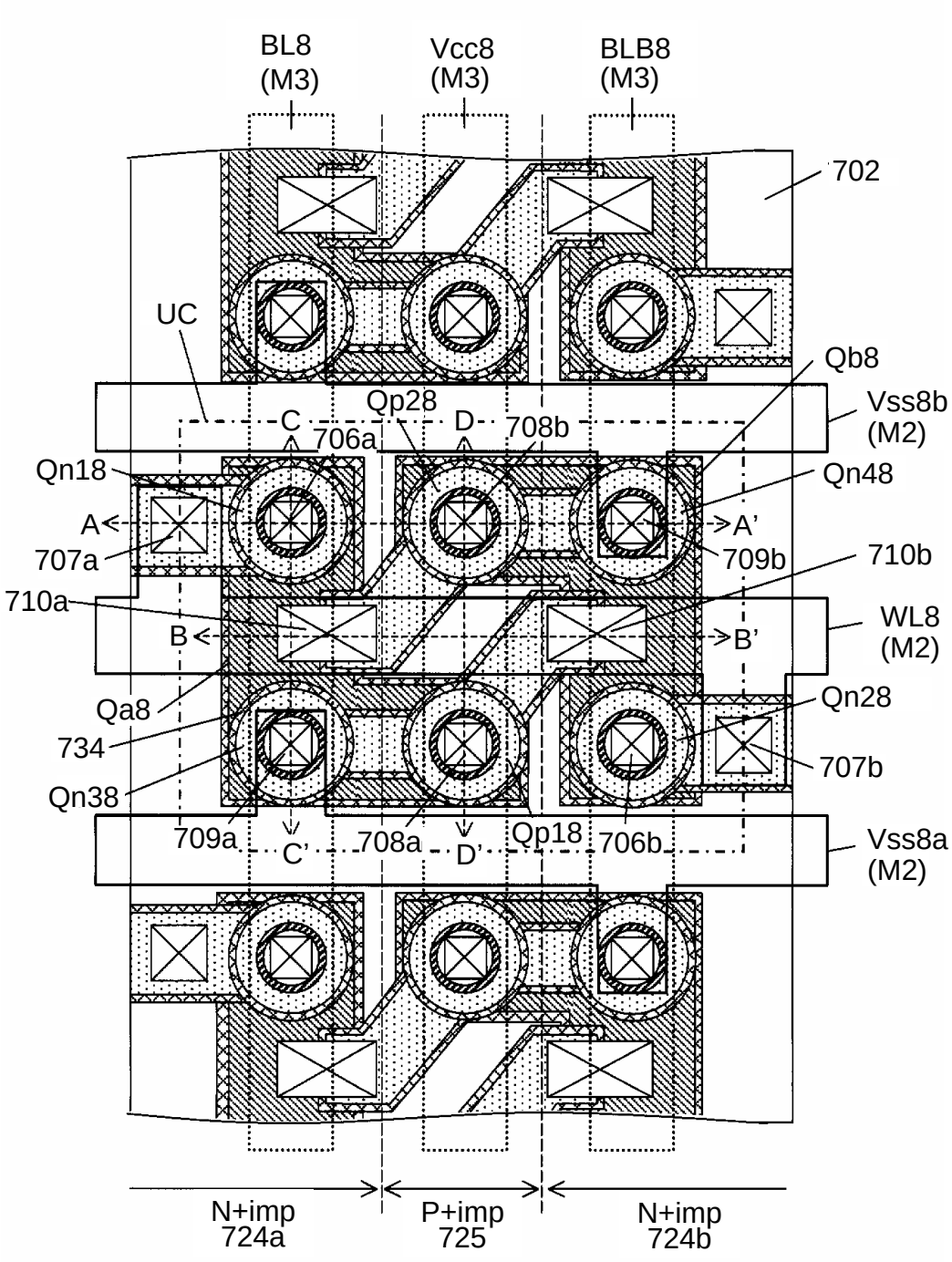

BL8
(M3)
Vcc8
(M3)
BLB8
(M3)
702
UC
Qb8
Vss8b
(M2)
Qp28
C
706a
D
708b
Qn18
Qn48
A
A'
707a
709b
710b
710a
B
B'
WL8
(M2)
Qa8
Qn28
734
707b
Qn38
709a
C'
708a
D'
Qp18
706b
Vss8a
(M2)
N+imp
724a
P+imp
725
N+imp
724b

FIG.24A

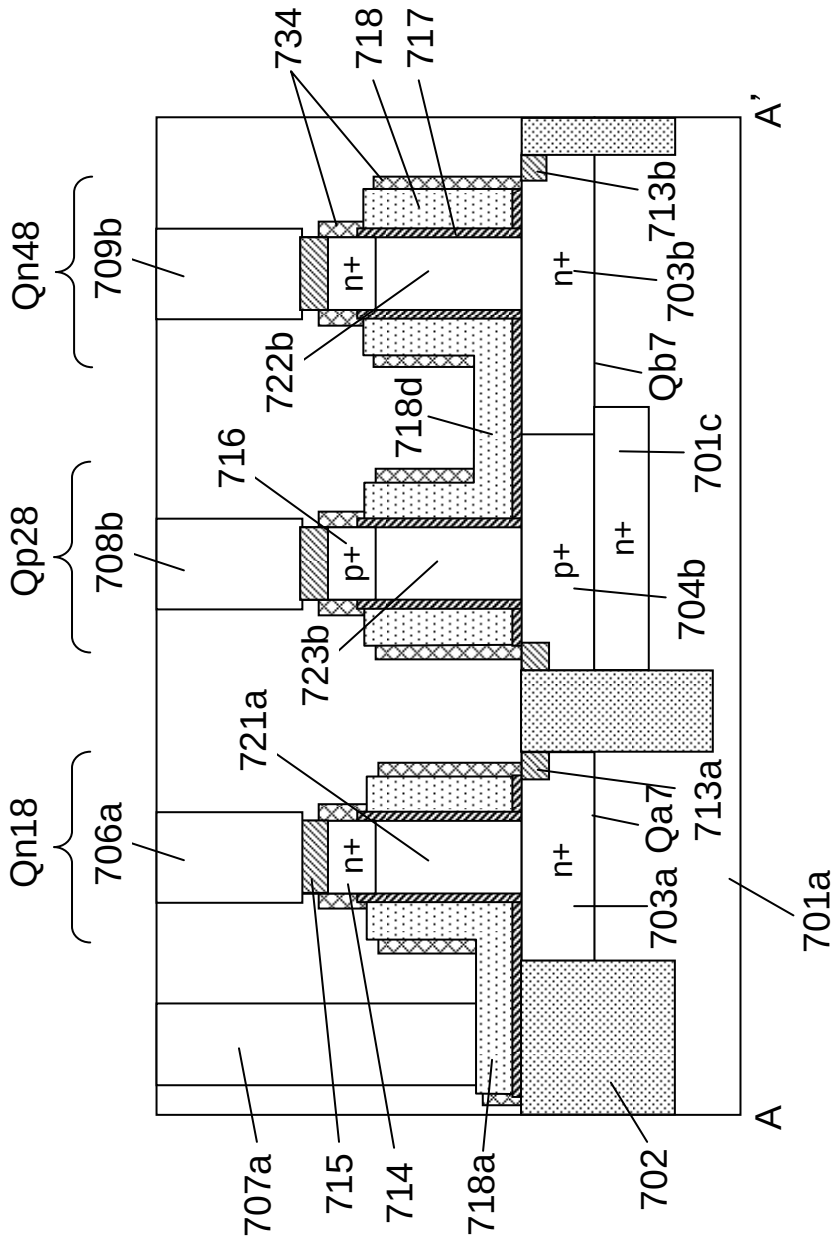

734
718
717
A'
713b
Qn48
709b
n+
703b
722b
Qb7
718d
716
701c
Qp28
708b
p+
n+
704b
723b
721a
713a
Qn18
706a
n+
Qa7
703a
701a
A
707a
715
714
718a
702

FIG.24B

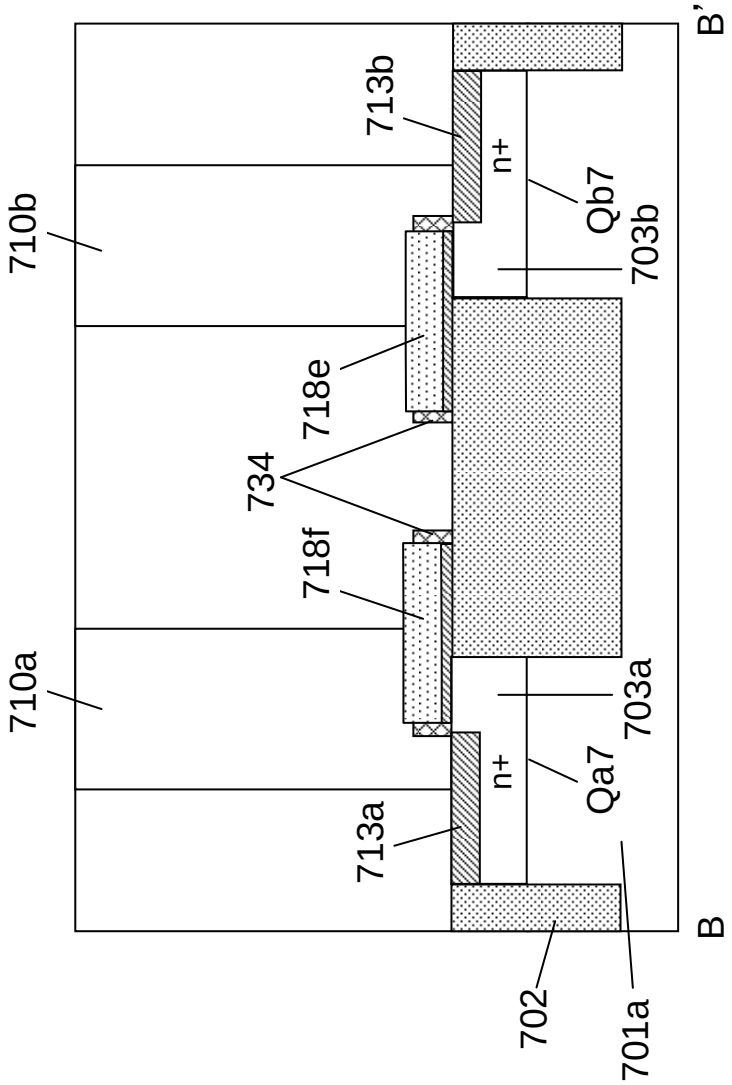

B'
713b
n+
Qb7
703b
710b
718e
734
718f
710a
703a
n+
Qa7
713a
B
702
701a

FIG.24C

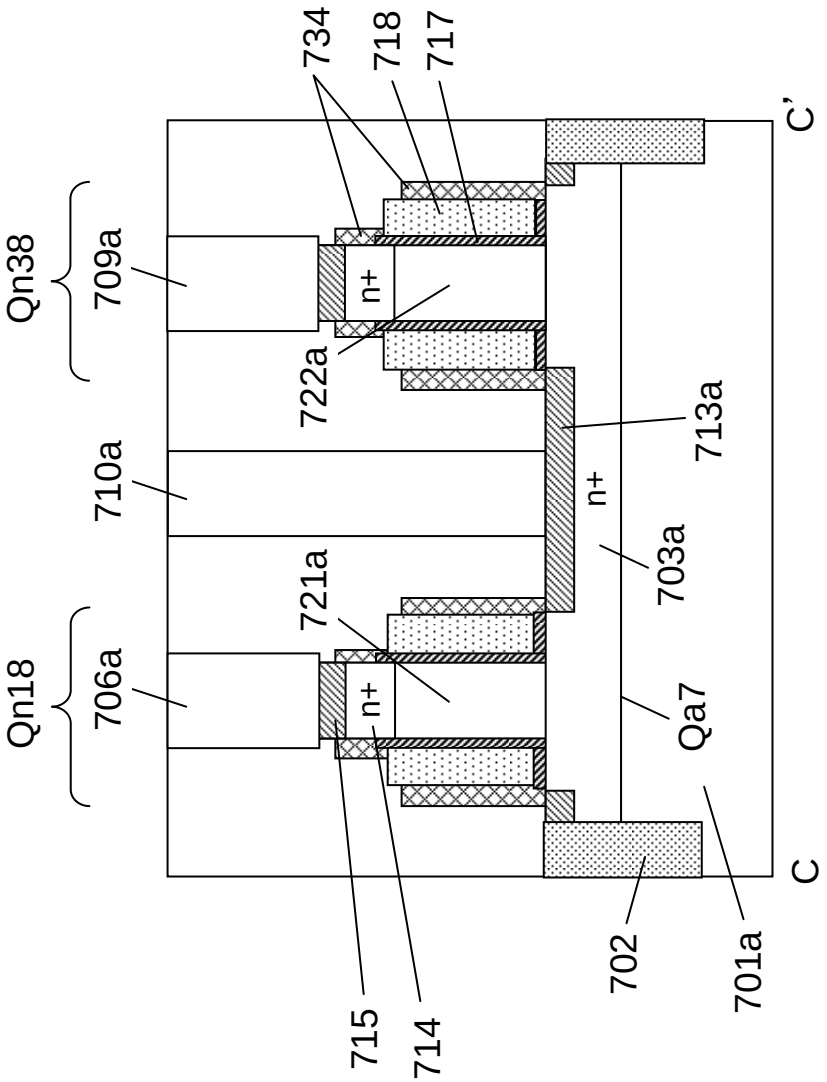

734
718
717
C'
Qn38
709a
n+
722a
713a
710a
n+
703a
721a
Qn18
706a
n+
Qa7
C
715
714
702
701a

FIG.24D

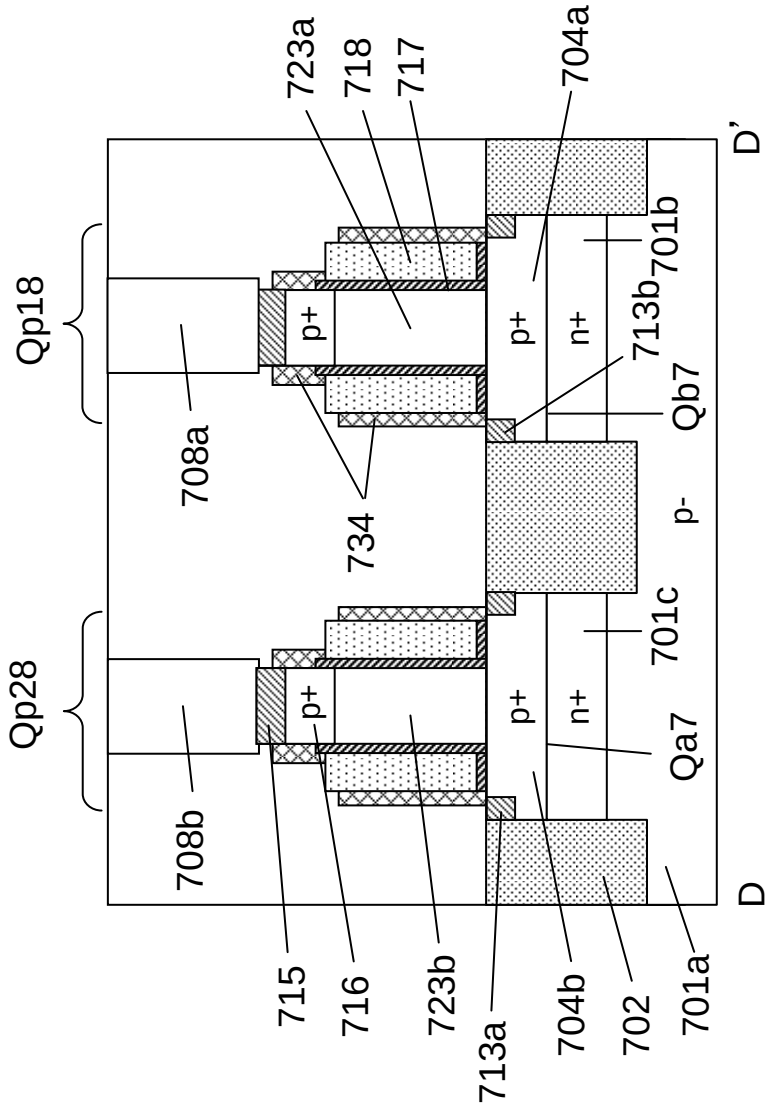

723a
718
717
704a
D'
Qp18
708a
p+
p+
n+
713b
701b
Qb7
734
p-
701c
Qp28
708b
p+
p+
n+
Qa7
715
716
723b
713a
704b
702
701a
D

FIG.25A

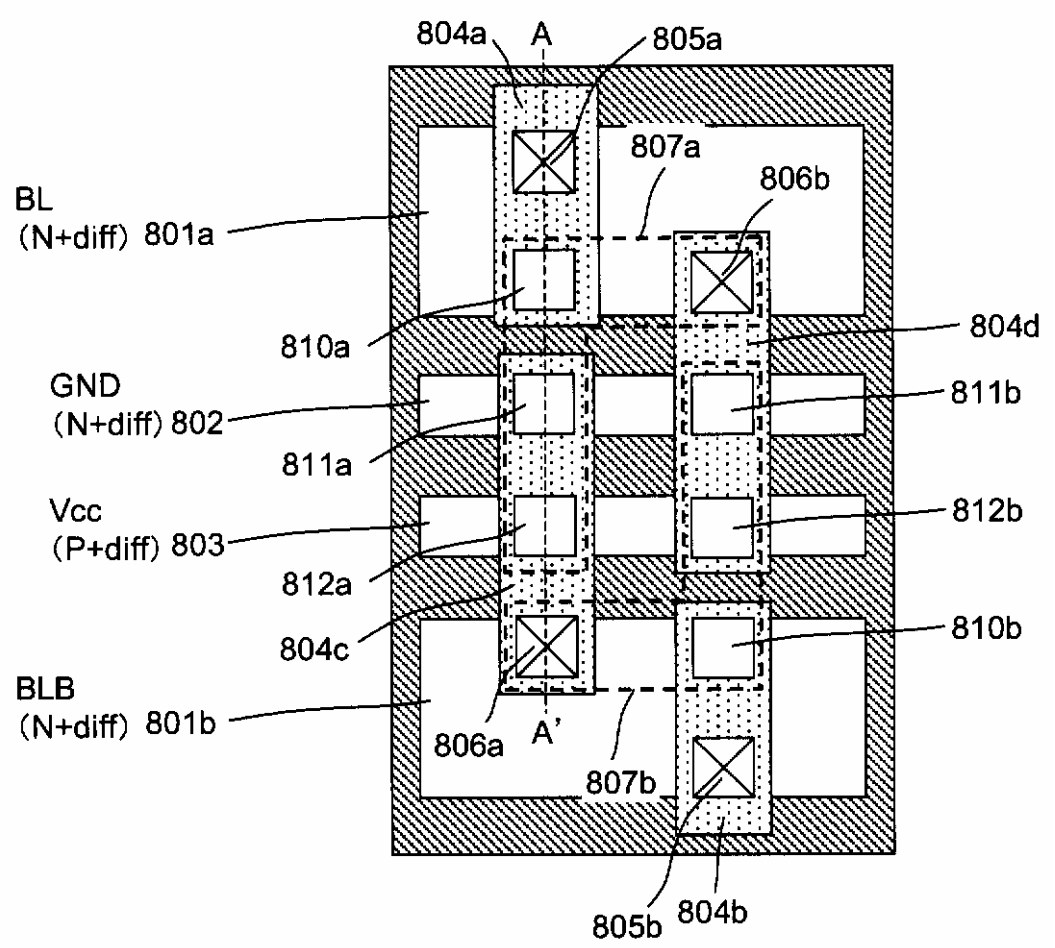
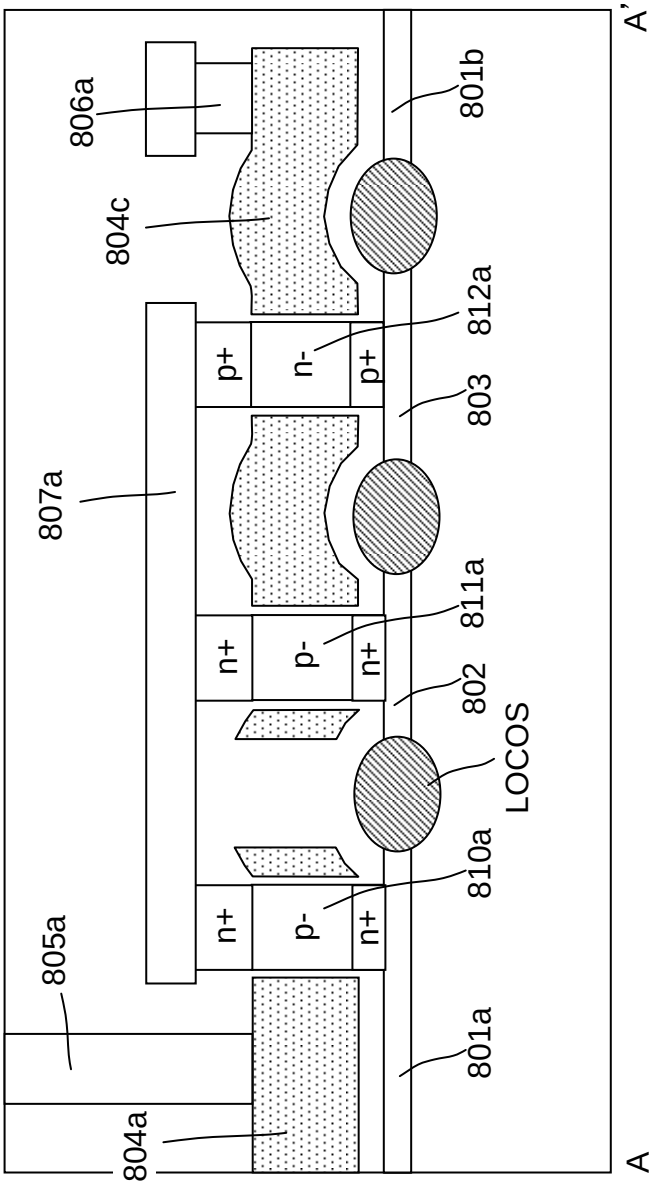

804a
A
805a
807a
806b
BL
(N+diff) 801a
810a
804d
GND
(N+diff) 802
811b
811a
Vcc
(P+diff) 803
812b
812a
804c
810b
BLB
(N+diff) 801b
806a
A'
807b
805b
804b

FIG.25B


A'
806a
801b
804c
812a
p+
n-
p+
803
807a
811a
n+
p-
n+
802
LOCOS
810a
n+
p-
n+
805a
801a
804a
A