

(19)
(12)

(KR)
(B1)

(51) 。 Int. Cl. ⁶
H01L 21/027

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2001 11 01
10 - 0299520
2001 06 09

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10 - 1999 - 0024175
1999 06 25

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2001 - 0003744
2001 01 15

(73)

136 - 1

(72)

97

103 109

837 1002

(74)

:

(54)

WQ

가

2

1a 1c

2

3a 3b

4a 4d

5a 5c

()

100 : 110 :

120 :

120X, 120Y :

320X, 320Y : 400, 410 : 1 2

420 : 420A :

A :

(Wafer Quality; WQ)
(stage)
(fiducial mark)
(%)
, WQ가

가

가

1a

1c

1b

1c

가

가

(Scribe line primary mark; SPM)

(wafer

quality; WQ)

5%

WQ

0.1

5%

W

Q

가

2

3a

3b

(A)

2

(100)

(120)

(110)

(120)

SPM

XPA(eXpanded Pattern Area)

(120X, 120Y)

(120X, 120Y)

X

Y

X

(120X)

800

1,000 × 80

100μm

(120Y)

80

100

800

1,000μm

3a

(200)

3b

(320X, 320Y)가

4a

4d

3b

B - B'

4a

(200)

(A)

(320X)가

4b

(200)

(200)

1

2

(400, 410)

(420)

2

(100)

(420)

(320X) , 4c (120X, 120Y) (A) (420A) (100) (420) ,
1 2 (400, 410) .

4d , 1 2 (400, 410) (200) ()
(420) , (A) (320X) ,

5 15% , 3 (sigma) 50 60nm 30 40nm WQ가

5a 5c , 5a 5b ,

(57)

1.

2.

1 , .

3.

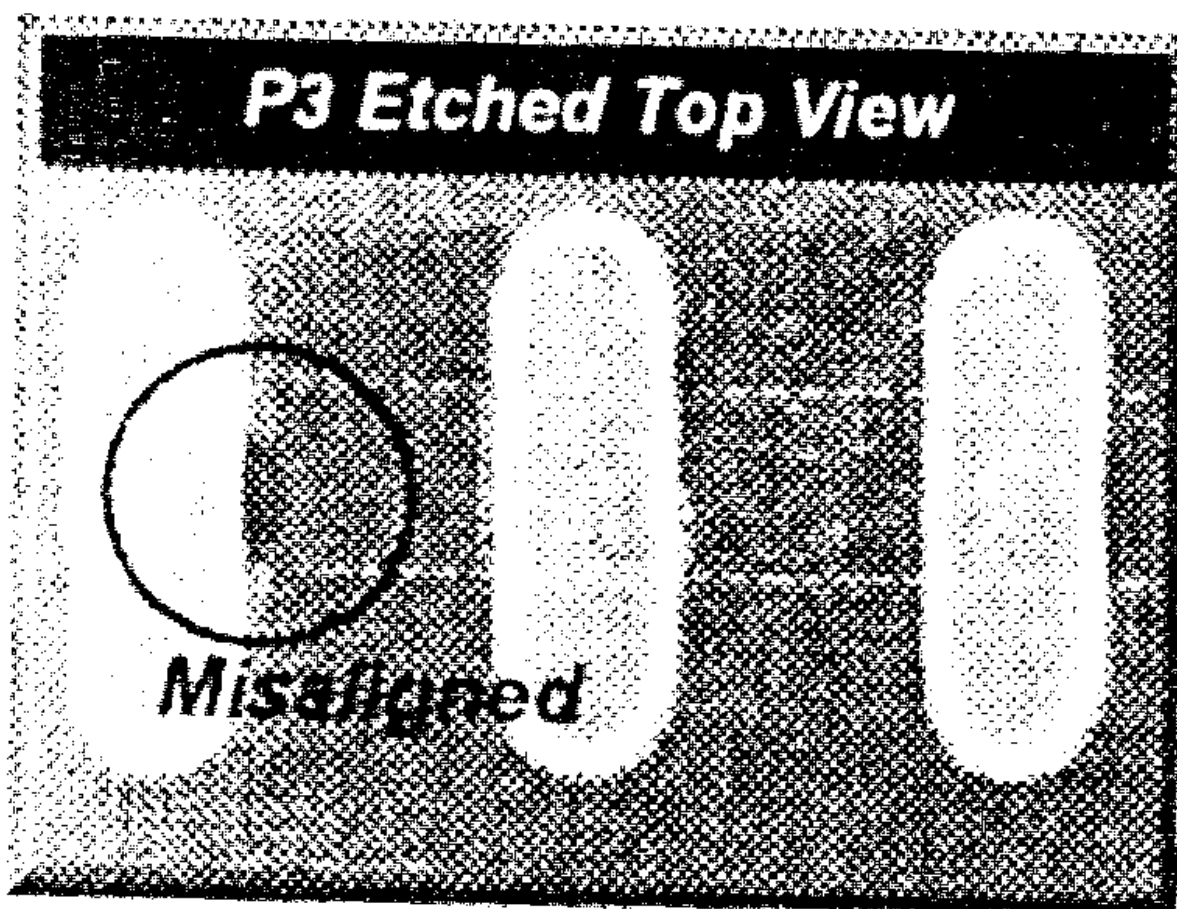
2 , 800 1,000 × 80 100μm .

4.

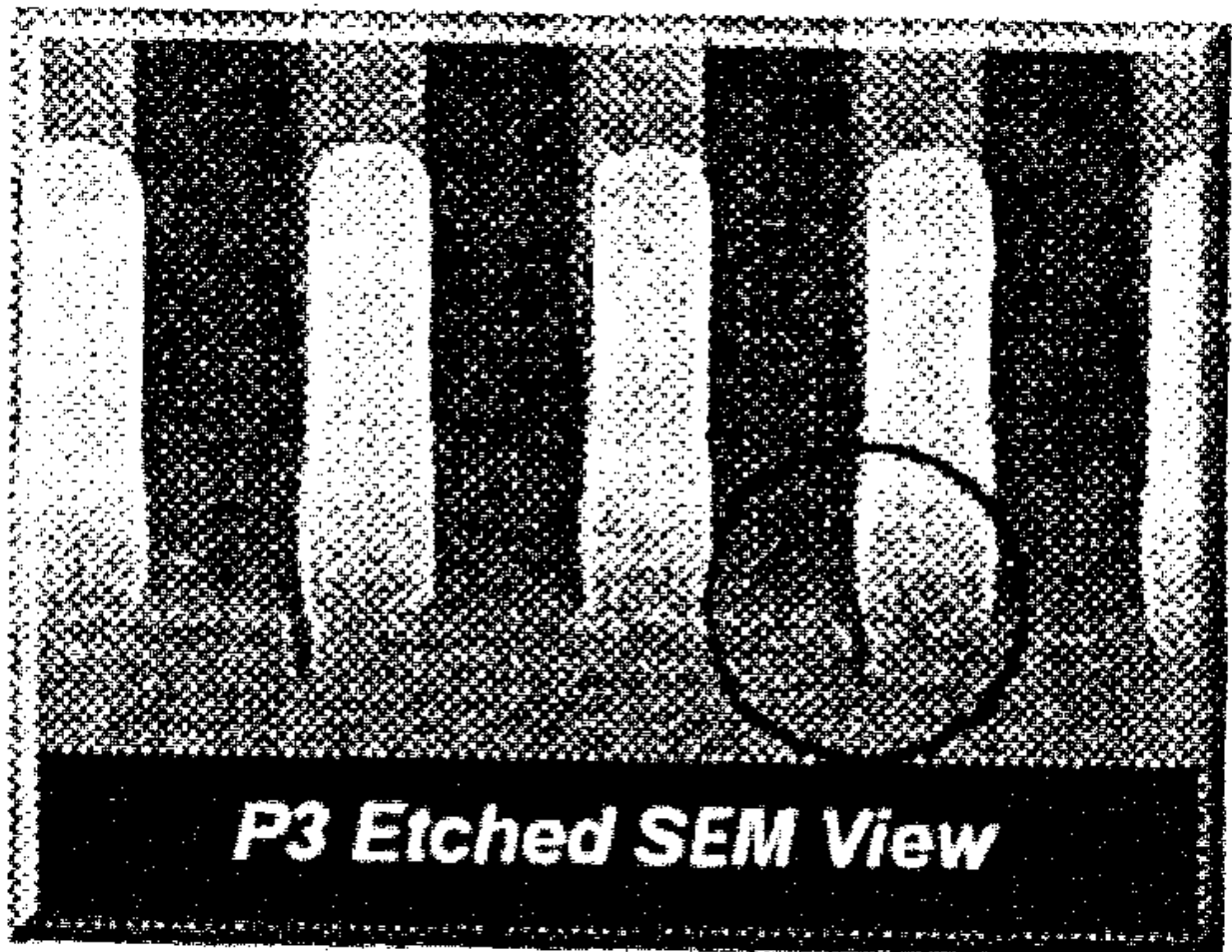
가

;

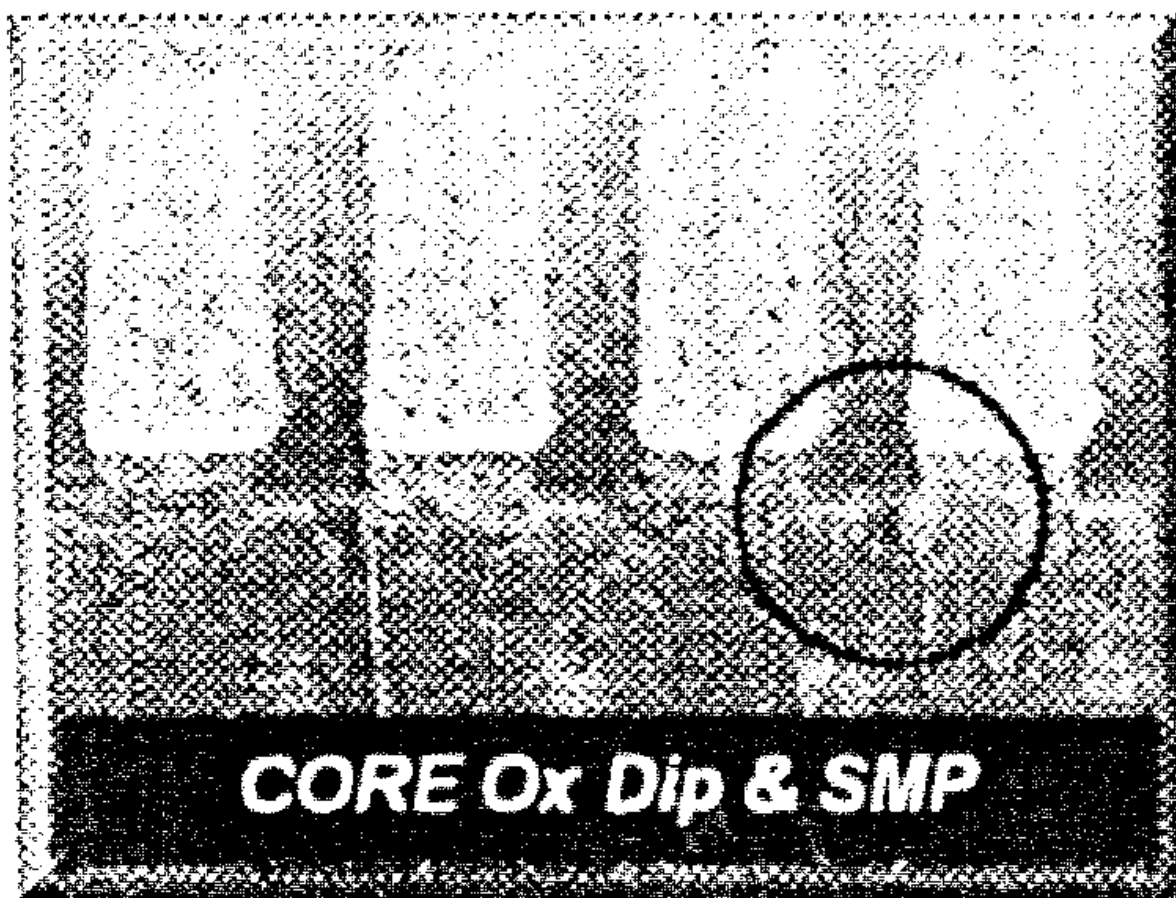
1a



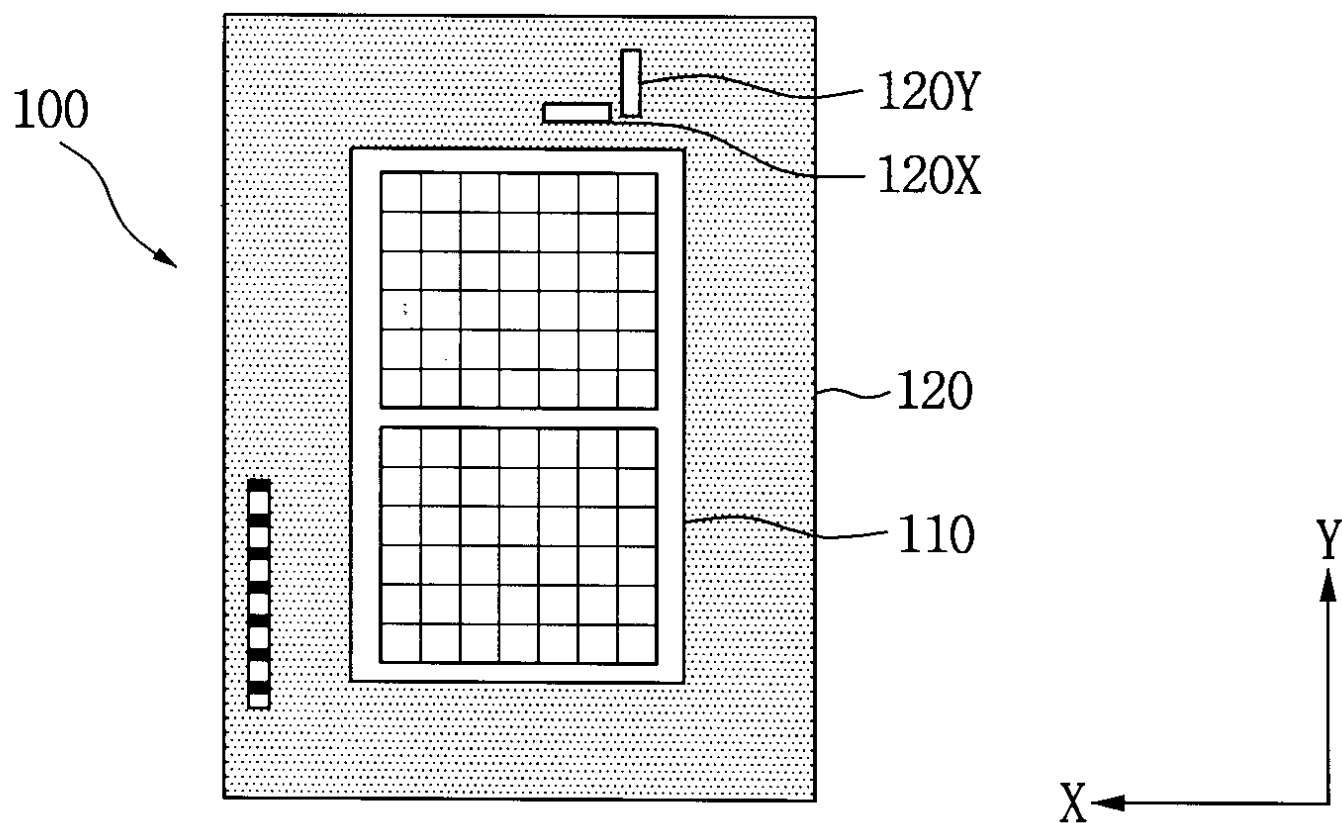
1b



1c



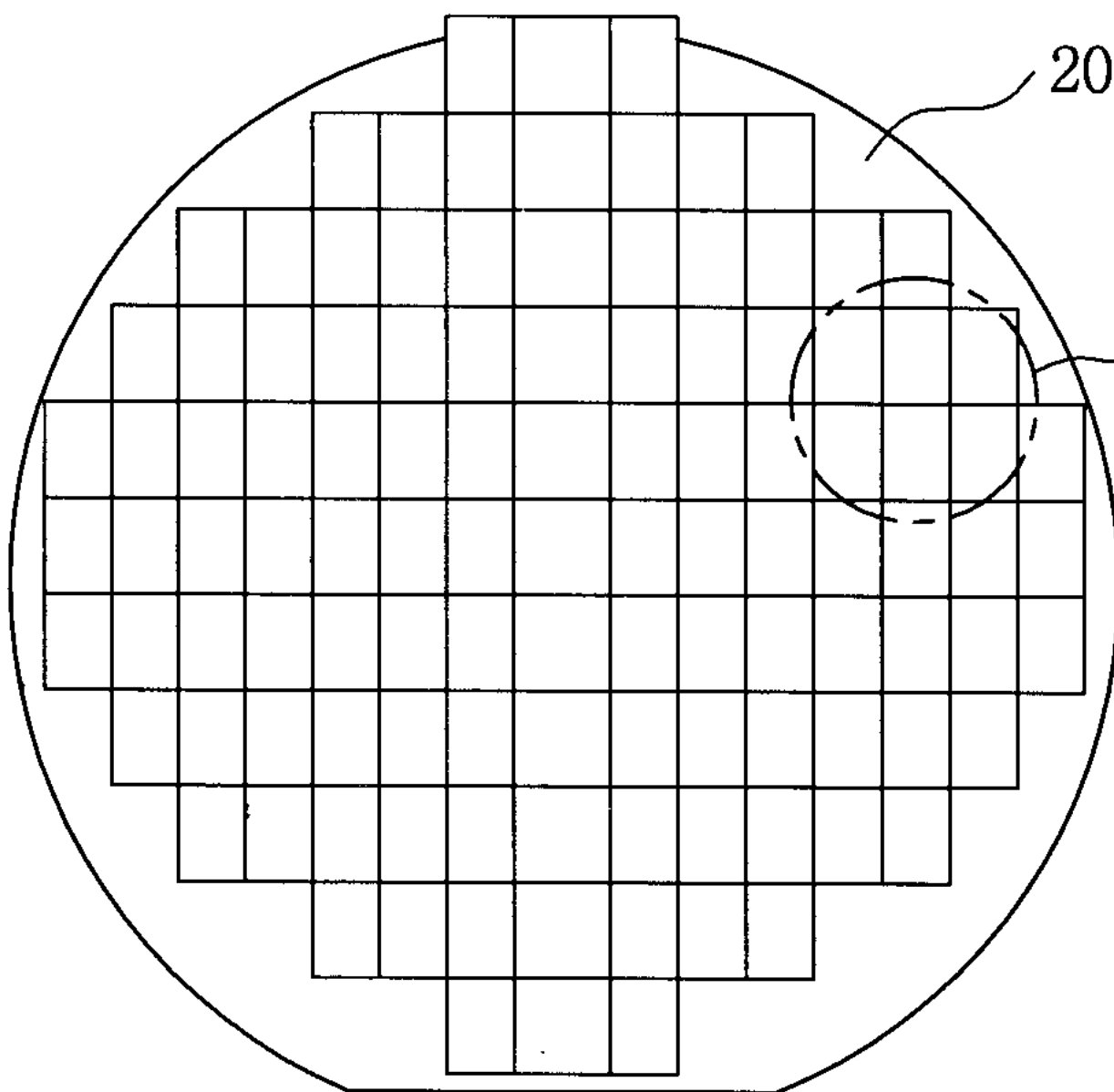
2



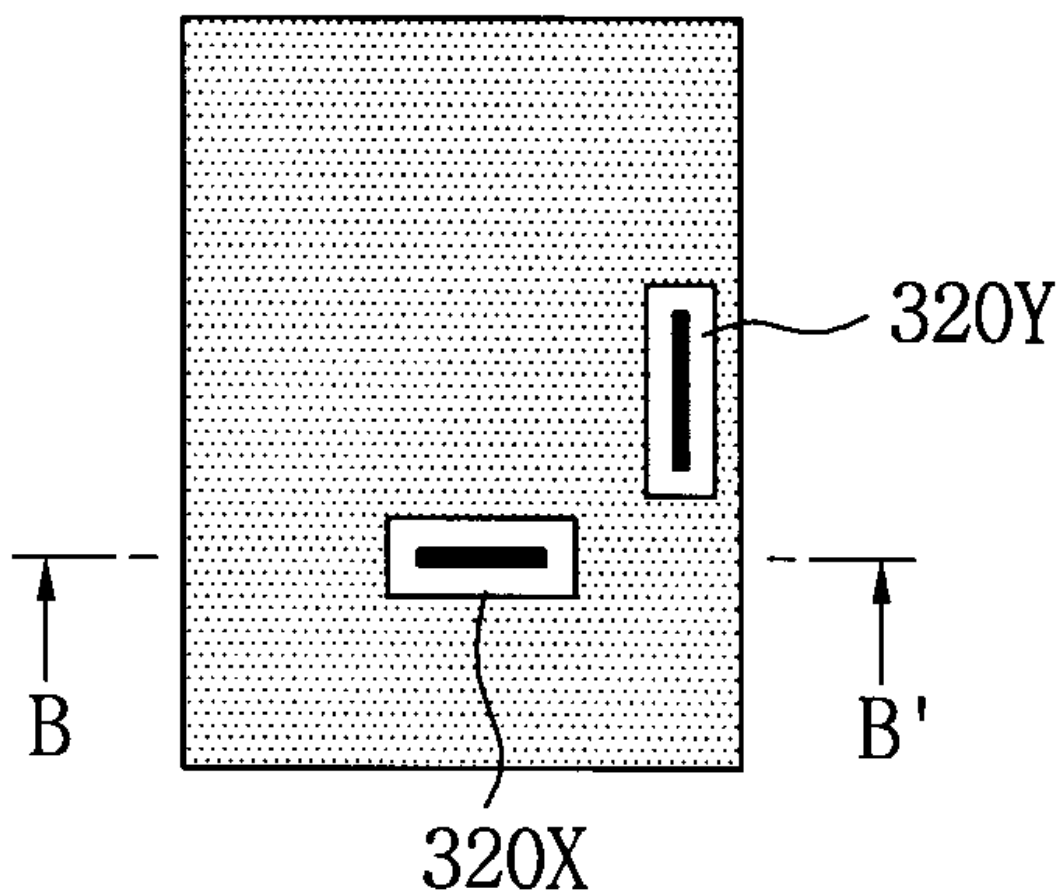
3a

200

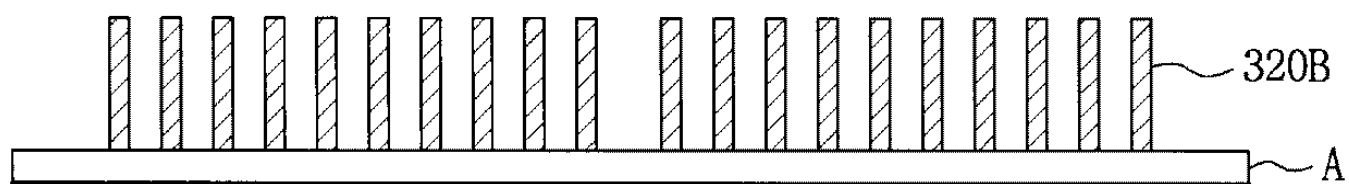
A



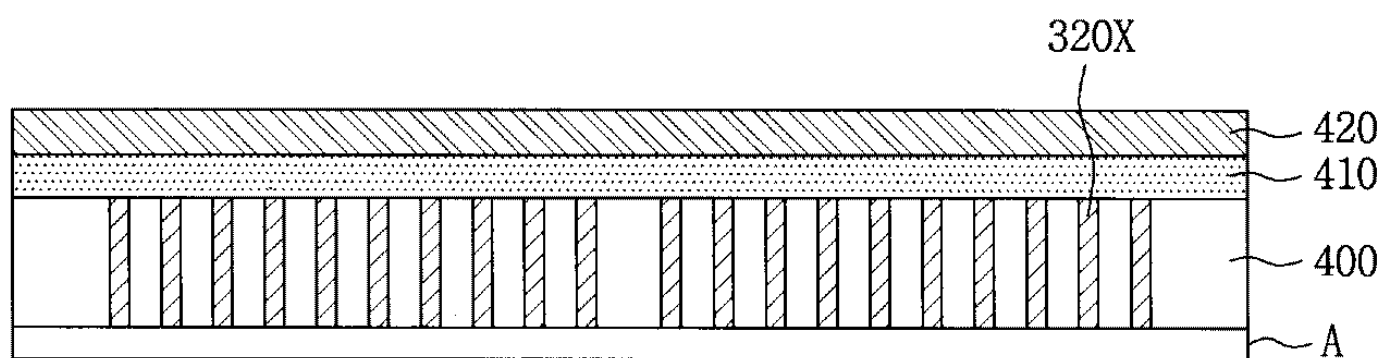
3b



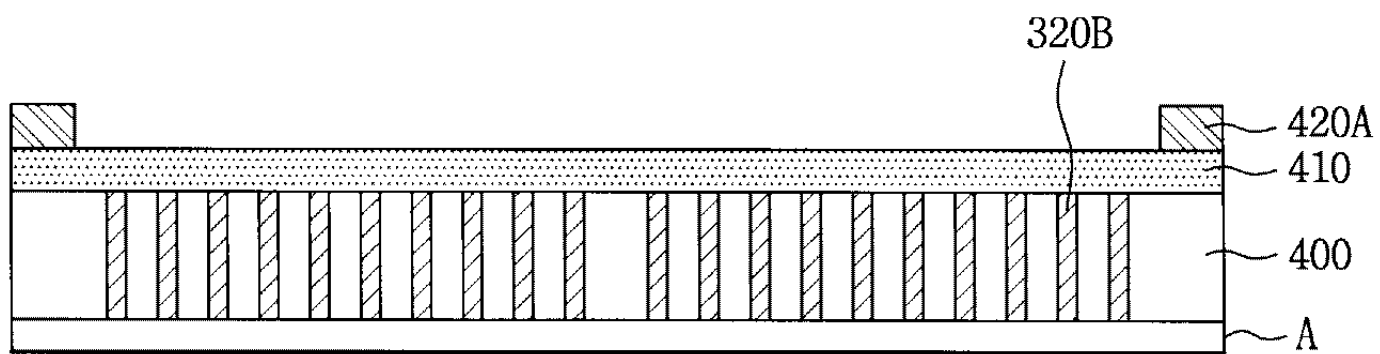
4a



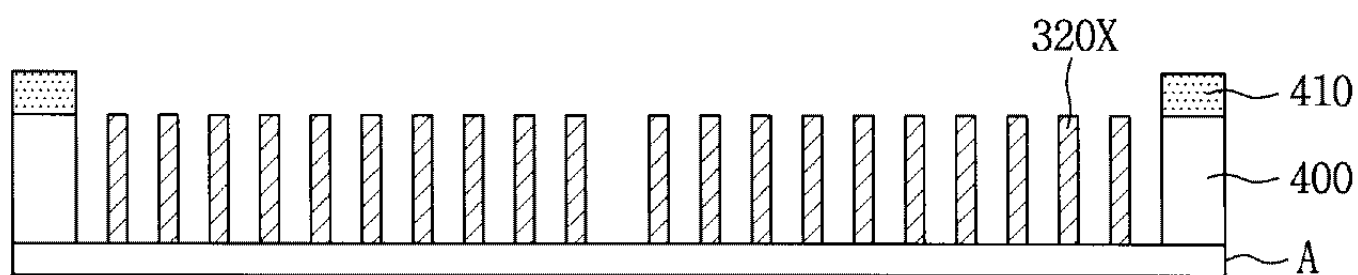
4b



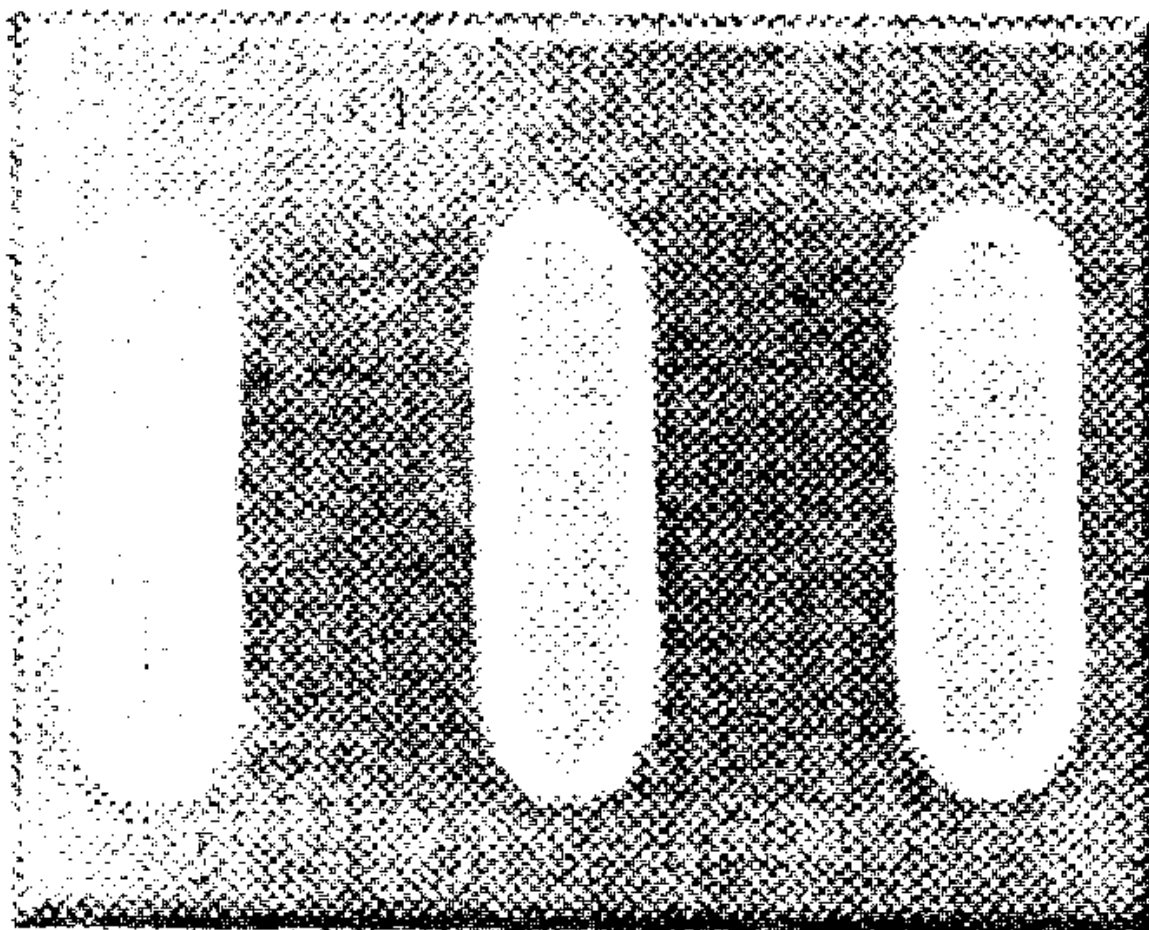
4c



4d



5a



5b



5c

