

(19)
(12)

(KR)
(B1)

<p>(51) 。 Int. Cl.⁷ H01L 29/786 H01L 29/786</p>	<p>(45) (11) (24)</p>	<p>2004 11 03 10-0436097 2004 06 04</p>
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<p>(21)</p>	<p>10-1997-0001219</p>	<p>(65)</p>	<p>10-1997-0060512</p>
(22)	1997 01 17	(43)	1997 08 12

<p>(30)</p>	<p>96-26210</p>	<p>1996 01 19</p>	<p>(JP)</p>
	96-26037	1996 01 20	(JP)
	96-32874	1996 01 26	(JP)
	96-32875	1996 01 26	(JP)
	96-32981	1996 01 27	(JP)
	96-58334	1996 02 20	(JP)
	96-324644	1996 11 21	(JP)
	96-88759	1996 03 17	(JP)

<p>(73)</p>	<p>가</p>	<p>가</p>	<p>가</p>	<p>가</p>	<p>398</p>
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<p>(72)</p>	<p>가</p>	<p>가</p>	<p>4-10-20</p>
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<p>가</p>	<p>가</p>	<p>304-1</p>	<p>-</p>	<p>205</p>
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<p>가</p>	<p>가</p>	<p>가</p>	<p>-</p>	<p>1-4-23</p>
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<p>가</p>	<p>가</p>	<p>가</p>	<p>304-1</p>	<p>-</p>	<p>301</p>
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<p>가</p>	<p>가</p>	<p>931-1</p>	<p>-</p>	<p>201</p>
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<p>가</p>	<p>가</p>	<p>1405-1</p>	<p>-</p>	<p>315</p>
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<p>가</p>	<p>가</p>	<p>7-896-1</p>	<p>-</p>	<p>501</p>
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<p>가</p>	<p>가</p>	<p>987-4</p>
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(74)

:

(54)

207 (203) (205) . , 가
 가 (209) . , ,
 , , / , , ,
 가 200(cm^{-2}/Vs) , S 100(mV/dec) , TF

1

1
2
3
4
5
6
7
8 TFT
9

201 : 202 : ()
203 : 204 :
205 : ()
206 :
207 : 208 :
209 : 210 :
211 :
304 : CVD (CVD)
305 : 306 :
307 : 308 :
309 :
310 : 311 :
312 : 313 :
314 : 315 :
316 : 317 :
318 :

TFT TFT . 가

TFT 800 900 IC 가

TFT가 TFT 가 (

TFT 600 가

TFT TFT
TFT

~ 100(cm^{-2} /Vs) TFT, S 200 400(mV/dec)($V_D = 1\text{V}$) 가 .

MOS S 60 70(mV/dec)

TFT . . . , TFT

, TFT MHz (margin) MHz

IFI
IFI
MOS 100MHz

(MHz)

MOS

가 , , ,

6 7 . 7 6

150 450 . , 6 7 100 750 ,
가 . 가

가 , 가 , 800 1100 30 가 , 가 ,

MOS, CVD, 가

HCl, HF, HBr, Cl₂, F₂, Br₂, CF₄ (1)

가

가, S 100(mV/dec) TFT MHz
 가, 가 800, 900
 , ,
 .9mmHg, 994, 820.6mmHg (760mmHg), 541, 38
 가, 1100

가 가 , 800 1100 30 가 , 가 , 가

[]
가 ,
가 ,
,

,

800 1100 30 가 6 7
,

가 , 가 ,
,

TFT TFT

1

, 210 (211) 300 HCl 3%
 950 30 가 (210) 350
 (211) (209) 가 (209) T
 FT (304) 1000 CVD
 , 0.2 %
 , 2(A)) 4000
 , 0.2 %
 , 100
 , 2(B) 3% 305
 , (306) 308
 , (305) (306) 가 3%
 , (308) 6000
 , 306 3%
 , (306) 309
 , (308) 309
 , (309) 1000 가
 , (304) (300) (308)
 , 2(D) N
 P() 311 315 312 314
 , (310) ,
 , (311), (313), (315), (312, 314) (自己)
 , 314 LDD(2000) (2(D))
 , (313) (309) 2000
 , 2000 가 200V
 , (316) ,
 , (317) (318) 3(E)
 , NTFT(N TFT ,
 V) TFT , PTFT(P 가 200 300(cm²/Vs), S 75 90(mV/dec)(V_D = 100
 (mV/dec)(V_D = 1V)
 , S TFT TFT TFT 1/2

1
 3 (208) , , 1(A) (B) 500
 , HCl 3% , 200
 (209) 200
 10) , (209) , (3(B))
 , CVD (304) 1000
 , HCl 3% (211) 300 (304) (3(D))
 , CVD , 3(D)
 , (211) CVD (304)

3

4 (4(A)) 1 2 2(D)
 , 1 (402) (401) 2000 , 4(B) CVD
 3) , (311) (315) , (403) (403) (403)
 , (403) 2 (404)
 4(C) , (404) (405)
 , (BM)(405) (405)
 403) (405) , 3 ITO (407) (406) (406)
 , (406) 2 (407)

4

1 (2) 3

, 5
 , 5(A) , (210) , (211) CVD
 (304) , CVD , , 500
 5(A) , (306) , 305 , (501)
 , (5(B)) , (306) (309) (307)
 5(B) , (501) , (306) (304)
 , (211)

, 5(C) (308) 5(C) (306)
 , (501) , 5(D) (315)
 , (311), (312 314), (313), (315)
 ,
 , 5(D) (317), (307) (503), (318) (502) 5(E)
 , / (307)
5
 1 667 1737
 600 , 4 가 HCl 3 % 2 30
 , 950 가 가
6
 1 , HCl
7
 1 ,
8
 TFT 8(A) (2005) 8 (2001)
 , EL (2001) (2002) 가 (2002)
 , (2003) (2004)
 8(B) 2 (2102) 가 cm (2101)
 ,
 8(C) (2204) (2202) 가
 , (2203) EL
 8(D) (2301) (2306) 가 (2303)
 , (2302) (2305) (2304) EL
 8(E) (2406) (2407) 가
 , (2407) TFT
 ,
 (2406) (2404) (2407) IC
 ,
 (2402) (2405)
 8(F) (2501)

(2501) (2502)
 (2503), (2504) 가
 , (B)

400MHz PTFT NTFT , 9
 40MHz 10% , TFT
 (MHz)
 S 100(mV/dec) MOS
 TFT

(57)

1.

가

(grain boundaries)

100mV/dec S 가 ,

LDD

2.

100mV/dec

3.

가

100mV/dec S 가 ,

LDD

4.

100mV/dec

5

5.

100 M/1

6

8

100mV/dec

5

7.

1

6
가 0 °

8

8

1

6

8

9.

6

S 75 100mV/dec

- | | | | | |
|------|------|--|--|--------------|
| 10. | 6 | , | Cl, F, Br | , |
| 11. | , | 5×10^{17} atoms/cm ³ | , | , |
| 12. | , | Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Au | , | , |
| 13. | , | , | , | , |
| 14. | , | , | 가 | , |
| 15. | 6 | , | ± 30 | (unevenness) |
| 16. | , | , | , | , |
| 가 | 가 | , | , | , |
| , | , | 800 | 1100 | 가 |
| , | , | , | , | , |
| 17. | , | , | , | , |
| 가 | 가 | , | , | , |
| , | , | 800 | 1100 | 가 |
| , | , | , | , | , |
| 18. | , | , | 가 | , |
| 16 | 17 | , | , | , |
| 19. | 17 | , | (Ni) | , |
| 16 | 17 | , | Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Au | , |
| 20. | 6 | , | 가 | 500 |
| 2000 | , | , | , | , |
| 21. | 17 | , | 가 | 500 |
| 16 | , | , | , | 2000 |
| 22. | 6 | , | 가 | , |
| 1 | 2000 | , | , | , |
| 23. | 17 | , | 가 | 2 |
| 16 | , | , | , | , |
| 24. | 17 | , | 가 | , |
| 16 | , | , | , | , |

25.

1 6 , 200cm²/Vs N

26.

1 6 , 120cm²/Vs P

27.

± 30

100mV/dec

S

N -

LDD

기

28.

+30

100mV/dec

5

가

29

± 30

100mV/dec

8

N-

가

30.

± 30
100mV/dec S 가

31.

 ± 30 N-
LDD

100mV/dec S 가

32.

 ± 30

100mV/dec S 가

33.

27

32

0 °

0 °

34.

27

32

35.

27

32

Cl, F, Br

36.

34

,

5×10^{17} atoms/cm³

37.

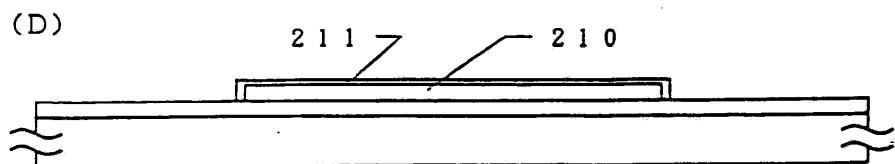
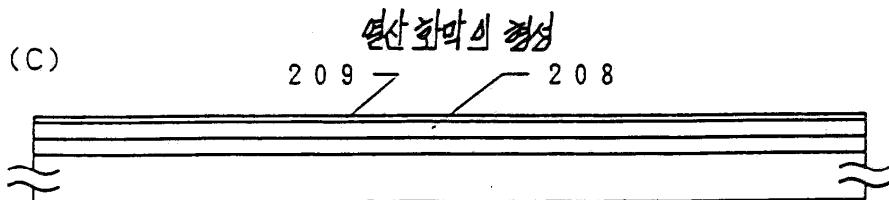
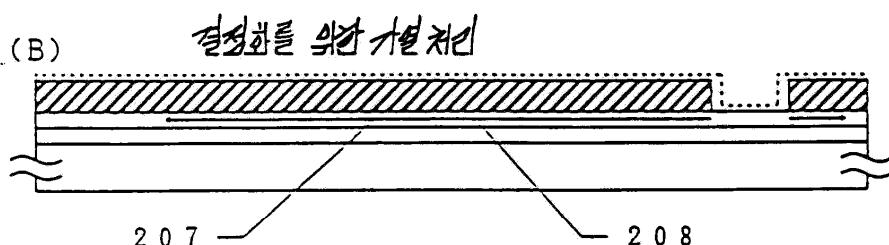
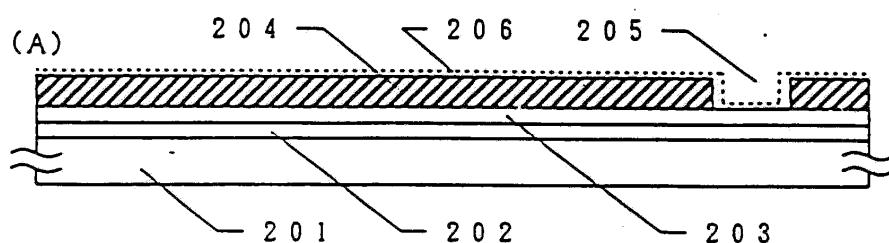
34 , Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Au

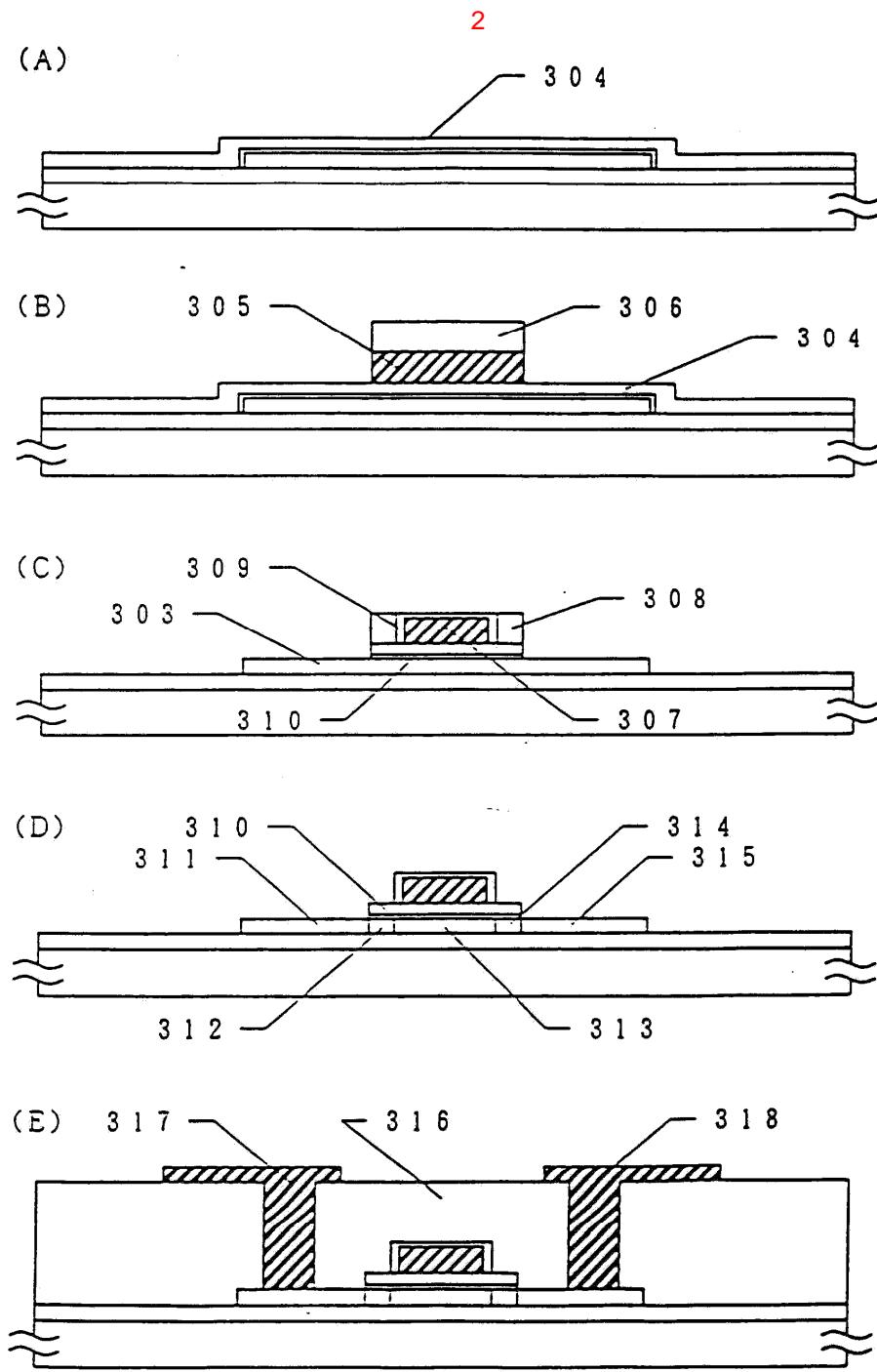
38. 27 32 , S 75 100 mV/dec ,

39. 1 6 ,

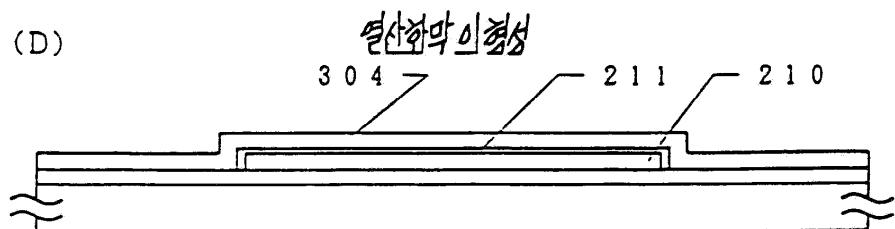
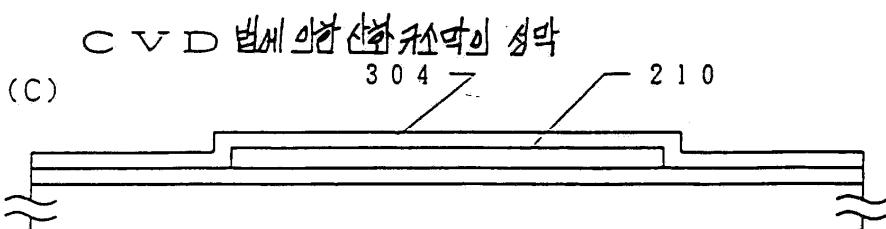
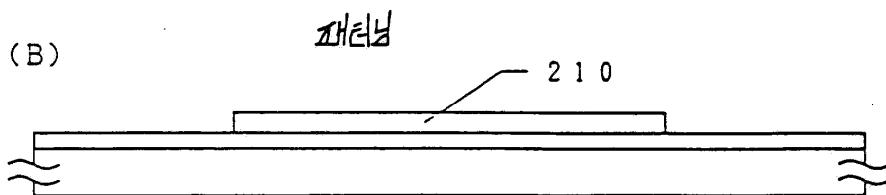
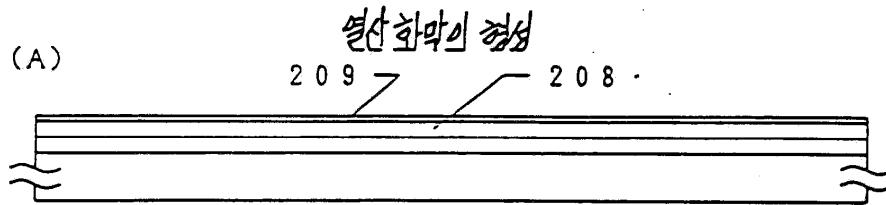
40. 27 32 ,

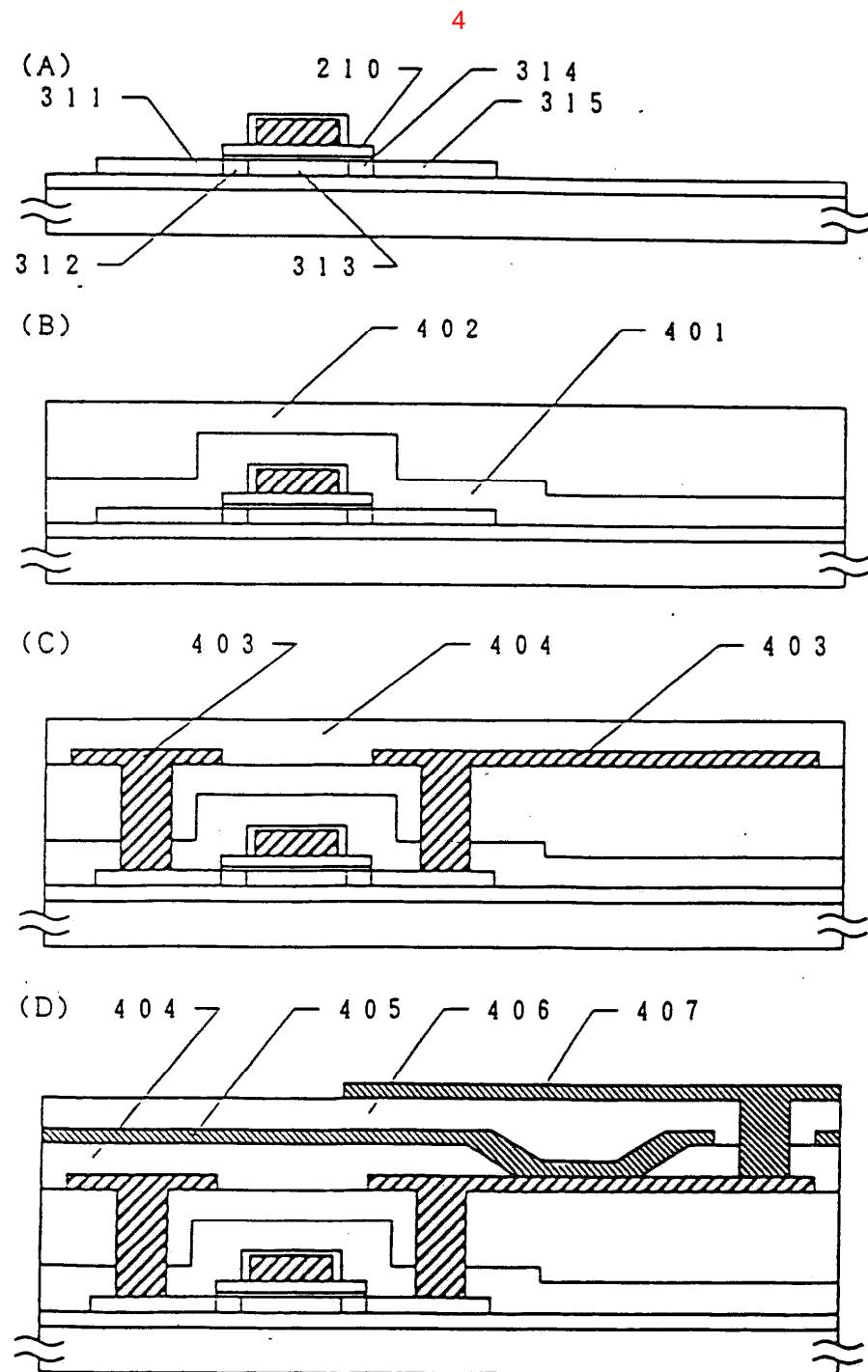
1

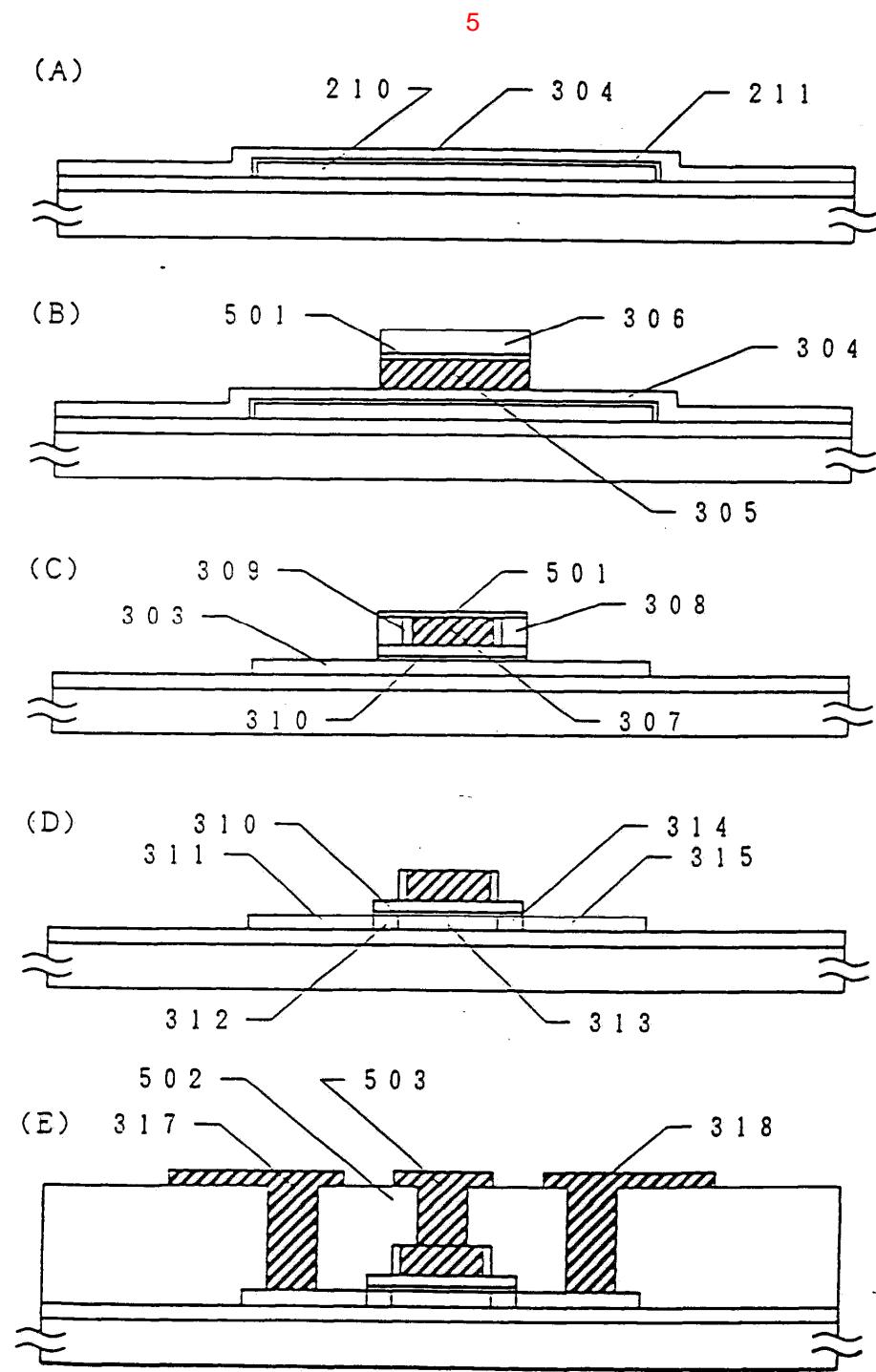




3

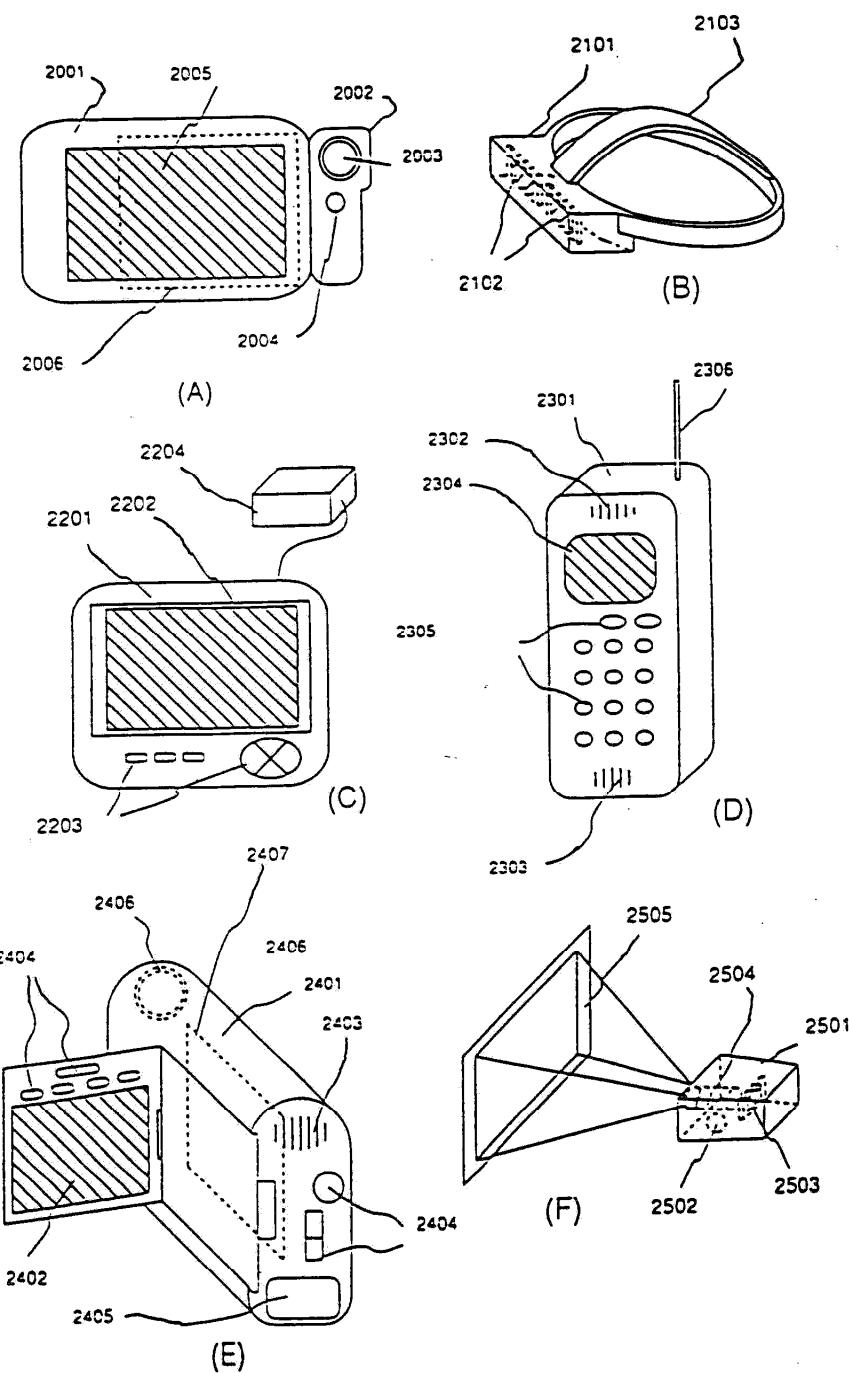




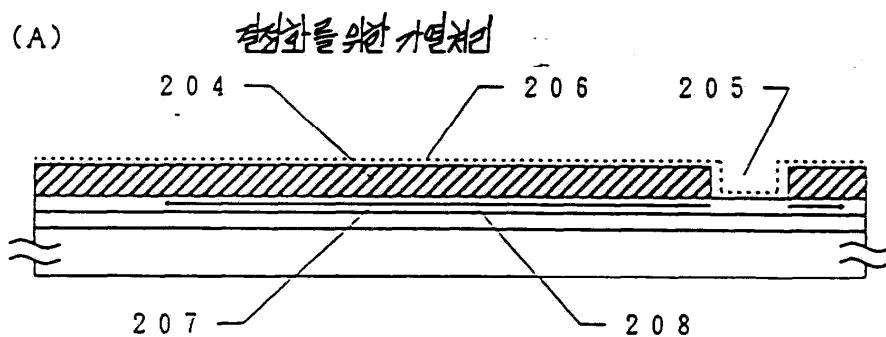








(A)



(B)

