

1 (16)

3

가

가

가

Transistor;) () TFT(Thin Film 가

4(1992) - 242724

(相補型) TFT

1 (A) 4(1992) - 242724
1 (B) 1 (A) A - A

1 (A) (B) , TFT (HD)(14), (V
D)(13) 가 (16) , () (62)
(63)
(TC)(23), (REF)(24), DC - DC (DDC)(25) , IC (23
25) (16) (13,14)가 ,
(8) (13,14)

2 , TFT (HD)(14), (VD)(13)
가 (16) , ()
TC)(23), (REF)(24), DC - DC (DDC)(25) , IC (23 25)
(13,14)

1 (A) (B) , 1 (B) , IC (23 25)
(8) (ta) , 1mm (tb)가

(tb)가 , 가 가 가 .
, 2 , () , TFT (13,14) , IC (23 25)
, () , 가 .

가 , 1 , 1 2 , 1 1 , 2 가 ,
, 1 가, 1 가, ,
가, , 1 가, .

1 2 , 1 1 , 2 가 , 1 1 가 , 1
가 , 가, 1 가, ,
1 가, .

1 (A) , 1 , 1 (B) 1 (A) A - A
2 , 2 .
3 (A) 1 , 3 (B) 3 (A) B - B
4 , 1 .
5 (A) , TFT , 5 (B) TFT

6 ,

7 ,

8 (A) , IC , TFT
8 (B) ,

9 , 2

10 , 9

11 , 2

12 ,

13 , PDA

1

3 (A) , 3 (B) 3 (A) B - B

, 4 ,

3 (A) 4 , (11)가
(12), (12) (11)
(VD)(13), (11) (HD)(14)
(13,14) (15)가 (16)

n (16) , (12) , m () (17 - 1 17 - m) ,
() (18 - 1 18 - n) , 가
(62) (63) , (17 - 1 17 - m)
(18 - 1 18 - n) (11)가

(11) , (17 - 1 17 - m) , (18 - 1 18 - n)
TFT(Thin Film Transistor;) (19) , TFT(19)
() (20) , TFT(19)
(21)

, (20) , (21) , (22)

(22) , (VCOM) .

(12) , (VD)(13), (HD)(14)
TFT ,

5 (A) TFT, 5 (B) TFT .

5 (A) TFT , () (16) (42)
, (42) (43) (Po1y - Si) (44) ,
(44) (45) .

, (42) (43) , n + (46)
(47) , (46,47) (48)
(49) .

5 (B) TFT , () (16) (52) ,
(52) (53) (54) , (54)
(55) .

, (52) (16) , n + (56)
(57) , (56, 57) (58)
(59) .

(15) , (TC)(23) , (VD) (IC)
D) , CPU (data)가 ,
(CLK) TCP(Tape Carrier Package) .

(23) , (VST), (VCK)
(VD)(13) , (HST), (HCK)
(data) (HD)(14) ,

(REF)(24) , 가 ,
(HD)(14) D/A (37) .

DC - DC (DDC)(25) , () 2 ()
(VD)(13), (HD)(14), (24) .

, (23), (24) DC - DC (25)가, (15)
(IC)

, IC(23 25) , 3 (B) , (VD)(13) , COG(Chi
p on Glass)

IC(23 25) , 100MHz 가 .

14) , TFT , (VD)(13) (HD)(

(33) 가 (VD)(13) , 6 , (31), (32)

(31) , (VST)가 , (VST) (VCK)

(32) , (31) (33)

7-1 17-m) (33) , (32) (12) (11) (12) (1)

(HD)(14) , 7 , (34), (35),
 (36), D/A (37) (38) 가

(34) , (HST)가 , (HST) (HCK)

(36) (35) , (34)

(36) , (35) (34)
 (data)

D/A (37) , (36)
 (38) (12) (18-1 18-n)

8 (A) IC (23 25) (15) , TFT (VD)(13)
 , 8 (B) ,

8 (A) , IC(23 25) 가 , (VD)(13) ,
 (13a) , (13a) (13b)

IC(23 25) , 8 (A) , (250) (251)
 , (251) (252)

8 (A) , (251) (252) ,

8 (B) , (VD)(13) (13a) IC(23 25)
 (251) , IC(23 25) (252) (66)

(VD)(13) (13b)

(13b) , (16)
 4 IC (23 25) , IC (23 25) (13,
 14)

8 (B) , (13a) , TFT , TFT
 n⁺ (47) , TFT p⁺ ()
 (46a) , (60) , TFT
 (61)

CPU (23) (data)가 (data)가
 (HD)(14) (36)
 (24) (HD)(14) D/A (37)
 , D/A (37)
 (HCK) (HST)가 (HD)(14) (34)
 (34) (HST)가 (HST)가 (HCK)
 (35)
 (35) 가
 (36)
 (36) (35) (34)
 (23) (data)
 (36) D/A (37)
 D/A (37) 가 ((38)
 (12) (18 - l 18 - n)
 (VD)(13) (VST)가 (31)
 (VST)가 (VCK) (32)
 (32) (31) 가
 (33)
 (33) (32) 가 (17 -
 1 17 - m) 가 (12) (11)가
 가 n
 (VD)(13) (HD)(14) TFT
 (15) (23), ((24), DC - DC (25) IC IC (VD)
 (13) COG
 3 (B) (VD)(13) IC (23 25) (t1)가
 (62) (63) (t3) (t2)가 IC (23 2
 5)
 (16), (62) (63) (t2)가

, IC , IC (16) , (16)

, IC (23 25) (16) , IC , IC IC

2

()

9 ,

10 , 9

9 10 , (11)가

(12), (12) (11) (VD)(13),

(11) (HD)(74), (SW)(75),

(13,74) (SW)(75) (15)가 (16)

(11) , (17-1 17-m) , (18-1 18-n)

TFT(19) , TFT(19) (20) , TFT(19)

(21)

(11) (20) (21)

(22) (22) , (VCOM)

(VD)(13), (HD)(74) (SW)(75) (15) ,

(TC)(23), (REF)(24), DC-DC (DDC)(25) 가 .

(23) , (VDD) ,

CPU (data)가, (CLK)

TCP

(23) , (VST), (VCK)

(VD) , (HST), (HCK)

(data) (HD)(74) , (S1 S3, XS1 XS3) (S

W)(75)

(24) , 가 ,

(HD)(74) D/A (8)

DC-DC (25) , () 2 ()

(VD)(13), (HD)(74), (24)

(19) (SW)(75) TFT (12) (VD)(13) (12) (16)

(HD)(74), (15) (23), (24), DC - DC (25)
IC

IC (HD)(74) (75) IC
(24), DC - DC (25) (VD)(13) COG

(12) 1 () 1
(HD)(74)

1 (SW)(75) (SW)(75)
(HD)(74)

(HD)(74) 1

11 (74)

11 (HD)(74) (84), (85), (86),
(87) D/A (88) 가 , 5 (data1 data

5) (Vdd,Vss) (84) (HST)가 ,
(HST) (HD)(74) (84) (HCK)

(85) (84) ()
(data1 data5)

(86) (85) 5V

(87) (86) 1H

D/A (88) (87) 1H

(HD)(74)

(HD)(74) 가
1 1

(SW)(75) , (HD)(74)
 ()

12 , (SW)(75)

12 (SW)(75) , (HD)(74) 1
 , R(), G(), B() 3

CMOS (SW)(75) , p MOS n MOS 가
 (75 - 1,75 - 2,75 - 3)

MOS , n MOS (75 - 1,75 - 2,75 - 3) , CMOS , p
 가

(SW)(75) , 3 (75 - 1,75 - 2,75 - 3)
 3 (18 - 1,18 - 2,18 - 3)

(75 - 1,75 - 2,75 - 3) , (HD)(74)
 가

, 1 2 , 6 (89 - 1 89 - 6)
 (75 - 1) 2 , CMOS 가 (89 - 1,89 - 2) ,
 (75 - 2) 2 (89 - 3,89 - 4) , (75 - 3) 2
 (89 - 5,89 - 6)

6 (89 - 1 89 - 6) , 3 (75 - 1,75 - 2,75 - 3)
 (S1 S3,XS1 XS3)가 (TC)(23)(10) ,
 (XS1 XS3) , (S1 S3)

(S1 S3,XSI XS3) , (HD)(74)
 3 (75 - 1,75 - 2,75 - 3)

(75 - 1,75 - 2,75 - 3) , (HD)(74)
 1H 3 (18 - 1,18 - 2,18 - 3)

VD)(13) (SW)(75) TFT (HD)(74) , (15) (23),
 (24), DC - DC (25) IC , IC
 (VD)(13) (SW)(75) COG , 1

3

1 2 , , OA
 , 가 PDA(Personal Dig
 ita1 Asistants) 가

13 , 1 2 가 , PDA
 .
 PDA , (91) , (92), (93), (94) (95)
 .
 , 13 PDA , , (92) , (96) 가 .
 , (91) , (94) (96)
 , (92) 가 .
 PDA (92) , 1 2 가 .
 , PDA , (92) , 가
 , , CPU, 가 .
 , IC COG ,
 , TAB(Tape Automated bonding) ,
 가 .
 , 가 가 .
 가
 , , 가
 , , .

(57)

1.

- 1 (16) ,
- 1 (16) , 가 (12) ,
- 1 (16) 2 (62) ,
- 1 (16) 2 (62) (63) ,
- 1 (16) , (12) 가 ,
- (13)가 1 (16) ,

(23,24,25)가

가

1 (16)

2.

1 ,

(13) ,

(14) 가

3.

1 ,

(13) 가 ,

(74) 가

4.

2 3 ,

(13)

(23) 가

5.

2 4 ,

가 .

(24)

6.

2 5 ,

DC - DC (25) 가² .

7.

1 6 ,

가, COG

1

8.

7

가

COG

9.

1

8

10.

1

9

가

1

2

11.

가

1

(16)

1 (16)

가

(12)

1 (16)

2 (62)

1 (16)

2 (16)

(63)

1 (16)

(12)

가

(13)가 1 (16)

(23,24,25)가

가

1 (16)

12.

11 ,

,

(13) ,

(14) 가 .

13.

11 ,

,

(13) 가 ,

(74) 가 .

14.

12 13 ,

,

(13)

(23) 가 ,

15.

12 14 ,

,

(24)

가 .

16.

12 15 ,

,

DC - DC (25) 가 ² ,

17.

11 16 ,

가, COG

1

18.

17 ,

COG

가

19.

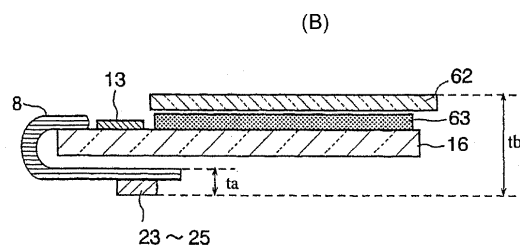
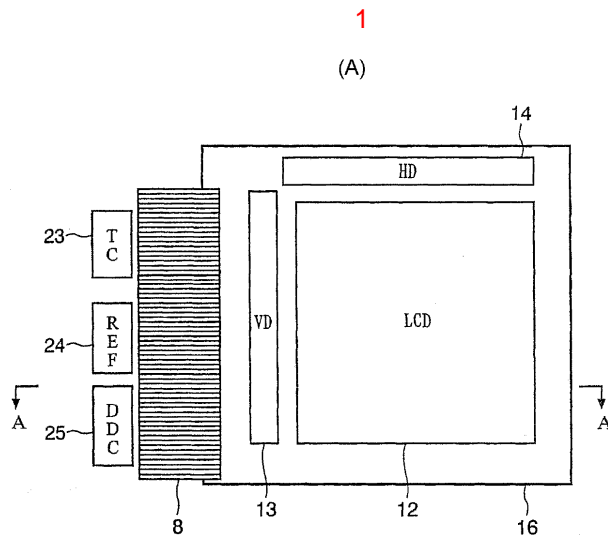
11 18

20.

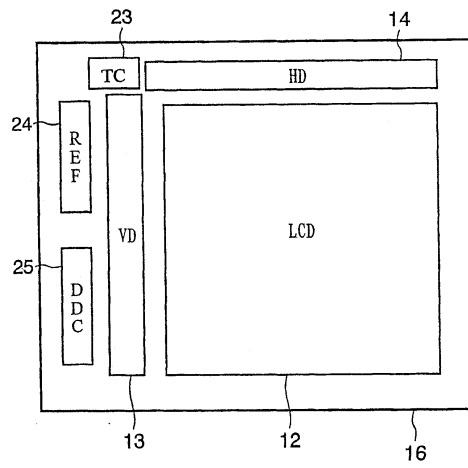
11 19

가 1

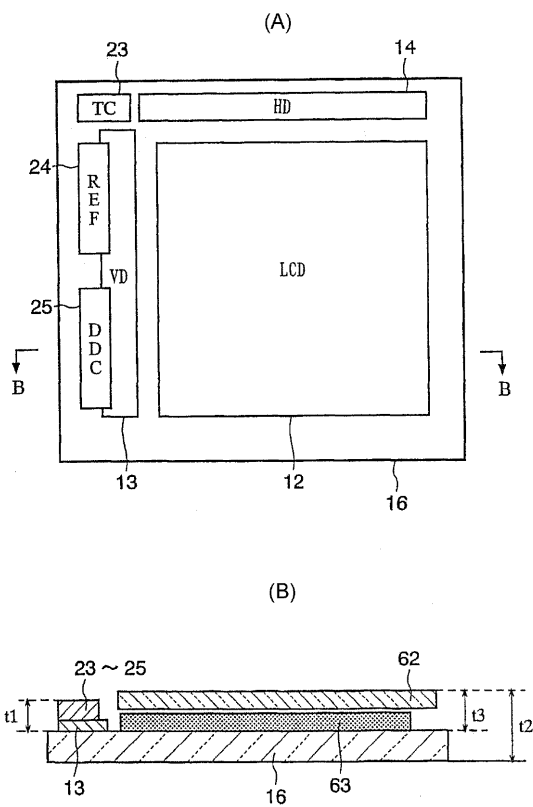
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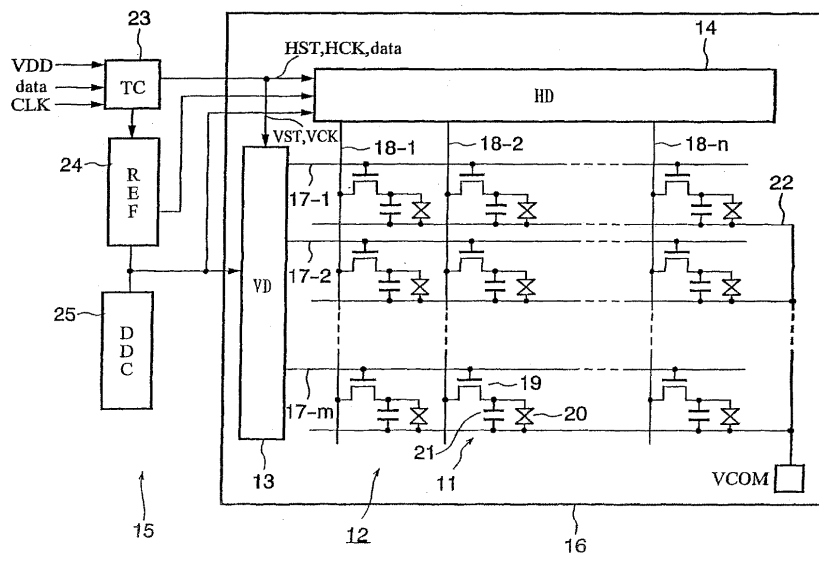


2



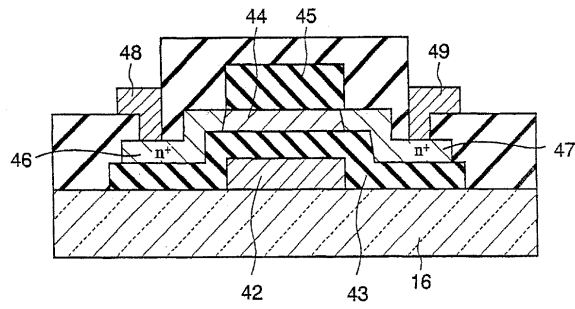
3



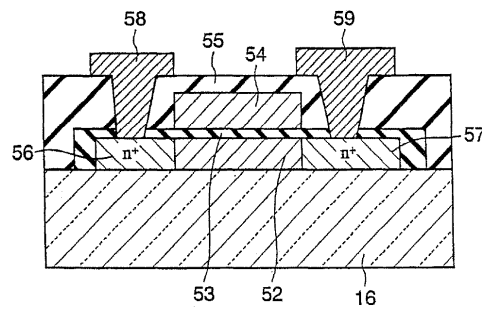


5

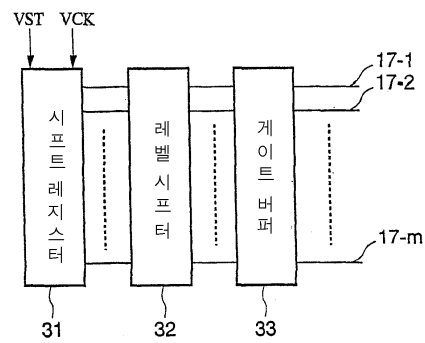
(A)



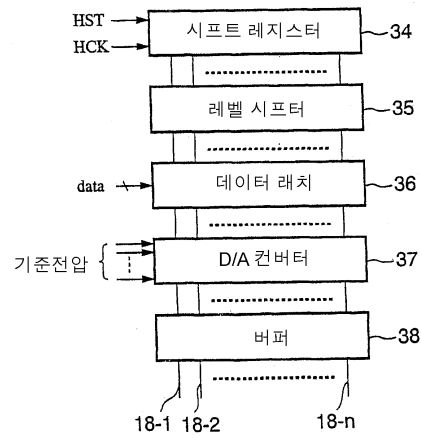
(B)



6

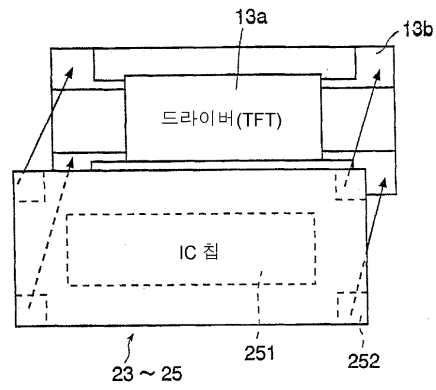


7

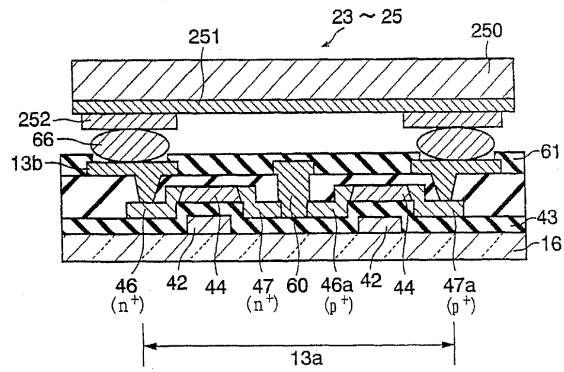


8

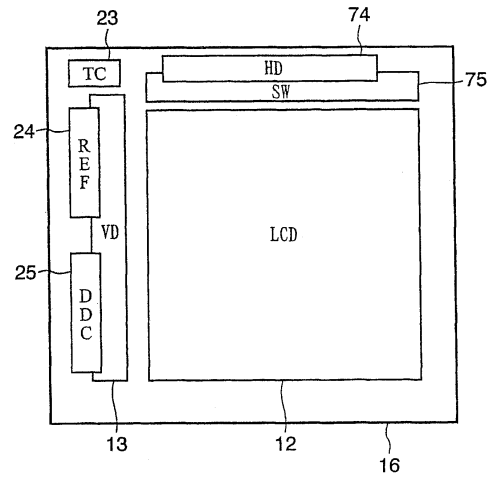
(A)



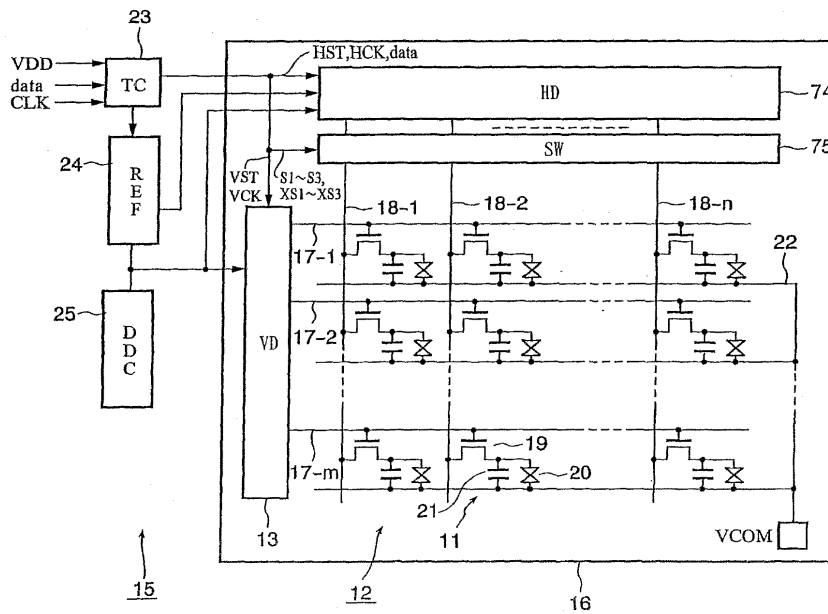
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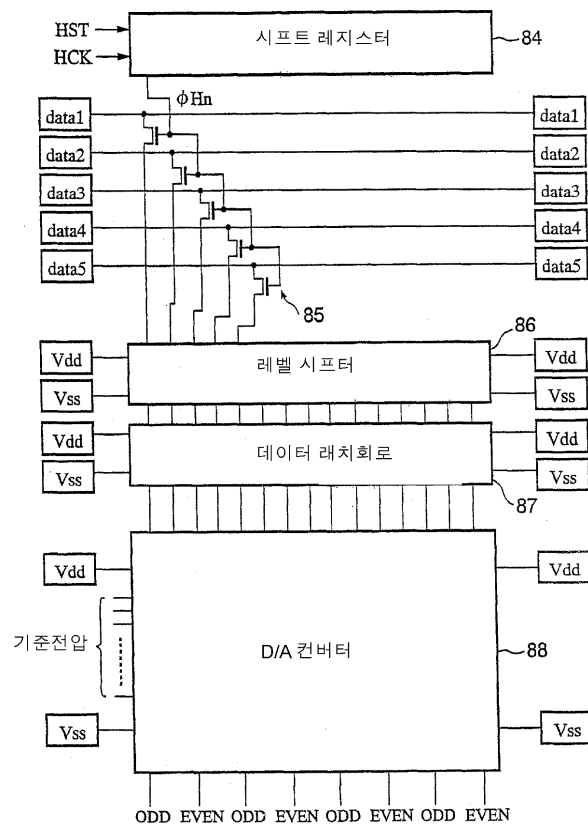


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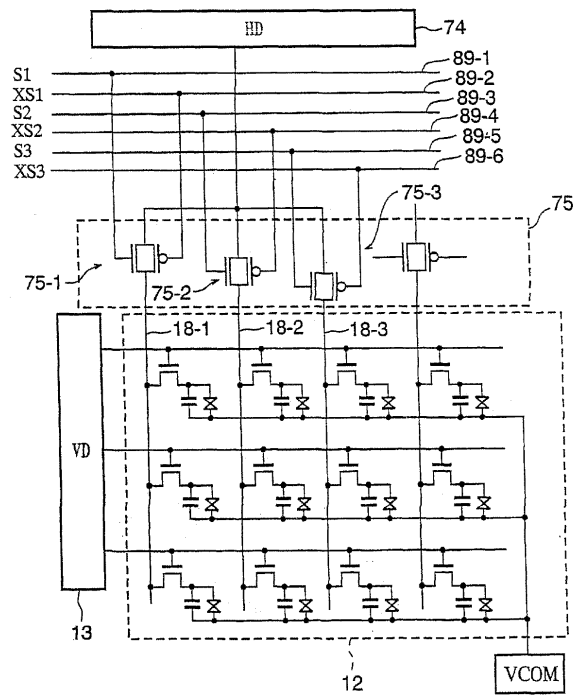


10

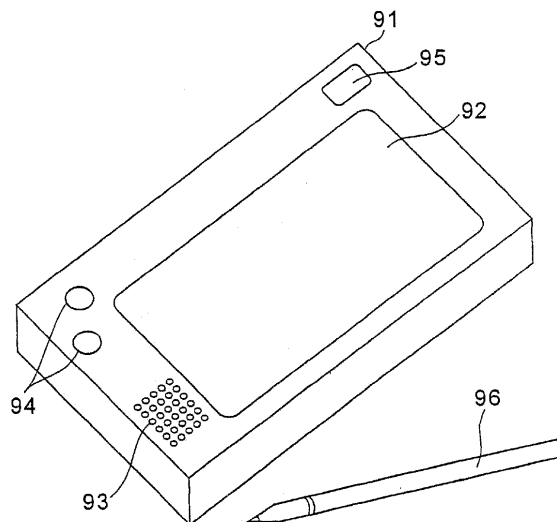




12



13



专利名称(译)	液晶显示装置和使用其的电子设备		
公开(公告)号	KR1020020040879A	公开(公告)日	2002-05-30
申请号	KR1020027004833	申请日	2001-08-23
[标]申请(专利权)人(译)	索尼公司		
申请(专利权)人(译)	索尼公司		
当前申请(专利权)人(译)	索尼公司		
[标]发明人	INO MASUMITSU		
发明人	INO,MASUMITSU		
IPC分类号	G02F1/1345 G02F1/13 G02F1/133 G02F1/1362		
CPC分类号	G02F1/13452 G02F1/13454 H01L2224/16225		
代理人(译)	您是我的专利和法律公司 KIM , JAE MAN		
优先权	2000254335 2000-08-24 JP		
其他公开文献	KR100829066B1		
外部链接	Espacenet		

摘要(译)

本发明提供了薄型成型，用于制造小面积的液晶显示器，以及实现了框架边缘的缩小，以及使用该液晶显示器的电子设备。因此，为了使本发明的液晶显示器与具有在第一基板(16)上形成的像素的像素(12)的区域和第一基板(16)重叠，并将其布置为矩阵类型和外围电路，其中剩余部分的半导体芯片外围电路(23,24,25)的至少一部分形成在半导体芯片中的半导体芯片中形成在第二基板(62)上，第一基板(16)与第一基板(16)和第一基板(16)之间设置的液晶组合(63)和至少部分外围电路(13)在第一基板(16)上形成薄膜晶体管，外围电路写入像素信号，在像素(12)周围的外围电路中形成薄膜晶体管，半导体芯片排列在第一基板上小号substrate(16)。液晶显示器，电子器件，薄型，小面积。

