

(19) (KR)
 (12) (A)

(51) 。 Int. Cl. 7
 G09G 3/36 (11) 2002 - 0059222
 (43) 2002 07 12

(21) 10 - 2001 - 0069957
 (22) 2001 11 10

(30) JP - P - 2000 - 00343562 2000 11 10 (JP)

(71) ()
 ↗ 5 - 7 - 1

(72) - 5 7 - 1 ()

(74)

:

(54)

(16) , (301) 303) (V1 V3) D/A
 , (20) , (22A) ,
 , 1 (24) ,
 , , , , , VDD
 VSS (26) . 1 , ((301) ,
 301) (V1) (22A) ,
 2 , (302) (V2) (22A) ,
 2 (302) .

1
2 1
3 11 - 145768
4 3
5 1
6 1
7 1
8 7
9 EL 가

* *
10, 10A 12, 12A
14, 14A, 14B 16, 16A D/A
18 20
22 22A
24 26
28 TFT 301 30K
40 50

()

, TFT - LCD()
EL

()

가

가

가

PDA,

(手持式；)

TFT - LCD

가

, TFT - LCD

(靜消費)

, TFT - LCD

, TFT - LCD

TFT - LCD

(階調)

EL

가

LCD

7 - 13528

7 - 104703

, LCD

가

가

가

7 - 173506

7 - 173506

가

11 - 119741

()

1

1

1

1

2

2

2

(, P 2

, 1

P

P

P

1

D/A

2

2

D/A

D/A

, P

1

1

2

1

1

1

1

가

D/A

D/A

1

, 1

2

2

2

『 』 「 」 , , , (VDD) (VSS) 가 . , 「 」 , (VSS) (VDD) (VSS) (VSS)

()

, , D/A (16) (20), (20)
 (22) , (22) , TFT - LCD TFT (20)
)(28) (30i)(i=1 K) (24) , (30i)
 (VDD) (VSS) (26)
 , (30i)(i=1 K) , 301, 302, 303, 304, . . . , 30K . , (303)
 02) , (301) (303) , (301) (303)

TFT - LCD TFT (28), , (32) . (32),
 (TFT)(34) . (34) . (34)
 (36) , (36) , (Vcom)) (30i)
 (POL) .
 , (20) , (22) , (24) , 1 (22A)

, D/A (16) , (20) , 3 , 3
 (22) 1 . (301) D/A
 (16) (V1) , (20) (201) (22A)
 (302) D/A (16) (V2) , (202) (22A)
 , (303) D/A (16) (V3) , (203)
 (22A) . K 가 , (30)(3j-2), (3)
 0)(3j-1) (30)(3j) D/A (16) 3 , (20) 1

, $j = 1$ $M(\dots, M = K/3, K/3, K/3)$
 $, K/3 \nmid j$ $, K, (3j - 1) / (3j)$

, (20) (24), (40)
, (20)(3j - 2) (24)(3j - 2)(, (201) (241))가, (40)
(S1) , 가 , 가 . , (20)(3j -)
(24)(3j - 1)(, (202) (242))가, (40) (S2)
가 , 가 . 가 , (20)(3j) (24)(3j)(
, (203) (243))가, (40) (S3) , 가 ,
가 .

(26) , (30i) (26i)(i=1 K) (VDD)
 (VSS) . (26i) , (30i) (VDD)
 , (30i) (VSS) , (30i) (VDD)
 , (VSS) 3 가 . , (26i) , (40)
 (SO) , (POL) , (14) D/A (1)
 6) , (26i) , (SO) 가 , (D0i)(i=1 K)
 (OL) , (30i) (VDD) (VSS) (D0i) (P)
 i) , (SO) 가 , (D0i) (POL) (26)
 (30i) (VDD) (VSS) ,
 (26i) 가 (D0i) ,
 (D0i) (26i) ,
 , (POL) , (18) , (Vcom)
 ,
 , (POL)

, 1 . 2 , (POL)가 「1」()
 , (POL)가 「0」()
 , , (POL)가 「1」()
 (VSS) . (POL)가 「1」() (Vcom)
 , (POL)가 「0」() (Vcom)

(VDD)

1 () , K 가, (12) (14)
 /A (16) , K (Vi) (i=1 K) (18) (POL) 가 「1」 () D
 , , , , , , , , , , ,
 S) , , , , , , , , , , ,
 . , 2 , , , , , , , , ,
 (V1) , (Vm) (VDD) , , , , , , ,
 D02=0 D03=0 , (V2 V3) , (Vm) , , , ,
 (Vm) , , , , , , , , , .

, () , N 가 , N (36)
, N (36) 가 N (34) 가 .
. (34) 가 .

1 , 1 가, 3 1 , 1
2 , 1 3 .
(301) (303) (304)
(301) (303) .

2 , 1 , , , (40) ,
 (SO) , , (S1, S2, S3) . ,
 (26) , D/A (16) (D0i) (PO)
 L) , (30i) (VDD) (VSS) , (3
 0i) .

(POL)가 , , , (301)
 (D01)가 「1」 , , D/A
 V1) , (VDD) (VSS) (Vm) , (26)
 (261) (VDD) , (301) (VDD) . ,
 (302) (D02)가 「0」 , , D/A
 (V2) , (VDD) (VSS) (Vm)
 , (26) (262) (VSS) , (302) (VSS)
 , , (303) (D03)가 「0」 ,
 (26) (263) (VSS) (303) (VSS)
 , , , (301) (30K)
 , (Vi) 가 (VDD) (VSS)

$$0) \quad , \quad (S1, S2, S3) \quad . \quad (40) \quad , \quad (S$$

, (30i) , (Vi) (VDD) (VSS) , D/A
 (40) , (S1) 가 . , (S2, S3)
 , (20) (201) , (24) (241) 가 , (202, 203)
 (242, 243) , (301) (301) (301) (22A) (22A) D/A (16) 가 (24
 1) (301) , (301) (301) (V1) (V1)

, (301) (VDD) (VSS) (301)
 D/A (Vm) , (V1) , (VDD) (VSS)
 , (301) (22A) , (V1) (301)

2 , , (40) , (S1) , (S2)
 , (202) (242) 가 , (203) (243) (241) 가
 (302) D/A (16) 가 (242) (302) (30) (22A)
 2) (V2) .

, (302) (VSS) (302)
 D/A (Vm) , (V2) , (VDD) (VSS)
 , (302) (22A) , (V2) (302)

3 , (40) , (S1) , (241)
 (S2) , (202) (242) 가 , (203) (243) 가 (241)
 303) D/A (16) 가 (243) (303) (303) (22A)
 , (22A) , (V3) , (V3) (303)

, (303) (VSS) (303)
 D/A (Vm) , (V3) , (VDD) (VSS)
 , (303) (22A) , (V3) (303) (VSS)

2 , {N+1} 1 , () , {N+1} (36) , N
 가 , (40) , (SO) (S1, S2, S3) 가
 1

(POL) 가 「0」() , (POL) 가 「1」() , (Vc)

, (), , , 1
240 가 , 1
가 , 3 1
80

1 , 3 1
, . , , ,
, 2 1 , , ,
, 120 . 4 1 , ,
60

(VDD) , (VSS) , 가, .

가 11 - 145768

3 , 11-145768
 3 , 1 (22A) (261, 262, 263)
 (100) (200)

(26) (26i) , (30i) (T2)
 (T2) (VSS) (VSS) (VDD) (VDD) (212)
 (112)가, (100) , (212)가, (200)

(100) , NMOS (101, 102) (111)가 . (101) , VDD
 (101, 102) VDD , , (101) (111)가 . (101) (20) , (103)
 (T1) , (101) (T1) , (VSS) (101) (104) (1)
 (121)가 . (102) , (102) (22A) (T3) , VDD
 22)가 . (102) , (T3) (VSS) , (105) (124)가 . (123)가
 , (103 104) I(11), (105) I(13)

(200) , PMOS (251, 252) (251, 252) , VSS
 (251, 252) VSS , , (251) (251) , (253)
 , (251) . (251) , (251) , (T1)
 1) (VDD) , , (254) (222)가 . (252) (252) , (25)
 (22A) (T3) , VSS (223)가 . (T3) VDD
 2) . (255) (224)가 . , (253 254) I(21),
 (255) I(23)

3 , (112, 212) (100, 200) , ,
 D0i) , (POL) , (40) (SO) (SO1, SO2, SO
 3, S1, S2, S3)

, (26i) , (SO) , (112, 212)
 가 , (POL) (D0i) , OR (D0i) , (POL) , (112, 212)
 (D0i) , OR (501) (261) (D01)가, 2 (112, 212)
 가가 . (POL) (D02)가, OR (502) , OR (50)
 1) . (262) (112, 212) 가가 . OR (502)
 가가 (D03)가, OR (503) (503) , (2)
 (502) . (112, 212) 가가 . (POL)
 63) (112, 212)

, (22A) , (100) (200) , 가 , (POL)
 (D0i) (D0i) , (S1) (22A) , (401) , 2 OR (400)
 (D01) , , (D02) , (S2) , (402)
 , 2 OR (400) (403) , 2 OR (400) (S3)
 OR (400) (100) , (200) (POL)가 , 2 OR (400)
 가가 .

, , , Vin , , , (200) 가
 , (100) 가 OFF , , , (100) 가
 , , , (100) 가
 200) Vin 가 OFF (200)

, , , (100) (200) , , , (SO1, SO2, SO3)
 (100) (200) , , , (121, 122, 221, 222) , , , (SO2)
 , , , (SO1) , , , (SO3)
 , , , (123, 124, 223, 224) , , .

4 , 3 , 4 , 1 (P)(
 t0 - t1), 1 (t1 - t4), 2 (t4 - t7), 3 (t7 - t0) . , 4

(POL) 1 , , , (POL) 가
 (SO) 가 , , , (SO1, SO2, SO3, S1, S2, S3)
 , , , (100, 200) .

, , , (301) (D01) 가 「 1 」 ,
 (302) (D03) 가 「 0 」 , , , (D02) 가 「 0 」 , , , (303)
 「 1 」 , , , D/A , , , 가 , , , (261) , , , (VDD)
 (Vm) , , , (112) , , , (301) , , , (VDD) , , , (D01) 가
 (212) , , , D/A , , , (262) , , , (VDD) , , , (VSS)
 , , , (Vm) , , , (212) , , , (302) , , , (VSS) , , , (112)
 , , , D/A , , , (263) , , , (VSS) , , , (D02) 가 「 0 」
 , , , (Vm) , , , (212) , , , (303) , , , (VDD) , , , (VSS)
 12) , , , (212) , , , (VSS) , , , (D03) 가 「 0 」
 , , , (112) , , , (212) , , , (VSS) , , , (VSS) , , , (1)

3 , (t1 - t0) , , , (SO) 가
 , , , (112, 212) (t1 - t0) , , , (SO) 가
 , , , (112, 212) (t1 - t0) , , , (SO) 가

1 , (tl - t4) , 2 , , , (S1)
 (S2 S3) , , , (201, 241) 가 , , , (401) 가
 (301) , , , (D01) 가 , , , (100, 200)
 OR (400) , , , (200) 가 , , , (301)
 (D01) 가 「 1 」 , , , (t1 - t4) , , , (111, 112, 121, 122, 123,
 (211, 221, 222, 223, 224) 4 , , , (124)

(t1) , (SO1) (211)가 , (251, 252)
 (V20) (VSS) . (t2) , (SO1) (211)가 ,
 (V20) . (t2) , (SO2) (221, 222)가 ,
 (V20) , (Vin) (251) . Vgs251(I21)
 , V20=Vin+Vgs251(I21) , Vgs251(I11) 가 I21

(t3) , (SO3) (223, 224)가 , (241)
 (252) , (Vout) , (V20) (252) . (VDD) Vgs252(I23)
 , Vout=V20 - Vgs252(I23) , Vgs252(I23) 가 I23

, Vgs251(I21) Vgs252(I23) , (I21, I23) , 2
 , (Vout) (Vin) . , , VSS - Vgs252(I23) (Vout)
 VDD가

1 (t4), (SO2 SO3) (221, 222, 223, 224)

2 (S1 S3) (t4 - t7) , 2 , (202, 242)가 , (S2)
 (302) , (D02)가 , (402)가 ,
 OR (400) (D02)가 「0」 , (100)가 , (302)
 (111, 112, 121, 122, 123, 124) 4 , , (t4 - t7)
 224)

(t4) , (SO1) (111)가 , (101, 102)
 (V10) (VDD) . (t5) , (SO1) (111)가 ,
 (V10) . (t5) , (SO2) (121, 122)가 ,
 (V10) (Vin) (101) . Vgs101(I11) Vgs101(I11)
 , V10=Vin+Vgs101(I11) , Vgs101(I11) 가 I11

(t6) , (SO3) (123, 124)가 , (242) (10
 2) , (V10) (102) (t0 - t1) (VSS) (302) ,
 - Vgs102(I13) , Vgs102(I13) Vgs102(I13) 가 I13
 , Vgs101(I11) Vgs102(I13) , (I11, I13) , 2
 , (Vout) (Vin) . , , VSS Vout VDD - Vgs102(I1
 3)가

2 (t7), (SO2 SO3) (121, 122, 123, 124)

3 (t7 - tO) , 2 , , (S3) ,
 (S1 S2) , . , (203, 243)가 , , (403)가 ,
 (303) (D03)가, (100, 200)
 OR (400) . , , (303)
 (D03)가 「0」 , (100)가 , , (t7 - t10)
 (111, 112, 121, 122, 123, 124) 4 , , (211, 221, 222, 223,
 224)

(t7) , (SO1) (111)가 (101, 102)
(V10) (VDD) . (t8) , (SO1) 가 , (V1
0) . (t8) , (SO2) (121, 122)가 , (V1
0) (Vin) (101) . Vgs101(I11)
V10= Vin+Vgs101(I11)

$$\begin{aligned}
 & (t9), \quad (SO3) \quad (123, 124)가 \quad (243) \quad (10 \\
 & 2) \quad , \quad (V10) \quad (tO - t1) \quad (VSS) \quad (303) \quad , \\
 & (V10) \quad (102) \quad . \quad Vgs102(I13) \quad , \quad Vout = V10 - \\
 & Vgs102(I13) \quad . \quad , \quad Vgs101(I11) \quad Vgs102(I13) \quad , \\
 & (I11, I13)가 \quad , \quad (Vout) \quad (Vin) \quad .
 \end{aligned}$$

$$\begin{aligned}
 & 3, (t10), (SO2, SO3), (121, 122, 123, 124) \\
 & ., (t10), 1, , , , \\
 & ., (t0, t11), ., , , , \\
 & , \{ VDD - Vgs102(I13) \}, \{ VSS - \\
 & Vgs252(I23) \}, , , . \\
 & (100, 200), , , , , \\
 & (V10, V20), (100, 200), (100, 200), , , , \\
 & 가, ., , , , , \\
 & , (100, 200), , , , , \\
 & , , , , , , \\
 & (22)
 \end{aligned}$$

$$, \quad 3 \quad , \quad (253, 254 \quad 103, 104) \quad , \\ (211, 111) \quad .$$

5 , 1 . 1 ,

5 , 1 (10) (12) , (50)가
- 가 (18) , 가

가 (50) (14), . . , 5, 5, 1
 . , , , . , 5, , (22)
 , 3 (100, 200),

6 , 1 . 1
 , , , , (301) (803)
 , , , , (301) (303)

6 , (14) , (S1 S3) , D/A
 , 3 . , D/A

(26) (14) (26i) 가 , 1 . , (D0i) , (20) (14)
 D/A (16A) , (20) (20i) , D0i (20i) , D/A (16A) .
 () (14) 가 6 , 가 , , , , ,
 (14) (20) (20i) , 6 , , , , 1

, (301) (D01 D51) (201) (302)
(D02 D52) (202) , , (303) (D03)
D 53) (203) , D/A (16A) D/A (16B)
, D/A (16A) , 1 D/A (16) 1/3
, , D/A , , , ,

D/A (16A) D/A (16B) , (22A)
(D0i) , (14) (26)

, (), N 가, N (36) (34) 가 . 6 , 1 , 1 , 1

3 . , , (301) (303)
 . (304) , , (301) (303)

2		, 1						(40)
	(SO)		,	(S1, S2, S3)			,	
(26)		(14)					(D0i)	,
(30i)		(VDD)		(VSS)		,	(30i)	.
	(POL)가		가	,	,	(301)		
	(D01)가 「1」			(26)	(261)	(301)	(D02)가 「0」	(VDD)
.	,	(302)					,	,
	(26)	(262)	(302)	(VSS)	(VSS)	.	,	(303)
			(D03)가 「0」		,	(26)	(263)	
(302)		(VSS)	.	.	,	,	(301)	
	(30K)		.		가		(VDD)	
	(VSS)	.	.					

3 , 2 (S1, S2, S3) , (40) , (SO)
 , (301) , (30K) , (VDD) , (VSS) ,
 D/A 가 .

, (40), (S1),
 (S2, S3) . , (20), (201), (24)
 (241)가 , (202, 203) (242, 243) . , (301)
 (D01 D51)가, (14) (201) D/A (16A)
 D/A (16B) , (301) D/A (16B)가
 (V1) (22A) , (22A) , (241)
 (301) , (301) (V1) .

, (301) (VDD), (301) (VSS)
 D/A (Vm), (22A), (VDD) (V1), (VDD) (V1).
 (301), (301)

D/A , (302) (VSS) , (302)
 (Vm) , , (V2) , (VDD)
 (302) , (302) , (VSS) (VSS)

 3 , (40) , (S1) , , (201) , (S2)
 , (202) (242) 가 (203) (243) 가 , (241)
 D/A (D03 D53) 가, (14) (203) , (303) , (303)
 (16B) (V3) (22A) , D/A (16A)
 (303) (303) , (V3) , (16B) 가 (24)

 D/A , (303) (VSS) , (303)
 (Vm) , , (V3) , (VDD)
 (303) , (303) , (VSS) (VSS)

 2 , 1 , , 1 , (N+1) , (36) , N
 가 , {N+1} , , 가 , {N+1} (S1, S2, S3) 가
 , 6 , , (22) , , 3 , (100, 200)

 7 , 1 , , 1 , 6 , (301) , (301) , (303)
 , , , , , , , ,

 7 , , , , , , , ,
 , 3 , , , , , , ,
 , , , , , , , ,

 , 1 , , 3 , , , ,
 , (12A) , 1 , (301) , (301) , 3
 , (30)(3j-2)(j=1 K/3) , 1 , (14A)
 , , 2 , (302) , 3 , (3j-1) , (D02
 D52) 가, (14A) , 1 , 3 , 2 , (303) , 3 , (3
 (12A) , 1 , , , , , , ,

j)

(D03 D53)가, (14A)

, 1 (301) 1 3 , (14A) , 1
)가, (14B) , 1 2 (302) 2 3 , (D01 D51
 , 1 (D02 D52)가, (14B) , 2 3 , (3j - 1)
 , (14A) , 1 (D03 D53)가, (14B) , 3
 (3j) , (40) .

, (14A) (14B) , { 1 } / { + 1 } (10A)
 (12A) , 1 (10) , 1 (12) 1/3 (14) 1/3 ,
 (14A) (14B) , 1 (14) 2/3 ,
 , 7 , D/A , 6 .
 (14B) , D/A (16A) D/A (16B)

, (26) (26i) , (14A) (S1 S2) . (D0i)
 , (POL) , (SO) , (SO) ,
 (D01) (261) (POL) , VDD VSS 가가
 (302) (262) , (S1) ,
 (D02) (POL) , VDD VSS 가가
 (302) (263) , (S2) ,
 (D03) (POL) , VDD VSS
 가가 .

, 1 7 , 8

7 , 1) , 8 , 4 , 3 , 4 , 1 , 3 , 1
 , , , , , (301) , , (301) , (303) (303)
 , , , , , (304) , , , , (301) , (301) , (303)

1 () (36) , N . () (36) , N . (34)가 . (34)가 .

, 1 () , (301) D01 (301)가,
 3 (30)(3j - 2) () . , 8 D51)가,
 (12A) (14A) ,
 , (40) , (SO) , (S1, S2, S3)
 . , (26) , (14A) (301)
 (D01) (POL) , (VDD) ()
 VSS) , (301) (POL)가
 , (301) (D01)가 「1」 ,
 (26) (261) (301) (VDD)

, 1 (302) 3 (12A), (30) (3j - 1) (14A), (30) (3i - 2) (14B)
D02 D52)가, , (301) D01 D51)가, (14A) (14B)

, (301) , (VDD) (VSS) ,

(40) 가,	(S1)	,	(S2, S3)
,	(24)	(241) 가	,
(301)	(D01 D51) 가,	(242, 243)	
(16B)	(301)	(14B)	D/A
(V1)	(22A)	D/A	(16B) 가
(301)	(301)	(22A)	,
		(V1)	(241)

, (301) (VDD) , (301) (VSS)
 D/A (Vm) , (V1) , (VDD) (V1) .
 (301) (301) (22A) .

1 , 2 , 3 , ()
D03 , D53)가, (12A) (30)(3j) (303) (303)
() , (302) , (302) (30) (3j - 1)
D02 D52)가, (14A) (14B)

, 8 , 2 , (40) , (S2)
 , (SO) (S1, S3) . , (26) ,
 (14A) (303) (D03) (PO)
 L) , (303) (VDD) (VSS) , (3
 03) . 1 (POL)가
 , , (303) (D02)가 「0」 ,
 (26) (263) (303) (VSS) .

(40) 가, (S2), (S1, S3)
 , (24) (242) 가, (241, 243)
 (302) (D02 D52) 가, (14B) D/A (16A) D/A
 (16B) (302) (16B) 가
 (V2) (22A) (22A), (242)
 (302) (302) (V1)

, (302) (VSS) , (302) (VSS)
 D/A (Vm) , (V2) , (VDD) (VSS) (VSS)
 (302) , (302) (22A) , (V2) .

, 8 , 3 , (40) , (S3)
, (SO) (S1, S2) , , (241)
, (242)가 (243)가 , (303)
(D03 D53)가, (14B) D/A (16A) D/A (16B) (V3)
(303) D/A (16B) (V3)
(22A) (22A) (243) (303)
(303) (V3) .

, (303) (VSS) , (303) (VDD) (VSS)
 D/A (Vm) , (22A) , (VSS) (VSS)
 (303) , (303) (V3) .
 8 가 , {N+1} 1 , 가 , {N+1} () (36) , N
 , (40) , (SO) (S1, S2, S3) 가 .
 , 1, 5, 6 , , 가 (VDD)
 , , (VSS)

$$, \quad 7 \qquad , \qquad (22) \qquad , \quad 3 \qquad (100, 200)$$

5, 6 7 , 1 , 3 1 . , 1
., 3 가 가 , . , , , ,
가 .

¹ 5, 6, 7, , .

, 1 (VDD) (VSS) (VSS) 2 , , , 2
 , 3 , 3 4 , , , 1
 가 . , , , 2 (位)

1 5 6 TFT

1 5, 6 7 ,
 . ,
 가 , , , ,
 (18) 가 , ,
 , 3 (100, 200) , ,

9 , EL 가
EL , 9 ,
MP1 (MP2) (MP2) 가 (OLED) ,
가, (MP2) , (MP2) . (MP2) ,
() . , EL ,
, El SID 98 DI

GEST 11 14 , R. M. A. Dawson
active - Matrix Organic LED Display ↴

4.2 Design of an Improved Pixel for a Polysilicon a

가 11 - 145768

가

(57)

1.

1

1

2

2

1
D/A
D/A

1

3.

D/A

D/A , , D/A , , D/A , ,
 D/A , ,

4.

, , P , (, P 2), 가 , P
 , , 1 , , P , , D/A , ,
 2 , , 2 D/A , , D/A , , P
 P 1 , , , , , , , , , , ,
 , , , , , , , , , , , , ,
 , , , , , , , , , , , , ,
 1 , , , , , , , , , , , ,
 , , 2 , , 1 , , , , , , ,
 , , , , , , , , , , , , ,
 1 , , , , , , , , , , , ,
 , , 2 , , 2 , , , , , , ,
 , , , , , , , , , , , , ,
 D/A , , , , , , , , , , , ,

5.

4 ,

1 P P , , 1 2 1 1 , 1
 P P , , , , P , , 2 1
 , , 1 , , P , , , 2 2
 P , , , , , , , , , , ,

6.

1 5 ,

, , 1 2

가 , , 2 , 2 가 , , 1 , 1

7.

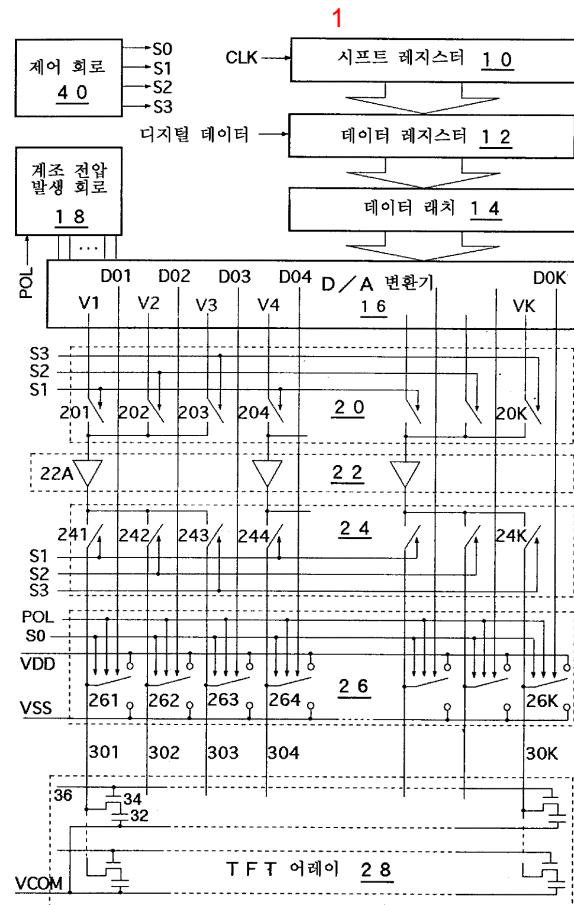
6

1 , , 1 PMOS , 1 PMOS
1 가 , 가 , 2 PMOS , 2 PMOS ,
1 PMOS 1 ,
1 PMOS 2 ,
3 , 2 PMOS 2 ,
4 , 2 PMOS 2 ,
5 , 1 , 1 , 1 , 1 , 1 , 5 , 2 , 2 ,
5 , 1 , 1 , 1 , 1 , 2 PMOS , 2 , 3 ,
4 , 5 , , , 1 , 5 , 5 , 1 ,
,

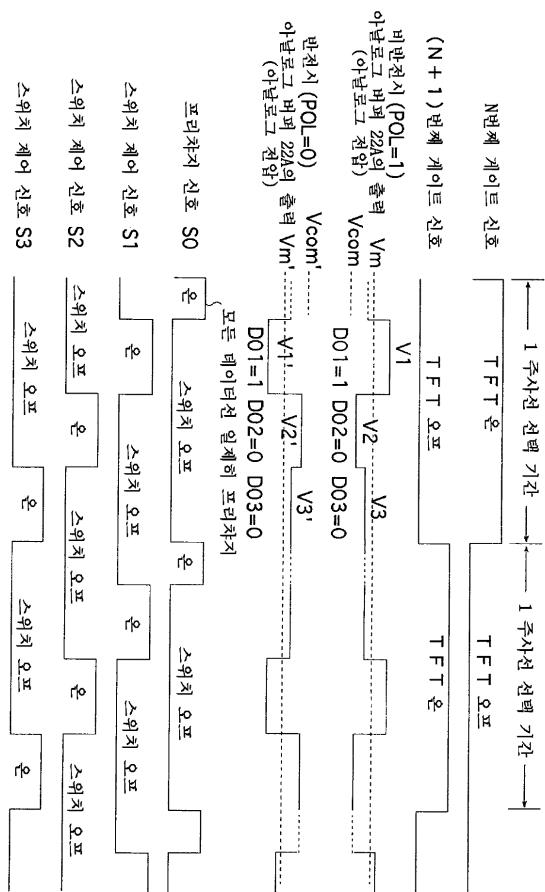
8.

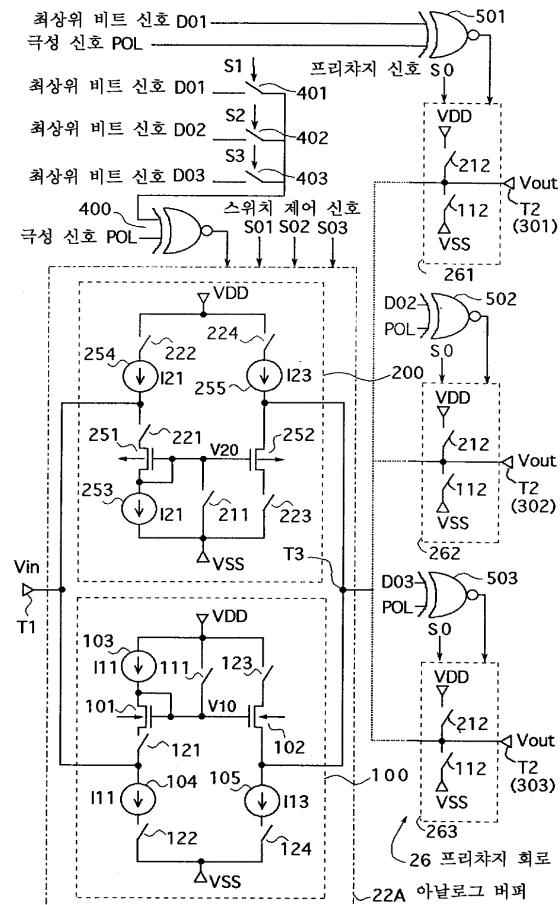
7

2 , 1 NMOS , 1 NMOS
가 , 가 ,
1 2 NMOS 2 NMOS 6 , 1
NMOS 3 ,
1 NMOS 7 ,
8 , 2 NMOS 9 , 4
9 , 2 NMOS 10 ,
10 , 6 2 , 가 , 6 10 , 7 8
10 , 6 , 2 NMOS 1 , 2 NMOS 9 10 , 6 10 , 가 ,
9 10 , , , 6 , 10 , 7 8

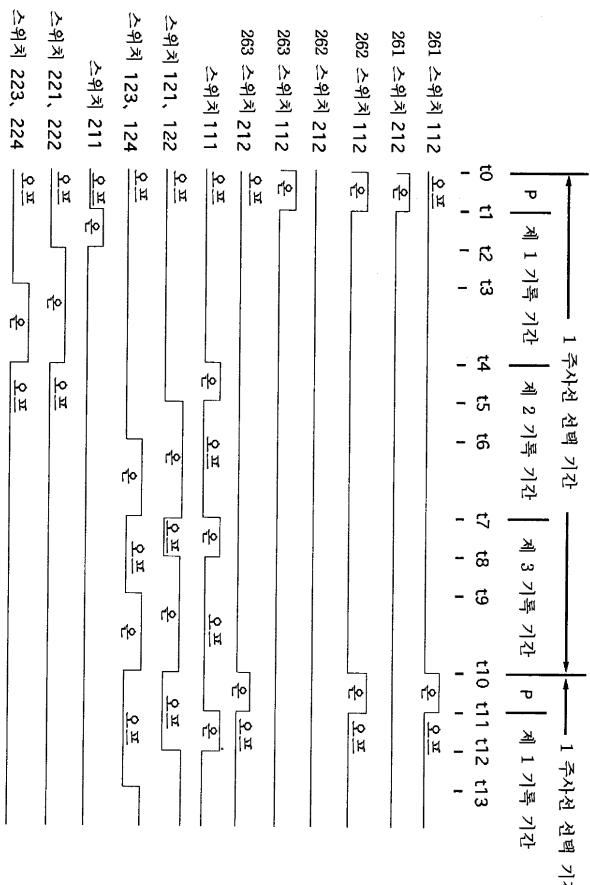


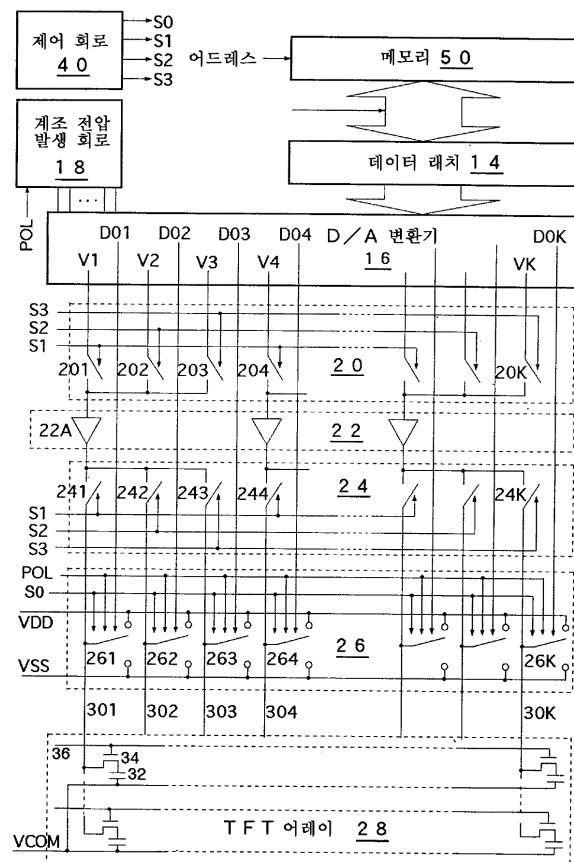
2

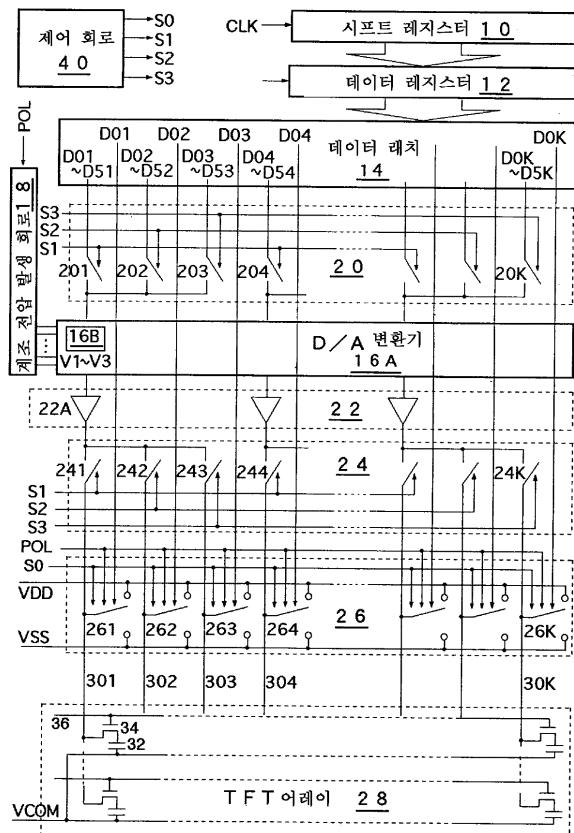


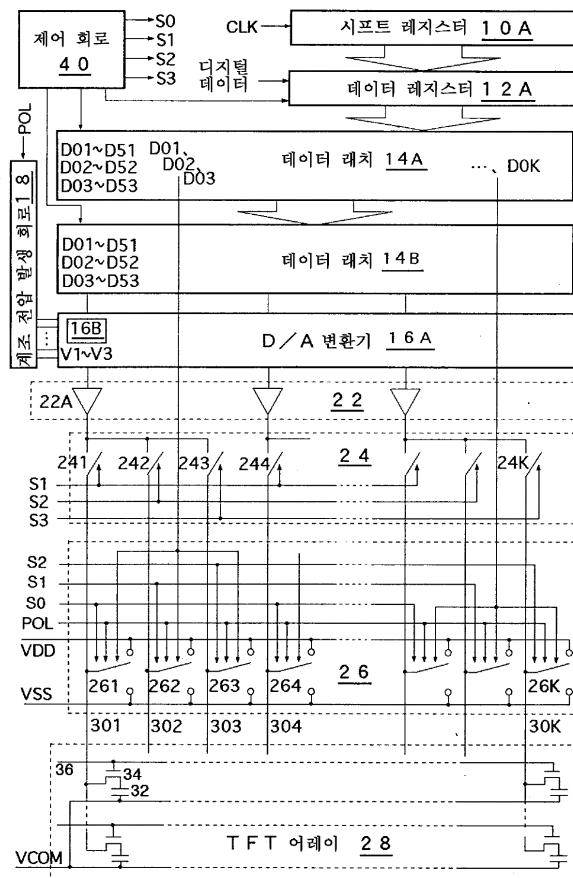


4

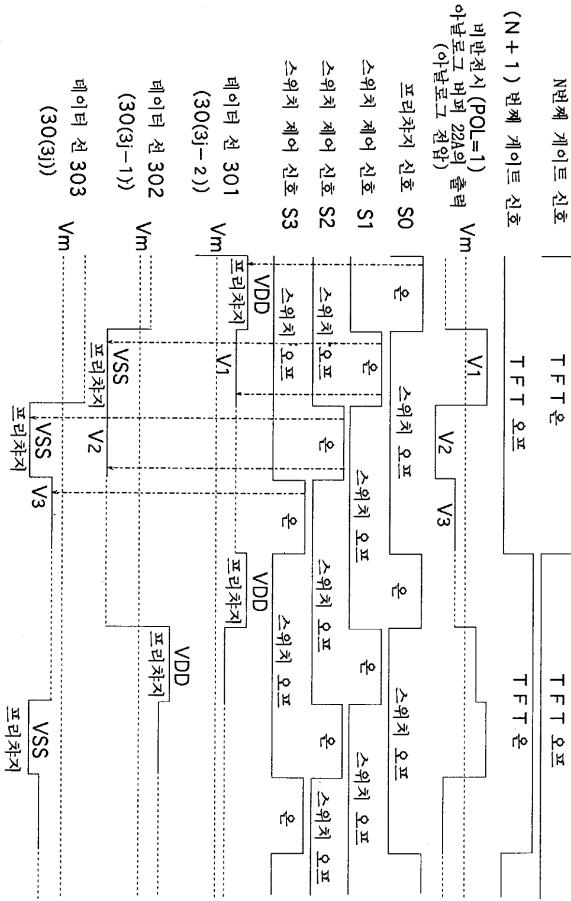






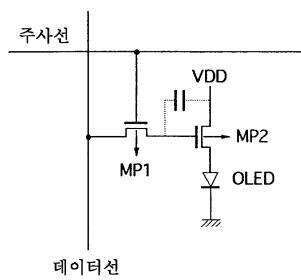


8



9

액티브 매트릭스형 유기 EL 디스플레이의 가장 단순한 화소 구성



专利名称(译)	面板显示装置的数据线驱动电路		
公开(公告)号	KR1020020059222A	公开(公告)日	2002-07-12
申请号	KR1020010069957	申请日	2001-11-10
申请(专利权)人(译)	日本地方可否让来.)		
当前申请(专利权)人(译)	日本地方可否让来.)		
[标]发明人	TSUCHI HIROSHI		
发明人	TSUCHI,HIROSHI		
IPC分类号	G09G3/30 G09G3/36 G09G3/20 H04N5/66 G02F1/133 G09G3/32		
CPC分类号	G09G2300/0842 G09G3/20 G09G2310/027 G09G3/3233 G09G3/3614 G09G3/3688 G09G2310/0248		
代理人(译)	李 , 何炳		
优先权	2000343562 2000-11-10 JP		
其他公开文献	KR100413137B1		
外部链接	Espacenet		

摘要(译)

用途：降低液晶显示装置等平板显示装置的数据线驱动电路中输出缓冲器的静态功耗。组成：液晶显示设备的数据线驱动电路设有一个选择电路20，用于从DA转换器16接收对应于数据线301-303的多个电压V1-V3，并交替地输出它们，模拟缓冲器22A连接选择电路的输出，用于接收模拟缓冲器的输出并且可选地将它们分配到一个相应的数据线的分配电路24，以及用于根据VDD或VSS对每个数据线预充电的预充电电路26。至少每个扫描选择周期的第一个预充电周期中最重要的数字数据位。

