

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl.⁷
G02F 1/133

(11)
(43)

10-2004-0025599
2004 03 24

(21)
(22)

10-2003-0064331
2003 09 17

(30)

JP-P-2002-00270665 2002 09 17

(JP)

(71)

가 가 가
가 가

가

292

(72)

가 가

292 가 가

가

가 가

292 가 가

가

(74)

:

(54)

,

11+, 11-, 12+, 12-) , (P) , (P) (20) , (11+, 11-, 12+ , 12-) (20) 1 (11+, 11-, 12+, 12-) (PX) 1 (20) , (T1), (PX) 1 . , (PX) 1 (20) (+) (-) 1 2 (C1, C2) 가 .

3

1

2 1

3 1 가 .

4 3 .
 5 3 가 1 가 .
 6 3 2 2 가 .
 7 3 3 가 .
 8 3 1 4 가 .
 9 3 .

EL(Electro Luminescence) ,
 ,
 , 가 1
 , DAC(Digital - Analog Converter)가
 가 .
 ,
 , 가
 가 (動畫) , 가
 가 , 가 1
 (階調) ,
 ,
 (1) ADC(Analog - Digital Converter) DAC
 가 .
 (2) (副) (白) .
 (3) .
 (1), (2) , (3) ()가
 (多) 가 .
 가 .
 ,
 , 가 ,
 (Vdata) , (逆) (- Vdata) ,

가 ,

1 , ,

1 2 (storage capacitances) 가 .

2 , 가 가 ,

1 2 가

가 , 1 2 가 .

3 , ,

1 , 1 , 1 , 1

1 2 가 가 .

1 2 , 가 , 1 2 가 , 1 2

가 . , 가 , 1 2 .

1 (100) , 2 (100)

(100) , (101) (101) (102) 가 ,
(101) , (LQ) (AR) (CT)
(102) (1) (PCB)

(AR) , (GL) (DP) (PE),
(PE) (12), (PE)
(20), (20) (12) (12)
(PE) (20) (Vdata) (Vdata)
(PE) (PX), (12) (103), (

(CT) (PE) (GND) (CE)

(102) , (VIDEO)
(YCT), (XCT), (POL) (YCT)
(103) (XCT) (104)
(POL) (PX)

(103) (YCT) , 1 () (12) 1 (1H)

(104) (XCT) , 1 (12) (VIDEO) 1

(Vdata) (20)

3 1 (PX) 가 . 3 , P (PE), (CE), (PE, CE) (LQ)

(PX)

(AR) , (12)

1 (副) (11+, 11-), 2 (12+, 12-) , (13), (14+, 14-), (15)

(PE) , 2 , (T1 T9), 1 2 (C1, C2) , 가 (T1, T3, T5, T7, T9) P , T2, T4, T6, T8 N (T2 T5) 1 2 (C1, C2) (14+, 14-) , 1 2 (C1, C2) (T6 T9) 1 2 (C1, C2)

1) C2)

4) (T1 T5) (20), 1 (11+, 11-), 2 (12+, 12-) (T2) (14+) (T3) , (T2) 1 (C1) (T5) (14-) , (T2) 2 (T6 T9) (T1) 1 2 (C1, C2) , 가 (15) (T4, T5) (13) (T6) (PE) (14+) (T8) (14-) (T8) (T9) (T9) (PE)

1) , 1 (PX) 4 (10 (T2, T3) 1 (11+, 11-) (C1, C2) (14+, 14-) 가 (T2, T3) (ON) , 1 2 (+Vpi, -Vmi) (C1, C2)

(T2, T3) 가 (+VDD, -VDD) 가 0 (T2, T3) 가 , 1 2 (C1, C2) (+Vpi, -Vmi) (+Vpi=+VDD, -Vmi=-VDD) 가 , 2 (+VDD+VTn, -VDD-VTp) 가 , VTn N , VTp P , P 가 N

(T2, T3) (T2, T3) () 가 (+Vpi=+VDD, -Vmi=-VDD) 가 (P (T2, T3) (OFF)가 , 1 2 (C1, C2) (P1+, P1-)가 0 (+Vpi, -Vmi) 가 , 1 2 (C1, C2) (T2, T3) 1 2 (C1, C2) (+Vpi, -Vmi)

1+, P1-) 0 (T2, T3) (ON) , 1 2 (12+, 12- (T1) (20) (+Vdata) , 1 2 (C1, C2) (+Vpi, -Vmi) 가 , 1 2 (C1, C2) (+Vp, -Vm)

가 (T1) (+Vpi, -Vmi) (+Vdata)

(逆相) (T1) (VTp) (P2+)

(P2-) 0 (T4, T5) 가 1 2 (C1, C2) (P2+, P2-)가 0

(+Vp, -Vm) (T1)가 (20)

+Vpi=+VDD-VTn, -Vmi=-VDD+VTp, +Vp=+Vdata+VTp, -Vm=-Vdata-VTp+Vpi-Vmi=-Vdata-VTp+VDD-VTn-VDD+VTp=-Vdata-VTn가

+Vpi=+VDD, -Vmi=-VDD, +Vp=+Vdata+VTp, -Vm=-Vdata-VTp+Vpi-Vmi=-Vdata+VTp+VDD-VDD=-Vdata-VTp가

(+Vpi, -Vmi) (+Vp, -Vm), N P

(VTn, VTp) +Vp=+Vdata, -Vm=-Vdata-VTp가

1 2 (C1, C2) (T1) N +Vdata (VTp) +Vdata-V

Tp 가 (T1) N (T6, T7) (T6, T7) 1

1 2 (C1, C2) (+Vp, -Vm), (T6, T7) (T6, T7) 1

(T8, T9) 가 (T6, T7) 1

+Vpi=+VDD, -Vmi=-VDD, 1 2 (C1, C2) (T6, T7)

+Vp=+Vdata+VTp, -Vm=-Vdata-VTp가 (VTn, VTp) +Vp=+Vdata+VTp-VTn, -Vm=-Vdata-VTp+V

Tp=-Vdata가 (VTn, VTp) P (VTn, VTp)

VTn=VTp, +Vp=+Vdata, -Vm=-Vdata

(T8, T9) (13) (P3+, P3-)

(T9)가 가 (T8, T9) (C1) (T6) (P3+)가 (T8)가

(C1) (+Vp) (T6) (PE) (PE) (T8)가

(T8, T9) (P3-)가 가 (T8)가 (T9)가

2 (C2) (T7) (PE) 2 (C2)

(-Vm) (+Vp, -Vm) (PE) (PE)

(+Vp, -Vm), (PE) (PE)

, N P (VTn, VTp)

(+Vp=+Vdata, -Vm=-Vdata)

5 3 (PX) 1 가 3

Tp) (T11) 5 N P (VTn, V

(T10) 가 3 N (T10, T12) P

가 (T7) (T10) (T2) (T10) 가 (T4) (T12)

(T8) (T11) 가 (T6) (T11) (T9)

(T2, T3) 가 1 2 (C

1, C2) (+Vpi=+VDD, -Vmi=-VDD) (T4, T5) 1 2 (C1, C2) +Vp

(T10) (VTn) 1 2 (C1, C2) +Vp

=+Vdata+VTp+VTn, -Vm=-Vdata-VTp-VTn

N (T6) P (T7) (VTn, VTp)

, +Vp=+Vdata+VTp, -Vm=-Vdata-VTn가 .

) , P (T11) N (T12) (VTp, VTn
+Vp=+Vdata, -Vm=-Vdata가 . ,

(101) , 1 (11+, 11-), 2 (12+, 12-),
(13), (14+, 14-), (15) ,
, 2 4 .

2 :
6 3 (PX) 2 가 . 3 ,
(P2+, P2-)
T5) (P1+, P1-) , 6 (T4,
2 (12+, 12-) , 1 (11+, 11-)

3 :
7 3 (PX) 3 가 . 3 ,
가 , 7 , 1 2 (C1, C2) (,
15) , 1 1 (11+, 11-)

4 :
8 3 (PX) 2 가 . 3 , (P1+) (P1-)
(30) , (T3)
1 (11-) , (30) (11-)

3 , 9 (VTn, VTp) VTn=1.0, VTp=-2.0 , 9 ,
N P (+Vdata) (,
, (T1)
+Vp=+Vdata, -Vm=-Vdata)

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

(57)

1.

- (T1) , (T1)
- 1 2 (C1, C2) .
- 2.
- 1 , 1 2 (C1, C2) (T1)
(14+, 14-) , 1, 2 (C1, C2)
(T2 T5) .
- 3.
- 2 , 1 2 (C1, C2)
(T6 T9, T11, T12) .
- 4.
- 1 , (T1) P N .
- 5.
- 3 , (T2 T5) 1 2
(T2), 3 (T3), 1 2
(T1) 2 (C1) 4 (T4), 3 (T1) 1
(C2) 5 (T5) , 2 3 (T2, T3)
(C1,C2) (T4, T5)
(T2, T3)
- 6.
- 5 , (T6 T9, T11, T12) 1 2 (C1, C2)
6 7 (C6, C7), 6 (C6) (14+)
1 (P) 8 (T8), 7 (T7)
(14-) 2 (P) 9 (T9) , 8 9 (T
8, T9) .
- 7.
- 6 , 1, 3, 5, 7 9 (T1, T3, T5, T7, T9) P
2 4, 6 8 (T2, T4, T6, T8) N .
- 8.
- 7 , P 가 N
(T10) , (T6 T9, T11, T12)가 4 (T4) 10
11 (T11), 7 (T7) 9 (T9) 8 (T8)
12 (T10, T11, T12) 12 (T
, P N .
- 9.
- 6 , 1 2 가 (PE, CE) 가
(P) .
- 10.
- (PE, CE) 가 (P) ,
(T1),
C1, C2) 가 (T1 T5, C1, C2) , 1 2 (C1, C2)
(P) 가 (T6 T12)

11.

10 , (T1 T5, C1, C2) 1 2 (C1, C2)
 (14+, 14-) , 1 2 (C1, C2)
 (T1) (T2 T4)

12.

(P) , (P) (12) ,
 (P) (20) , (12) (20)
 1 (P) 1 (12) 1 (20) ,
 (T1), (PX) 1 (20)
 (T1) 1 2 (C1, C2) 가
 (T1 T4, C1, C2)

13.

12 , (T1 T4, C1, C2) 1 2 (C1, C2)
 4-) (14+, 14-) , 1 2 (14+, 1
 (T1) (T2 T5)

14.

13 , (T1 T4, C1, C2) 1 2 (C1, C2)
 (T6 T9, T11, T12)

15.

14 , (T2 T5) (14+) 1 3 (C1)
 2 (T2), (14-) 2 (C2) 4 (T3),
 1 (T1) 1 (C1) 5 (T4), (T1)
 2 (C2) 5 (T5) , 2 3 (T2, T
 3) 1 2 4 5 (T4, T5) (C1, C2)
 1 2 4 5 (C1, C2) 2 3 (T2, T3)

16.

15 , (12) 1 2 3 (T2, T3)
 1 4 5 (11+, 11-) , 1
 2 (T4, T5)
 (12+, 12-)

17.

16 , 2 2 (12+, 12-) (P) 1
 1 (11+, 11-)

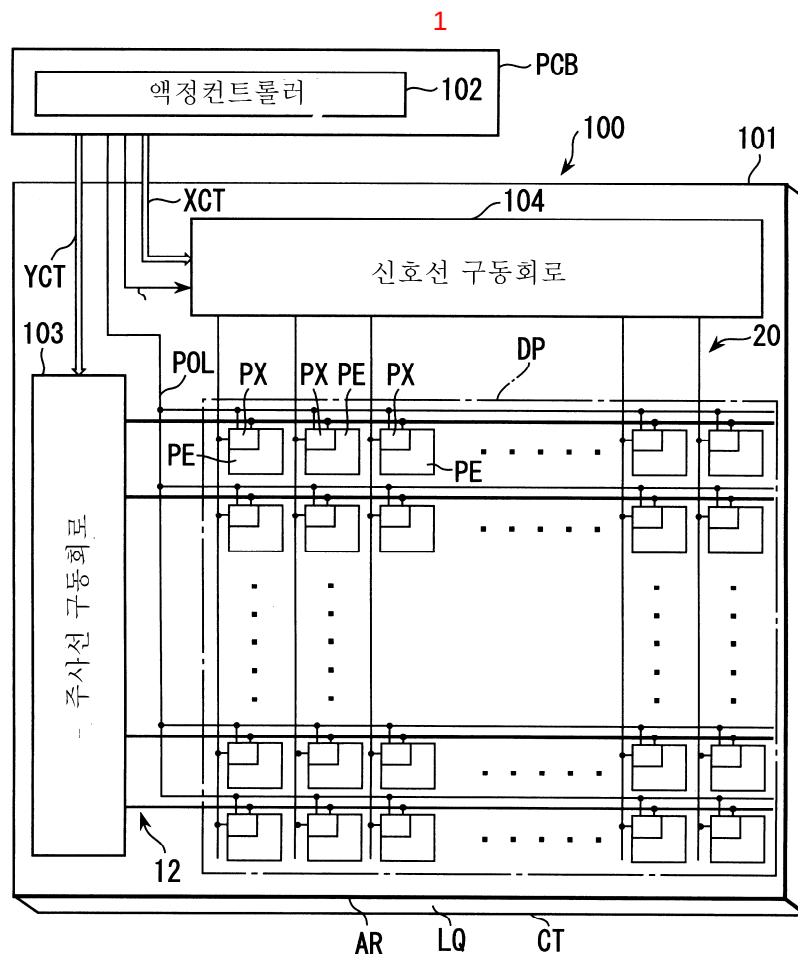
18.

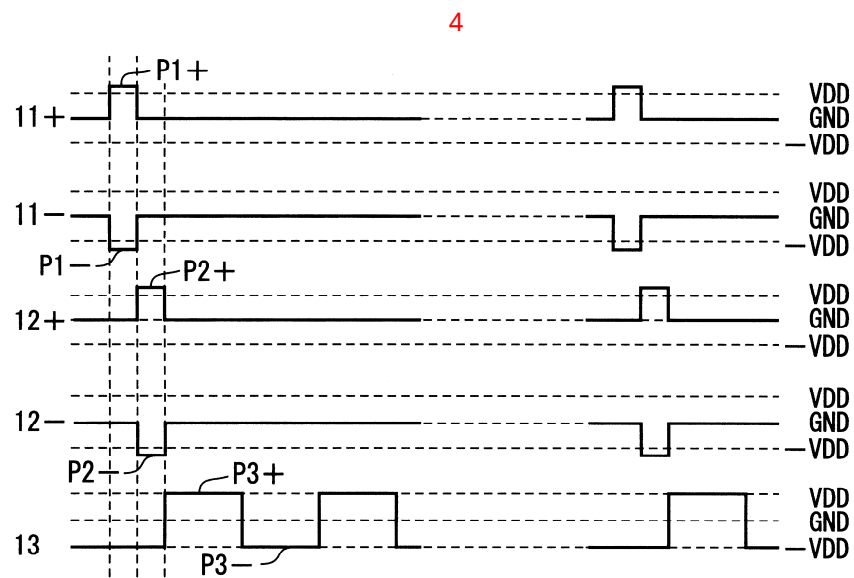
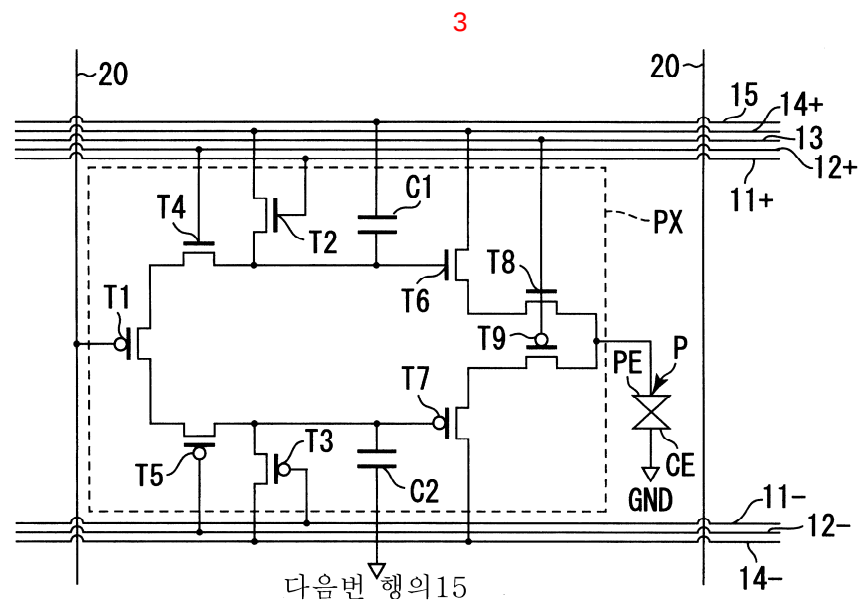
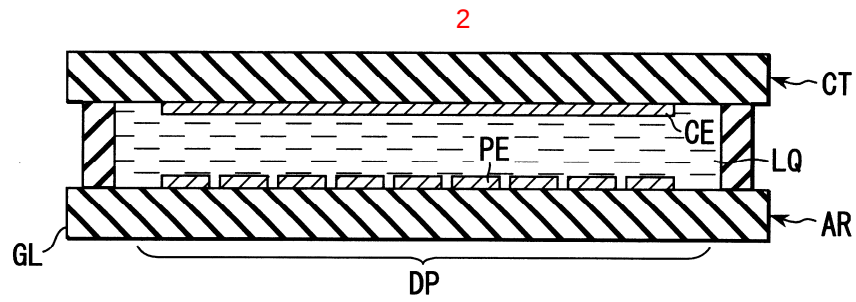
16 , 1 1 (11+, 11-) (P) (
 T1 T4, C1, C2) 1 2 (C1, C2)

19.

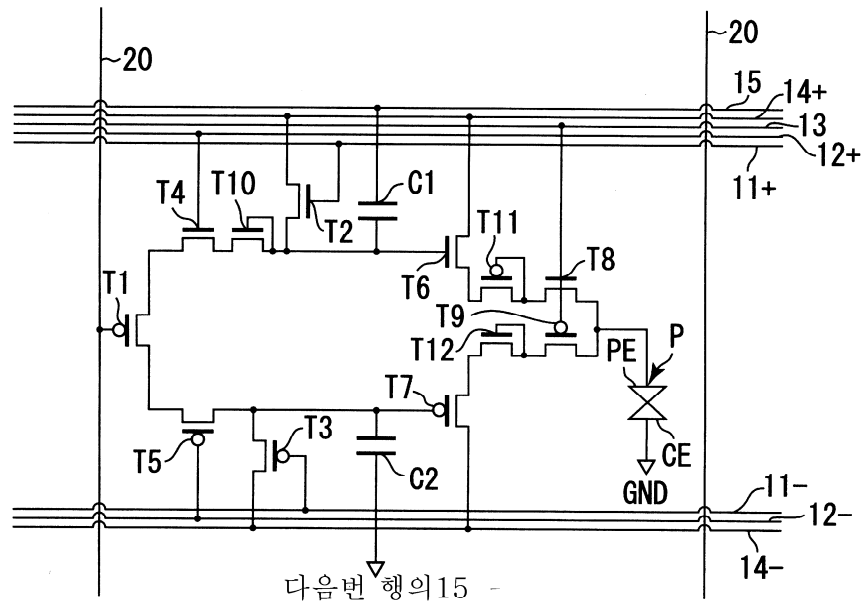
13 , (T1 T4, C1, C2) 2 3 (T2, T3) 가
 2 3 (T2, T3) 가
 30)

20. 15, (T6 T9, T11, T12) 1 2 (C1, C2)
6 7 (T6, T7), 6 (T6) (14+)
1 (P) 8 (T8), 7 (T7)
(14-) 2 (P) 9 (T9), 8 9
(T8, T9)
21. 20, 1, 3, 5, 7 9 (T1, T3, T5, T7, T9) P
2 4, 6 8 (T2, T4, T6, T8) N
22. 21, P N
(T1 T4, C1, C2)가 1 (T1) 4 (T4)
(T10) (T6 T9, T11, T12)가 6 (T6) 8
(T8) 11 (T11), 7 (T7) 9 (T9)
12 (T12), 10, 11 12 (T10, T11, T12)
N, P N
23. 20, (P) 가 (PE, PE) 가 (P)
, 1 2 (P) (P)

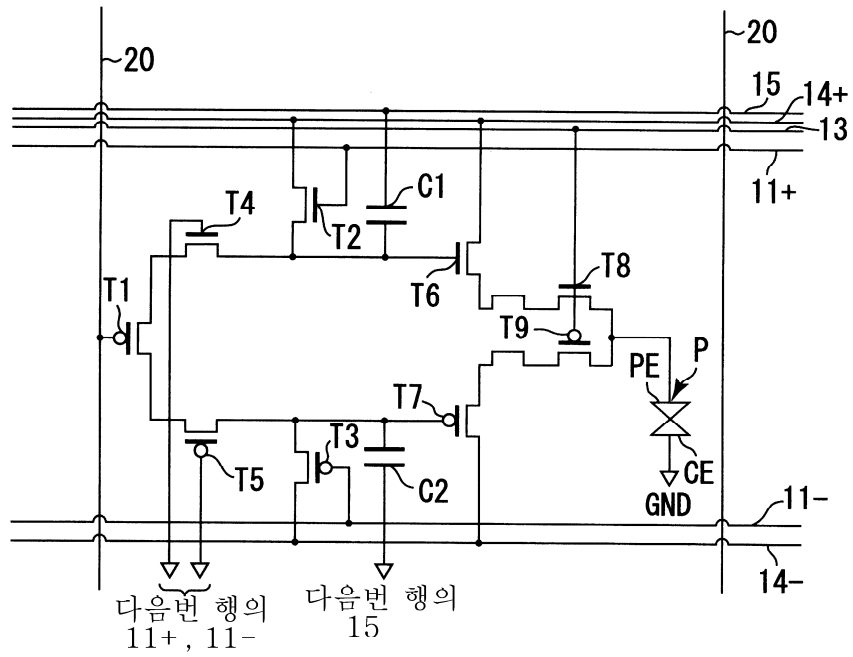


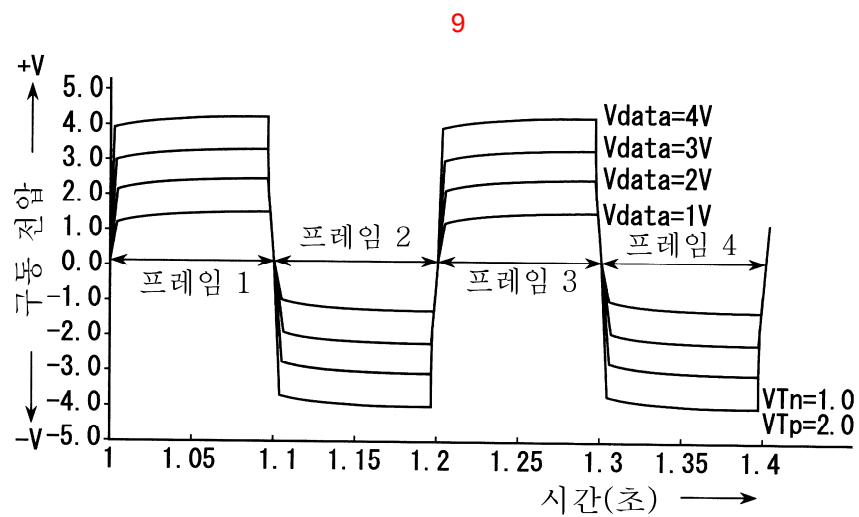
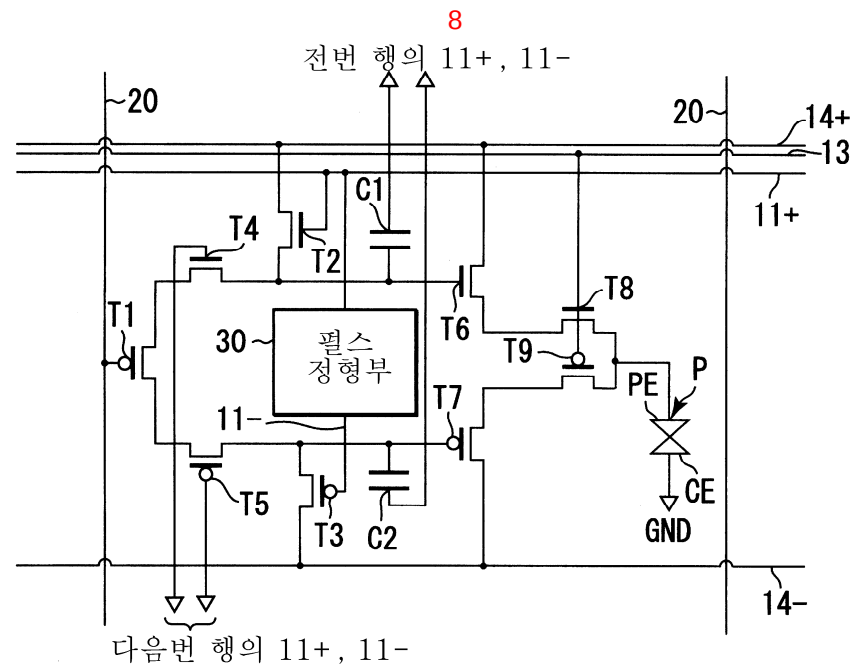
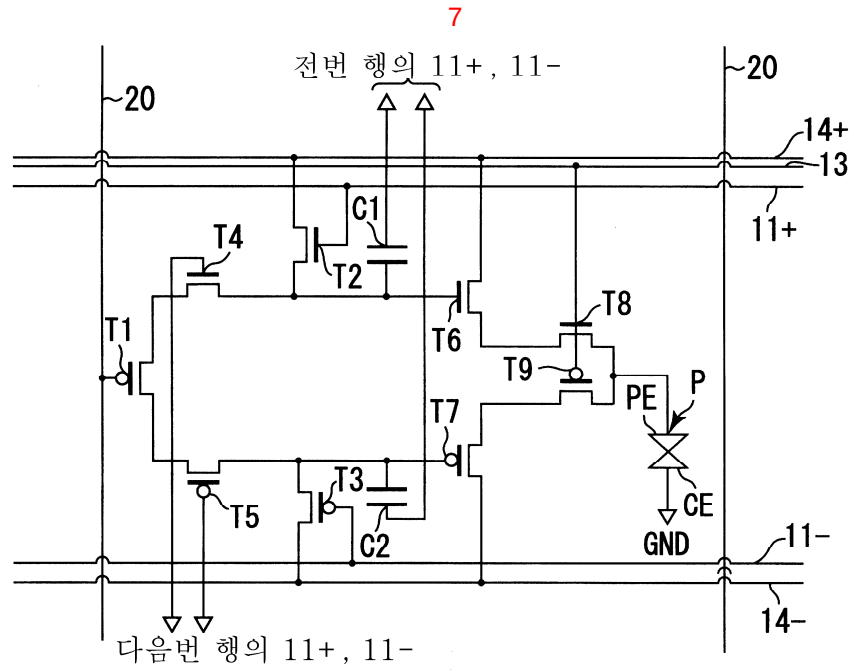


5



6





专利名称(译)	存储电路，显示电路和显示装置		
公开(公告)号	KR1020040025599A	公开(公告)日	2004-03-24
申请号	KR1020030064331	申请日	2003-09-17
[标]申请(专利权)人(译)	液晶先端技术开发中心股份有限公司		
申请(专利权)人(译)	可否让这个莎的煤机用高秀饰品有以下用中心		
当前申请(专利权)人(译)	可否让这个莎的煤机用高秀饰品有以下用中心		
[标]发明人	MATSUMURA MASAKIYO 마츠무라 마사키요 KORENARI TAKAHIRO 고레나리 다카히로		
发明人	마츠무라 마사키요 고레나리 다카히로		
IPC分类号	G09G3/36 G02F1/133		
CPC分类号	G09G2300/0842 G09G3/3648 G09G2300/0809 G09G3/3614		
代理人(译)	LEE, JAE HWA		
优先权	2002270665 2002-09-17 JP		
外部链接	Espacenet		

摘要(译)

液晶显示器包括排列为矩阵相位的多个像素 (P)，沿多个像素 (P) 的行和多个信号排列的多个扫描线 (11+, 11-, 12+, 12-) 沿着多个像素 (P) 和这些扫描线 (11+, 11-, 12+, 12-) 的热量布置的导线 (20) 和布置在交叉位置的多个像素驱动部分 (PX) 信号线 (20) 的环境通过来自1条信号线 (20) 的至少1条扫描线 (11+, 11-, 12+, 12-) 的控制接收数据信号，并将该数据信号输出到1像素。特别地，每个像素驱动部分 (PX) 包括将栅极连接到1信号线 (20) 的晶体管 (T1)，双极数据信号，以及作为负电压的模拟驱动电压充电的存储电路。本质上的负原理 (-) 和用于存储的量 (+) 并且在晶体管的源极和漏极上具有相应的连接的第一和第二电容 (C1, C2)。

