

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

(51) Int. Cl.<sup>7</sup>  
G09G 3/30

(11)  
(43)

10-2004-0087958  
2004 10 15

(21) 10-2004-0024305  
(22) 2004 04 09

(30) JP-P-2003-00105694 2003 04 09 (JP)

(71) 가 가  
가 가 1006

(72) 1-31-3

가 6-25-17-315

(74)

:

(54) , ,

가

EL , (5)가 , (5) , (9) (5) , (1)가 (11) , (11) , (5)

2 1 EL , .  
 3 1 EL , 1 .  
 4 (5) 1 1 가 (Vo) EL , (5) (I) , .  
 5 1 EL , 2 .  
 6 (I) 1 2 가 (Vo) EL , .  
 7 1 EL , 3 .  
 8 (I) 1 3 가 EL (Vo) , . EL  
 9 1 4 .  
 10 2 EL .  
 11 2 EL .  
 12 3 EL , .  
 13 12 3 EL .  
 14 3 EL , .  
 15 4 EL .  
 16 5 EL .  
 17 6 EL .  
 18 (a) 7 EL , (b) 7 EL EL , ( ) TFT .  
 19 8 EL .  
 20 (a) 9 9 EL EL , TFT .  
 , (b) 9  
 21 10 EL .  
 22 11 EL .  
 23 EL .  
 24 (a) XXVb-XXVb EL , , (b) (a) , (c) TFT .  
 , (d) TFT .  
 25 (a), (b) EL .  
 26 EL , . 가

\* \* \*

1, 1a : 3 :  
5 : 7 :  
9 : 11, 80 :  
14 : 15, 63, 221 :  
17 : 18 :  
19 : 20, 72 : TFT  
21 : EL 22i<sub>0</sub> : 1  
22i<sub>1</sub> : 2 22i<sub>2</sub> : 3  
22i<sub>3</sub> : 4 22i<sub>4</sub> : 5  
22i<sub>5</sub> : 6 24, 231 : 가  
31a, 31b, 31c, 31d, 31e, 31f :  
33a, 33b, 33c, 33d, 33e, 33f :  
35a, 35b, 35c, 35d, 35e, 35f :  
37 : 50 :  
51 : 53 :  
55 : 57 :  
59 : 61 :  
64 : 65 :  
67 : 67a :  
71 : 73, 79 :  
74 : 1 75, 77, SW<sub>A0</sub> SW<sub>A5</sub> :  
76 : 3 78 : 2  
82, 107 : 101 :  
102 : 107a : 가  
108 : 1 MOSFET 109 : 2 MOSFET  
110 : 3 MOSFET 121 : 2  
123 : DAC 125, 127, 233  
131 : 133 : 가

212: 1 213: 2

214 : 6 215 : 1

216 : 2      217 : 6

Sc0 Sc5 : Sr0 Sr5 :

, EL(Electro Luminescence)

TFT(Thin-Film-Transistor)

가 ,

, EL(Electro Luminescence)

23

EL

23 , EL , , (1005) , (10  
 05) (1003) , (1003) (1005)  
 (1001) . (1003) , ,  
 . 23 (1003) , ,

(1005) , (1007) (1008) (1011) , (1008) EL  
 (1009) . 23 ' ' , R( ), G( ), B( ) 3

, , EL

24 (a) , EL , , (b) (a) . 24 (c) XXVb-XXVb , , (d) TFT TFT



(K1) 2 (K2) .  
 (1011) , 1 2 (K1) 1 3 (M4) 2  
 (M3) 가 , (K2) 가 (M5) (C1)  
 (1011) , (Vc1) (C1)  
 (C1) , TFT(M1) 가 .

3 , 1 (M4) 2 (M3)가  
가 TFT(M1) EL (1009) (Vc1) ,

( 1) 2002-215095

26 EL , 26 , 가 (1005) , (1005)  
가 . , (t) , (l) (V)

EL , 23 EL , 가 (1220) (1007)  
7) . . EL (1009) 가 (1220) (100 (t1)

, 가 N 가 D/A  
, , , , 가  
1 , , , , 가  
,

D/A N , MIS MISFET MISFET , 가 , 가 , 가 , 가

, N 2 , N N 2  
N 3 , N 3  
가 D/A N , , , 3  
가 , N , , , 3

가 , 1 , 가

, 가 , , 가

2

1

가

가

가 가

가

가

가

3

N

가

가

TFT

가

1  
가

D/A

1 2

가

4

, N

가  
(N+M)

M 가 (N+M)

N

가

M

1 2

가

5

, N

FET

N

1 MISFET

가

1 MISFET

가

N

1 MISFET

가

2 MISFET

, 3 MISF

ET

가

1

, N

가

가

2

가

3

, N

가

4

, N

$$N \quad \begin{matrix} M & \quad \begin{matrix} M & \quad (N+M) \\ \downarrow & \quad \downarrow \\ (N+M) & \quad , \end{matrix} \\ \downarrow & \quad \downarrow \\ (N+M) & \quad , \end{matrix}$$

$$\left( \begin{array}{cc} 1 & \\ & \end{array} \right)$$

$$\frac{1}{\text{EL}} \quad , \quad \frac{1}{\text{EL}} \quad (1) \quad , \quad \dots$$

$$(5) \quad \text{가} \quad . \quad (5) \quad , \quad , \quad \text{EL} \quad (17) \quad (18) \\ (19) \quad , \quad (19) \quad (21) \quad .$$

2 , EL , (19) 가 .  
(19) , 25 (a), (b) , TFT .





7 1 , 가 2 EL D/A 1 , 6 가 , 3 , D/A .

7 (22i<sub>0</sub>), 2 (22i<sub>1</sub>), 3 (22i<sub>2</sub>), 4 (22i<sub>3</sub>), 5 (22i<sub>4</sub>), 6 (22i<sub>5</sub>)  
 5 ) D/A (SW<sub>A0</sub>), 2 (22i<sub>1</sub>) D/A (SW<sub>A2</sub>), 4 (22i<sub>3</sub>) D/A (SW<sub>A4</sub>),  
 D/A 1 ), 3 (22i<sub>2</sub>) D/A (SW<sub>A3</sub>), 5 (22i<sub>4</sub>) D/A (SW<sub>A5</sub>) .  
 6 (22i<sub>5</sub>) D/A 2 , (SW<sub>A0</sub> SW<sub>A5</sub>)가 1 . (A0 A5) , 1  
 (9)

8 (5) 가 EL (vo), EL (l)

8 , (11) , (3F)('3F' 16 EL ) , 64 (0) (T) (I 3F )가 .  
· (5) 가 (V0) (Vta) 가 .

2 , (3T) , (SW<sub>A2</sub>) 가 (SW<sub>A3</sub>) (3T) (5T) 가 (5T) . . . . .

(5T) , (SW<sub>A0</sub>) (SW<sub>A1</sub>)  
6 ,

, 2 (5) 가







(55) , (53) (51) (55) (61) ) (51), (53)  
 (53) EL (55) 가 , , ,  
 ( 3 ) 12 , 3 13 12  
 , 3 EL , , (5)  
 13 , , EL , , (5)  
 EL  
 ) 13 , (5) , (3) , (1a) EL , , (3) (5)  
 (1a) , (5) (73) , (5)  
 , (71) (73) (71) ,  
 (3) (5) (14) , (5)  
 (64)  
 (5) , EL (21) EL (21) , (3) (19) (73)  
 (71) , ,  
 12 , EL (21) , (19) (14) , TFT(72) ,  
 (21) (Vc1) (21) (C1) P TFT(72) , TFT(72) ,  
 (14) , TFT(72) 1 (K1) 1 (K1) 1 (14) ,  
 2 (21) (78) (64) (19) (19) 2 (74) (K2)  
 (78) (64) , 1 (K1) , , TFT(72) 2 (78) (74)(K2)  
 (64) , 1 MOS , P TFT 3 , (76)(74) (17)  
 12 (C1) TFT(72) , 13 , , ,  
 (18) (19)  
 (76) 1 (K1) 2 (K2) (78) 1 (74) 3 (73)  
 (76) 1 (76) 2 (74) (78) 1 (74) 3 (73)  
 (Vc1) 1 2 , TFT(72) (C1) TFT(72) , (C1)  
 (76) 1 (76) 2 , TFT(72) (74) (78) 1 (74) 3 (73)  
 (Vc1) 1 2 , (K1) (K2) (78) 1 (74) 3 (C1)  
 (76) 1 (76) 2 , (Ita) 1 (Ita) TFT(72) , (C1)  
 (Vc1) 1 2 , (K1) (K2) (78) 1 (74) 3 (C1)





( 7 )

7 (79) DAC (123) EL , 16 DAC (123) 5 (1) EL .

18 (a) ,  $\frac{7}{, (b) 7}$  EL EL , ( ) TFT .

18 (b) , 7 EL , TFT EL (5) ,  
(5) (102) ( ) , (102) , (5)

, (5) (127) , 가 2 (11) (11) (5) (121) , DAC (123) DAC (12)  
 3) , (125) , (101) . 2 (121) (121) 16

2 (121), DAC (123) 1 (215), 2 (216), ... 6 (217)  
 6 .

(101) , P 1 MOSFET(108) , 1 MOSFET(108) , ,  
 (107) , 1 MOSFET(108) 2 MOSFET(109) , 2 MOSFET(109)  
 1 (212), 2 (213), ..., 6 (214) N 3 MOSFE  
 T(110) . 1 (212), 2 (213), ..., 6 (214) N MOSFET  
 3 MOSFET(110) .

EL DAC (123) , . (125) , 6  
DAC (123) (5) . , (5) 가

DAC (123) (11)  
(221)( 16 (15))  
, 18 (a)  
, (5) TFT .

DAC (123) 64 (5)

64

DAC (123)

( 8 )

19 8 EL

DAC (123)

(5) , TFT (5) , 20 (a) ,  
(131) , 2 (121) 6  
EL , 1 1 EL (5) ,  
( 10 ) 가



2.

1

가

3.

1

N

가

D/A

,

가

,

, 가

1

4.

3

D/A

N

,

MISFET

, MISFET

가

N

MIS

5.

3

4

,

가

,

가

6.

1

N

2

N

N

2

N

3

가

D/A

,

3 가

, 3 가

,

7.

1

8.

7

,

,

N

N

,

N

2

,

N

2

N

,

,

3

가 D/A

,

,

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9.

7

,

가

3

,

10.

1

,

,

가

,

가

,

,

,

11.

10

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12.

11

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10

,

,

TFT

가

,

,

14.

13

1

15.

14

가

16.

10

17.

18.

17

가 가

19.

18

가

20.

17

가

21.

17

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,

, MISFET ,

, MISFET ,

MISFET ,

, MISFET ,

MISFET ,

22.

, MISFET ,

, MISFET ,

MISFET ,

, MISFET ,

MISFET ,

23.

N

가

24.

23

TFT 가

25.

23

24

1

26.

23

D/A

27.

26

D/A

1 2

28.

23

29.

N

M 가 (N+M)

가

(N+M)

N

30.

29

M 1 2

31.

N

MISFET

N

가

FET , 1 MISFET , 가 2 MISFET , 2 MISFET , 3 MISFET , 1 MISFET , 1 MIS

32.

N

가

33.

32

가

가

34.

가

35.

34

36.

34

35

가

37.

N

가

38.

N

M

가

(N+M)

가

(N+M)

N

39.

N

MISFET

N

가

FET

1 MISFET

가

2 MISFET

, ,

2 MISFET

3 MISFET

, ,

1 MISFET

N

1 MIS

가

가

40.

41.

42.

41

MISFET

MISFET

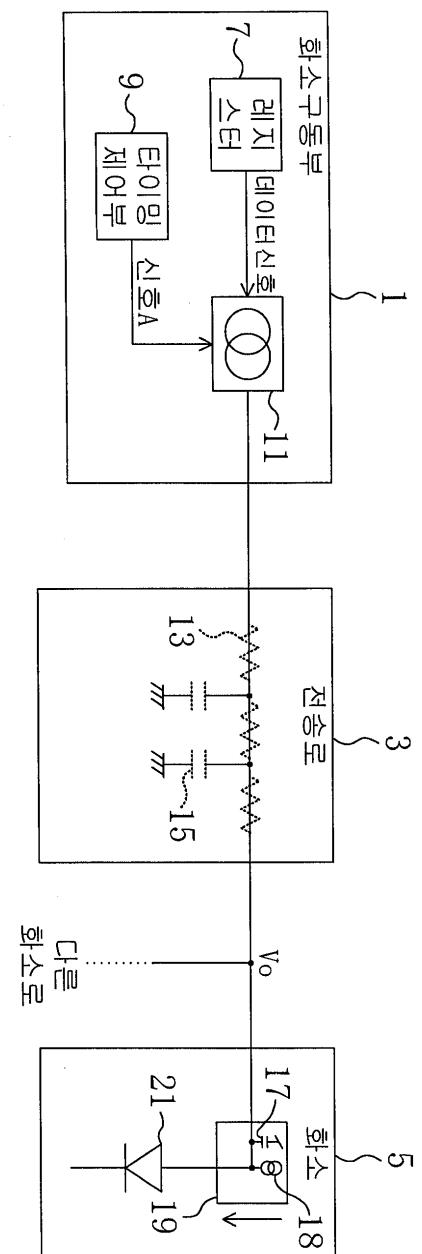
MISFET

MISFET

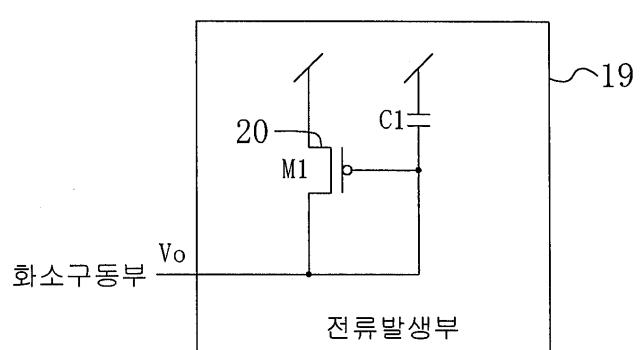
MISFET

가

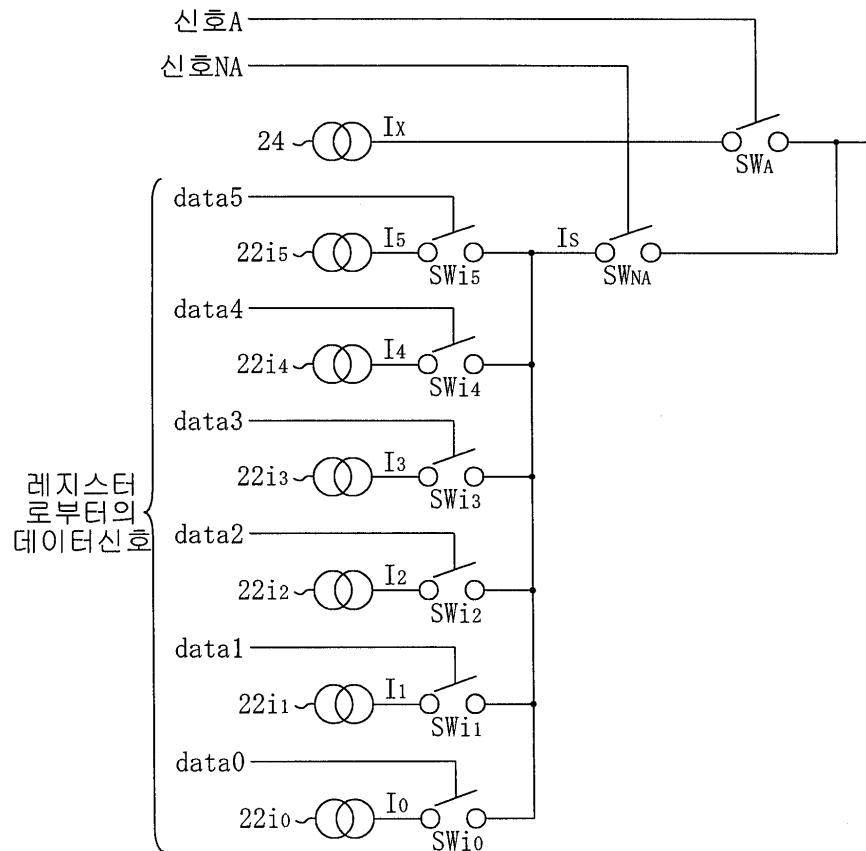
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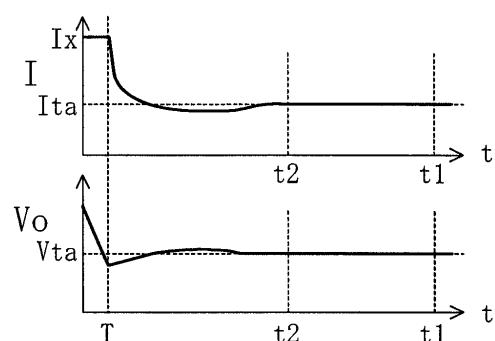
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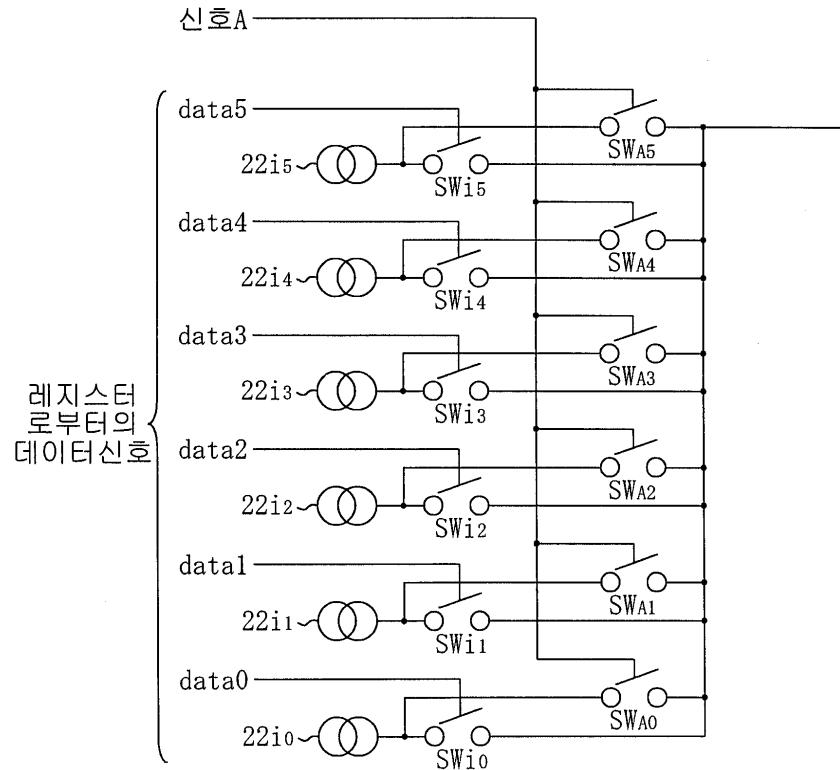
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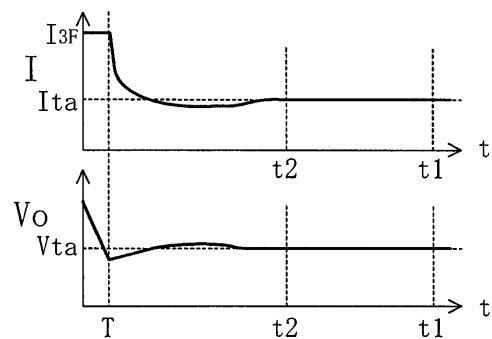
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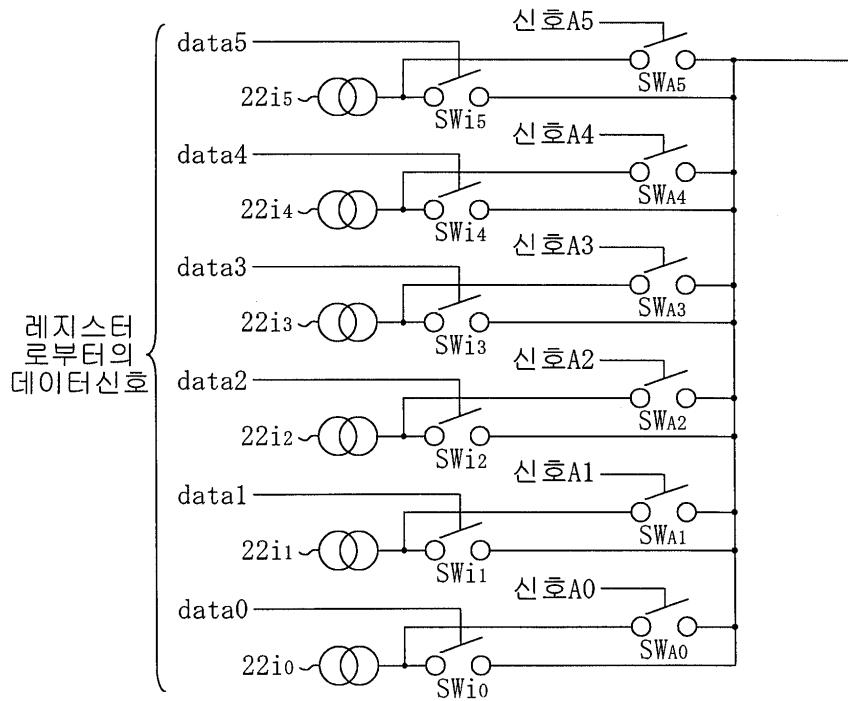
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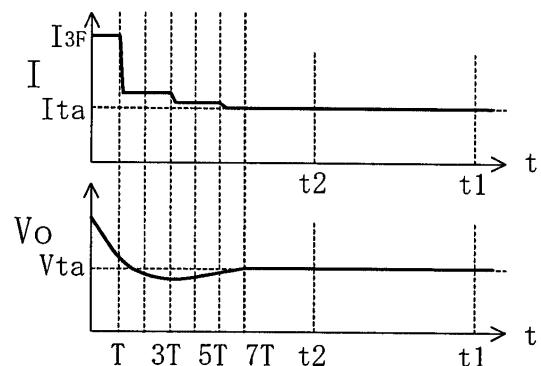
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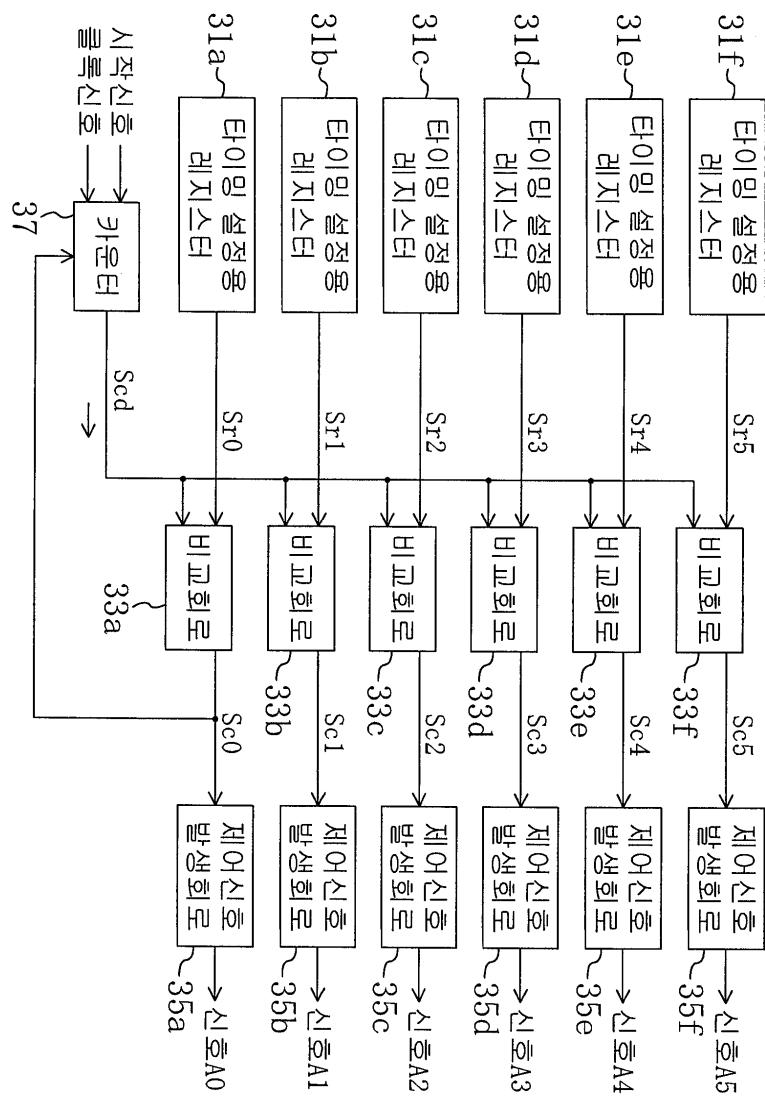
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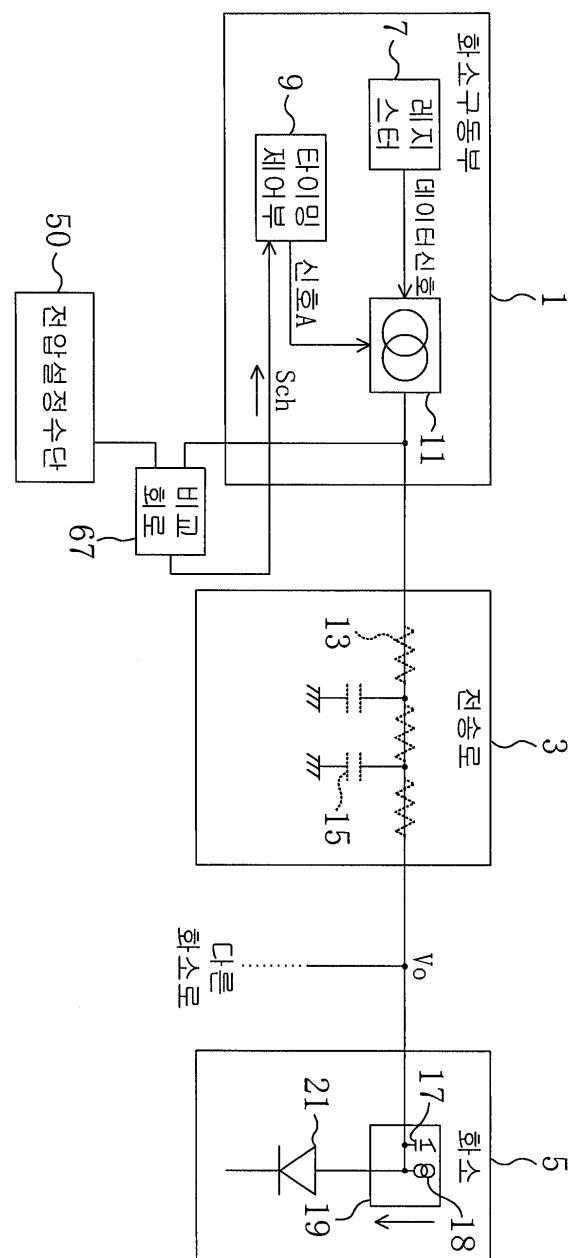


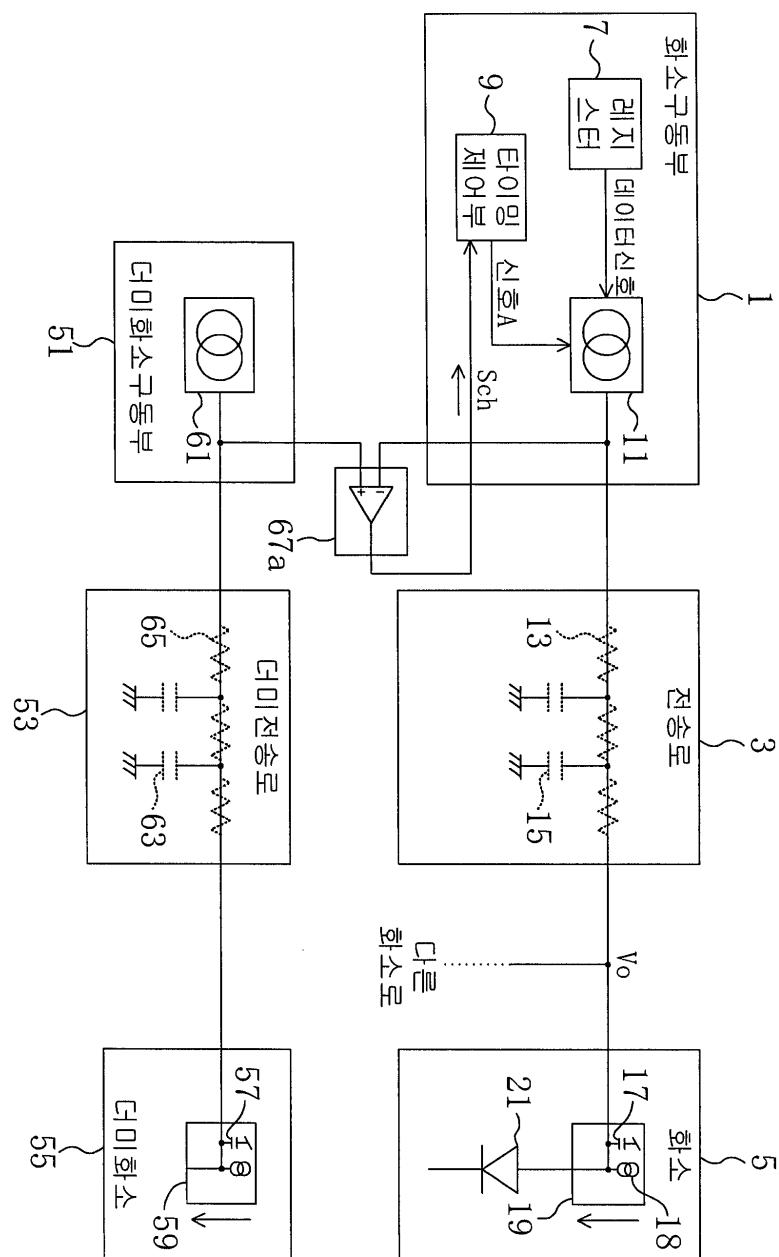
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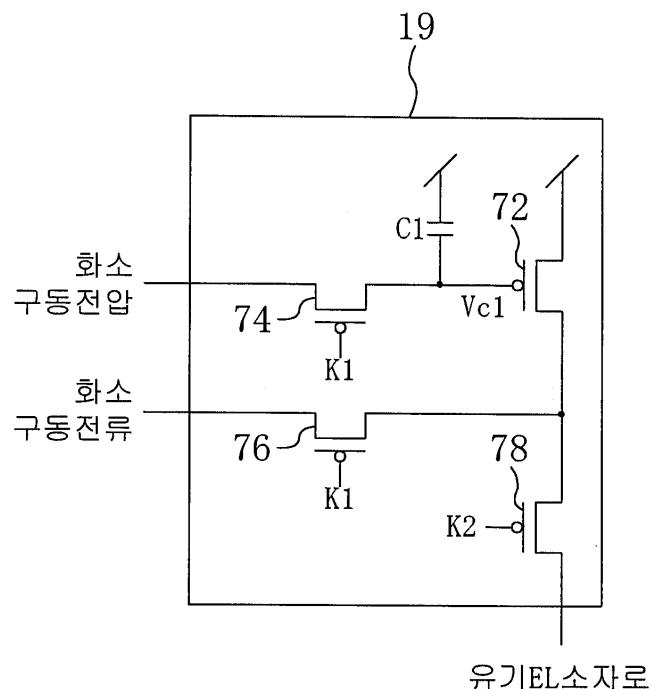
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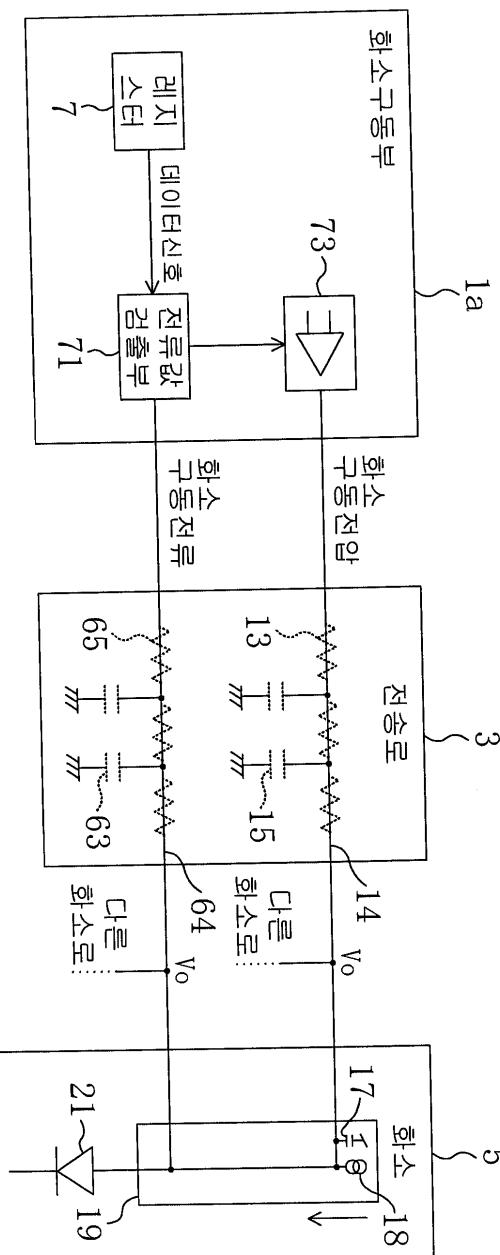




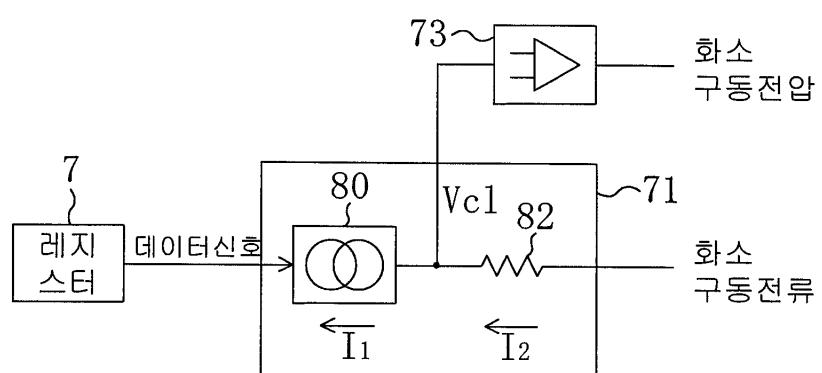
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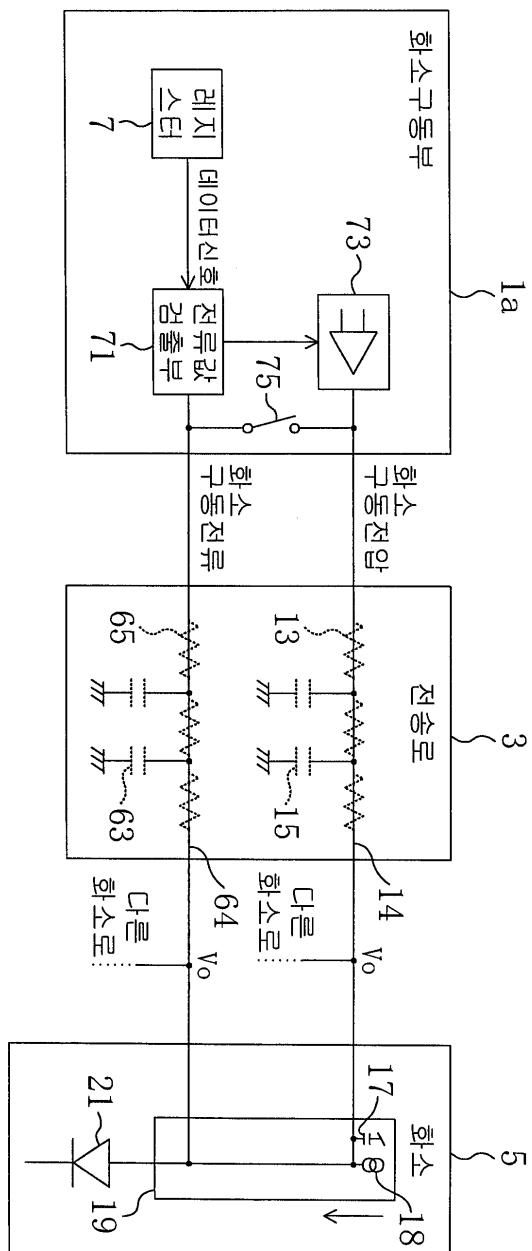


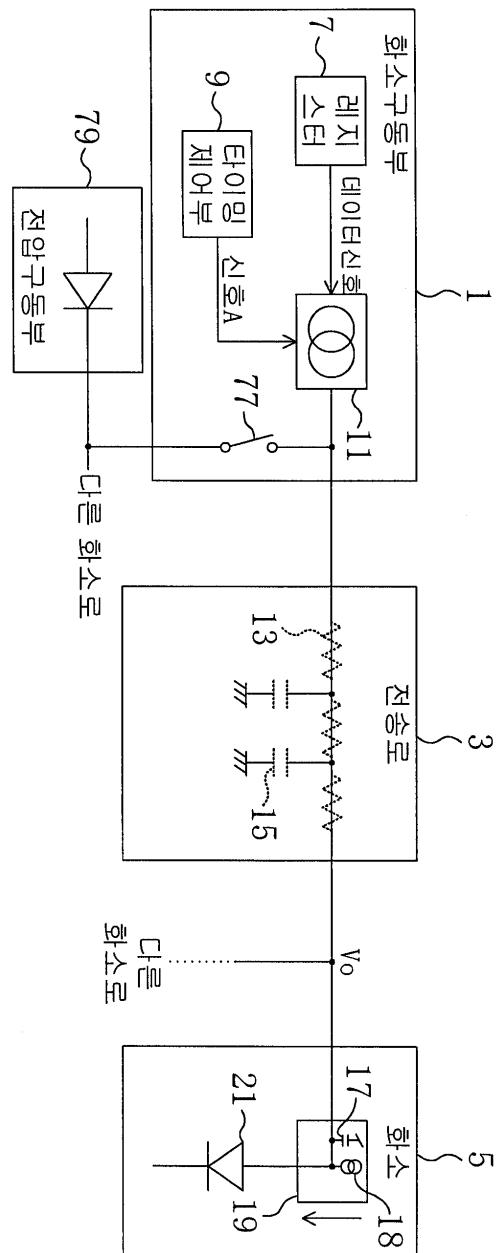
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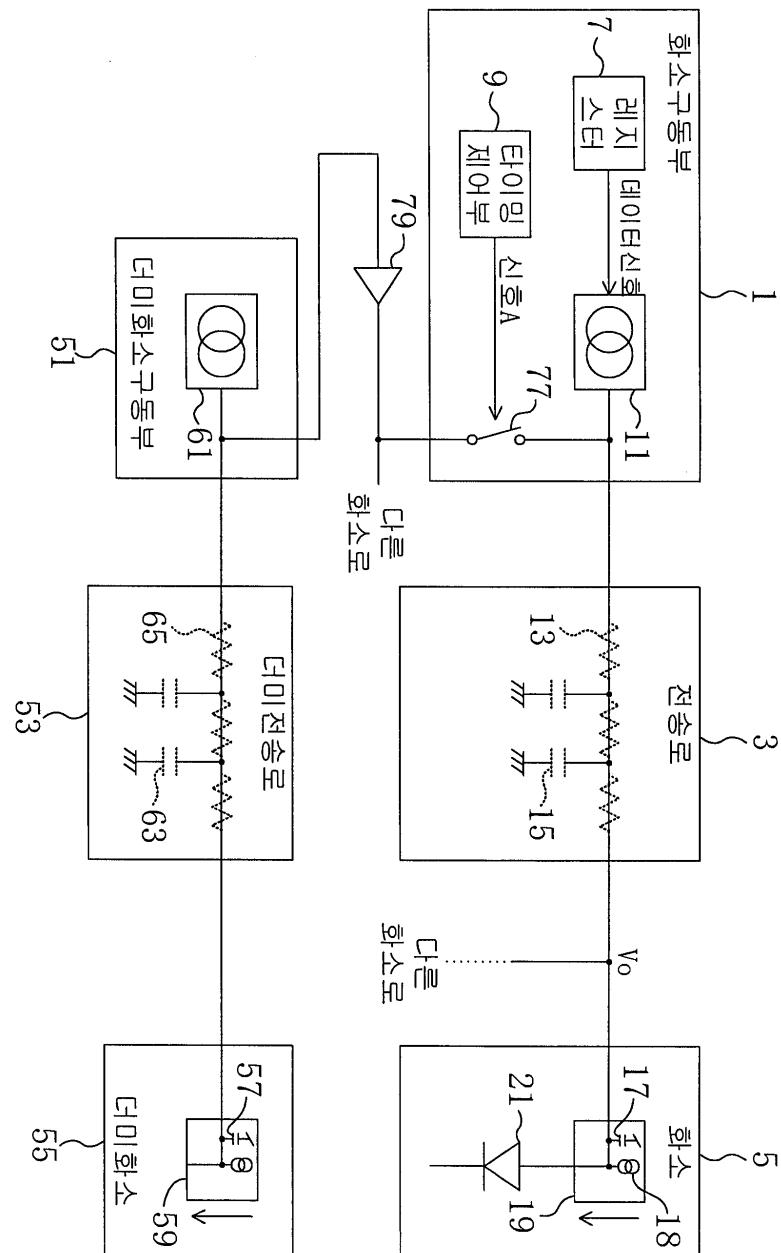


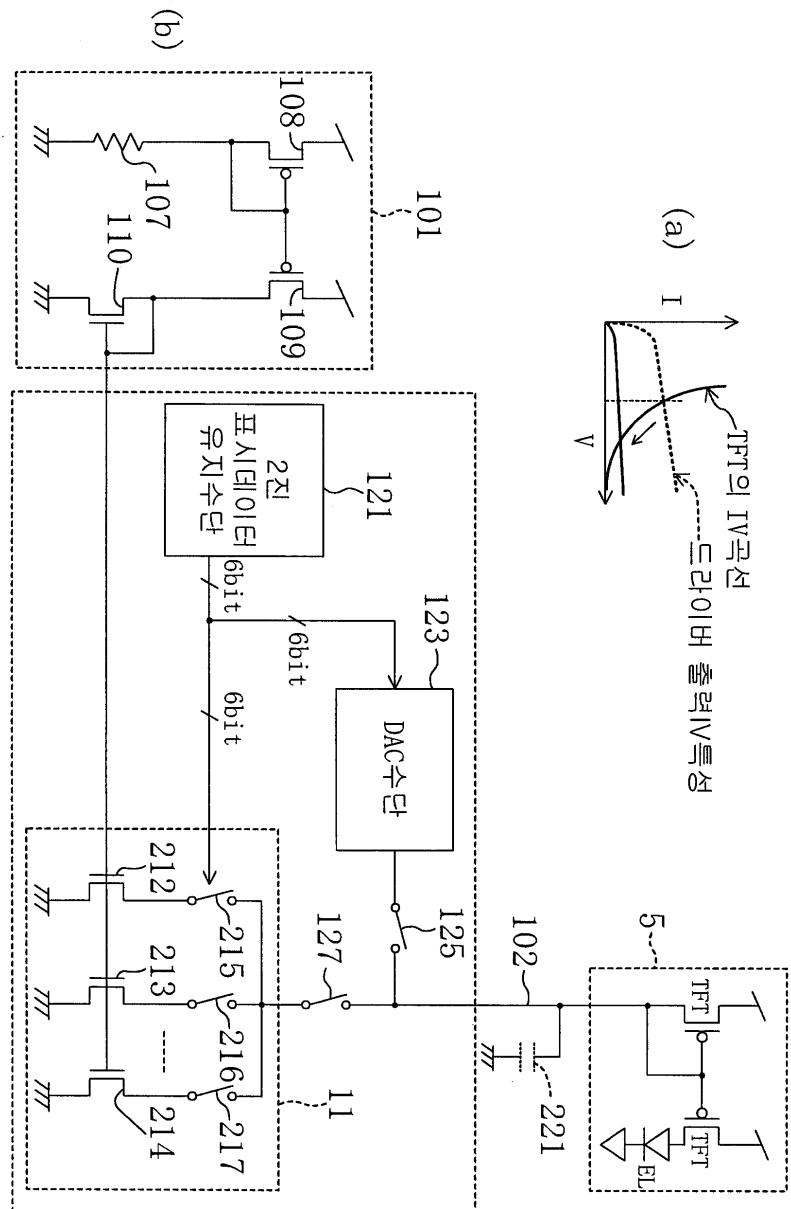
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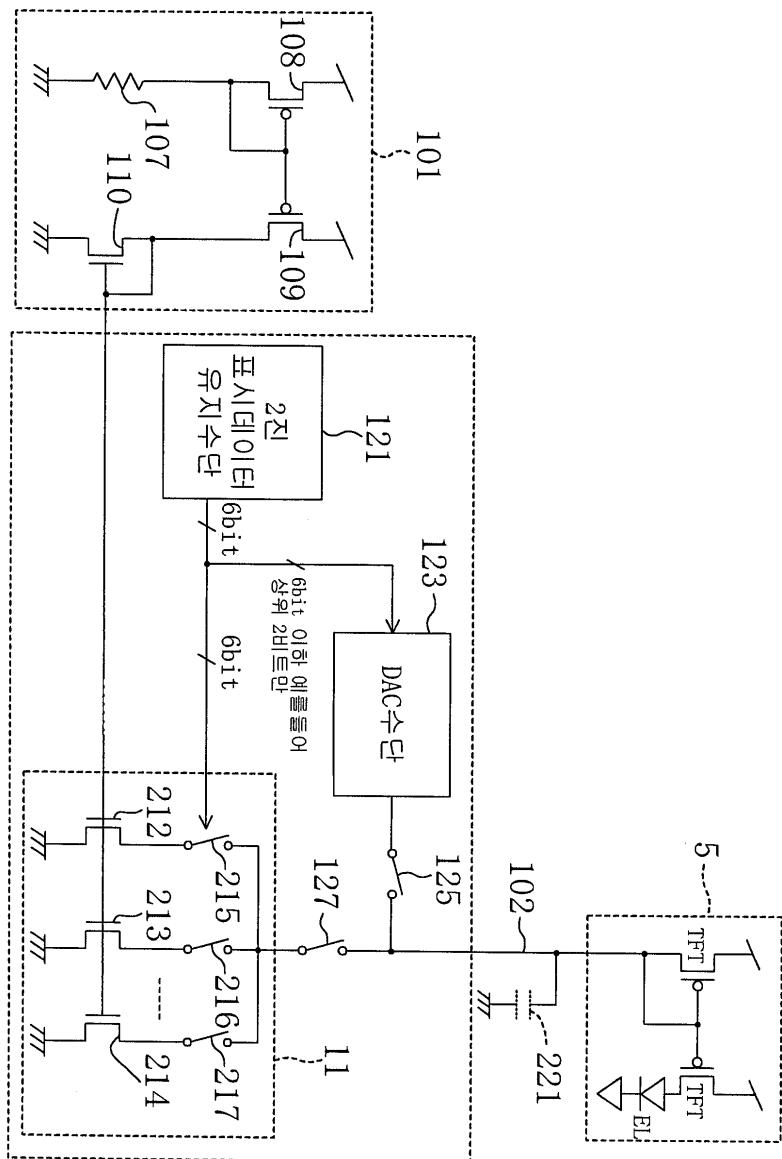


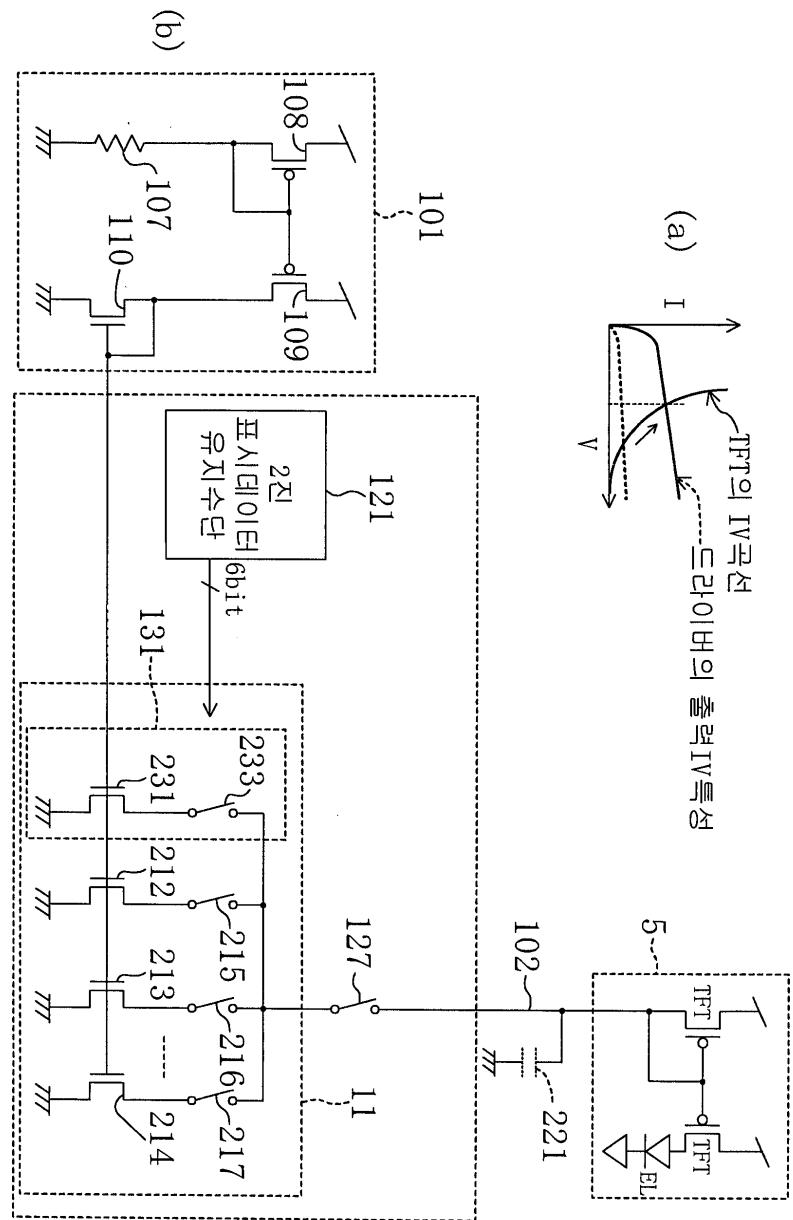


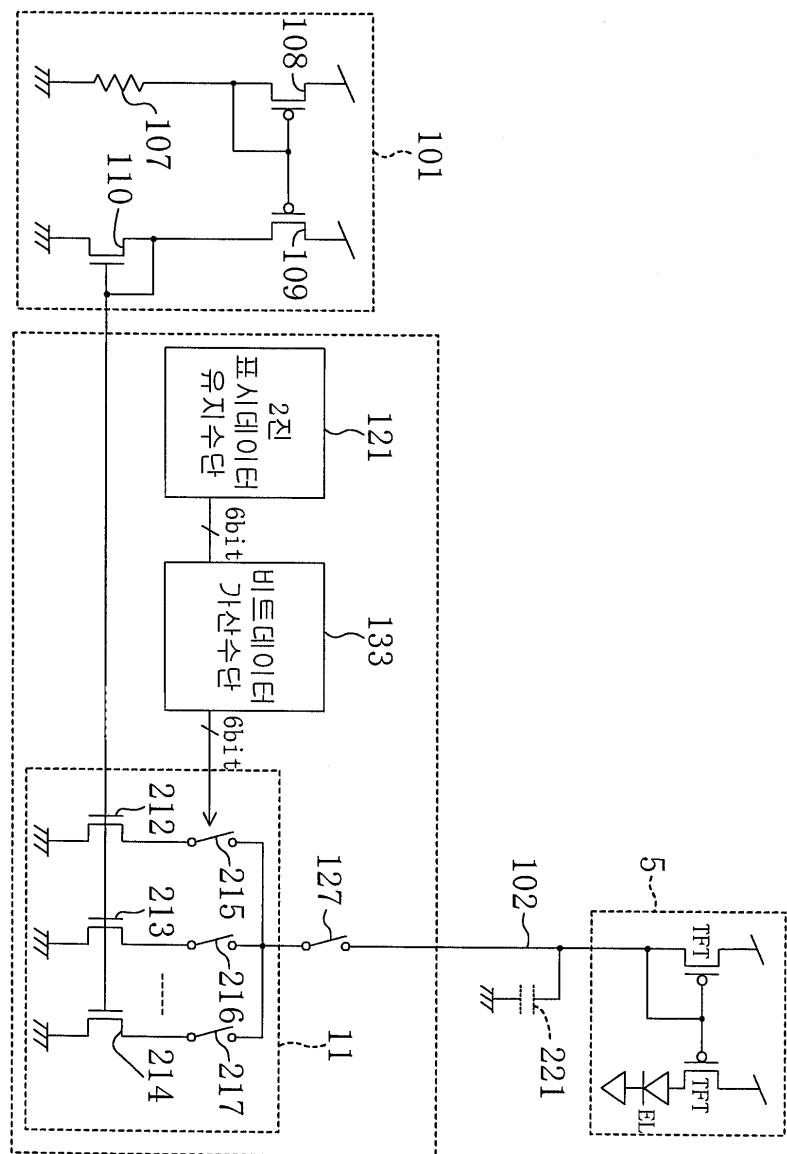




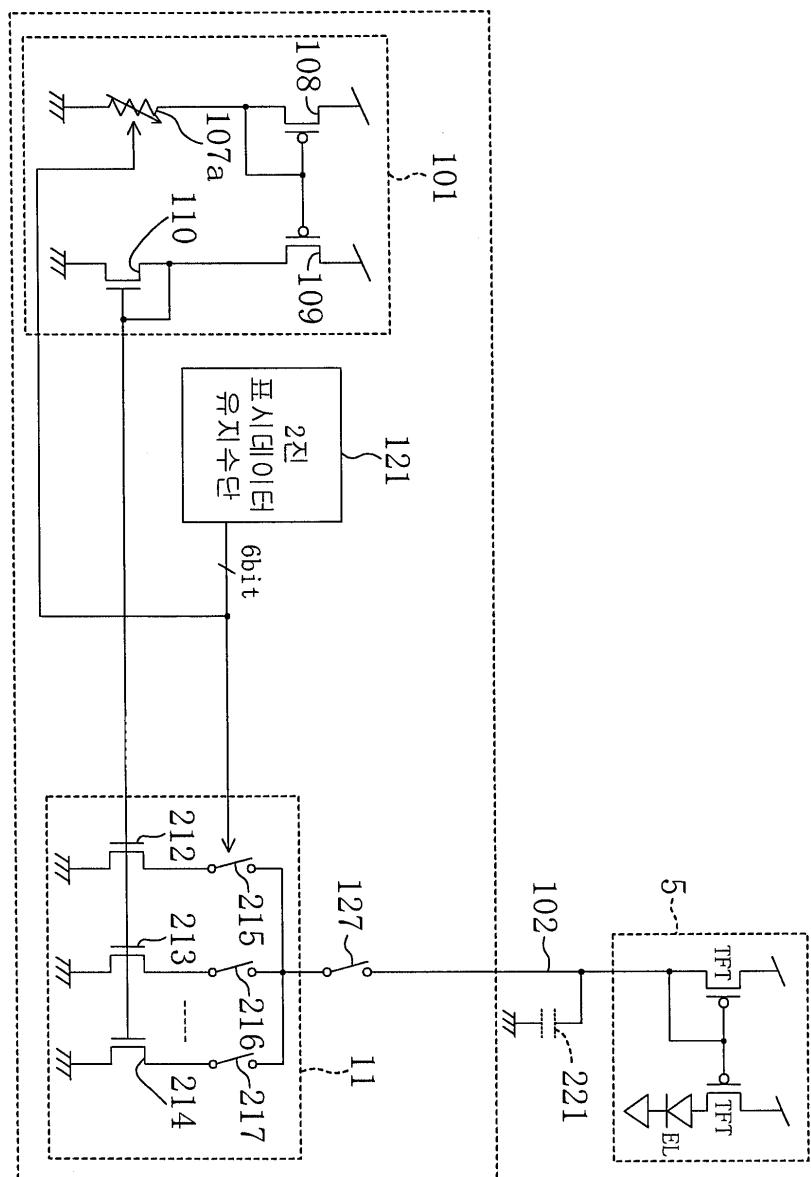


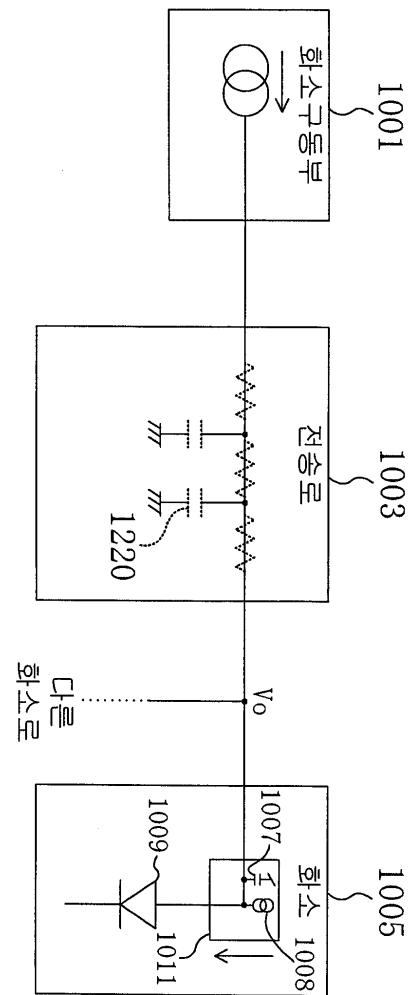


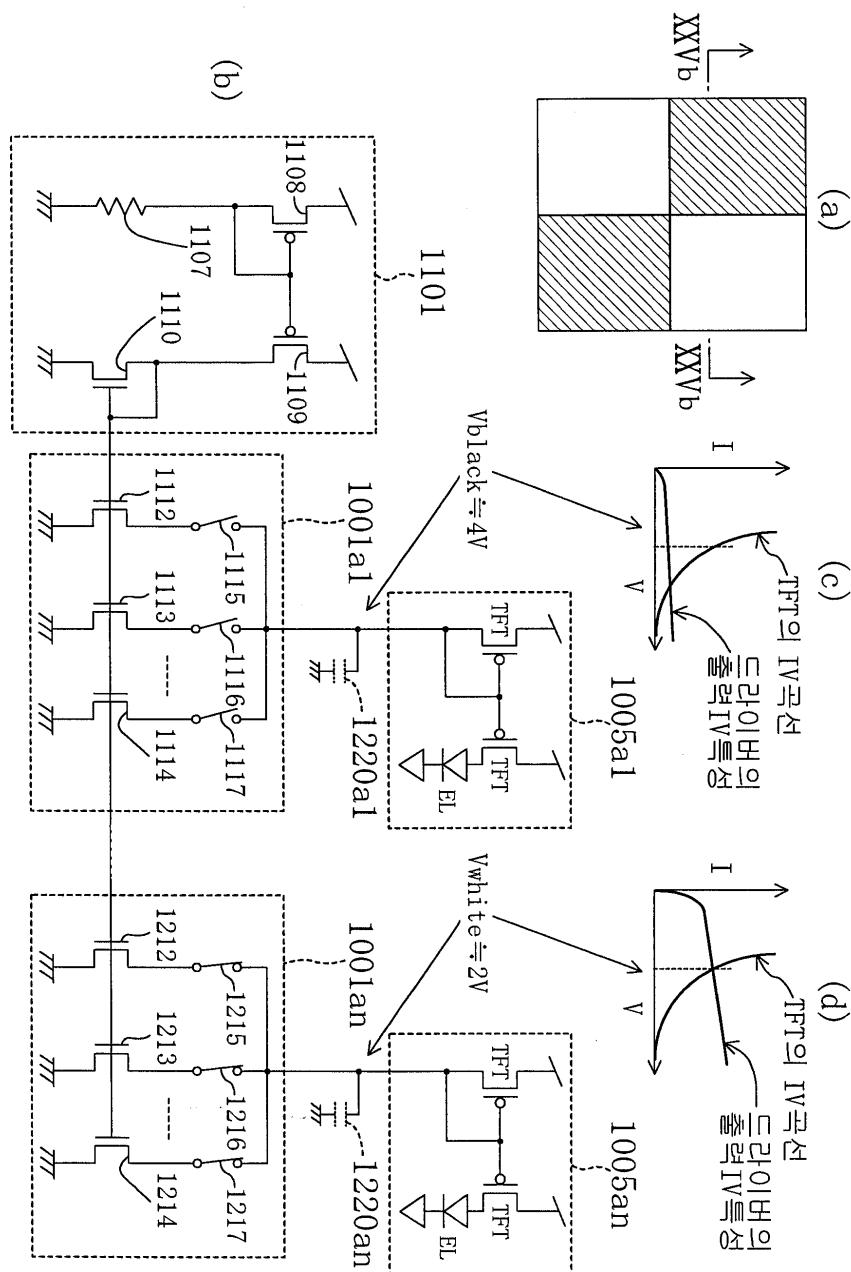




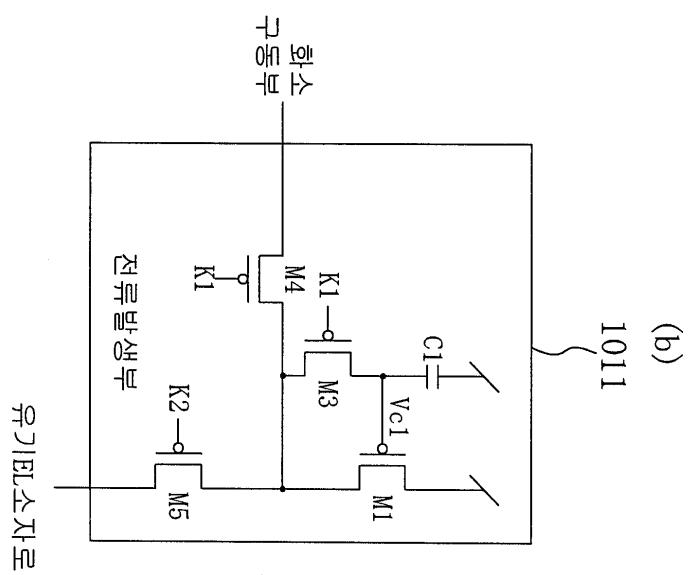
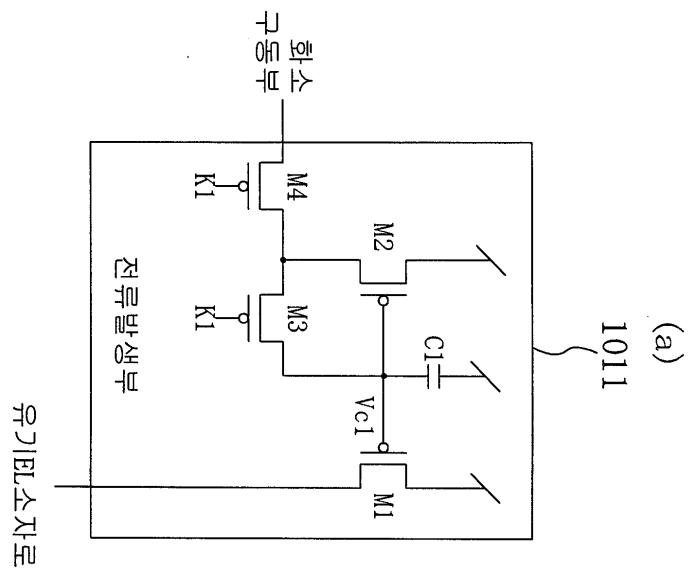
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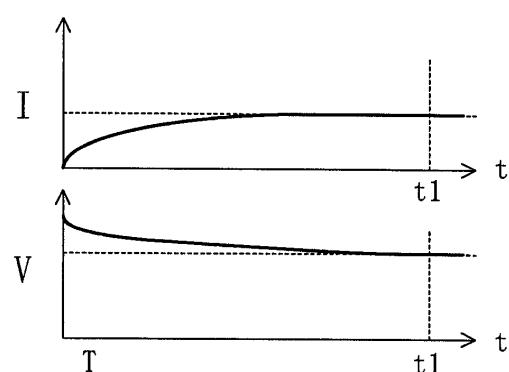




25



26



专利名称(译)	显示装置，源极驱动电路和显示面板		
公开(公告)号	<a href="#">KR1020040087958A</a>	公开(公告)日	2004-10-15
申请号	KR1020040024305	申请日	2004-04-09
申请(专利权)人(译)	松下电器产业株式会社		
当前申请(专利权)人(译)	松下电器产业株式会社		
[标]发明人	OOMORI TETSUROU 오모리데츠로 DATE YOSHITO 다테요시토		
发明人	오모리데츠로 다테요시토		
IPC分类号	G09G3/30 H01L51/50 G09G3/32 G09G3/20		
CPC分类号	G09G2300/0842 G09G3/325 G09G2310/0251 G09G2310/027 G09G2320/0252 G09G3/3241 G09G2320/0223 G09G3/3283 G09G2310/0248 G09G3/3291		
代理人(译)	KIM , YOUNG CHUL		
优先权	2003105694 2003-04-09 JP		
外部链接	<a href="#">Espacenet</a>		

### 摘要(译)

本发明的目的在于提供一种电流驱动型显示装置，其在指示亮度的变化中不会降低图像质量，并且可以实现高清晰度的显示。在有机EL显示装置中，多个像素(5)包括从源驱动电路提供驱动电流的信号线，其中具有形成的显示面板的像素驱动部分(1)和电流驱动部分(11)用于将驱动电流发送到像素(5)和寄存器(7)，用于锁存数据信号和定时控制单元(9)，并且电流驱动部分(11)被安排到像素(5)。电流驱动部分(11)在时序控制单元(9)方面用数据信号控制，以便发送大于固定电流的电流。以这种方式，可以在快速目标值中达到像素(5)的流动电流值。显示面板，电流驱动部分，寄存器，源极驱动电路，信号线。

