

(19) (KR)
(12) (B1)

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(21)	10-2001-0029621	(65)	10-2001-0109140
(22)	2001 05 29	(43)	2001 12 08

(30) 2000-160804 2000 05 30 (JP)

(73) 가 가 가 , 1753

(72) 5-7-1 가 가

(74)

:

(54)

RGB (gradation) .
, RGB , 가 .
. RGB , , , 가 , , . RGB
. RGB 가 , , 가 .

1

1	1	1	.
2	1	(20)	.
3	2	.	.
4	3	(20a)	.

5 3 (70) R (V60)

6 (70)

7 6 (70)

8 6 (70)

9 6 (70)

10 6 (70)

11 3

12 11 (20B)

13 12 (23j(2k))

14 4

15 14 MUX(80)

16 14 (20C)

17 MUX(80)

18

19 a c

20 (2)

18 2000 5 30 2000-160804 (1), (2), (3)

(4) (1) RGB (, ,) (D2)

(X1, ..., Xn), (V3) (Y1, ..., Yn), (X1, ...,

Xn) (D2) (V3)

(D2) (Ck), (Ct), RGB (V4), (Vs1)

(2) (V4) (D2) (1) (X1, ..., Xn) (D2)

(3) (Ck) (V3) (1) (Y1, ..., Yn)

(4) (Ck), (Ct), (V4) (Vs1)

19 a c (1)

19 a (, ,) (stacked-up brick)

가 (,) RGB

가 RGB

RGB 8 0 256 , R B

0 4 251 256 가 5 250 G

0 RGB 255가 RGB

4- 60583 (,)

20 (2) / (2a), (2b1, ..., 2bn), (2C), (2d1, ...

, 2dn) / (2a) (Ck), (Ct) (V4) (V2a1, ...

(V4) RGB (V2a1, ..., V2an) (2b1, ..., 2bn) (V2a1, ...

, V2an) (V2a1, ..., V2an) (S2b1, ..., S2bn)

(2C) RGB 1, ..., 2dn), (CS) (V2c) (V1, ..., Vq) (Vs1) (S2b1, ..., S2bn) (1)(18) (VA, VB, VC) (V2c) (A C) (V1, ..., Vq) (2d

(D2) (Vs1) RGB (V4) (1) (Ck), (V4), (4) (Ck), (Vs1) (Ct), (Cs) (V4), (2) (CS) (Ck), (Ct), (D2)가

GB ..., 2bn) (VA, VB, VC) (V2c) (S2b1, ..., S2bn) (Ck), (V4) (X1, ..., Xn) (Ct), (V2a1, ..., V2an) (S2b1, ..., S2bn)가 (2a) (V2a1, ..., V2an) (A, B, C) R (2b1,

(VA, VB, VC) (V2c) (S2b1, ..., S2bn) (CS) (2C) (V1, ..., Vq) (2d1, ..., 2dn) (1) (2d1, ..., 2dn) (D2)

(ck) (V3) (V3) (1) (3) (Y1, ..., Ym) (V3) (ck) (1) (D2)

(D2) (VA, VB, VC) (1) (1) (D2)

GB (1) 18

RGB (,) RGB

가 1

2 가 , 가

3

가

가

가

가

4

가

가

5

가

가

6

가

가

(OV) () ()

128 64 64

1

1 1 1 (10), () (50),

(20)), (60) (10) RGB (10) (30)), (40), (50),

., Xn), Y1, ..., Ym) (V30) (Y1, ..., Ym), (X1, ..., Xn) (X1, .. (

(V30) (D20) (D20)

a), (20) (Ck), (Ct), RGB (V40), 가 (C

(V40) (V50) (V60) (V50) (V40), RGB

(V60) 가 (D20) (10) RGB

(X1, ..., Xn) (10) (30) (V30) (Ck) (10)

(40) (Ck), RGB (V40), 가 (Ca) (V50)(, VQ1, ..., VQ)

(50) (D20) (60) (IN) RGB

(V60)

2 1 (20) (21), / (, DAC(22)), 가 (23)

(20) (21) (Ck), (Ct), (V40) , RGB

(V40) (V21-1, V21-2, ..., V21-n) . DAC(22) (22a1, 22a2, ..., 22an),

(1-1, 1-2, ..., 1-64, 2-1, 2-2, ..., 2-64, ..., n-1, n-2, ..., n-64) (V50)(V1, ..., VQ)

() (V1, ..., V64) , (V1, ..., V64)

RGB (V40) (V21-1, V21-2, ..., V21-n) (V22-1, V22

-2, ..., V22-n)

가 (23) (23a1, 23a2, ..., 23an), (23b1, 23b2, ..., 23bn), (23c1, 23c2, ..., 23cn),

(23d1, 23d2, ..., 23dn), (23e1, 23e2, ..., 23en), (23f1, 23f2, ..., 23fn), (23g1, 23g2, ..., 23

gn), (23h1, 23h2, ..., 23hn), (23iq, 23i2, ..., 23in) . 가 (23) (V

60)(, VrR, VrG, VrB) 가 (Ca) (V22-1, V22-2, ..., V22-n) 가

(D20)

(40) (Ck), RGB (V40) 가 (Ca)

(50) (V50)(V1, ..., VQ) (60)

(IN) RGB (V60)

(20) (Ck), (Ct), (V40), 가 (Ca), (V50

), (V60) (V50) RGB (V60) (V40)

(V50) , RGB (D20) (10) (X1, ..., Xn)

(D20)

(21) (Ck), (Ct), (V40) , RGB

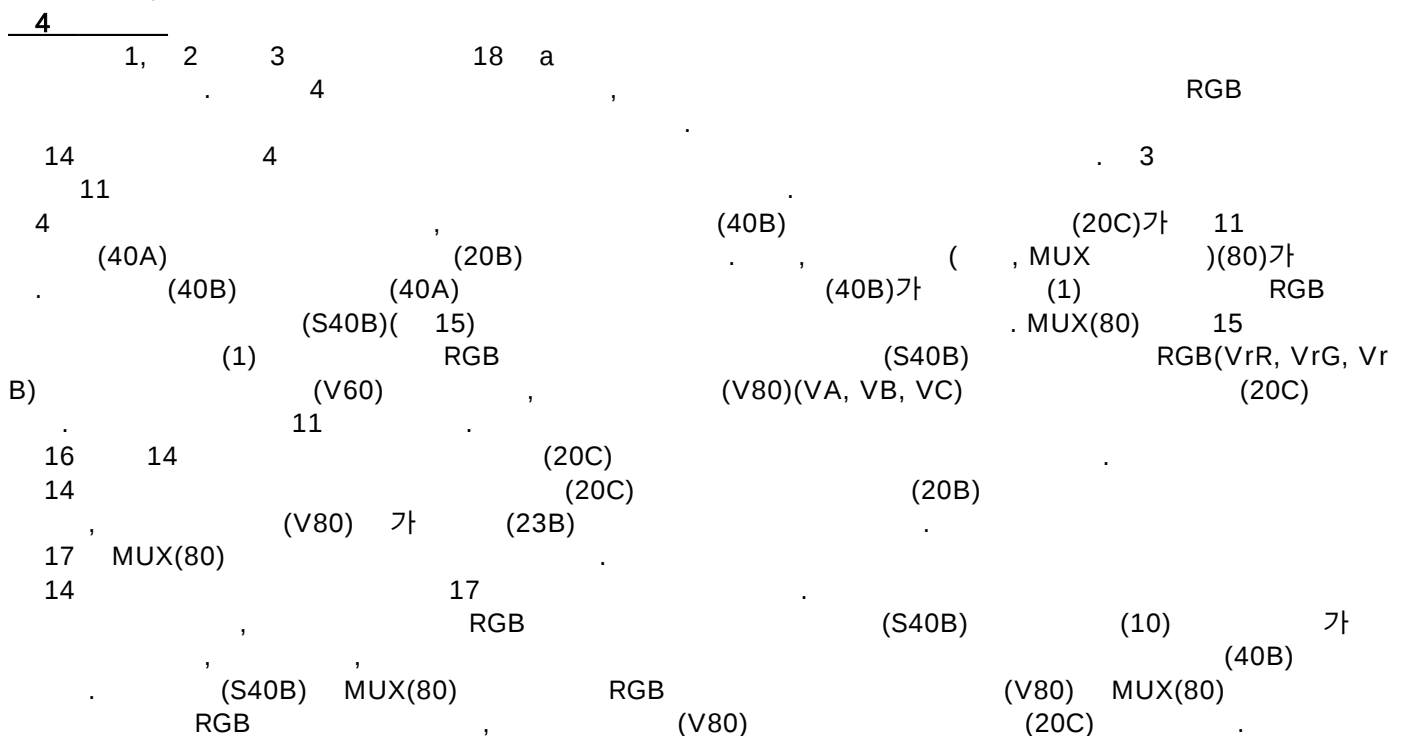
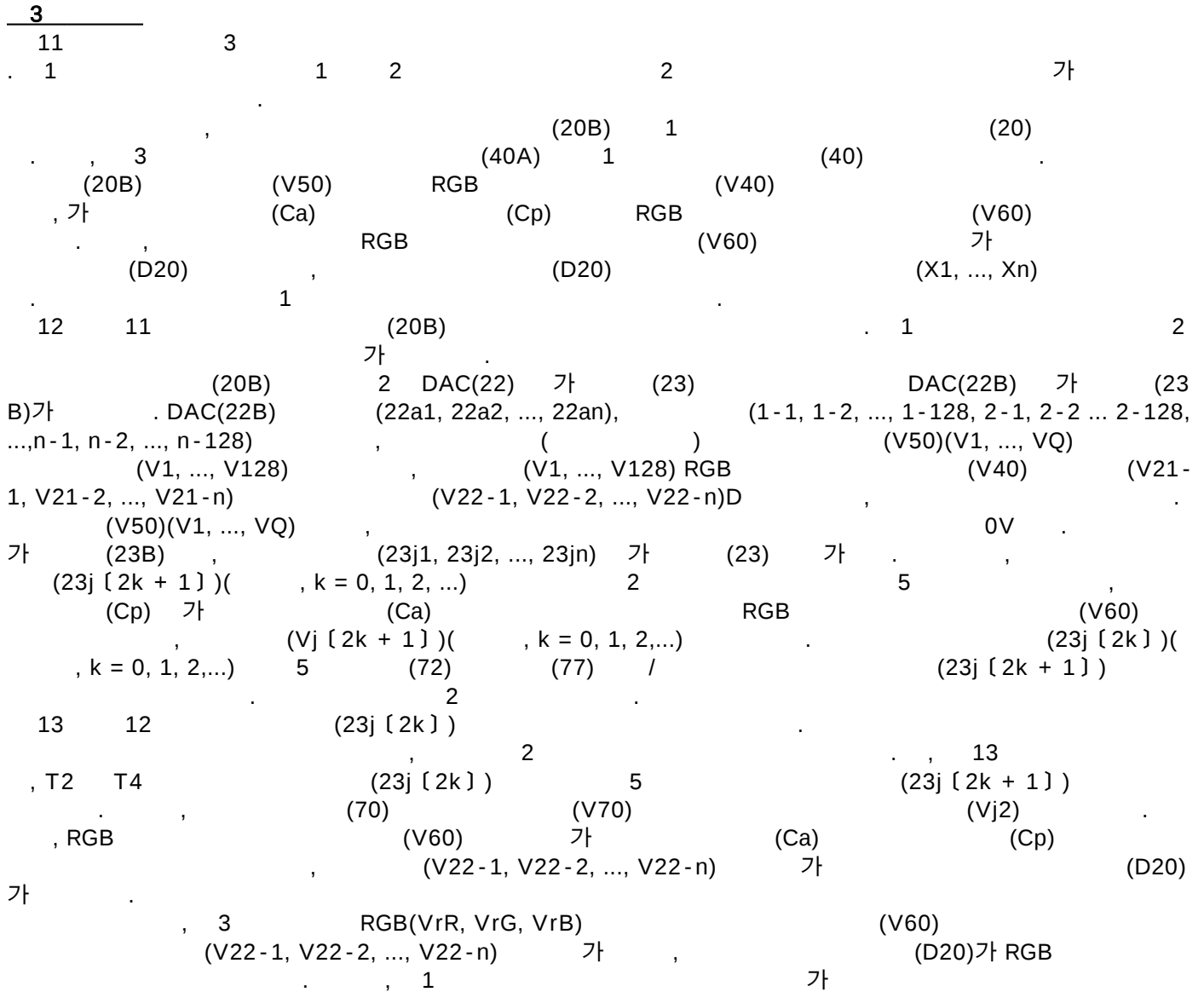
(V21-1, V21-2, ..., V21-n) . DAC(22) (V21-1, V21-2, ..., V21-n)

(V1, ..., V64) (V21-1, V21-2, ..., V21-n) (V22-1, V22-2, ..., V22-n)

(Ca) (23) (V60)(VrR, VrG, VrB) (V22-1, V22-2, ..., V22-n) (D20) 가
 가 (23) , 가 (Ca) (23b1) (23f1) (23f1) (23c1) (23c1) (23g1)가 (23g1)가 (23b1)가
 (23f1)가 (23f1)가 (23c1) (23c1) (23g1)가 (23d1) (a) (Vd1a) (23b1)
 (V22-1) (23f1)가 (23e1) (23c1) (23g1)가 (Vd1b) (VrR)
 (a) (Vd1a) (V22-1) + (VrR). (D20) G B
 (Vd1a) (23h1) (D20) (30) (Ck) (Y1, ..., Ym) (Ck) (V30) (D20)
 (V30) (10) (V30) (10) (D20)
 2-2, ..., V22-n) 가 RGB(VrR, VrG, VrB) (D20) RGB (V60) (V22-1, V22-2, ..., V22-n) 가

$$\frac{2}{3} \cdot \frac{1}{1} = \frac{2}{3}$$
 (20), (40) (20a), (40A) (50A) 1 (50A) (V60) (C) (V60) (C)
 (V70) (20a) (40A) (50A) (70) (Cp) (Cp) (V70) 1
 (V50) (V60) (70) (V70)
 RGB (20a) (20a) 2 (20) (20) (V70)
 4 3 (20a) (20a) (20) (V60) 3 가 (23) (70) (RGB) R (V60)
 5 (70) (71), (72), (73), (74), (75), (76), (77) (78) (RGB) (71), (72), (73), (74), (75), (76), (77)
 6 (70) 7, 8, 9, 10 6 (70)
 (V60) (Cp) 가 (Ca) (D20)(V22-1, V22-2, ..., V22-n) 가
 (70) 6 T1, 가 (Ca) L (75) (P1) (Cp) H (VrR) (1V) 8 (70) (72), (73), (74)
 (70) 7 T2, 가 (Ca) H (75) (P1) (Cp) H (1V) (Ca) L (V70) 0V T4
 (V70)(1V) 9 T3, 가 (Ca) L (70) 10 (72), (73) (74)
 (Ca) H (P2) (1V) (72), (73) (74)
 (V70)(1V) 2 RGB(VrR, VrG, VrB) (V60) (V22-1, V22-2, ..., V22-n) 가
 (D20) RGB (V70) (V22-1, V22-2, ..., V22-n) 가

가 .



17 (S40B)
(V60)(VA, VB, VC) MUX(80) (20C)

(S40B)가
(V60)(VA, VB, VC) MUX(80) (20C) , 3

4 (10) RGB (S40B) RGB
(40B), (V60) MUX(80)가 , 3 4

1 RGB(VrR, VrG, VrB) (V60) (V22-1, V2
2-2, ..., V22-n) 가 (D20) RGB

2 RGB(VrR, VrG, VrB) (V60)
(D20) RGB (V70) (V22-1, V22-2, ..., V22-n) 가 ,

3 RGB(VrR, VrG, VrB) (V60)
(V22-1, V22-2, ..., V22-n) 가 (D20)가 RGB

가 , 1

4 (10) RGB (S40B) RGB
(40B), (V60) MUX(80)가 , 3 4

RGB 4 (,) ,

4 MUX(80) (40B) 1 3

11

(57)

1.

2.

(pixel) R, G, B 3

R, G, B

R, G, B

R, G, B

가
가

R, G, B

3.

(pixel) R, G, B 3

1

1 R, G, B

R, G, B

R, G, B

R, G, B

4.

(pixel) R, G, B 3

R, G, B

R, G, B

R, G, B

R, G, B

, R, G, B

5.

(pixel) R, G, B 3

R, G, B

R, G, B

R, G, B

R, G, B

, R, G, B

6.

(pixel) R, G, B 3

R, G, B

R, G, B

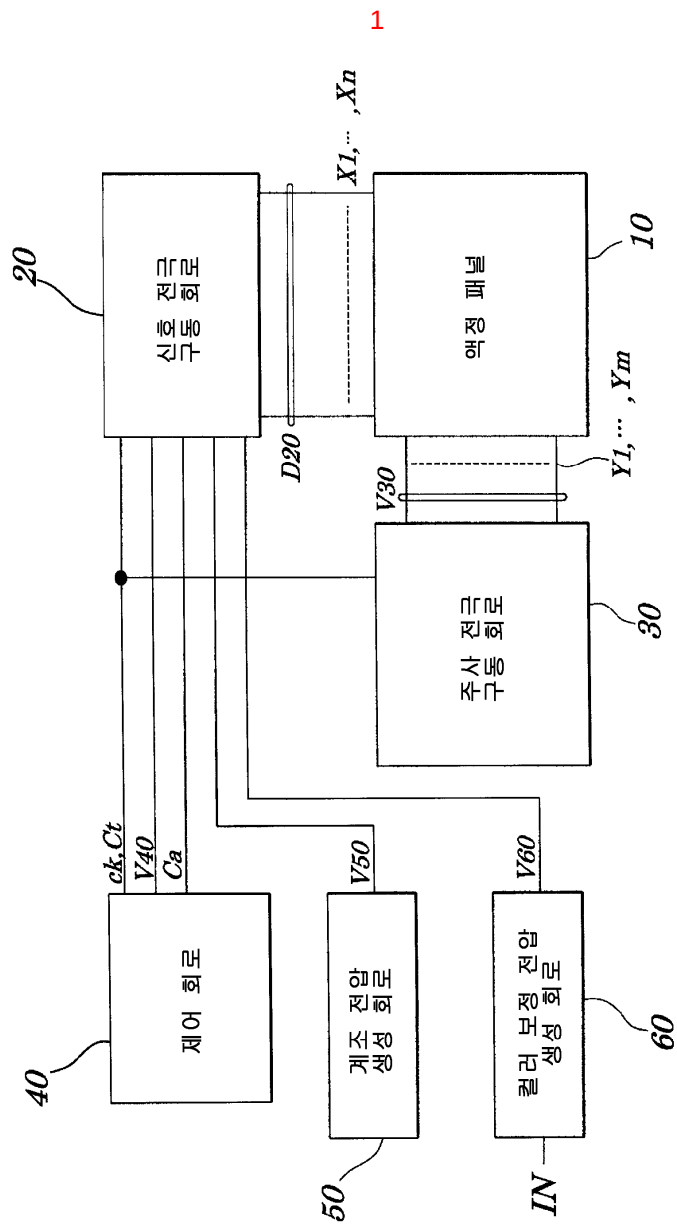
R, G, B

R, G, B,

R, G, B

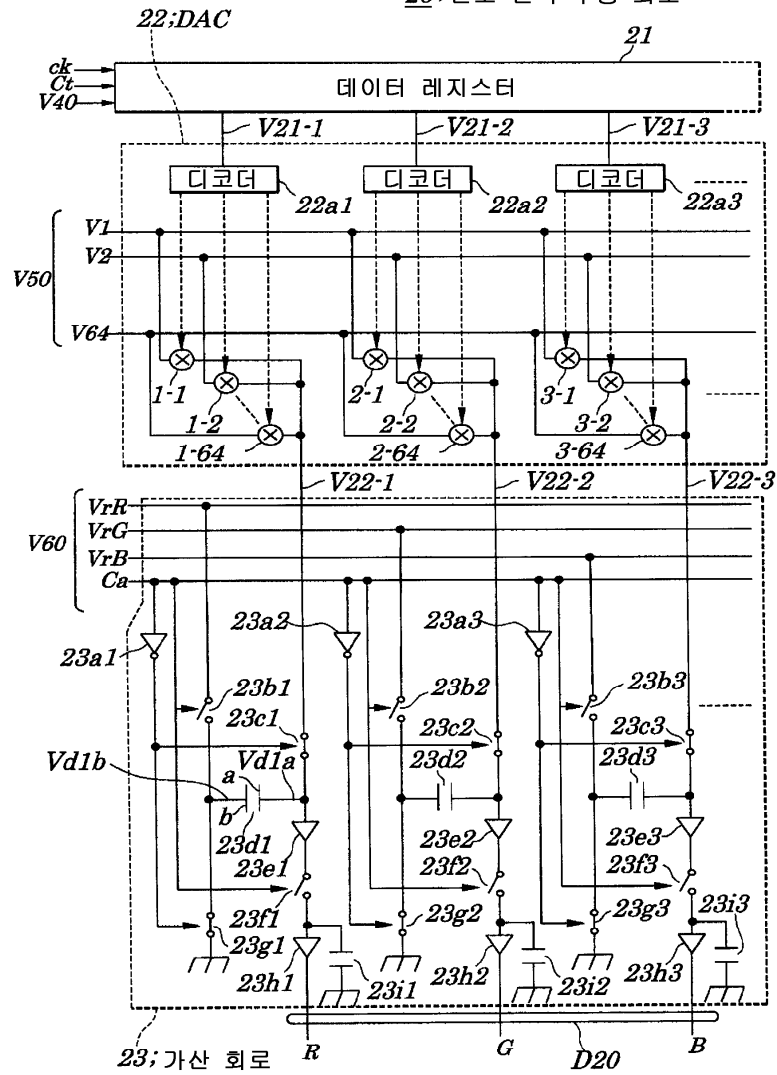
가
가

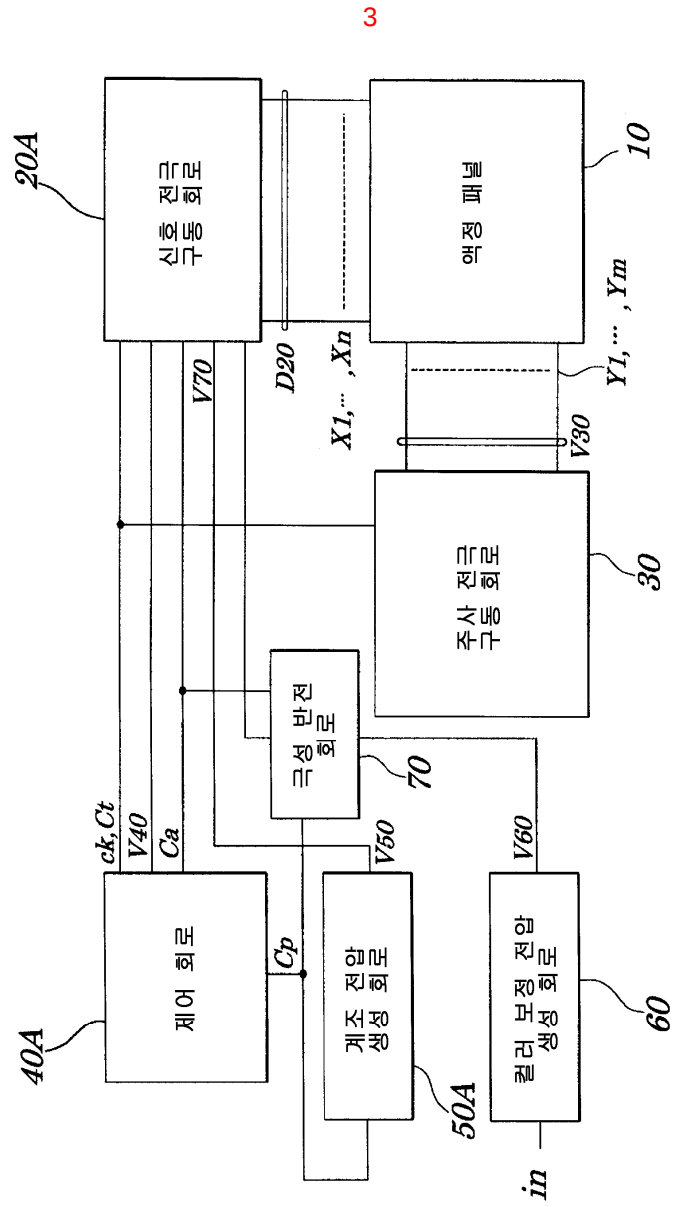
, R, G, B



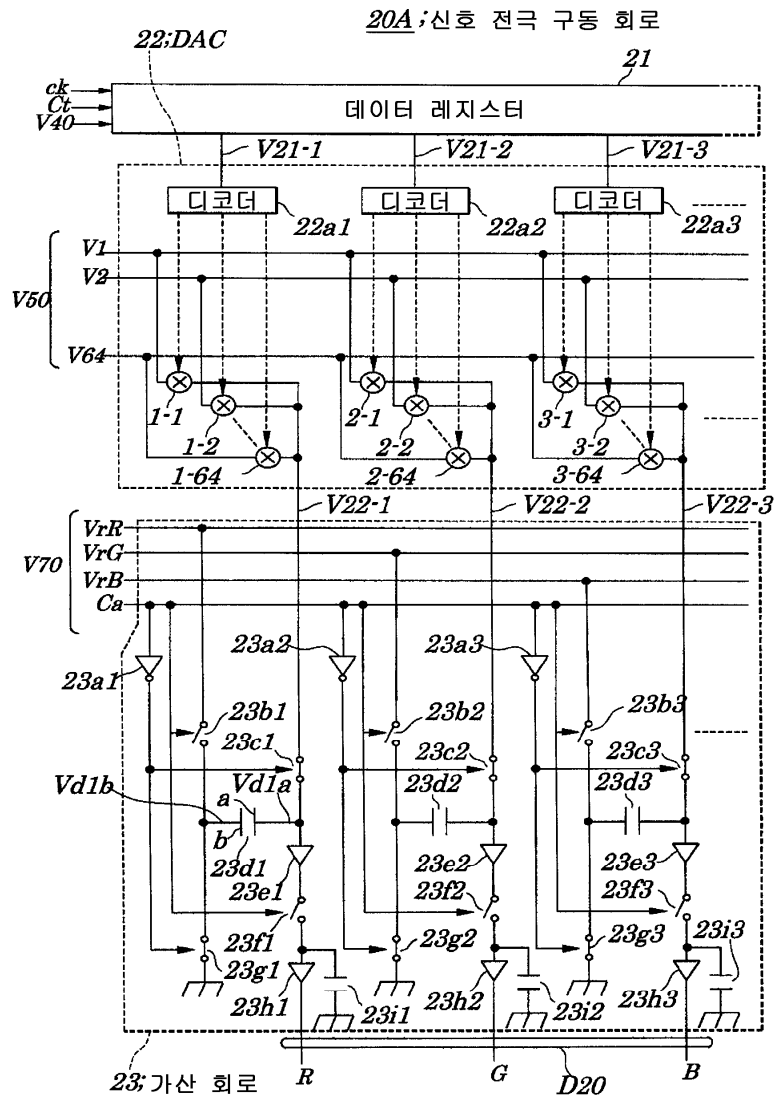
2

20; 신호 전극 구동 회로

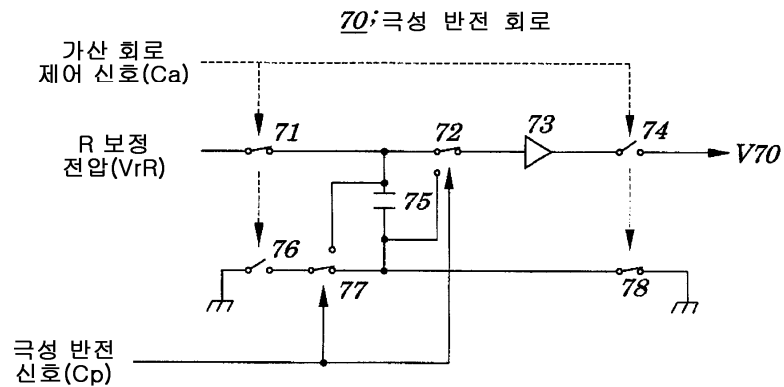




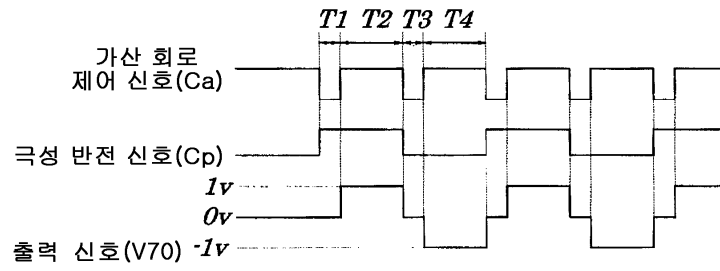
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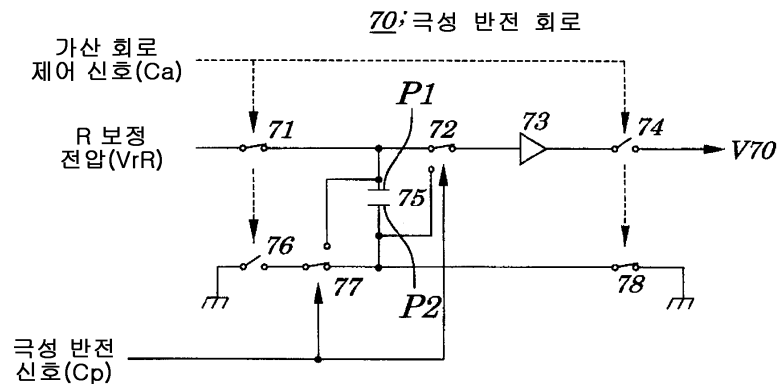
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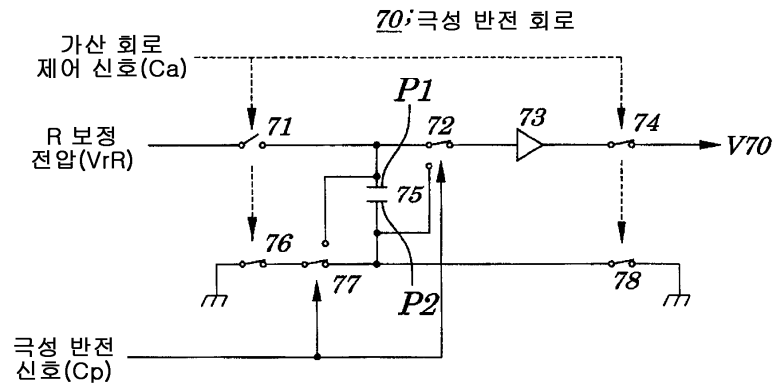
6



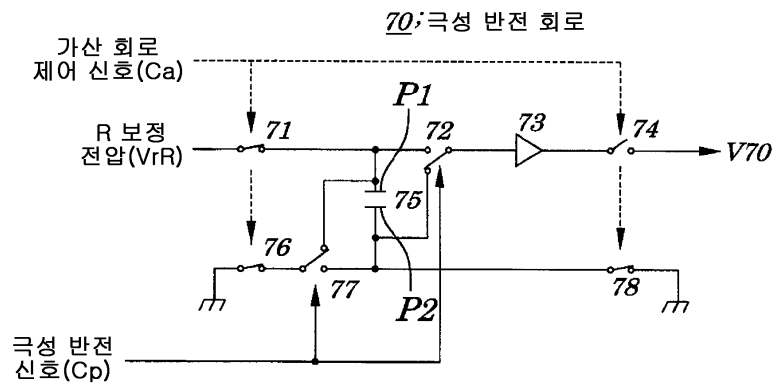
7

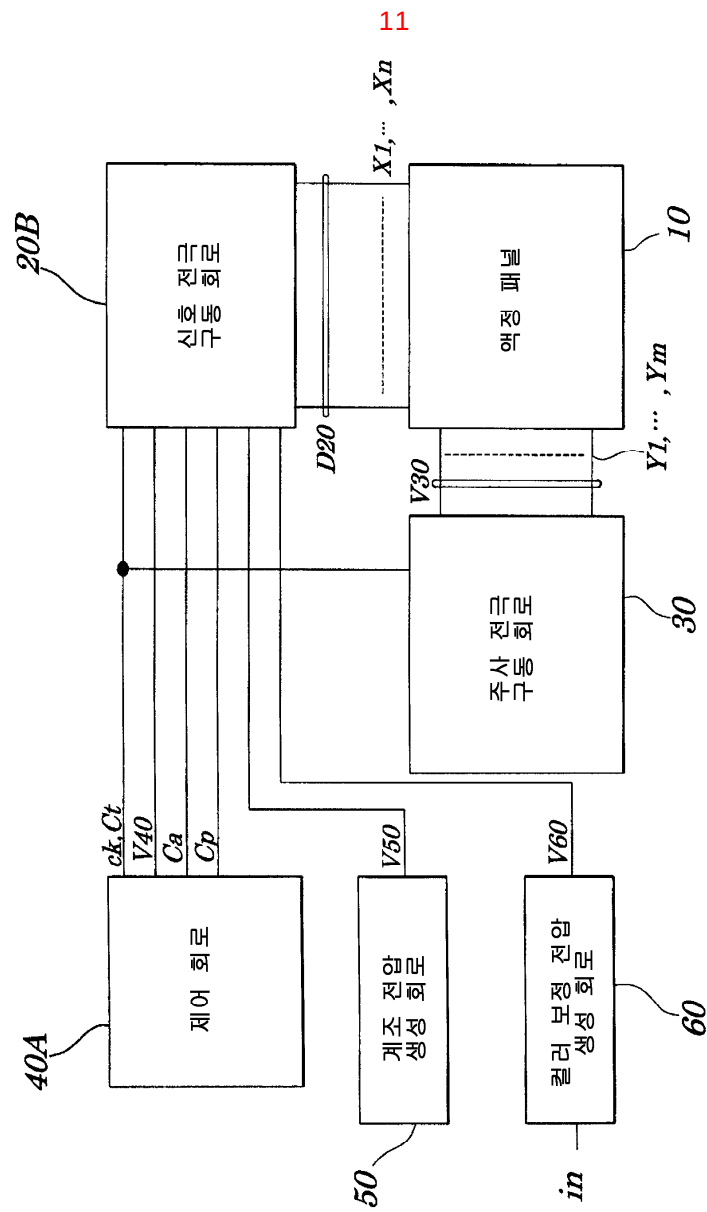
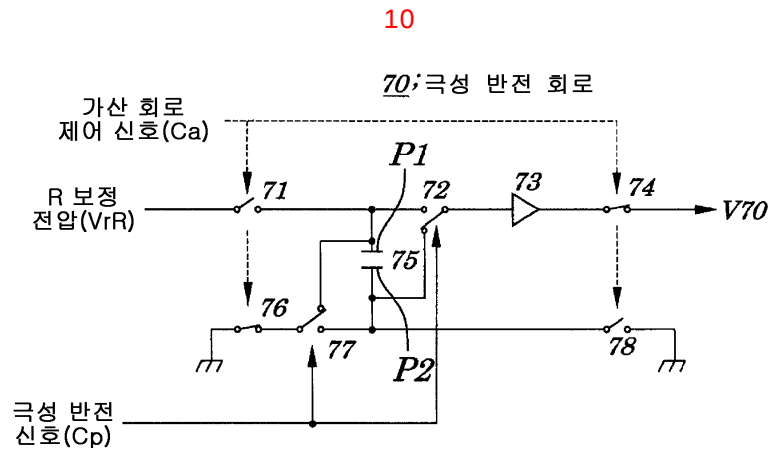


8

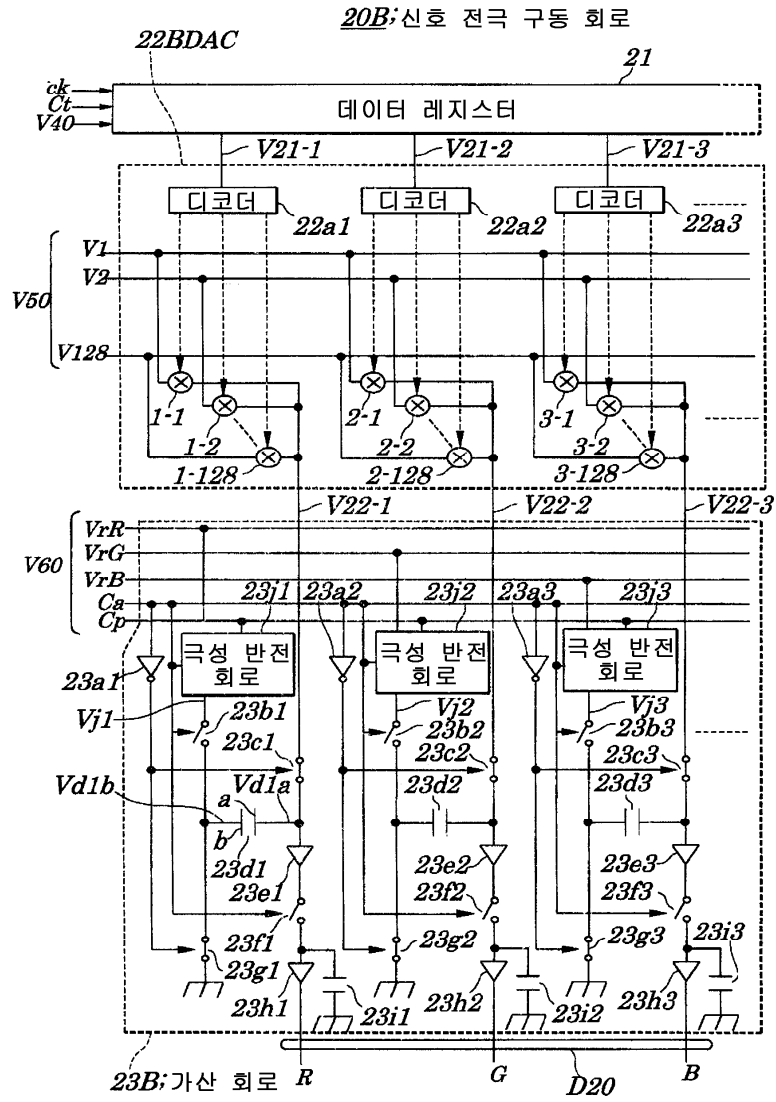


9

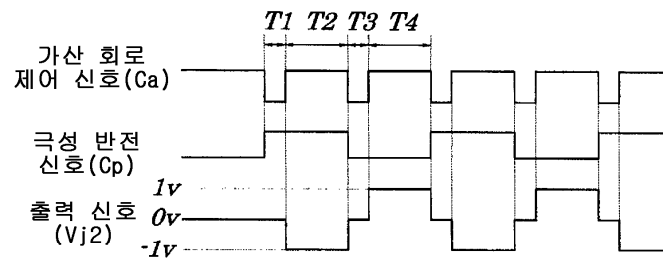




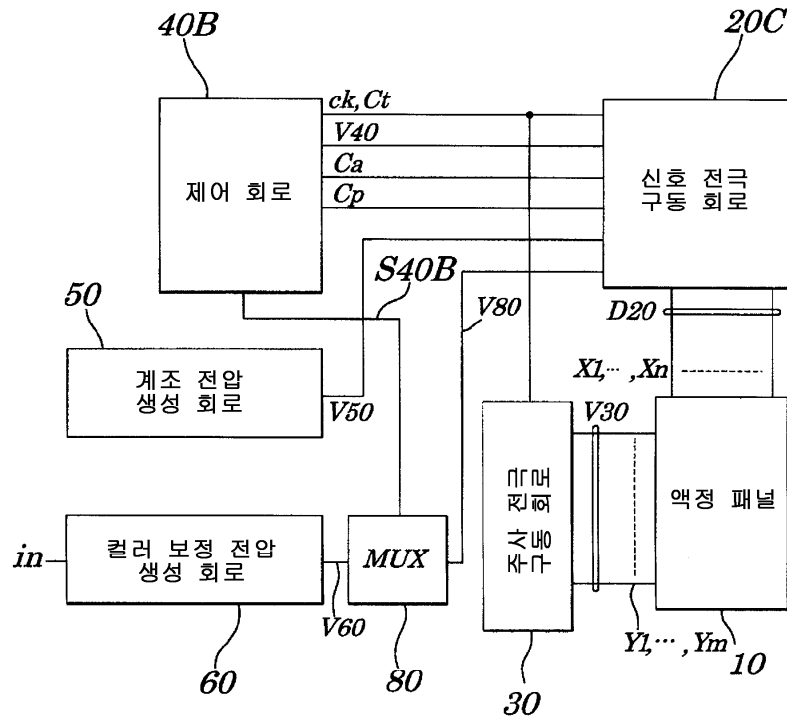
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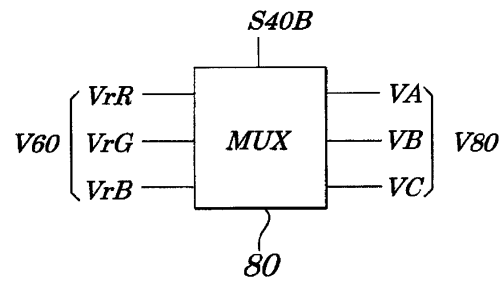
13



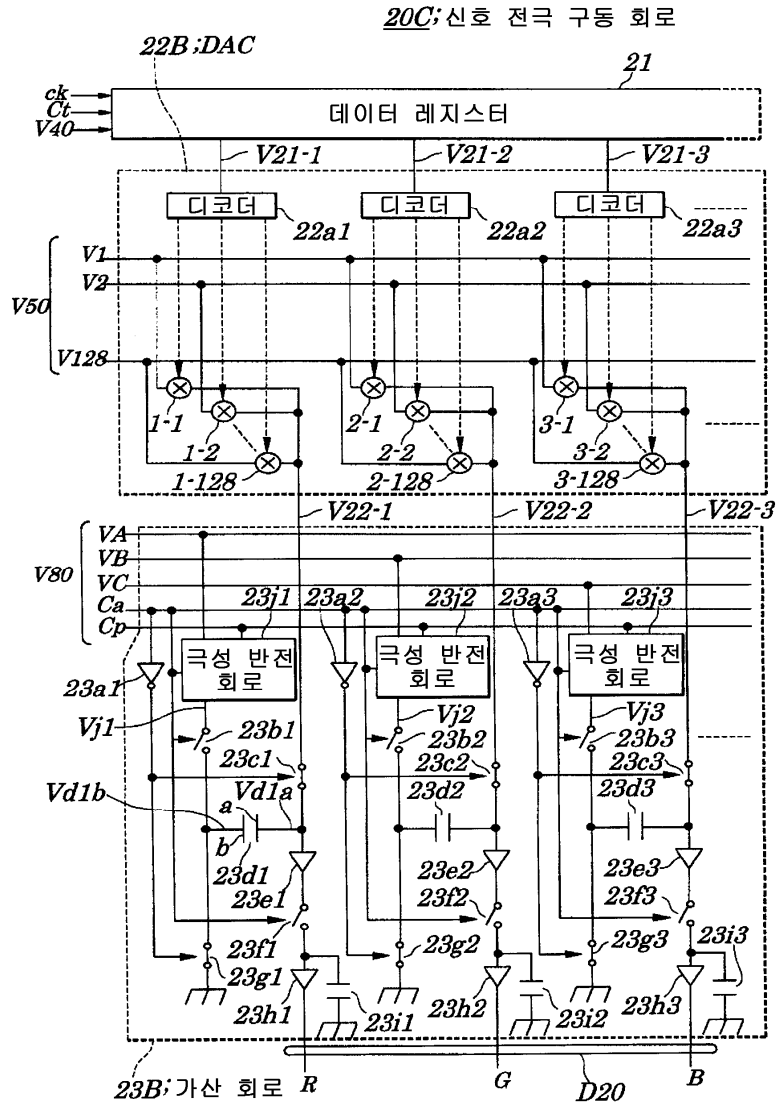
14



15



16

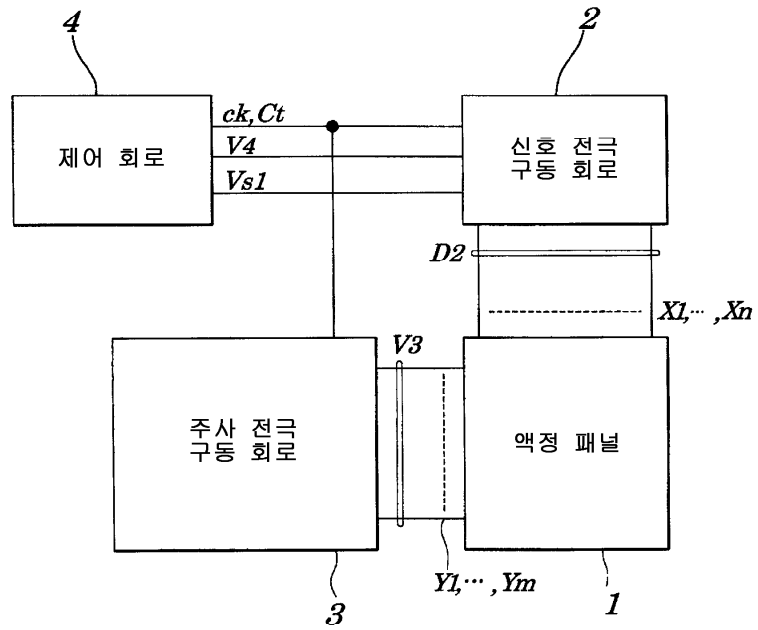


17

제어 신호 (S40B)	수직 스트라이프형			모자이크형			수평 스트라이프형		
수평선	Yi	Yi+1	Yi+2	Yi	Yi+1	Yi+2	Yi	Yi+1	Yi+2
VA	R	R	R	R	B	G	R	G	B
VB	G	G	G	G	R	B	R	G	B
VC	B	B	B	B	G	R	R	G	B

18

종래기술



19

종래기술

a

<i>R</i>	<i>G</i>	<i>B</i>	<i>R</i>	<i>G</i>	<i>B</i>
<i>R</i>	<i>G</i>	<i>B</i>	<i>R</i>	<i>G</i>	<i>B</i>
<i>R</i>	<i>G</i>	<i>B</i>	<i>R</i>	<i>G</i>	<i>B</i>
<i>R</i>	<i>G</i>	<i>B</i>	<i>R</i>	<i>G</i>	<i>B</i>
<i>R</i>	<i>G</i>	<i>B</i>	<i>R</i>	<i>G</i>	<i>B</i>

수직 스트라이프

b

<i>R</i>	<i>G</i>	<i>B</i>	<i>R</i>	<i>G</i>	<i>B</i>
<i>B</i>	<i>R</i>	<i>G</i>	<i>B</i>	<i>R</i>	<i>G</i>
<i>G</i>	<i>B</i>	<i>R</i>	<i>G</i>	<i>B</i>	<i>R</i>
<i>R</i>	<i>G</i>	<i>B</i>	<i>R</i>	<i>G</i>	<i>B</i>
<i>B</i>	<i>R</i>	<i>G</i>	<i>B</i>	<i>R</i>	<i>G</i>

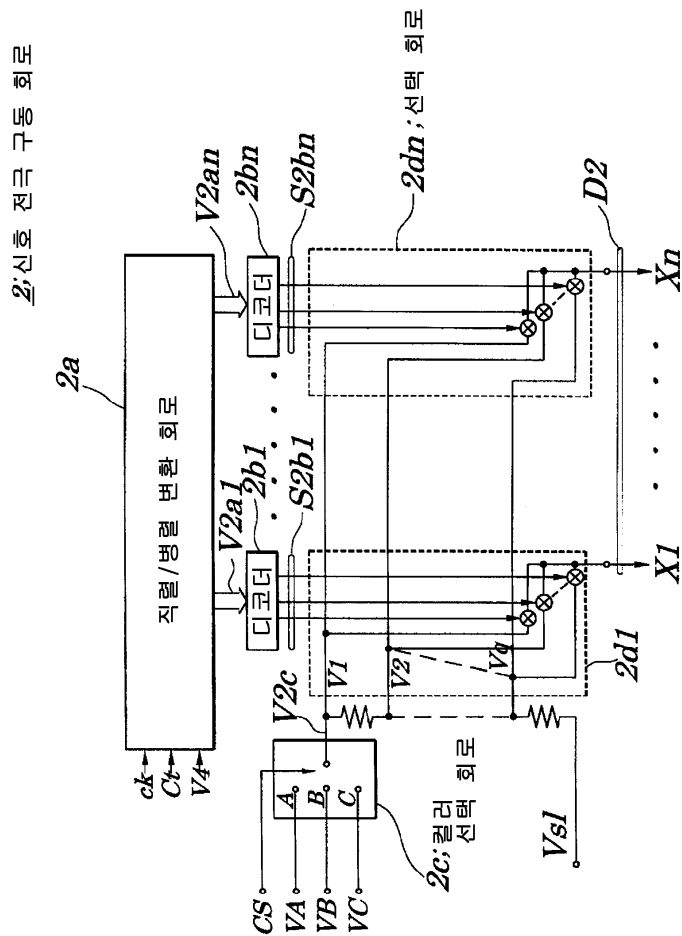
모자이크

c

<i>R</i>	<i>B</i>	<i>G</i>	<i>R</i>	
	<i>G</i>	<i>R</i>	<i>B</i>	<i>G</i>
<i>R</i>	<i>B</i>	<i>G</i>	<i>R</i>	
	<i>G</i>	<i>R</i>	<i>B</i>	<i>G</i>
<i>R</i>	<i>B</i>	<i>G</i>	<i>R</i>	

삼각형

종래기술



专利名称(译)	液晶显示器		
公开(公告)号	KR100435082B1	公开(公告)日	2004-06-09
申请号	KR1020010029621	申请日	2001-05-29
[标]申请(专利权)人(译)	NEC液晶技术株式会社		
申请(专利权)人(译)	日元号技术可否让这个夏		
当前申请(专利权)人(译)	日元号技术可否让这个夏		
[标]发明人	SUMIYA TAKANORI		
发明人	SUMIYA,TAKANORI		
IPC分类号	G09G3/36 G09G5/02 G09G3/20 G02F1/1335 G02F1/133		
CPC分类号	G09G5/02 G09G3/3688 G09G3/2011 G09G3/3685 G09G3/3614		
优先权	2000160804 2000-05-30 JP		
其他公开文献	KR1020010109140A		
外部链接	Espacenet		

摘要(译)

本发明的目的是提供用于独立控制关于RGB的灰度(灰度)的液晶显示器。控制电路输出时钟信号,以及关于RGB的图像信号和加法电路控制信号。灰度电压产生电路产生灰度电压。根据关于RGB的颜色补偿电压是用于颜色校正的输入信号,它在颜色校正电压产生电路中产生。信号电极驱动电路接收时钟信号,控制信号,图像信号,加法电路控制信号,灰度电压,颜色补偿电压。从灰度电压中选择与关于RGB的图像信号的灰度级对应的灰度电压。关于RGB的颜色补偿电压被加到灰度电压上。此后,产生子像素数据信号并将其在液晶面板中传输。液晶显示器,和。

