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(12) (A)

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(72)	1112-37204	
(74)		
(54)		

1 2

2 , 1

2

6a

1

2 1

3a 3b 2

4 1 3b

5 4 가

6a 6b

7 1 6b .
 8 6b .
 < >
 2 : 4 : (IC)
 6 : (TCP) 8 : (PCB)
 10 : 12 :
 14 : 16 :
 15,115 : 17,117 :
 18 : - (DAC) 20 : P
 22 : N 24 : (MUX)
 26 : 30,130 :
 32,132 : 50,150 : 1
 52,152 : 2 54,154 :

가
 (Thin Film Transistor; , 'TFT')
 . TFT 가 1

가

1 가

가
 (Integrated Circuit; , IC
 (Tape Carrier Package;
 , COG(Chip
) , TCP)
 On Glass) (TAB; Tape Automated Bonding)

1
 (2) IC (4) , TCP(6)
 (Printed Circuit Board; , PCB)(8) IC (4) TCP(6)

PCB(8) () IC (4) PCB(8) . TCP(6) (2)

(2) IC (4)

(14) , IC (4) 2 (VD) (16) , (16) , DAC (18) , DAC(18) , DAC(18) (26) (VD) IC(4) (10) , DAC (18) (12) 가 . 가

IC (4) n (DL1 DLn) (SSP, SSC, SOE, REV, POL)

(10) (VD)가 ()

(12) ()

(14) n/6 (10) (SSP) (SSC)

(16) (14) (10) (VD) (VD) (16) n (3 6) (VD) (VDeve (VDodd) (VDodd) (R), (G), (B) (VD) (16) (VDodd), 6 (SOE) (REV) (10) (VDeven) (10) (16) (16) 가 (VD) 가 (EMI) (VD) 가

DAC (18) (16) (VD) P(Positive) (20) N(Negative) (22) , P (20) N (22) (MUX; 24)

P (20) n P (16) n (22) n (12) N (16) n (24) n (10) (POL) P (20) N (22)

(26) n n (D1 Dn) (Voltage follower) DAC (18) (DL1 DLn)

3a 3b 2 IC(4) (15) (17)

3a , (15) (SSC) (SSP) (30) , (30) (SST1 SSTn) (32)

(30) (32) (SSC) (SSP)()

(30) (32)

(15) 1 (40), 2 (42), 3 (44), 4 (46) 5 (48)

1 (40) (15) , 1 (40) (High) 가

(15) , 1 (40)가 , 가 (32) (INT)

2 (42) (10) (SSC)

3 (44) 1 (40) (Hing) 가 (10) (SSP)

(15) (Carry) D-IC

4 (46) 1 (40) (Hing) 가 (15) (Carry)

D-IC , (10) (SSP)

5 (SP1 SPn) (17)

1 (BF1) , n (SST1) 가 , 가 3 (44)

1 (BF2) 3 4 (44,46) , 1 (40) 4 (46)

가 1 (BF1) , 2 (BF2)가 , 3 (44) (High)

(SSP) 1 (SST1) , 4 (46) n (SSTn)

(Carry) , 1 (40) (Low) 가 1 (BF1)

, 2 (BF2)가 , 3 (44) n (STn) (Carry)

, 4 (46) (SSP) 1 (SST1)

(15) (SSP) 1

(SST1) n (SSTn) 1 (AND1) 2

(AND2)

1 (AND1) 1 (40) 3 (44) , 가 1

(SST1) 1 (AND1) 1 (40) '1'

, 3 (44) '1' (SSP) '1'

(SSP) 1 (SST1) (15) 1 (40) '1'

(SST1) (SSP) 1 , 1 (AND1) (SST1)

2 (AND2) (INT) 4 (46) , 가 n

(SSTn) (AND2) 1 (40) '0' 가 (S

(INT) '1' , 4 (46) '1' (SSTn)

SP) '1' (SSP) n

(15) n (SSTn)

(AND2) (INT) '1' (SSP) n

(SSTn)

, i(i) (SSTi) (32) 가 (SSP)

3 (44) 4 (46) i-1 5 (SPi-1) , 가 1 (40)

(AND3) , 가 i+1 (AND3) 4

(SSTi+1) 5 (SPi+1) 4 가 (30) (OR)

(AND4)

3 (AND3) (SSP) 5 (15)가 (48) '1'

3 (44) '1'

1 (40) '1' '1' .

4 (AND4) (15)가 4 (46) '1'

(SSP) 5 (48) '1'

(INT) '1' .

(OR) 3 4 (AND3,AND4) (30)

(SSP)가 (10) (SSC) (15) (10) (SSC) (10) (SST1) (30)

(10) (SSP) 1 (AND1) (AND1) '1' '1' (SST1) (,

(32) .

1 (AND1) '1' 3 (AND3) .

AND3) 3 '1' (OR) (30) (OR) 1 (40) '1' 가 (AND3) '1' 3 (

(OR) (30) '1' .

2 (42) (SSC) 1 (SST1) (30)

1 (SST1) (30) '1' 1 5 (SP1) (SST2) (32)

1 5 (SP1) '1' 2 2 5 (SP2) (SST3) (32)

2 (SST2) (32) '1' 3 (AND3) (AND3) '1'

3 (AND3) '1' (OR) (30) '1' .

2 (42) (SSC) 2 (SST2) (30) '1' 2 5 (SP2) (SST3) (32)

2 (SST2) (30) '1' 3 2 5 (SP2) (SST3) (32)

5 (SP1) (15) 5 (SPn) ('1') 1

3b (17) (15) (50) 1 (50)

1 (SOE) n 가 (VD) 2 (

52) , (REV) (54) (RST1 RSTn) .

1 (50) (VD) (V

D) 2 (52) (SOE) 2 (52) n (VD) (10)

(REV) (54) 가 (VD)

(17) 6 (60), 7 (62) 8 (64) .

6 (60) (10) n (VD) 7 (62) (10)

n (VD) (SOE) 8 (64)

EV) (10) 가 (VD) (R

(10) n (VD)가 (15) 가 (15) (10)

1 (RST1) 1 (50) (RST1) 1 (50) (VD)가 1 (10)

(VD) 1 (RST1) 1 (50) (RST1) 1 (50) (RST1)

1 (RST1) 2 (52) (VD)가 1 (15) (10)

2 (50) (RST2) 1 (50) (RST2) 1 (50) (VD)가 2 (10)

(VD) 2 (RST2) 1 (50) (RST2) 1 (50) (VD)가 2 (RST2)

1 (RST2) 2 (52) (VD)가 2 (RST2)

(50) (52) (VD)가

(17) (15) (RST1 RSST

RSTn) 1 (50) (VD) (RST1 RSST

n) 2 (52) (VD)가 1 n-1 (RST1 RSTn-1) 2 2 (

52) (52) (VD)가

(10) (SOE) 가 2 (52) (54) 가

2 (10) (52) (VD) (REV) (54) 가

(10) (VD) (54) 가

(Vgh) (VD)가

(static image) 1 (VD)가

1 (1 Hsync)(, 가 (17) (VD)

(Image data) (Black data) (Impulse)

(Black data) 가 (Image data) (Black data

가 (Image data) (SSP)

(Black data) (Image data)가 (

Black data)가 TFT 5 TFT (Charging)

가 (Black data)가 TFT

1

2

1

2

1 2

1 2

가

가

가
2

1

1

가

2

가

6a 8

6a 6b
(117)

(115)

6a
(SSP)

(132)

(115)
(130) , (130) (SSC)
(SST1 SSTn)

(130)

(SSC)

(SSP)(
(SSP)

(130)

(132)

SPn) 6 (115) 1 (140), 2 (142), 3 (144), 4 (146), 5 (SP1
(148)

1 (140)

(115)

1 (140)

(High)

가

(115)

1 (140)가

가

(132)

(INT)

2 (142)

()

(SSC)

3 (144)

1

(40)

(Hing)

가

(Carry)

D-IC

(SSP)

4 (146)
ry) D-IC

1

(140)

(Hing)

가

(115)
(SSP)

(Car

5 (SP1 SPn) (117) .

6 (148) (BEO) .

1 (SST1) 가 , 가 3 (144)
 1 (BF1) , n (SSTn) 가 , 가 4
 (146) 2 (BF2) 3 4 (144,146) , 1 (140)
 (High) 가 1 (BF1) , 2 (BF2)가 3 (144)
 (SSP) 1 (SST1) , 4 (146) n 가 1
 (SSTn) (Carry) , 1 (140) (Low) 가 1
 (BF1) , 2 (BF2)가 3 (144) n (SS
 Tn) (Carry) , 4 (146) (SSP) 1 (SS
 T1) .

1 (115) (SSP) 1
 (SST1) n (SSTn) 1 (AND1) 2
 (AND2) .

1 (AND1) 1 (140) 3 (144) 가 1
 (SST1) 1 (AND1) 1 (40) '1'
 , 3 (144) '1' (SSP) '1'
 (SSP) 1 (SST1) (SST1) , 1 (115) 1 (140)
 '1' (SSP) 1 (AND1) (SST1) .

2 (AND2) (INT) 4 (146) 가 n
 (SSTn) 2 (AND2) 1 (140) '0' 가
 (INT) '1' , 4 (146) '1' (SSTn)
 (SSP) '1' (SSP) n (SSTn) .
 , (115) n (SSP) , 2
 (AND2) (INT) '1' (SSP) n

1 (SSTi) (132) 가 (SSP)
 3 (144) 4 (146) i-1 5 (SPi-1) 가 1
 (140) 3 (AND3) , 가 (INT) , 가 i+1 (AN
 (SSTi+1) 5 (SPi+1) 4 가 (AND4) , 가 3 (O
 D3) 4 (AND4) 가 (130) (O
 R) .

3 (AND3) (115)가 3 (144) '1'
 (SSP) 5 (SP) '1'
 1 (140) '1' '1' .

4 (AND4) (115)가 4 (146) '1'
 (SSP) 5 (SP1 SPn) '1'
 (INT) '1' '1' .

(OR) 3 (AND3), 4 (AND4) 6 (148)
 (30) .

(SSP)가 (10) (SSC) (10) (SSC)
 (10) (SSC) 1 (SST1) (130)
 , 1 (SSP) 1 (AND1)
 , 1 (AND1) '1' 1 가 (SST1)
 (132) .

1 (AND1) '1' 3 (AND3)
 , 3 (AND3) (AND3) (OR) 1 (140) '1' 가 3
 (AND3) '1' (OR) (130) '1' (AND3) '1'

, 2 (142) (SSC) 1 (SST1) (130)
 , 1 (ST1) (30) '1' (SST1) (130) '1' 가
 5 (SP1) '1' 2 1 5 (SP1) (SST2) (132) , 1

2 (SST2) (132) '1' 3 (AND3) 가 (AND3)
 3 (AND3) '1' (OR) 1 (140) '1' (AND3) '1'

, 2 (142) (SSC) 2 (SST2) (130) 가 (130)
 , 2 (SST2) (130) '1' 2 5 (SP2) (SST3) (1
 32) , 2 5 (SP2) '1' 3

5 (SP1) (115) n 5 (SPn) ('1') 1

, (BOE) (OR) (BOE) 가
 (Black data) (Image data) (Black data) (00000000 11111111)
 (BOE) (Black data)

6b , (117) (115) 1 (150) , 1 (150)
 (152) , (SOE) n 가 2 (VD)
 (REV) (154) (RST1 RSTn)

1 (150) (VD) (V
 D) 2 (152) (SOE) 2 (152) (154) n (VD)
 (REV) 가 (154) (VD)

, (117) 6 (160), 7 (162) 8 (164)

6 (160) n (VD) 7 (162) (SOE) 8 (164) (REV)
 n (VD) 가 (VD)

, (VD) (Image data) (Black data)

, (115) 가 (115)
 (VD) (RST1) (Image data) 1 (150) (RST1)
 , 1 (150) 1 (Image data) 1 (RST1) 1

(150) 2 (152) (VD) (Image data)가 1 (RST1) (150)
 (VD) 2 (Image data)가 1 (RST1) 1 (115)
 (RST2) 1 (150) (RST2) 1
 (VD) (Image data) 2 (RST2) 1 (150) 1
 (150) (VD) (Image data)가 2 (RST2) 1 (150) 2 (152)
) (Image data)가 1 (RST2) 1 (150) (VD)

(117) (115) (RST1
 RSTn) 1 (150) (VD) (Image data)
 (RST1 2 (152) (Image data)가 1
 (RSTn) 2 (152) (VD) (Image data)가 1
 n-1 (RST1 RSTn-1) 2 (152) (VD)
 (Image data)가

2 (152) 1 (SOE) 가 2 (152) (Image data)가
 (154) (VD) (154) (REV)
 가 (VD) (Image data)

(BOE) (115) 가
 (VD) (Black data)가 (115)
 (RST1 RSTn) 1 (150)
 (VD) (Black data) (RST1 RSTn) R
 STn) 1 (150) (VD) (Black data)가 (RST1 RSTn) (RST1
 RSTn) 2 (152)

(SOE) 가 (RST1 RSTn) 2
 (152) 2 (152) 1 (VD)
) (Black data)가 (154) 가 (154)
 (REV) 가 (VD)

(Black data)
 (Black data) (Black data) 7
 (Image data)

8 (VD) (Image data)가 (A)
 (Black data) TFT (Charging)

(Image data)가 (Black data)가 TFT
 (Charging) 가 TFT (Black
 data)가 TFT , TFT가

가

가

(57)

1.

1 2 2

2.

1 1

3.

1 2

4.

1 1 2

5.

4 1 2 1

6.

4

7.

가

가 1

가 2

8.

7

1

가

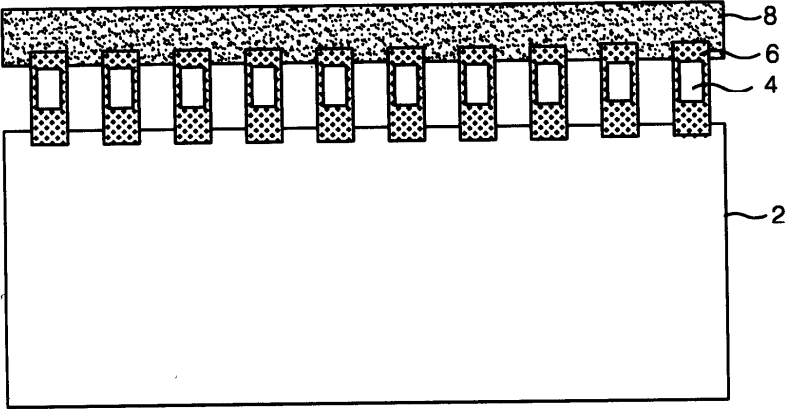
9.

7

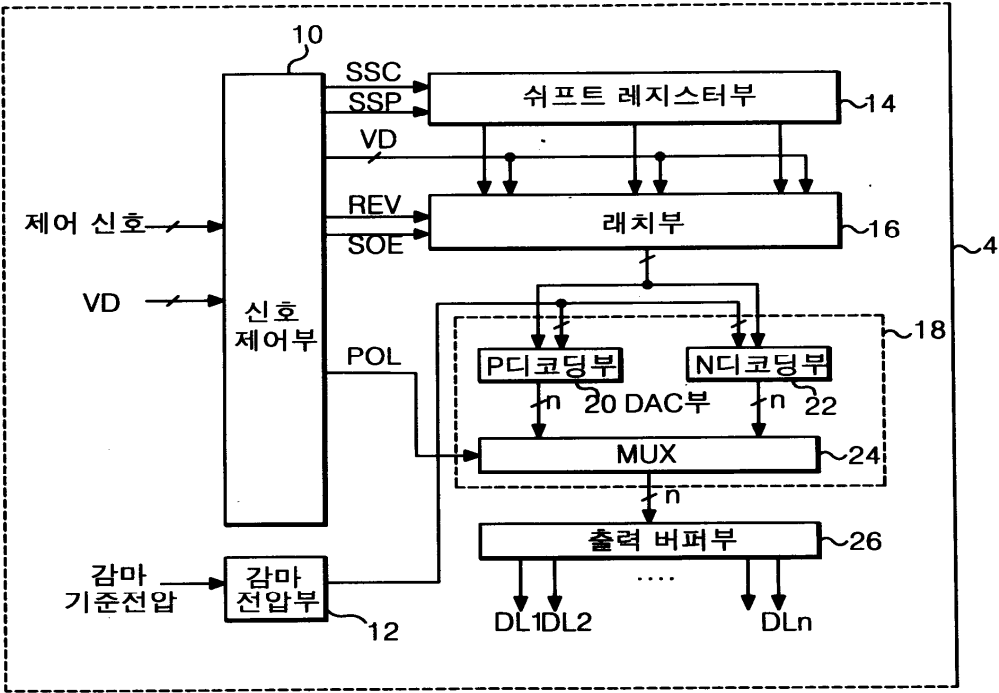
2

가

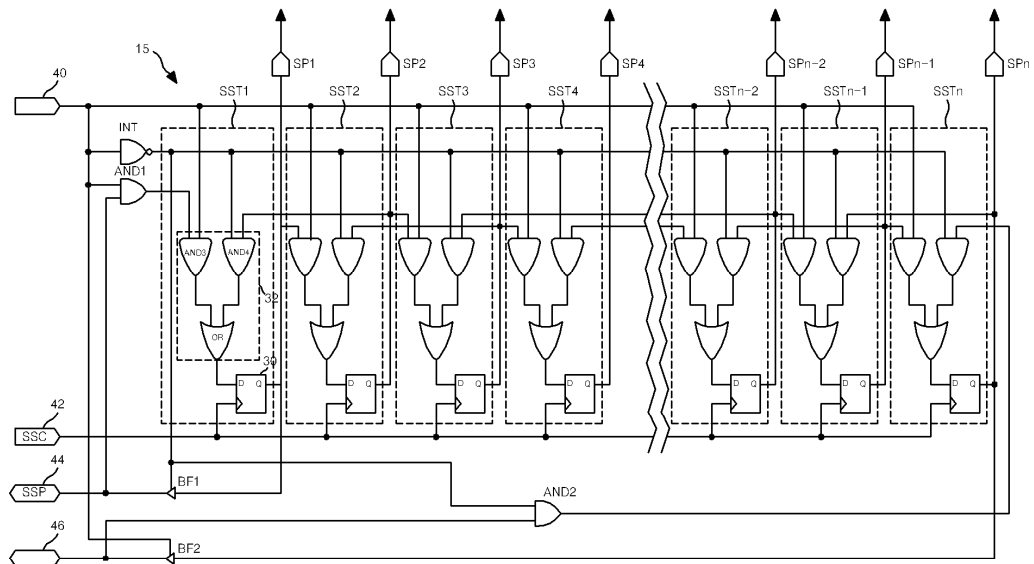
1



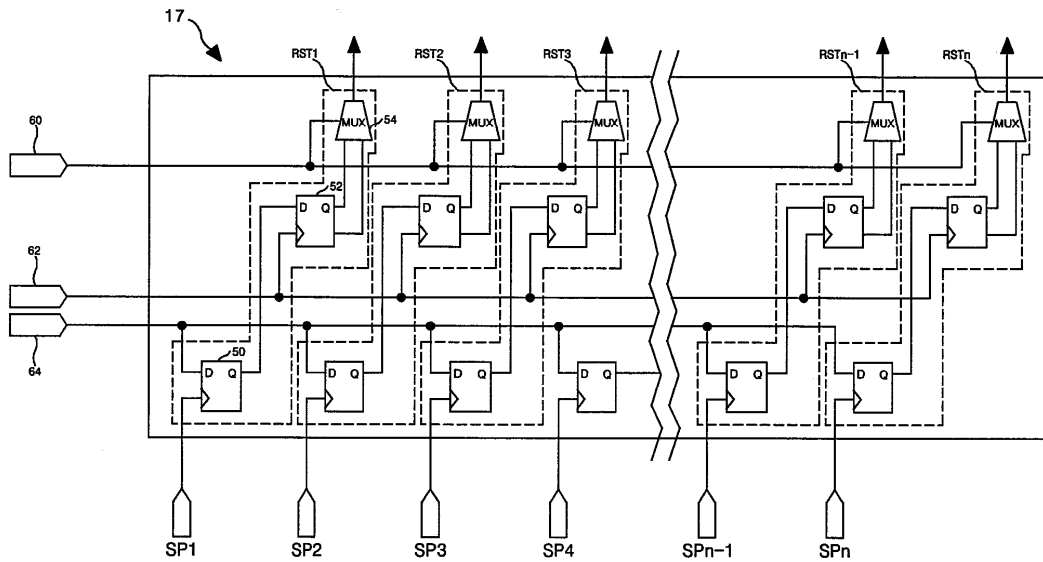
2



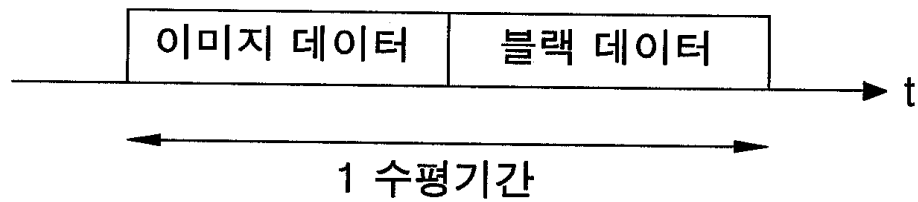
3a

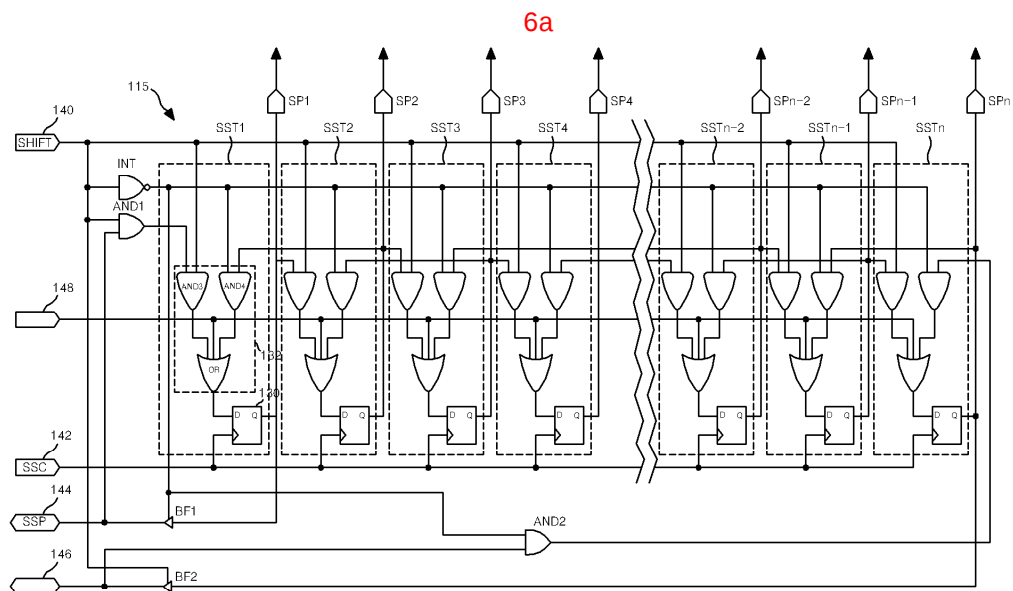
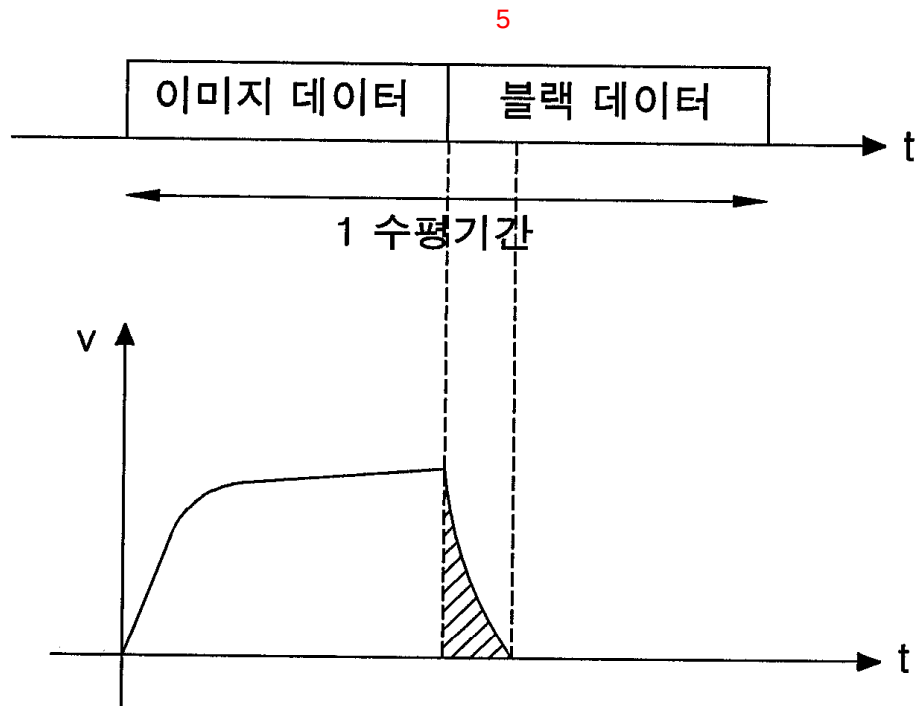


3b

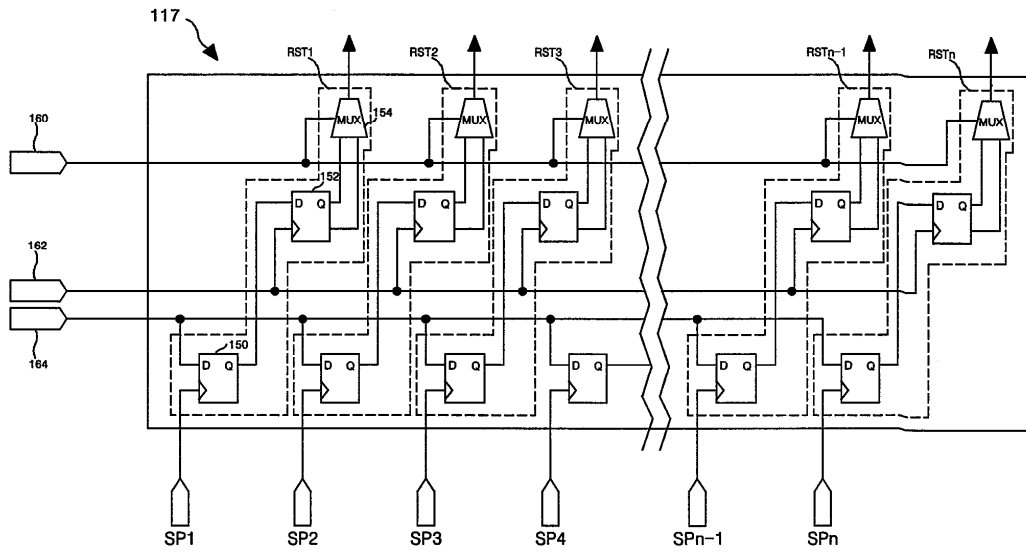


4

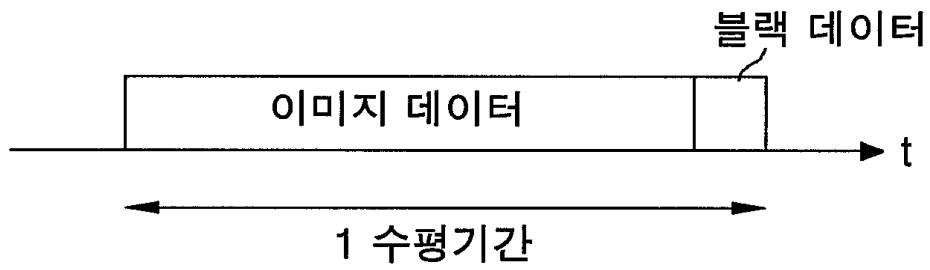




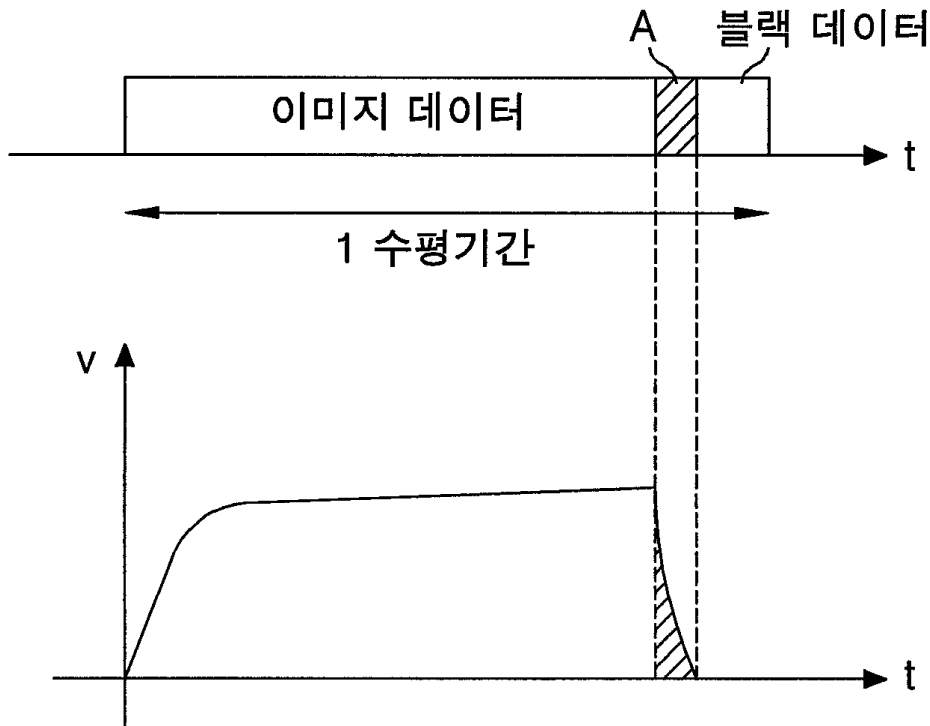
6b



7



8



专利名称(译)	用于驱动液晶显示装置的装置和方法		
公开(公告)号	KR1020050003752A	公开(公告)日	2005-01-12
申请号	KR1020030045242	申请日	2003-07-04
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG显示器有限公司		
[标]发明人	KIM HONGCHUL 김홍철		
发明人	김홍철		
IPC分类号	G09G3/36		
CPC分类号	G09G3/36 G09G2310/0286 G09G2320/04 G09G2320/0252		
代理人(译)	杨镛		
其他公开文献	KR100552906B1		
外部链接	Espacenet		

摘要(译)

目的：提供一种液晶显示装置的数据驱动装置及其方法，以通过减少黑色数据输出时间来防止图像质量下降。组织：根据使用像素数据驱动的液晶显示装置的数据驱动装置包括图像数据和黑色数据的移位寄存器单元（115）依次产生提供给第一触发器的第一采样信号，并同时产生提供给第二触发器的第二采样信号。并且锁存单元对应于第一采样信号依次锁存图像数据，并且同时对应于第二采样信号锁存黑色数据。©KIPO 2005

