

(19)  
(12)

(KR)  
(A)

(51) 。 Int. Cl. 7  
G09G 3/36

(11)  
(43)

2003 - 0007110  
2003 01 23

(21) 10 - 2002 - 0040171  
(22) 2002 07 11

(30) JP - P - 2001 - 00214530 2001 07 13 (JP)

(71) 가 가 5 7 1

(72) 가  
5 - 7 - 1 가 가  
5 - 7 - 1 가 가  
5 - 7 - 1 가 가

(74)  
:

(54)

(1) (3) (DE)  
(2) . (23)가 DE VCK  
(VCK) , DE (1) (10)  
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7

8

( )

9

10

(tx)

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1, 5 :

2, 6 :

3, 7 :

10 :

11, 21 :

12, 23 : OR

13, 22 :

14, 25 :

15 :

16, 27, 182 :

17 : tx

18 : VOE

22, 62 :

23, 63 :

26, 28, 151, 152, 172, 173 :

29, 153 :

30 :

31, 71 : 174 :  
 171, 183 : RS 231 :  
 232 :

0A , (LCD)가 가  
 TFT  
 1 2  
 1 (7) , (5) ; 6) , (7)  
 (6)  
 (6) 가 TFT (62)  
 (61) , (61) 1  
 (63) , (62) 1  
 D/A (61) 가 , 가  
 (7) (71) (DATA), (DATA) (71) ( )  
 ; DE) (DCK)  
 (5) 3 (DATA, DE, DCK) (6)  
 (62) (63) (62, 63) (61)  
 2  
 2 (DATA) 1  
 (DCK) ( )  
 (DE) 1 , 1  
 (long) , 1 (DE) 1

(1) (DE) 1  
 1  
 (HRST) HRST (HCK) DE  
 (HSP), (VSP)  
 (HRST) (HRST) (HRST) (tail edge)  
 ( ) , 1 DE  
 DE (5) (HRST) (HRST) ( ) DCK (VCK)  
 , 가 DE (DLP) 1  
 3 (22), (25), ( ) TD ( ) (21), (coincidence) ( )  
 27) (HRST) (30) DCK (22) OR (23) TD ( ) (21)  
 (28)( 0) , (29) (26) , (28)  
 (27) DE (HRST) OR (23) 가 (28) (TD )  
 HRST , OR (23) (22)가 (25)  
 (30) 1 DE HSP, HCK, DLP, VCK  
 (HCK) (DCK) (6 18 (6 x 3)  
 ( H10 - 301544 ).

, DCK (5) (5) , HCK  
 , HCK  
 , (VCK) 가 DCK  
 2) (61) (62) (63) (6) (63)  
 (62) (HSP) ( ) DE  
 (HCK) , 1 DLP  
 D/A 1 TFT

(63) VSP ( )  
, 1 TFT

(VCK)

ON

4 (VCK), ( ) (DLP),  
( , ( ) ) ( )  
(63) VCK (62) DLP

(62) 1 DLP , , 1  
DLP 가 , DLP ,  
VCK 1 DE DCK  
(HRST) 가

(DE) ( )

RST HRST( HRST) 가 DE (HRST) (DE) ( H  
( HRST) H10 - 301544 ).

HRST DLP VCK (DE) (HRST)

5 DLP VCK TFT , 5 (ON) DE  
(HRST)가  
5 DLP VCK

(DCK)

(DATA)

(DE) , (HRST)  
 (VCK) ( 6 23)가 ( 7 tx)  
 ( 7 VOE) ( 6 10)  
 ( 7 VOE) ( 7 tx)  
 가 ( 6 23) ,  
 ( 7 ts) .

, ( 7 D  
 ATA), (HCK), ( 7 HSP), ( 7  
 VSP) ( 7 DLP),  
 tx) ( 7

( 9 13) , ( 9  
 153) ( 9 152) ,  
 ( 9 173) ,  
 ( 9 (HRST))  
 ( 9 14) , ( 9 173) ( 9 181)  
 ( 9 18) ( 9 VOE) ( 9 182)

( 9 152) ,  
 ( 9 14) ,  
 ( 9 181) ( 9 17)  
 ( 9 18)

( 9 152) ,

( 9 14) ,

가 가

가 가

가

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6  
7) ,

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; 2) ,

(3)

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(2)

(1)

(230)

(2)

(1)

(22)

(22)

(10)

TFT

(2)

(21) ,

(21)

가

(22) D/A (23) , (22) 1  
 (21) 가 , 가 1

(2) (23) (231) , (231)  
 (232) , (232) (231)  
 (10) (tail ; )

(3) (31) (DATA),  
 (DATA) (DE) (

) (DCK) 3

(1) 3 (2) . ,

(HRST) (HSP), (

HCK), (DLP) (VCK),

, 1 가 RGB (VSP) . (1)  
 (DCK) 6 18 (6 × 3)

. DCK , HCK (HCK) (5)

. HCK

(VCK) 가 DCK . ,

(1) (10) (VOE) (21)

(23) , (DE)

7 (1) 3 1 (DATA) (3)

1 , 1 1 , 1

(DE) , 1 ts HSP HSP  
 ( + ) 1 (D) 가 HRST HSP HSP

(VOE) (10) VCK (VOE) VCK (tx) , VCK VCK

(23) (VOE) (23) (230) , (231)  
(VOE) (232) 가

8 (ON) ) ( ) ( )  
(VCK) (DLP)가 ,  
(VCK) ( )  
, TFT (ON) ,  
(DE) (B) , TFT (D) (VOE) ON

9 tx " (1) " " " " VOE

(DE) (11),  
(DE) (DCK) DE  
(13), (13) (HSP) , (HCK) , (DLP) , (VCK)  
(14), 1 HSP (15), 1 (t0)  
tx VOE VOE (18) tx tx (17), tx (17)

9 7  
(11) (DE) (DCK) DE (13) DE  
(13) DCK DE , DE  
DCK (14) DE  
(5 ) HSP DE  
(VCK) (DLP)

(151) (15) (151), (152), (153) , (153)  
(152) (13) DE (152) , OR (12) DE (12)  
(152) , OR (12) DE (t0)가 (152) , OR (12)

(coincidence) (16) (15) (152)가 (tmax)  
 (t0)(= tmax + ) (13)  
 (HRST) . , (16) HRST  
 (13) 가 t0 HRST .

tx (17) RS (171) 1 DE HRST  
 (172) 15  
 (152) (173)가 (173) (173)  
 (173) (tx) .

, VOE (18) VCK (DCK) (181)  
 (tx) (182) (183) , VCK VO  
 E (183) VCK ( )  
 tx VCK VOE .

(1) (VOE) (23)  
 (232) (DE) (22) ( )  
 ( ) 가 .

, tx (17) (tx)  
 10 .

10 (tx) , 10 a  
 , 10 b HRST ,

10 c .

10 a , (1, 2, 3, 4) (tmax) tmax1,  
 tmax2, tmx3, tmax4 , 가 tmax3 < tmax1 < tmx2 < tmax4 (tmax)  
 tmax1, tmax2, tmax3, tmax4 (tx) tmx1, tmax2,  
 tmax3, tmax3 .

, (1 4) HRST 10 b , ,  
 (1 4) VOE 10 c .

, 1 가 .  
 , tx . tx .

(1)

9 tx (17) (tx) 가 tx 가 .

(2)

(15) (13) 9 tx (17) (172) (D)  
 (153) ( 9 174) 9 가  
 VCK  
 가 VOE

(3) ,가 가

가 (13) , 1 9 tx (17)  
 가 가 + 1  
 가 가 가 가

TFT (ON) 가 가

(57)

1.

2.

1

3.

1 2 ,

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4.

3 ,

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(inter - frame)

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1 2 ,

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7.

1 2 ,

8.

7 ,

9.

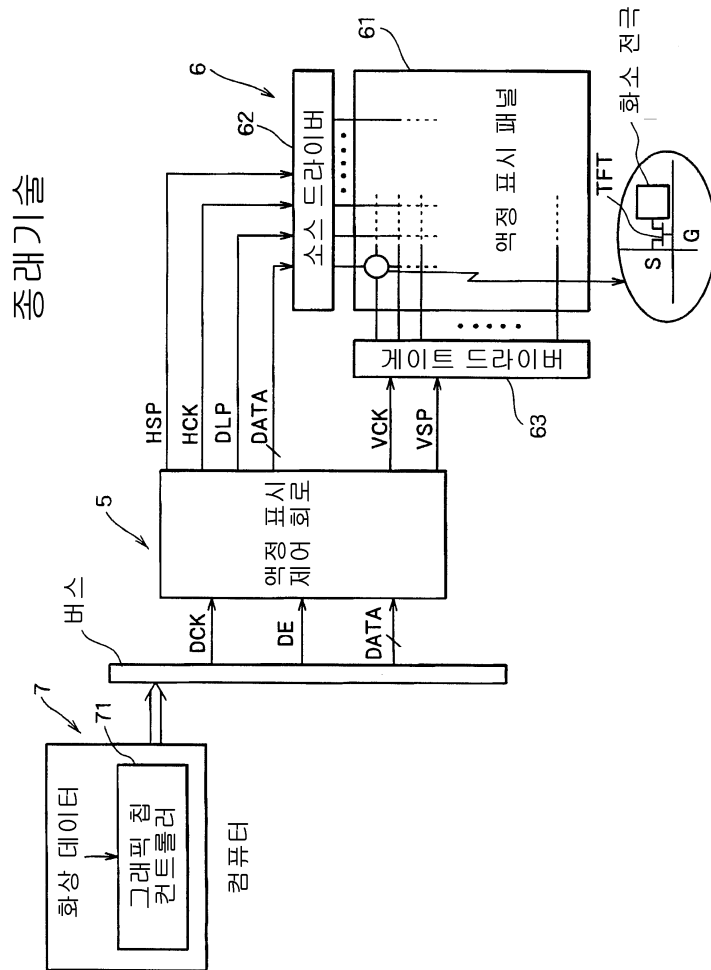
1 2 ,

가 가

10.

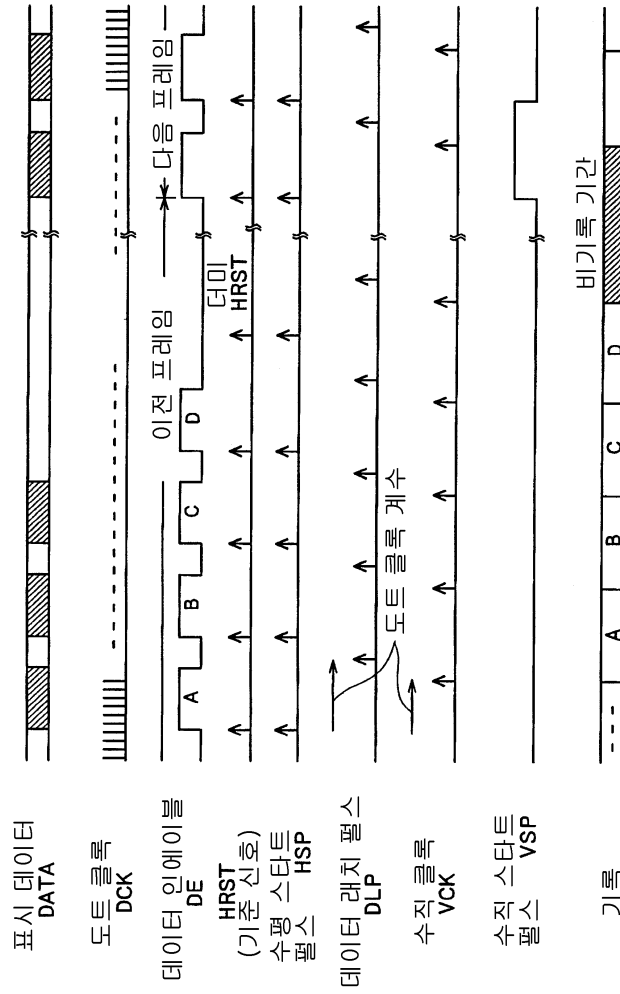
9 ,

가 가



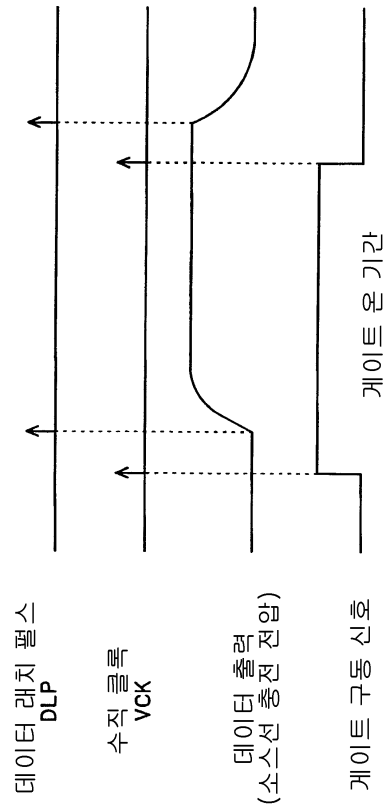
1

종래기술

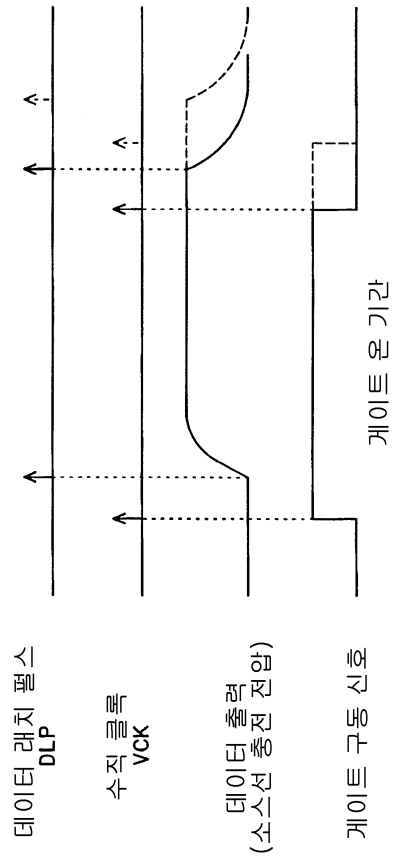


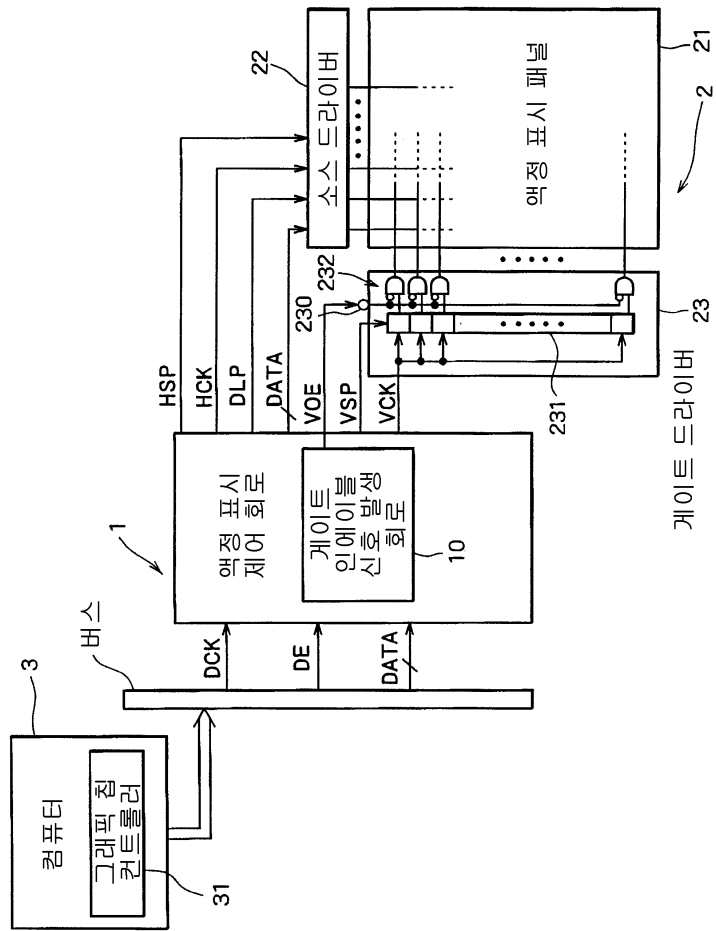


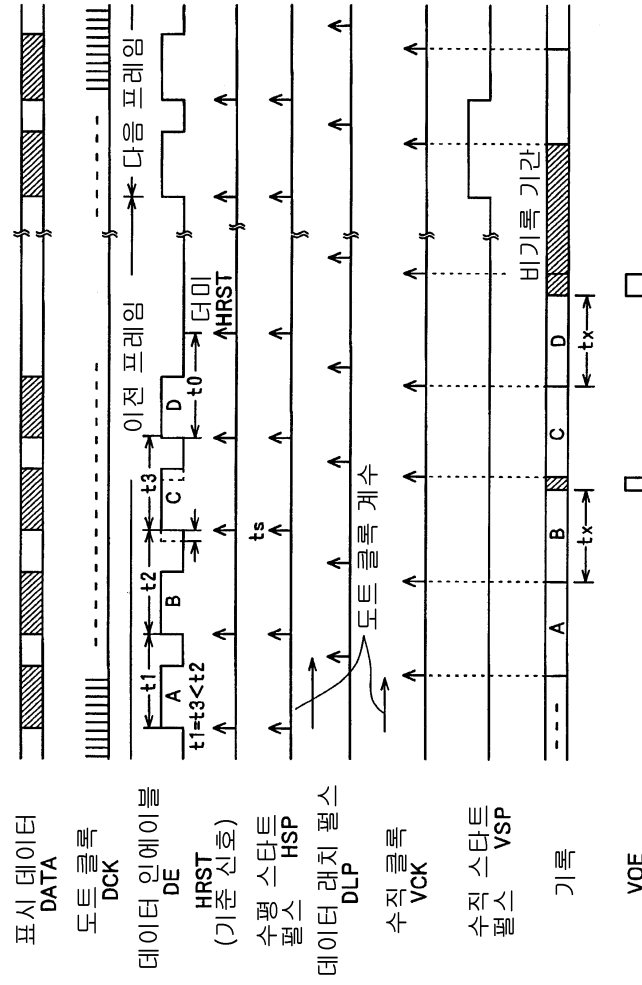
### 중래기술

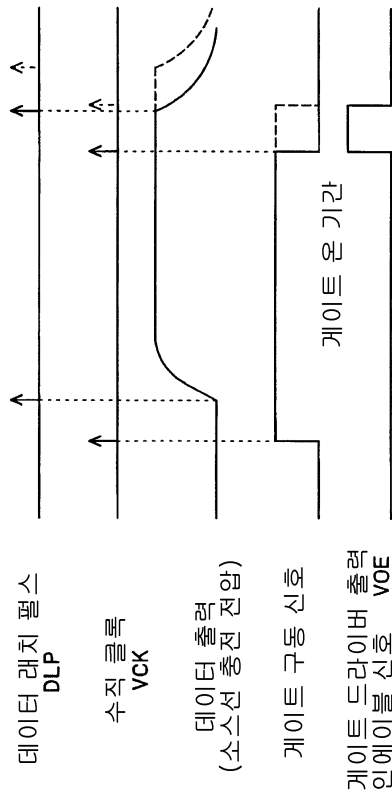


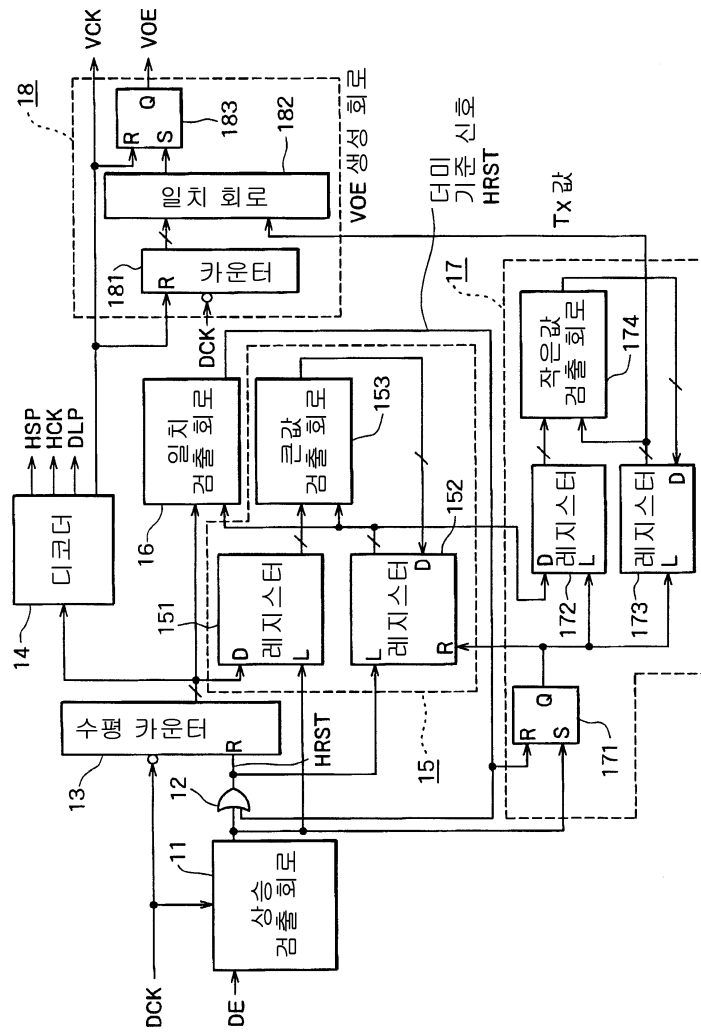
### 종래기술











(a)

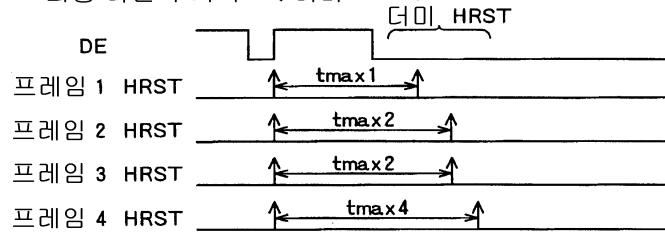
Tx의 결정방법 예 : 프레임 내의 최대값  
및 프레임 내의 최소값

프레임	프레임 내의 tmax	tmax	tx
1	tmax1	tmax1	tmax1
2	tmax2	tmax2	tmax1
3	tmax3	tmax2	tmax3
4	tmax4	tmax4	tmax3

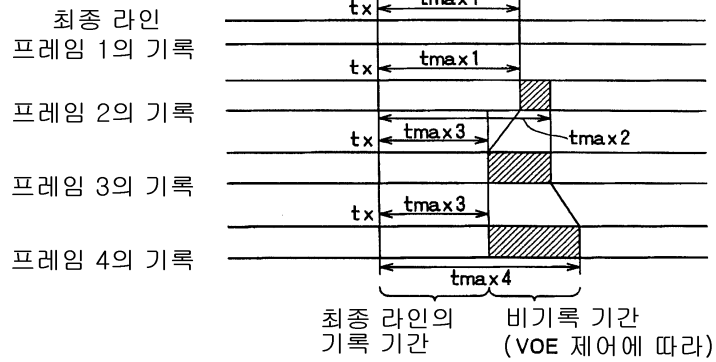
$$tmax3 < tmax1 < tmax2 < tmax4$$

(b)

최종 라인의 기록 (더미 HRST)



(c)



专利名称(译)	液晶显示控制电路		
公开(公告)号	<a href="#">KR1020030007110A</a>	公开(公告)日	2003-01-23
申请号	KR1020020040171	申请日	2002-07-11
[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	KOGA KOICHI 코가코이치 OKUZONO NOBORU 오쿠조노노보루 YAMAGUCHI MACHIIKO 야마구치마치히코		
发明人	코가코이치 오쿠조노노보루 야마구치마치히코		
IPC分类号	G09G3/36 G09G3/20 H04N5/66 G02F1/133		
CPC分类号	G09G3/3677 G09G3/3611		
优先权	2001214530 2001-07-13 JP		
其他公开文献	KR100477624B1		
外部链接	<a href="#">Espacenet</a>		

摘要(译)

本发明抑制了包括数据使能信号等变化的显示不均匀性的产生。因此，根据本发明的液晶显示控制电路(1)输入数据使能信号(DE)，该数据使能信号(DE)在线路单元的显示数据中同步。控制计算机(3)和液晶显示器(2)。准备栅极使能信号发生电路(10)，以便栅极驱动器(23)防止用垂直时钟信号(VCK)工作的像素电极的充电周期的改变，其中输出的栅极驱动信号在其中同步。DE的上升是由于DE和上升线的上升时序延迟后VCK的延迟引起的，液晶显示控制电路(1)和栅极驱动信号的脉冲延长量的输出由延迟是被禁止的。液晶显示，数据控制和脉冲。

