

(19)  
(12)

(KR)  
(A)

(51) 。 Int. Cl. 7  
G09G 3/36

(11)

(43)

2002 - 0066930  
2002 08 21

(21) 10 - 2001 - 0049739  
(22) 2001 08 18

(30) JP - P - 2001 - 00036303 2001 02 14 (JP)

$$(72) \quad 1 \quad 5 \cdot 1 \quad \begin{matrix} \text{가} \\ \text{가} \end{matrix}$$

1 5 - 1 가 가

가 1 5-1 가 가

가 1 5-1 가 가

(74)

1

(54)

, , , , ,

1  
2 1  
3 1  
4 1  
5 1  
6 1  
7 1  
8 1  
9 1 가  
10 2  
11 2  
12 2  
13 2  
14 3  
15 3  
16 3  
17 4  
18 4 가  
19 4 가  
20 4  
21 5

&lt;

&gt;

201 :

202 :

203 :

204 :

205 :

206 :

207 :

501 :

502 :

503 : A

504 :

505 : B

1001 :

1002 :

1003 :

1004 :

1005 :

1006 :

1007 :

1008 :

1009 :

1010 :

1011 :

1301 :

1302 :



$$0(0)$$

, (201) , 가  
(Vcom Modulation Drive)

, (202) (210) (202) 4 CL1, 1 SHT, C  
3 . , FLM, EN, M, L2, 1 CL3, 1 DT (203), (204),  
가 DT 1 6 64 (205) . , DT 1

	(203)	(204)	5	5	, (501)
	, (502)	, (503)	A, (504)		, (505)
B	(203)	DATA, CL1, CL2, EN, M, SHT,	64		V0
V63	(204)	M,	VCOMH	VCOML(	2
)	, V0	V63	VCOMH, VCOML	VCC	,
(206)					
	가	-	가		

, (203) , (501) EN DT CL2 1 (1  
 ) , CL1 LDT1 - LDTn( 'LDT' )  
 . (502) LDT M , V0 V63  
 , VD(VD1 - VDn 'VD' ) .

A(503) (502) SHT  
 , SHT가  
 , VX(VX1 - VXn )  
 , (204) (504) M VCOMH,  
 VCOML , VCOMP . , B(505) (504)  
 SHT , VCOM .  
 , 7 . 7 , VX VCOM SHT가  
 ,  
 , (205) (205) VCC  
 FLM, CL3, VGON 2 8 . , VGON VGOFF 가  
 (206) , VGON . , (205) 8  
 , VGOFF . , CL3 , , VY  
 , FLM CL3 , , 가  
 ,  
 , 2 , , VX1 가 VY1 가 P11, VX1  
 VY2 P12 , P11 P12 , VLC11, VLC12  
 P11 P12 (111111), (100000) 6 NB  
 9 VLC11 VLC12 가 , VLC11 VLC12  
 VGON , VCOM VX1 가 , VGON  
 ,  
 , M 1 , ,  
 , SHT M 1 , ,  
 ,  
 , 2 10 13 , ,  
 (1002) , (1003) , (1004) 10 2 , (1001) ,  
 6 , (1007) , (1008) , (1005) , (100) ,  
 , (1011) , (1009) , (1010) ,  
 ,  
 , , CS, MPU6800 , 11  
 E, / RW, / / RS,  
 , (1003) 12 , ,  
 , CS가 "



15 , 3 , (1502) , (1503) , , (1501)  
 C . , (1502) 1 , (205) (1504) 가 , VGO  
 N/VGOFF , FLM CL3 , CL3  
 R(R1 - Rn 1 " R" ) . , (1503) C(1504)  
 , FLM, CL3, SHTR . , VGON 가 1 ,  
 SHTR , , C(1504) (150)  
 3) 가 SR(SR1 - SRm 1 " SR" ) GND ,  
 (1502) VY(VY1 - VYm 1 " VY" )  
 . , VY2 16 . 16 ,  
 3 (1501) , 14 가 .

3 , 1 , 2  
,  
, 2 , 4 , 17 20 , ,  
가 , , 17 , , , 18 ,  
, GOFF , 19 , SHT가  
, VCOM VY 가 , , ,  
Hi - Z , 20 , , , VY  
, SHT , VY  
Hi - Z , 20 , 2 CL3 , VY VGON  
Hi - Z , , , , Hi - Z

4 , 가  
1 3 가 .

가 (Dot Inversion Drive), 5  
가 (Column Inversion Drive),  
21

가 ( ) ,  
가 .  
가 .  
가 .  
가 .  
GND ,  
가 .

3.

1 ,

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4.

3 ,

가 ,

, ,

5.

1 ,

, ,

6.

5 ,

가 ,

, ,

7.

1 ,

1

8.

, ,

, 가  
;

,

,  
;

9.

8

,

가 0

10.

9

,

, 가 ,  
;

,

11.

9

,

가 ,  
;

,

12.

9

,

1

13.

, 가  
;  
;

14.

13

가 0

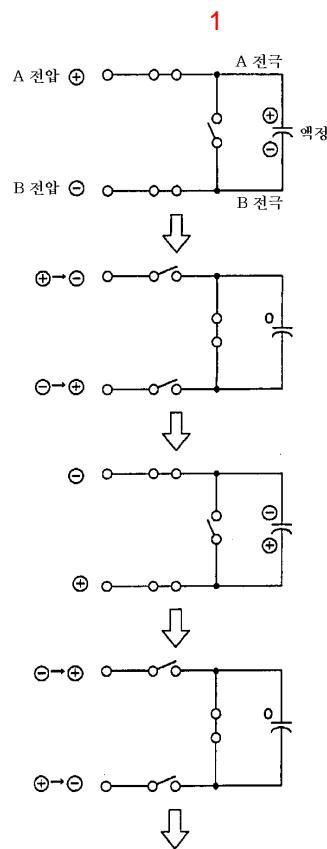
15.

13

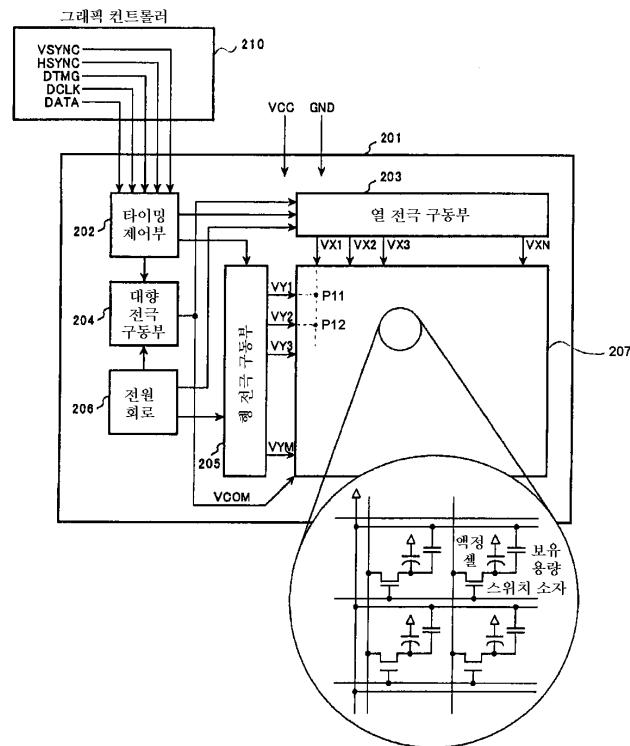
16.

15

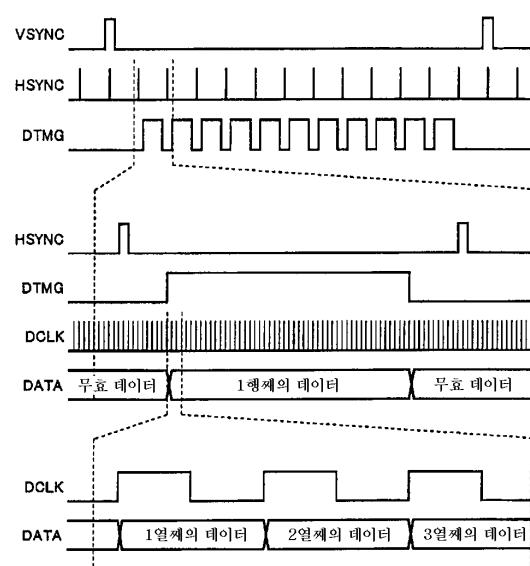
가



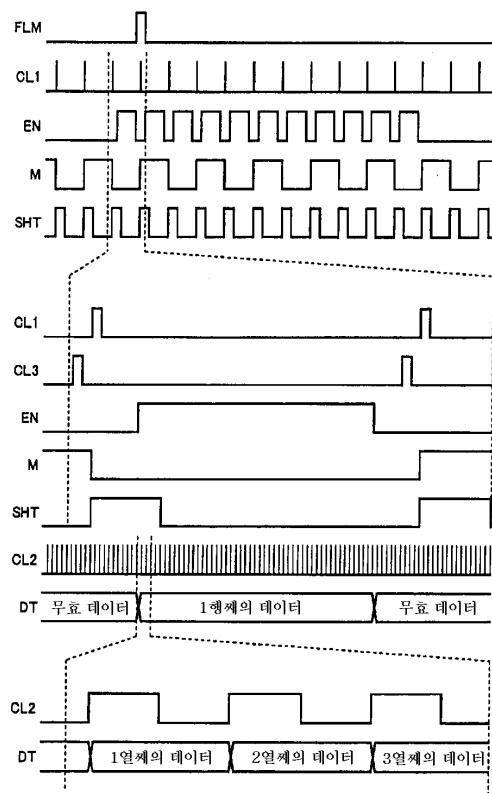
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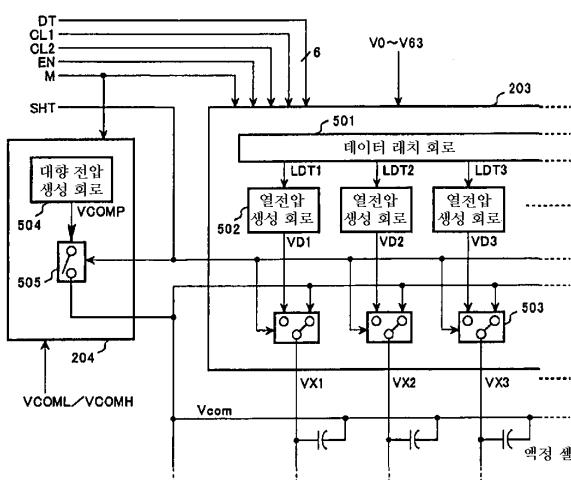
3



4

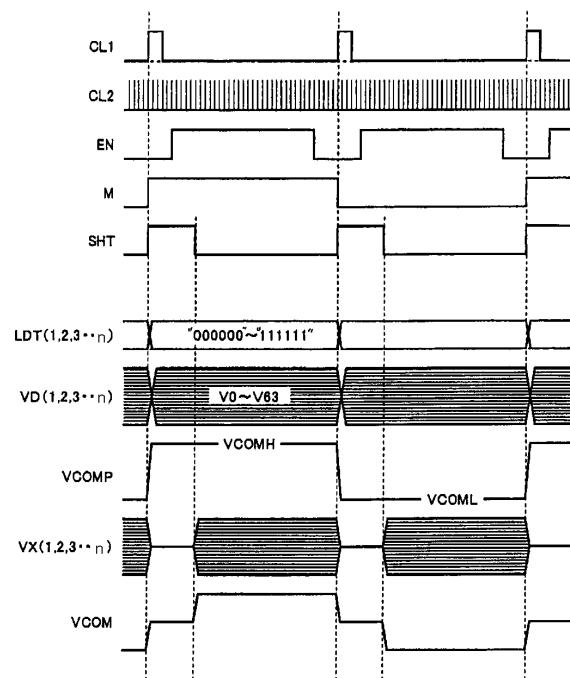


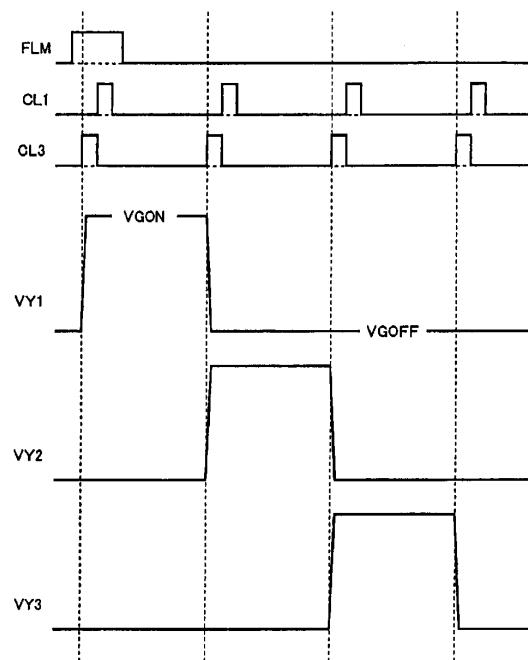
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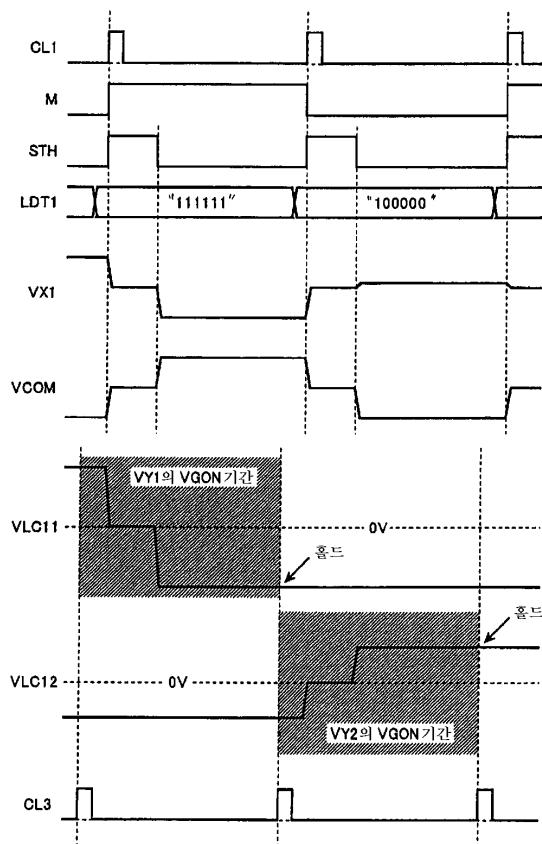


L DATA	M	VD	
		NW 모드 액정	NB 모드 액정
혹 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0 1 1 0 0 0 1 0 0 0 0 0 1 0 1 0 0 0 1 1 0 1 1 1 1 0 1 1 1 1 1 1 0 백 1 1 1 1 1 1	하이	저전위 V0 V1 V2 V3 V4 V5 V6 V61 V62 고전위 V63	고전위 V63 V62 V61 V60 V59 V58 V57 V2 V1 저전위 V0
혹 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0 1 1 0 0 0 1 0 0 0 0 0 1 0 1 0 0 0 1 1 0 1 1 1 1 0 1 1 1 1 1 1 0 백 1 1 1 1 1 1	로우	고전위 V63 V62 V61 V60 V59 V58 V57 V2 V1 저전위 V0	저전위 V0 V1 V2 V3 V4 V5 V6 V61 V62 고전위 V63

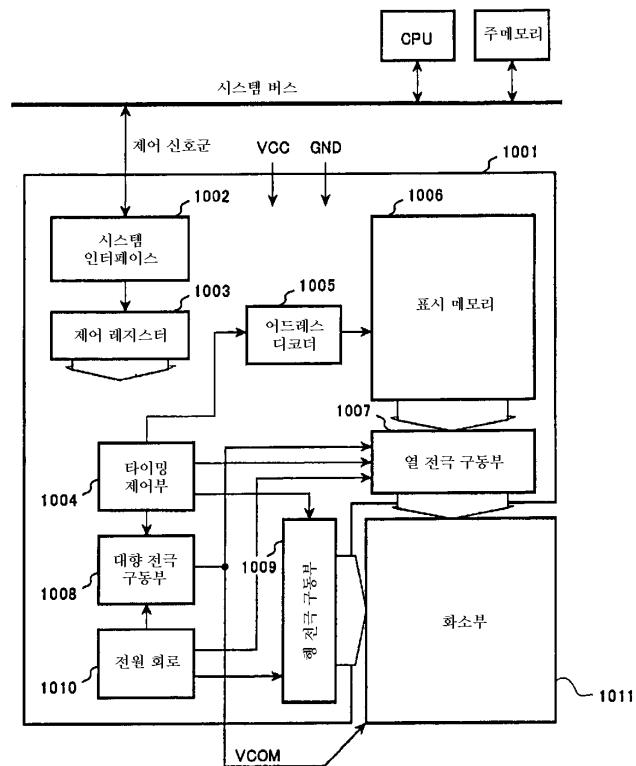
NW 모드 액정 : 전압무인가시에 백표시의 액정  
 NB 모드 액정 : 전압무인가시에 혹표시의 액정







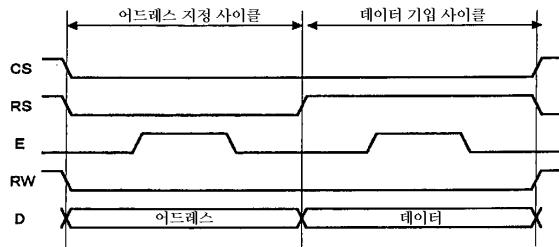
10



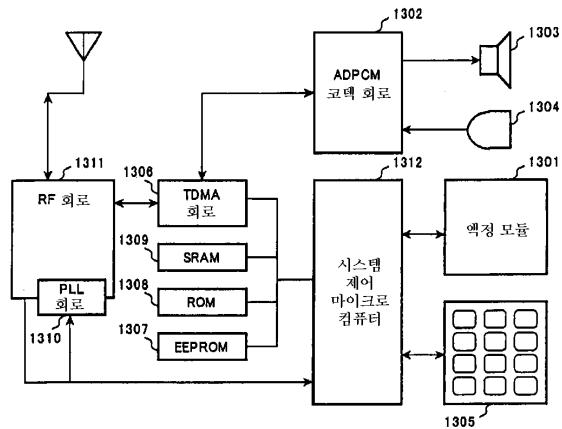
11

신호명	의미	"로우"	"하이"
<b>CS</b>	칩의 선택	액세스 가능	액세스 불가
<b>RS</b>	레지스터의 어드레스/데이터 선택	어드레스	데이터
<b>E</b>	데이터 기입/판독의 기동	비기동	기동
<b>RW</b>	데이터 기입/판독의 선택	기입	판독
<b>D</b>	쌍방향 데이터	--	--

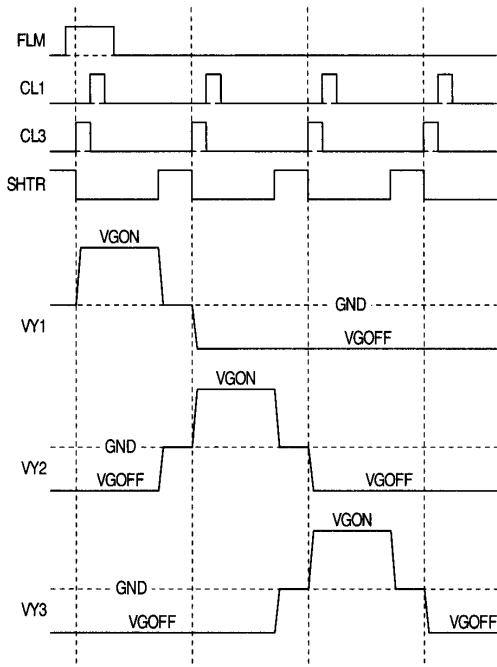
12



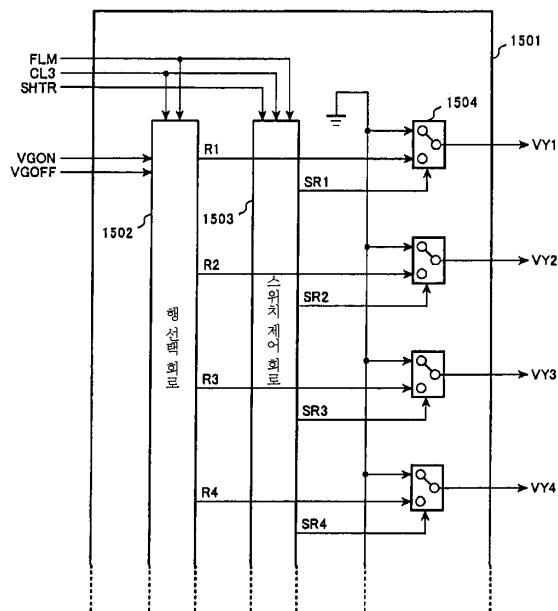
13



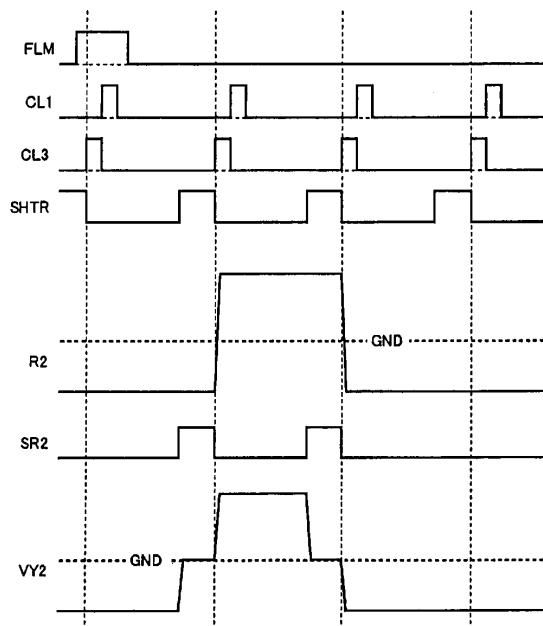
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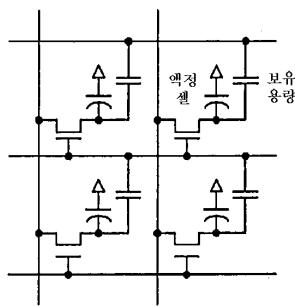
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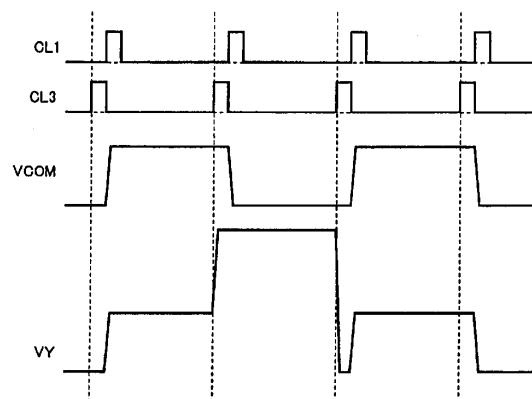
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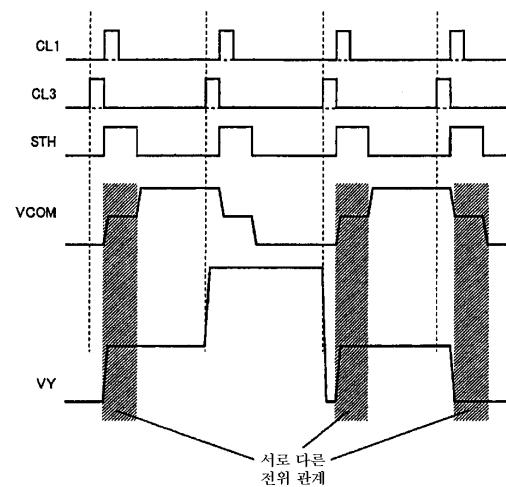
17



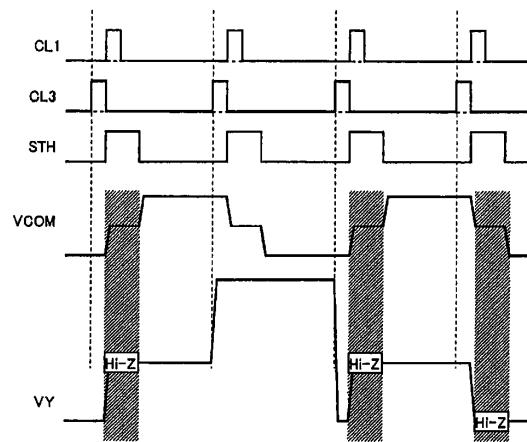
18



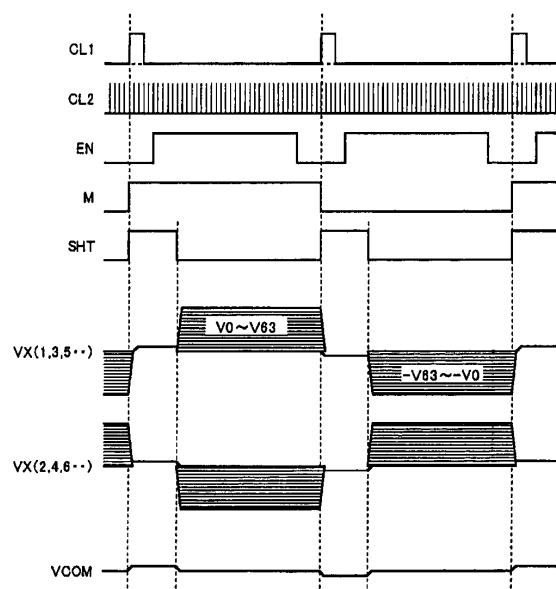
19



20



21



专利名称(译)	液晶驱动电路和液晶显示装置		
公开(公告)号	<a href="#">KR1020020066930A</a>	公开(公告)日	2002-08-21
申请号	KR1020010049739	申请日	2001-08-18
[标]申请(专利权)人(译)	日立HITACHI SEISAKUSHODBA		
申请(专利权)人(译)	株式会社日立制作所		
当前申请(专利权)人(译)	株式会社日立制作所		
[标]发明人	KUDO YASUYUKI 구도야스유끼 YOKOTA YOSHIKAZU 요코타요시카즈 KUROKAWA KAZUNARI 구로까와가즈나리 HIGA ATSUHIRO 히가아쓰히로		
发明人	구도야스유끼 요코타요시카즈 구로까와가즈나리 히가아쓰히로		
IPC分类号	G09G3/20 G02F1/133 G09G3/36		
CPC分类号	G09G2310/0251 G09G3/3677 G09G2330/023 G09G3/3614 G09G3/3655 G09G3/3688 G09G3/3659 G09G2330/021 G09G3/3648		
代理人(译)	CHANG, SOO KIL		
优先权	2001036303 2001-02-14 JP		
其他公开文献	KR100431235B1		
外部链接	<a href="#">Espacenet</a>		

### 摘要(译)

对于矩阵型的液晶显示器，包括在不设置存储容量或新电路作为存储容量的布线或在外部准备新部件的任务的情况下，包括抑制功耗的技能。对于液晶显示器，准备用于与交替定时同步地使双方电极临时短路的开关，用于夹持液晶的列电极和相对电极。液晶显示器，列电极，相对电极，交替，短路。

