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2003-0066362  
2003 08 09

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(71) 가 가 가 가 4 1-1

(72) 가 가 가 가 4 1-1

가 가 가 가 4 1-1

(74)

:

(54)

N

(N-1)

2

, , , , ,

1

2		1		
3	GMC			
4				GMC
5	DMC			
6				DMC
7		GMC		
8		GST		
9	GMCN			
10		DMC		
11		DMC		
12		2		
13	DST+LP			
14		DST+LP		
15		DST+LP	DST	LP
16		DST+LP		DST+LP
17		3		
18	LP+POL			
19		LP+POL		
20		LP+POL	LP	POL
21				
22				
23		2	1	
24	23			
25		2	1	
26	25			

< >

10 : LCD

21 :

22 :

23 :

(Liquid Crystal Display : LCD)

가 ,가

1

가 1

1

1

1

(13)

(12)

(13)

LCD

. LCD

가

(10),

(10)

(11),

(12),

가

(11)

ENAB

I/F

CX,

(11)

IXX,

ENAB가

CX

(11)

ENAB

ENAB

LOW

GST,

1

1

(11)

GOE

(12)

가

GCLK

가

1

GST

GCLK,

GOE

DST,

(11)

LP,

POL

(13)

DST

DCK

DCK,

DXX

(13)가

DXX

DXX

DXX

DCK

DST

LP

, DA

POL

DA

LCD

DA  
(10)



1 LCD (10), (21), (22),  
 (23) LCD (10) 가 ,  
 (22) 가 ,  
 (23) 가 .

(21) I/F CX, IXX,  
 ENAB (21) ENAB가

CX (21) ENAB ENAB LOW

(21) GMC 1 (22) GMC GCLK GMC GST가  
 GST 가 (21) GMC GCLK GOE

DMC (21) DMC (23) 1 DCK DST, LP,  
 POL DST, DCK LP, DXX POL (23) DMC (21)  
 가 , 1 가

3 GMC

3 GCLK GST 1 GCLK가 LOW CK  
 1 GSTP HIGH GST GCLK가 HIGH 1 LOW LOW  
 GCLK (22) GSTP OR (22) GMC가 2 GMC

MC LOW (22) GMC 'a' GMC GST가 'a' G  
 ( 3 'b') GCLK 가 .

GMC GMC GMCD

GMC GST가 GCLK GMCD LOW G  
 MCD HIGH 2 GMC가 GST가 2 HI  
 GH HIGH (22) GCLK

4 (22) GMC  
 4 , GMCn n (22)

GMC 2 (22) GST가 (22) GCLK GCLK  
 GMC (22) 가

GST (22) 가 (22) GST (22) ,  
 (22) (21) GST . 2 (2)

(22) .

(22) , 4 256 (22) 4 . (21)

) (22) GST (22) 256 GST GCLK , 3

, (22) 522 GST , 4 (22) 가 768 , 1

, . , 1

5 DMC .

1 , DMC DST, LP,

DST POL 가 , 1 DCX HIGH DST LP POL

5 'LHHLL' 'HHLH' HIGH POL LOW 'LHHLL' , 'HH'가 POL

'HH'가 , 'HH' 1 'L' 'H' POL LOW 'LHHLL' , 'HHLH' ,

. , 'HH' 1 'H' POL HIGH

MC DMC LP POL (23) (23) , D

LP POL (22)가 (23) 'LHHHL' 'HHHH'

6 (23) DMC 8

. 6 , DMCn n (23) (23)

(23) (23) DMC1 , DMC1 'LHL' (21) DMC1 .

, DXX (23) DMC2 'H' , 80 DCX

, DCX , DMC2 'L' . 2 (23) DMC2가 'LHL' (23) 2

(23) , , 8 (23) 가

, LP (21) (23) (23)

(23) : 'LHHHL' . 가 (23) (23)

, (21) LP (23) . ,

. , (21) 'HHHH' LP , (23)

, 1 .

7 (21) GMC .

7 (31), (32), JK (33, 34), AND (35), OR (36)

, (31) 1 ENAB (0) DATA (32) . (32) (

31) CK HIGH , 100 HIGH HIGH P100, 101 P499, 500

HIGH P101, 499 HIGH HIGH P499, 500

HIGH P500 .

JK (33) P500 J P100 K , 100 500  
 LOW HIGH GCLK , JK (34) P101  
 J P199 K , 101 499 HIGH (34)  
 LOW AND (35) 101 499 HIGH  
 LOW GSTP . OR (36) HIGH AND GSTP OR  
 , GMC . GCLK, GSTP, GMC  
 3 .  
 8 (22) GST  
 8 D (41 43), AND (44, 45), OR (46), (47), (48), (49,  
 50), XOR (51) .  
 (47) , GMC D (41) GMCD CL  
 K , GMCD 3 GMC D (41) GMC GST  
 가 , GCLK LOW . D (41) GST가 ,  
 D (41) GMCD HIGH 2 GMC GMC  
 . D (41) (41) , D (42) , 2 GMC , D  
 (41) D (42) AND , 2 HIGH 가 , D  
 (44) GST AND AND

(22) (22) GMCN ,  
 9 9 GMCN 8 XOR  
 (51) GXOR STM 9 AND STM D (41) 8  
 GXOR , D (43) 9 , D (43) GXOR  
 , D (43) 9 , D (43) GMCD  
 ) (22) GMCN . GSTN 가 , (43)  
 10 (21) DMC .  
 10 JK (61, 62), (63), AND (64, 65), OR (66 68), NOR (69, 70), XNOR  
 (71), (72, 73), OR (74, 75) .

JK (61) LP , (63)가 (0) ,  
 (63) CK , OR (68) (63) QA QD 10 ,  
 , JK (62) THSTRK LOW THSTRJ THSTRK가 , THS  
 TRJ HIGH THSTRK THENDJ THENDK가 , J  
 K (62) , (68) LP POL , JK (62)  
 가 . OR (68) DST가 OR (67) OR , DMC가 .  
 ,  
 11 (23) DMC .  
 11 (23)  
 11 (81), (82), JK (83, 85), (85), AND (86),  
 NOR (87, 88), OR (89) . (81) DMC (8)  
 1)가 DMC , THSTR, THEND, DST,  
 LPPPOL, LPNPOL . THSTR, THEND, DST, LPPPOL, LPNPOL

THSTR DMC, 1 DMC, 2 DMC, 3  
 DMC, 4 DMC가 (L, H, H, H, L) HIGH  
 JK (84), (85), NOR (87, 88) , 3 HIGH  
 OR (89) (23) 가 (23)  
 DSTN , OR (89) (23)  
 JK (83) 가 가 , HIGH , HIGH  
 H , AND (86)가 DMC ,  
 DMC  
 12 2  
 2 1  
 12 12 (21A) (23A)  
 DCK, DST+LP, POL DST+LP  
 DST DST LP가  
 (23A) , (21A) DCK, POL, DXX , 1  
 가  
 13 DST+LP 13 (23A) DST  
 +LP , 8 (23A) DST+LP LP  
 13 DST+LP DST , LP  
 DST+LP가 (23A) , (23A)  
 DST+LP가 DA , 1  
 가 DST+LP가 , (23A)  
 DST+LP  
 14 (21A) DST+LP  
 14 JK (91) , J DST DS  
 TJ , K LP LPJ DST+LP  
 15 (23A) DST+LP DST LP  
 15 D (101, 102), (103, 104), AND (105, 106), JK (107), (10  
 8), (109, 110), AND (111)  
 ) , D D (101) DST+LP DST ( , , DST+LP  
 DST+LP AND DST+LP( DST ) , , DST+LP  
 (102) LP ) , ,  
 AND (107) , (108) , (108)가 (23A) (108)가  
 LPK . ,  
 16 (23A) DST+LP DST+LP

16 (121), JK (122), AND (123) , JK (122) , J , J  
 . DSTN DSTN , K DST+LP , J 가  
 . JK (122) , DST+LP DST+LP AND ,  
 13 DST+LP(N)가 .

17 3 .

3 1 ,  
 17 17 (21B) , (23B) L  
 P+POL 1 DCK, LP DST, LP+POL (23  
 B) LP+POL POL .  
 (21B) DCK, POL DST, DXX ,  
 , 1 가 .

18 LP+POL .

18 LP+POL LP POL L  
 P+POL 'a' 'b'가 HIGH LOW POL  
 . 18 2 1 LOW ,  
 2 1 HIGH .

19 (21B) LP+POL .

19 JK (131), (132), (133, 134), OR (135), AND (136) .  
 JK (131) J , LP LPJ JK (1  
 31) CK , LP (132) (0) ,  
 , 18 b LOW (133, 134) OR (135) , (132) POL  
 , OR POL LOW b LP AND , POL HIGH HIGH가  
 . OR (135) LP AND , LP+POL .

20 (23B) LP+POL LP POL

20 (141), (142), JK (143) .  
 (141) LP+POL DCK LP+POL  
 , (142) (141)가 PPOL, NPOL, LPJ, LPK  
 , PPOL, NPOL, LPJ, LPK

OL LP+POL, 1 LP+POL, 2 LP+POL, 3 LP+POL, 4 PP  
 P+POL (H, H, H, H, H) HIGH . L

JK (143) , HIGH POL .  
 POL , (23B) .

21 .

21 (151), (152), (153), DA (15  
 4), (155) .

DST 가 DXX  
 DST DCK (1  
 51)가 (152) , (152)  
 (152) DXX .  
 , LP (152) DA (154) , DA DXX (153)  
 . (154) (154)

(155) POL LCD (154) , DA

1 3 DCK, DST, LP, POL

22

22 LCD (210), (211), (212),  
 (213) LCD (210) 가  
 (212) 가  
 (213)

(211) I/F ENAB CX, ODD EVEN, ENAB  
 ENAB (211) ENAB DXX CX

22 1 IX ODD EVEN 2 1 (11)  
 (11) DXX ODD EVEN 2 22 (211)  
 IX ODD EVEN 2 가  
 DXX ODD EVEN 2 1 1  
 DXX\_ODD&EVEN 2 1 가

23 (211) 2 1  
 , 24 23

23 (221 223), (224), (225), (226)  
 (221, 222) CK , ODD\_DATA EVE  
 N\_DATA 24 a b , (224) A  
 B b (224) CK SEL , A a  
 (223) 2 CK d (223) PLL  
 (223) e (224) d (22  
 6) 2 DXX\_ODD&EVEN (22  
 DCK

1 22 24 (211) 2 가  
 (213) (211) (213)  
 가 (213) , 21  
 가 , 2 1

25 (211) 2 1  
 , 26 25

25 (231 233), (234), (235), (236)  
 (231, 232) CK , ODD\_DATA  
 EVEN\_DATA (234) CK SEL , A a B b  
 LL , CK 2 (233) e , (235) P  
 (233)

(233) 2  
 (233) 1 e (234) d  
 DXX\_ODDamp;EVEN  
 23 24  
 25 (T) (236) 2 e HIGH  
 LOW가 DCK가 26 e  
 25 DCK  
 DCK 1/2 (213)  
 가 가

(57)

1.

(N-1)

N

2.

1

(N-1)

N

1

1

3.

2

1

1

4.

2

N

5.

1 ,

(N-1)

6.

(N-1)

N

7.

6

(N-1)

1

1

1

8.

7

1

9.

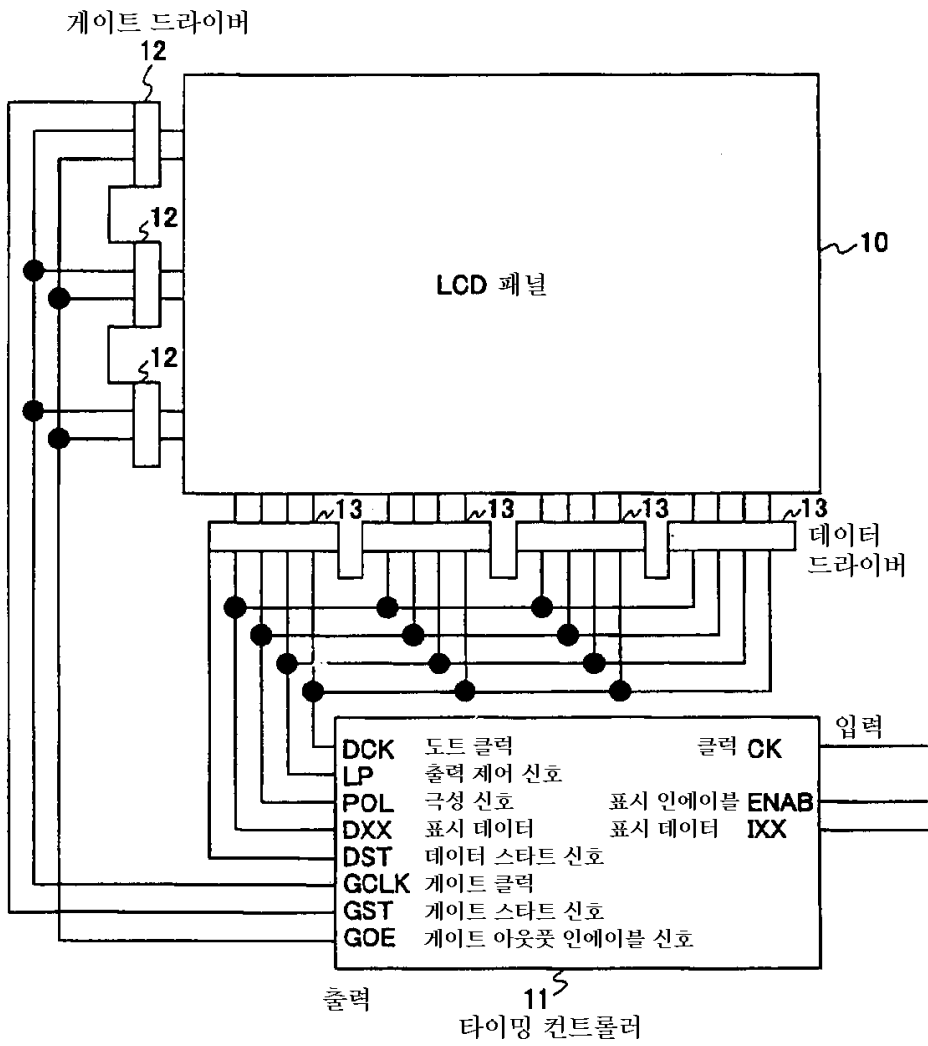
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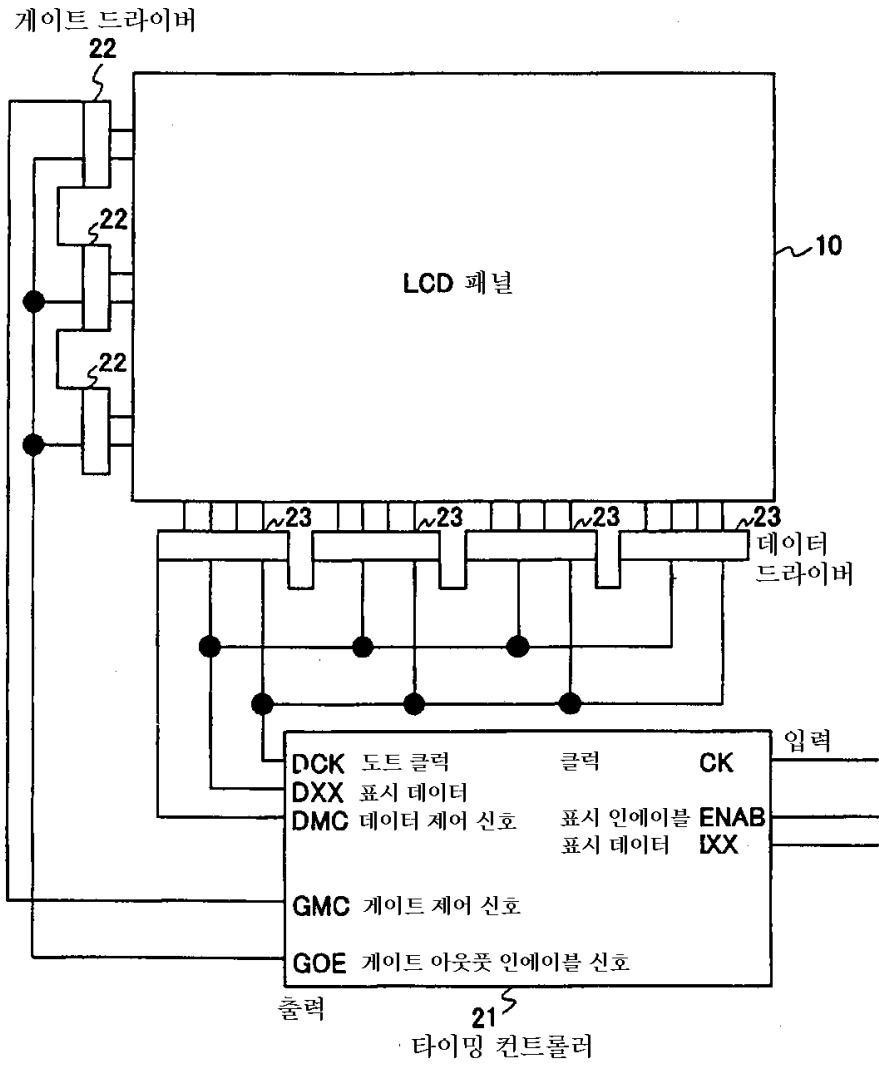
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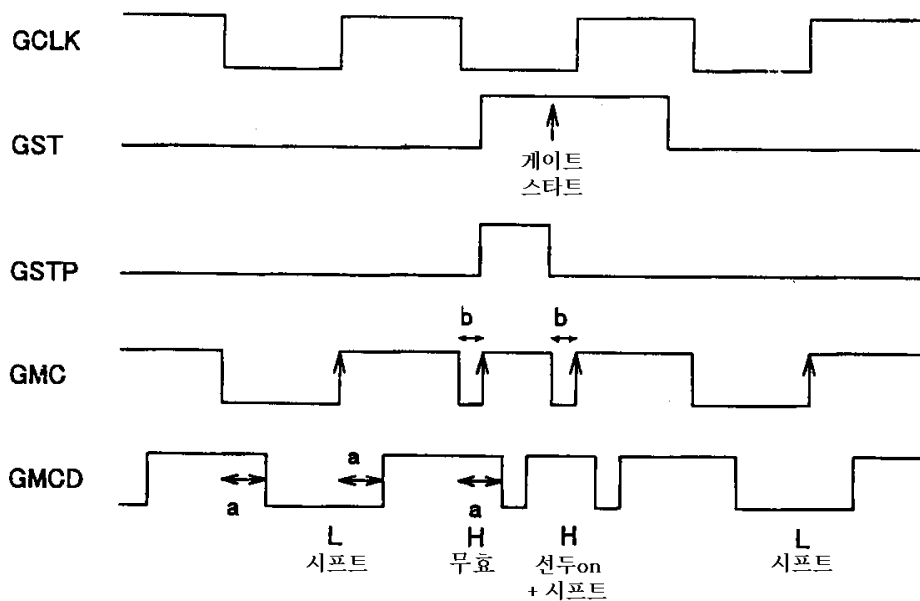
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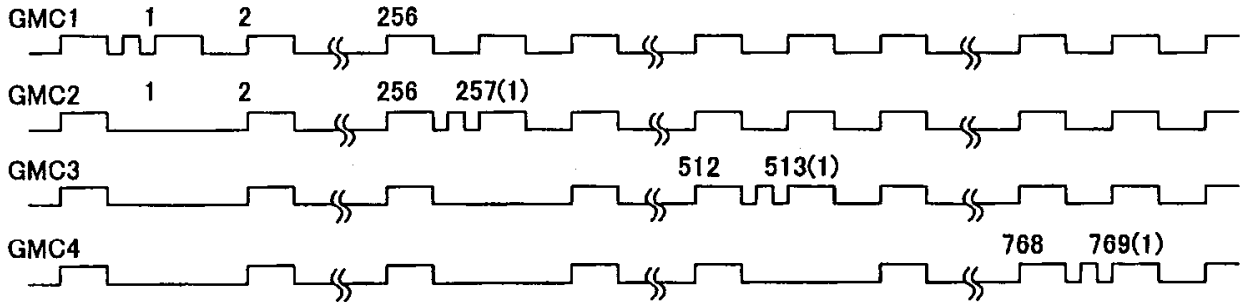
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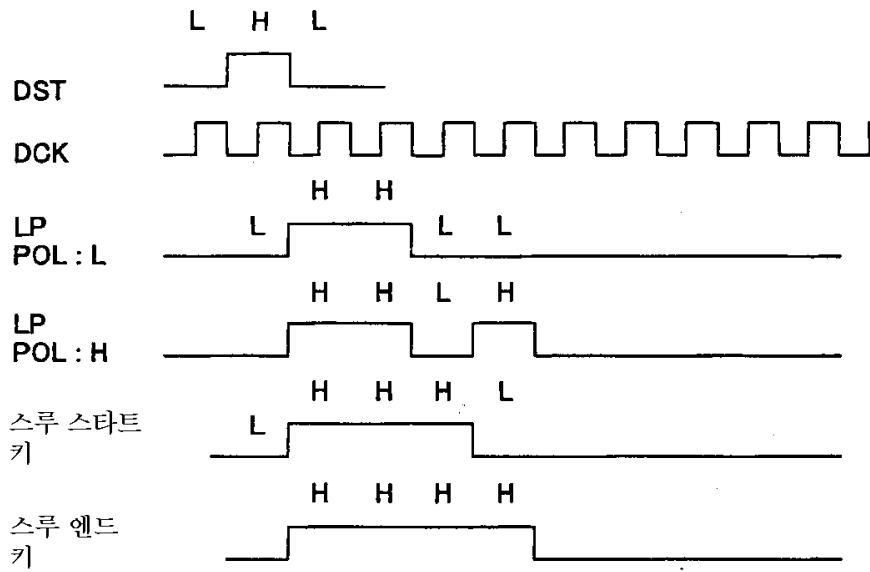
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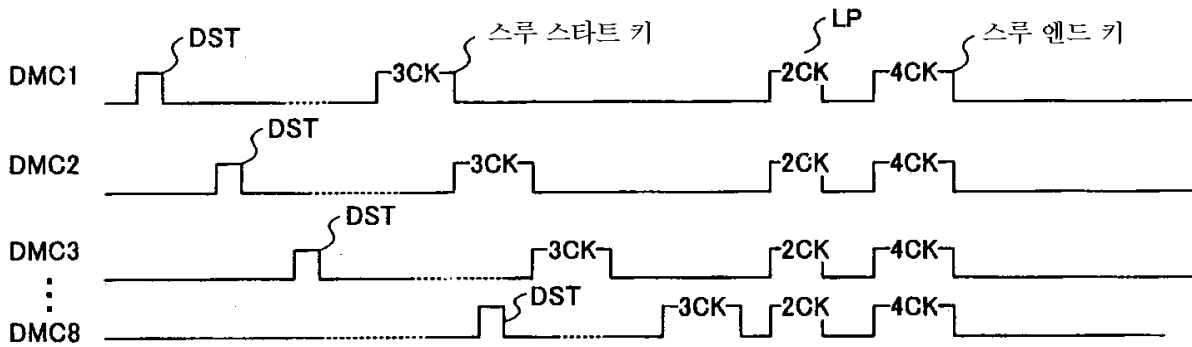
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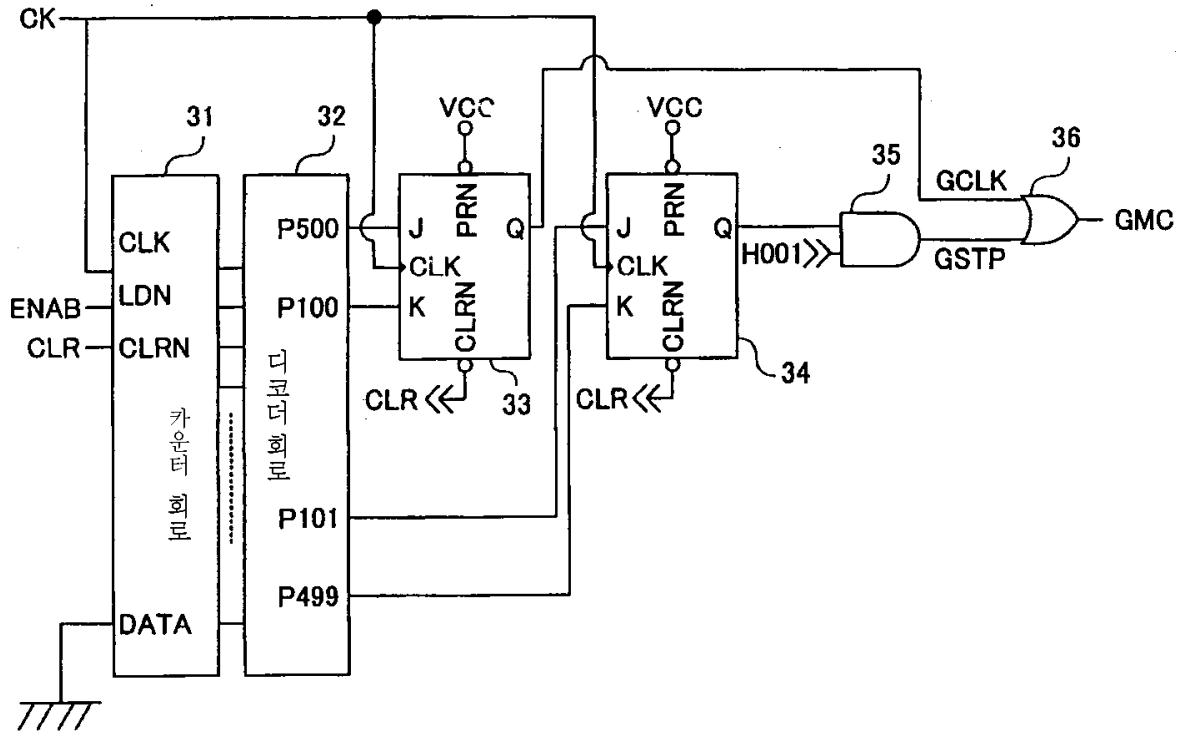
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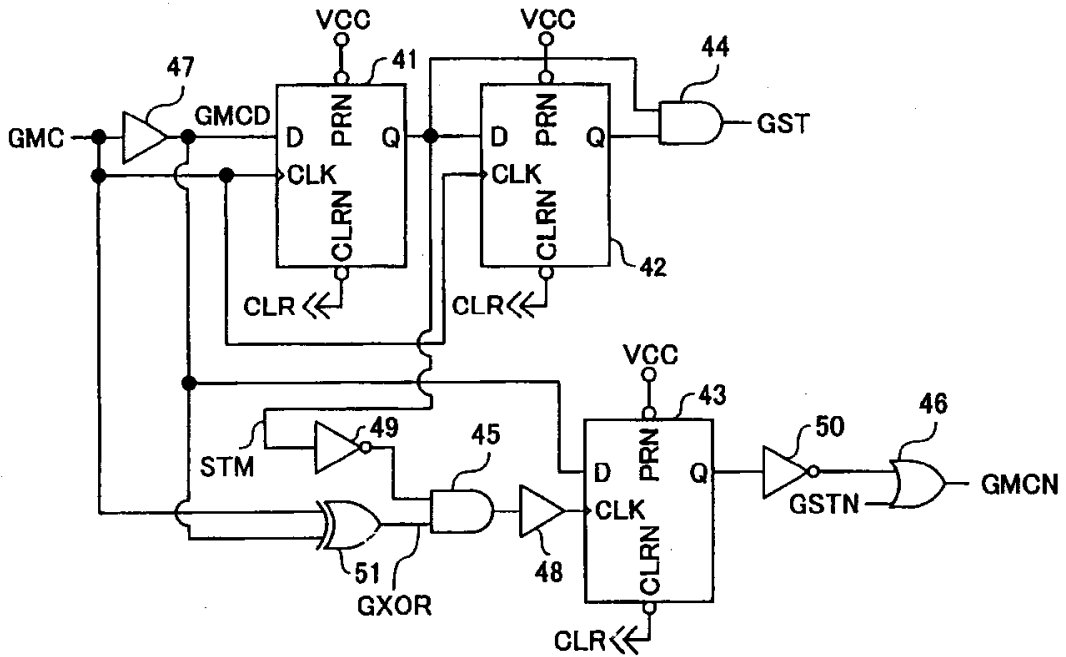
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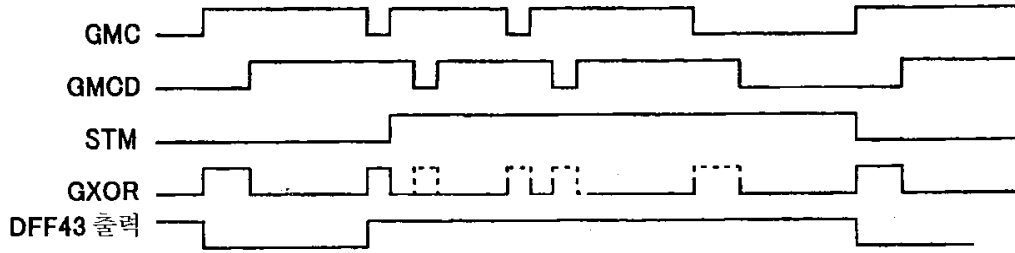
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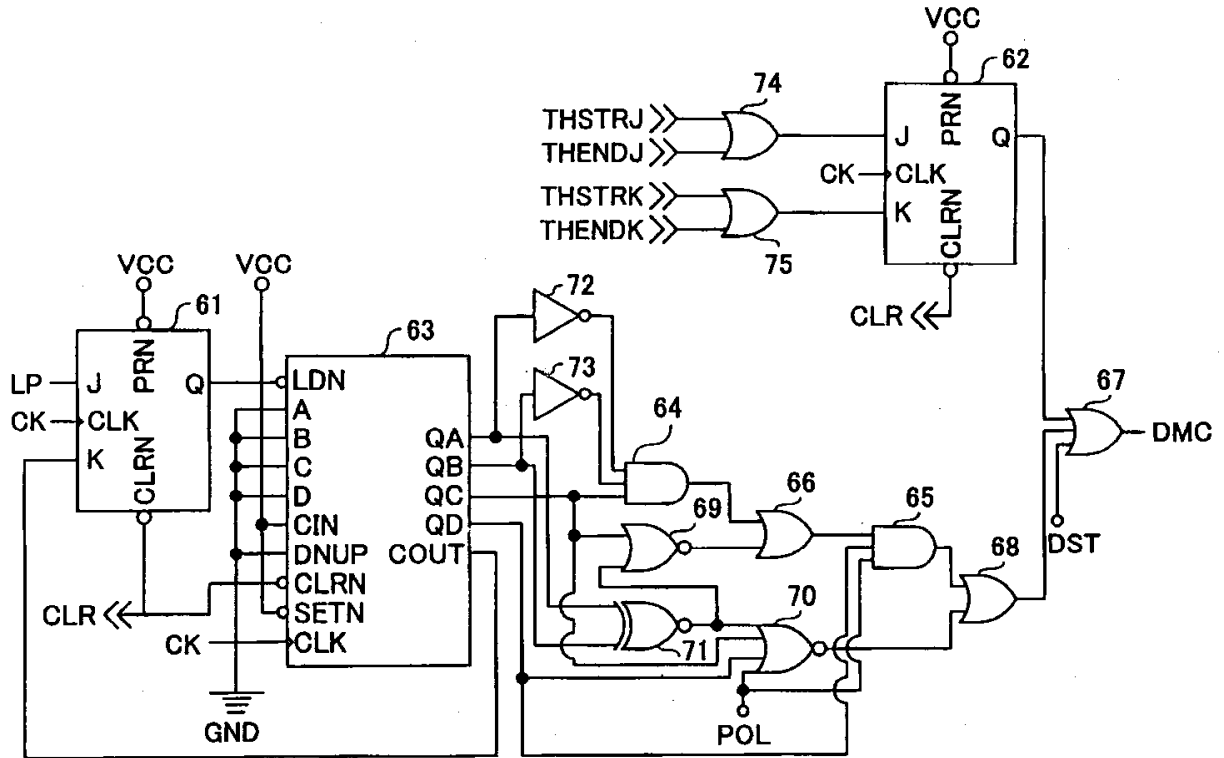
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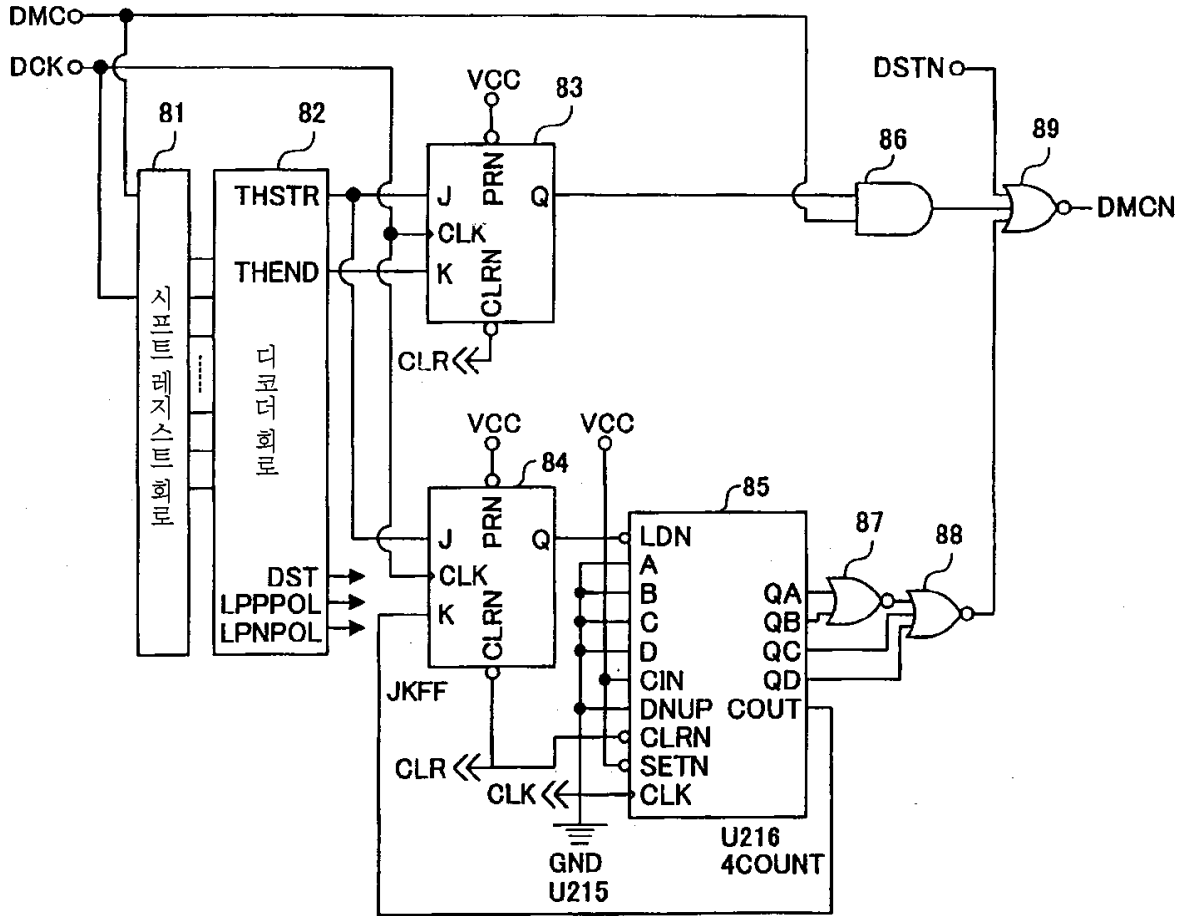
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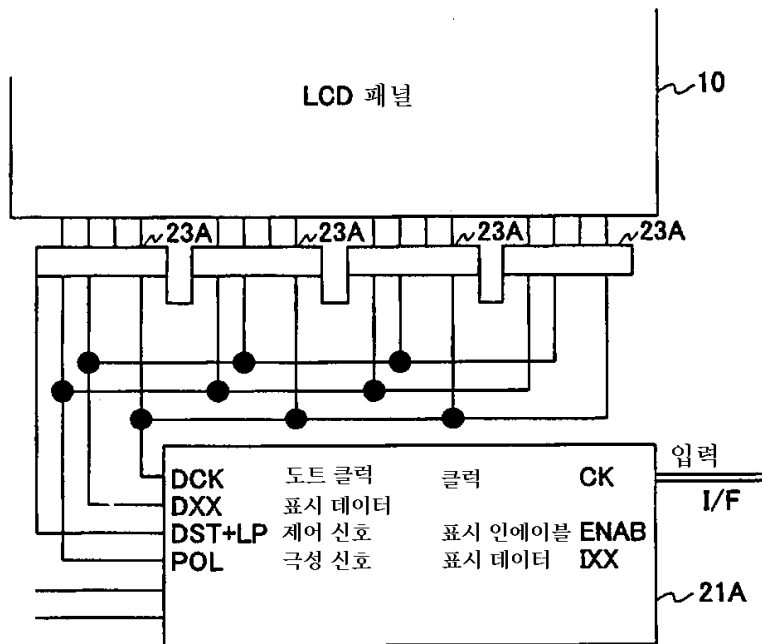
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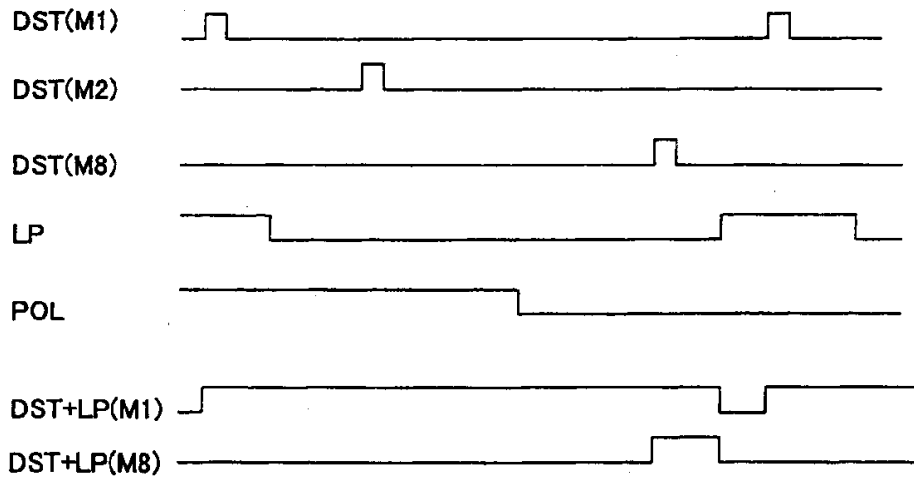
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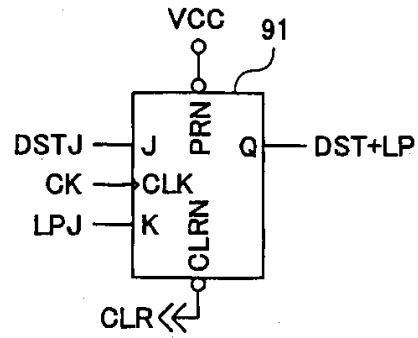
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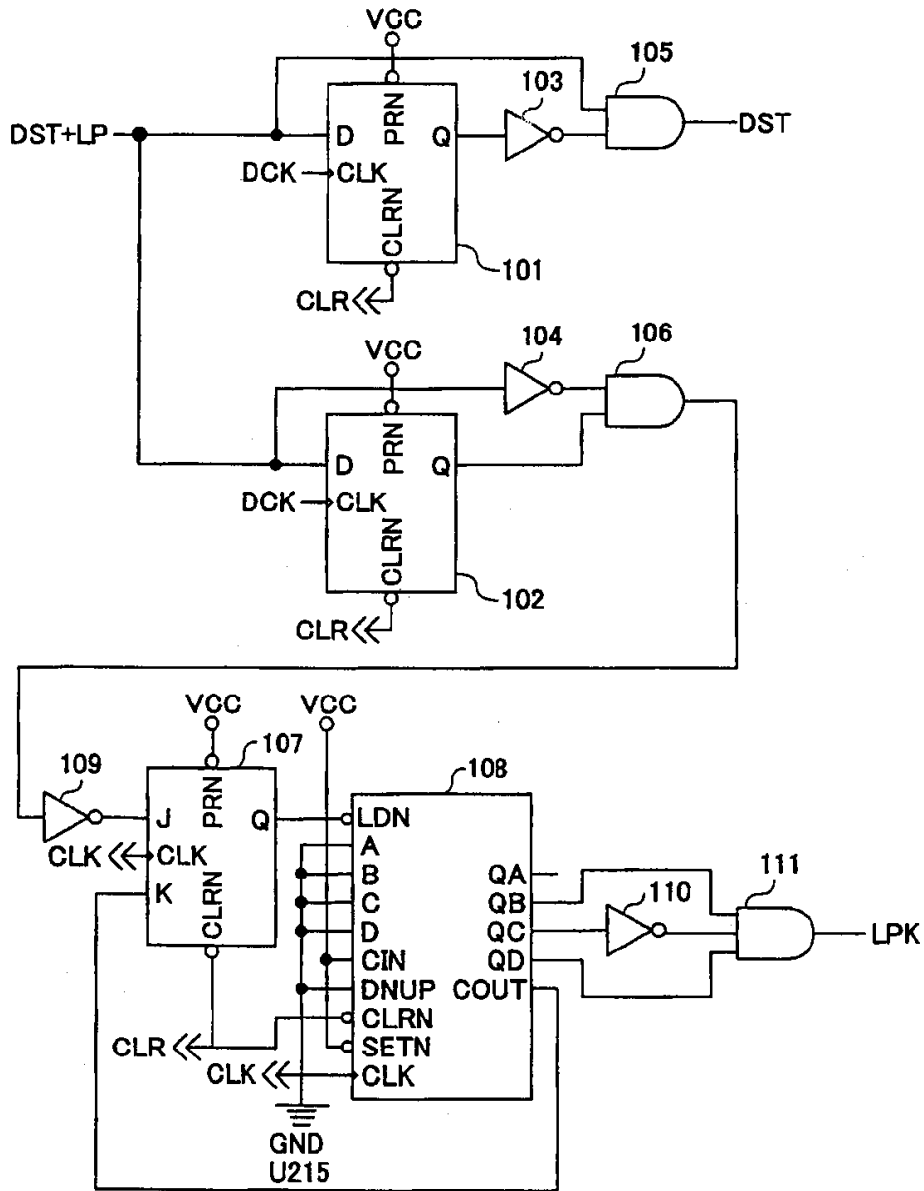
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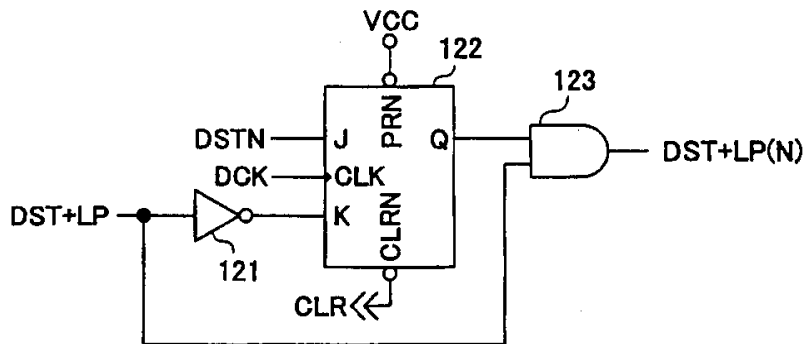
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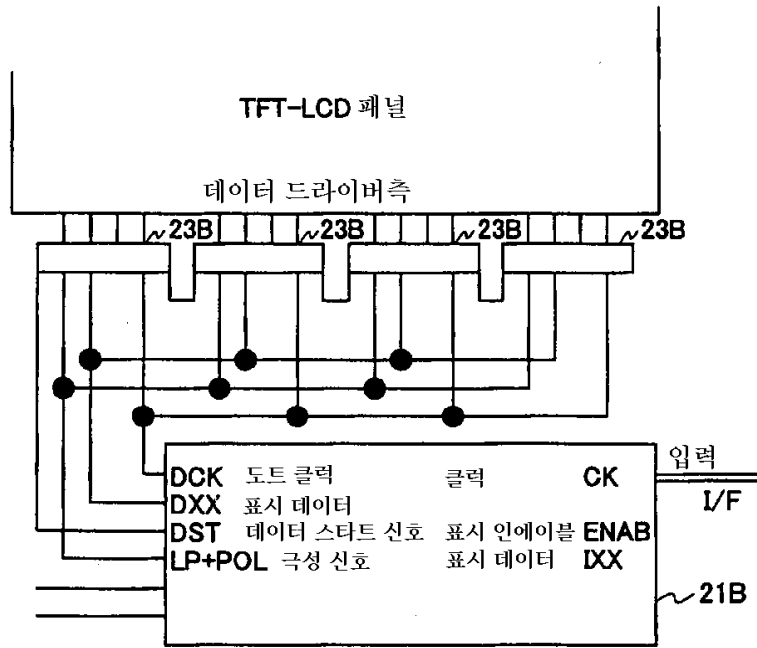
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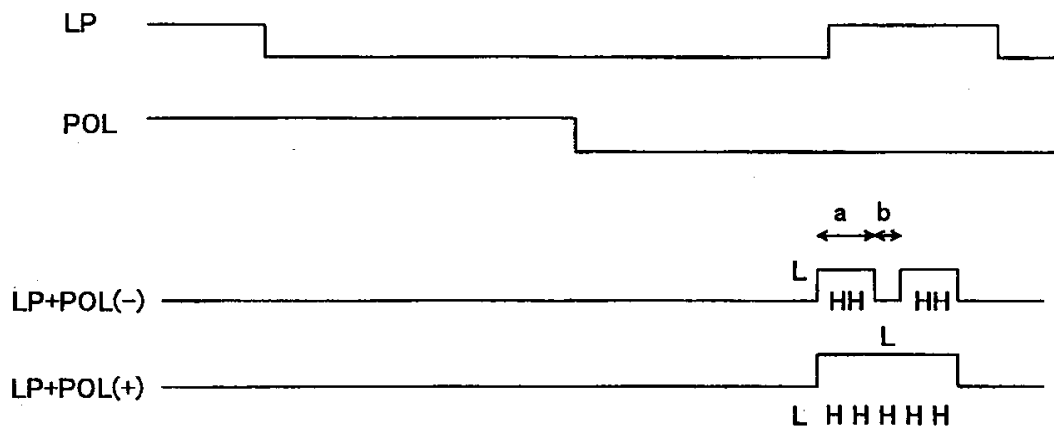
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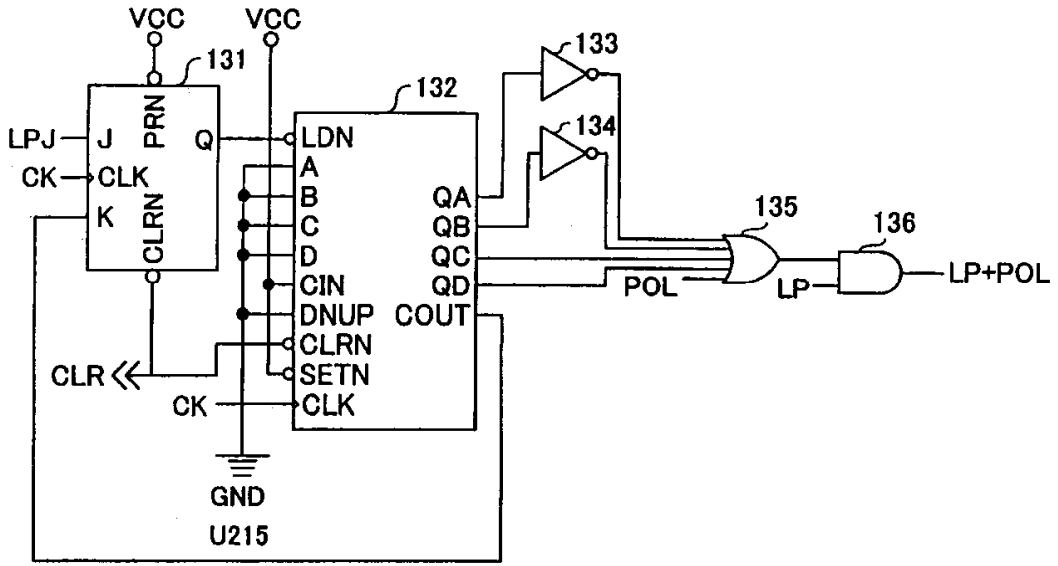
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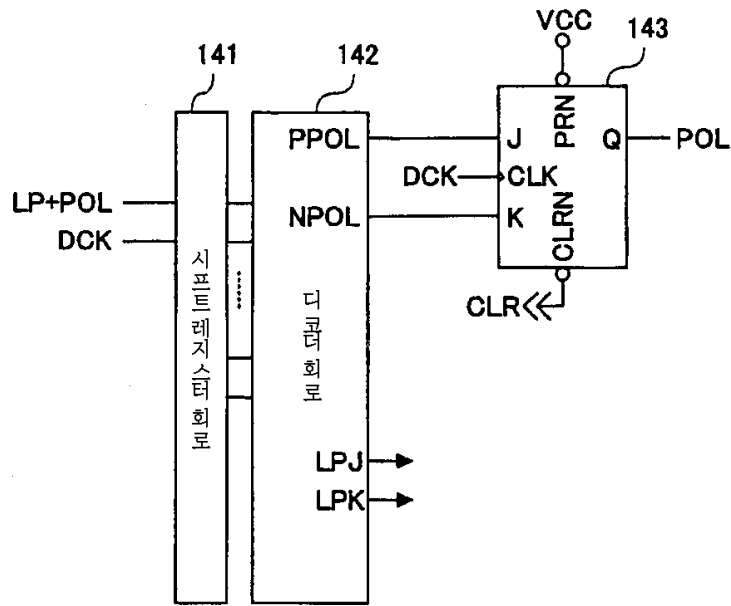
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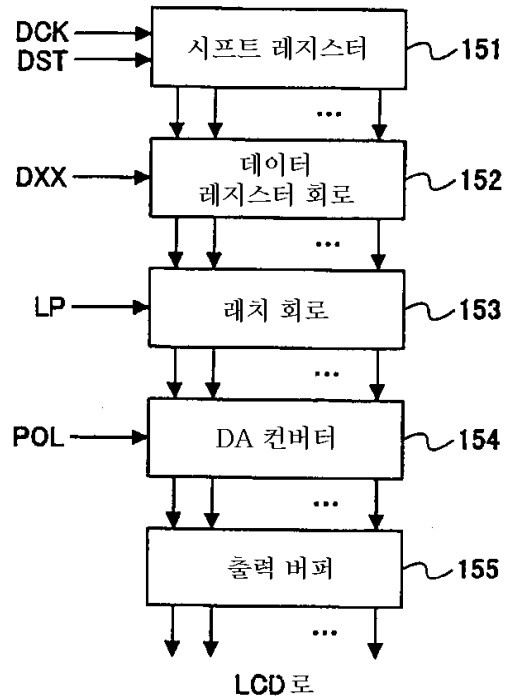
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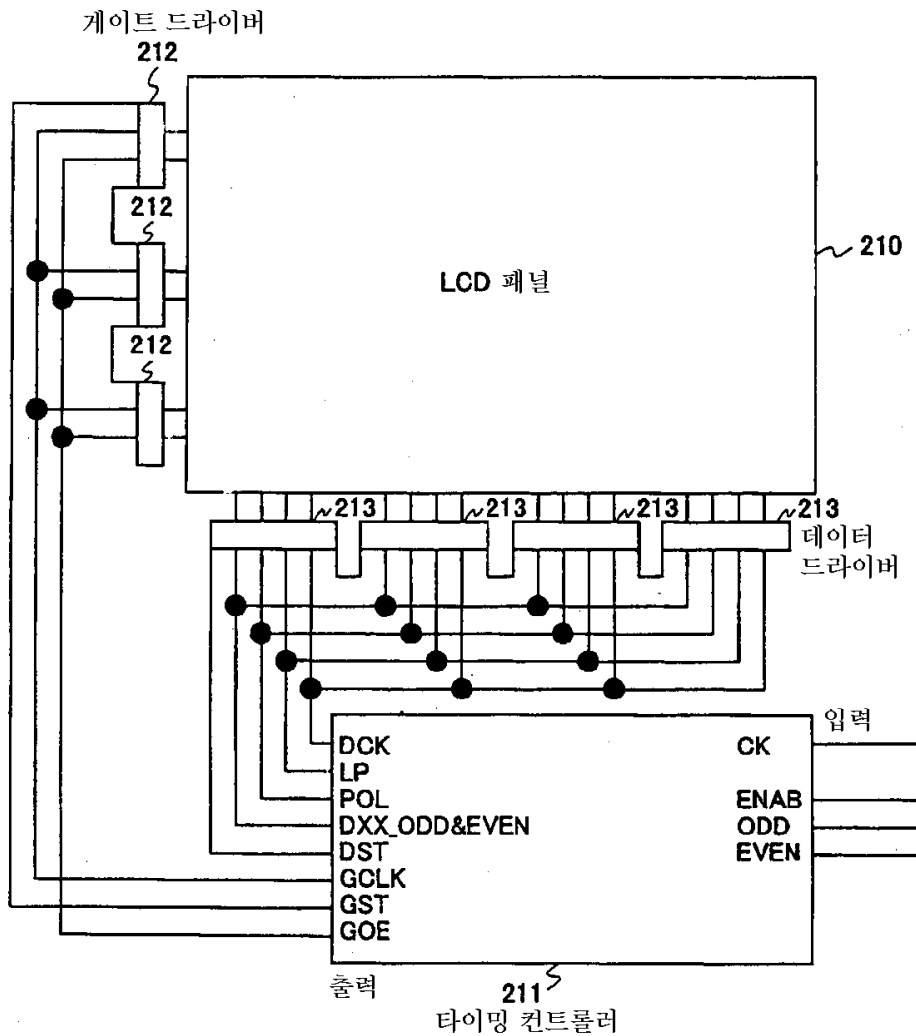
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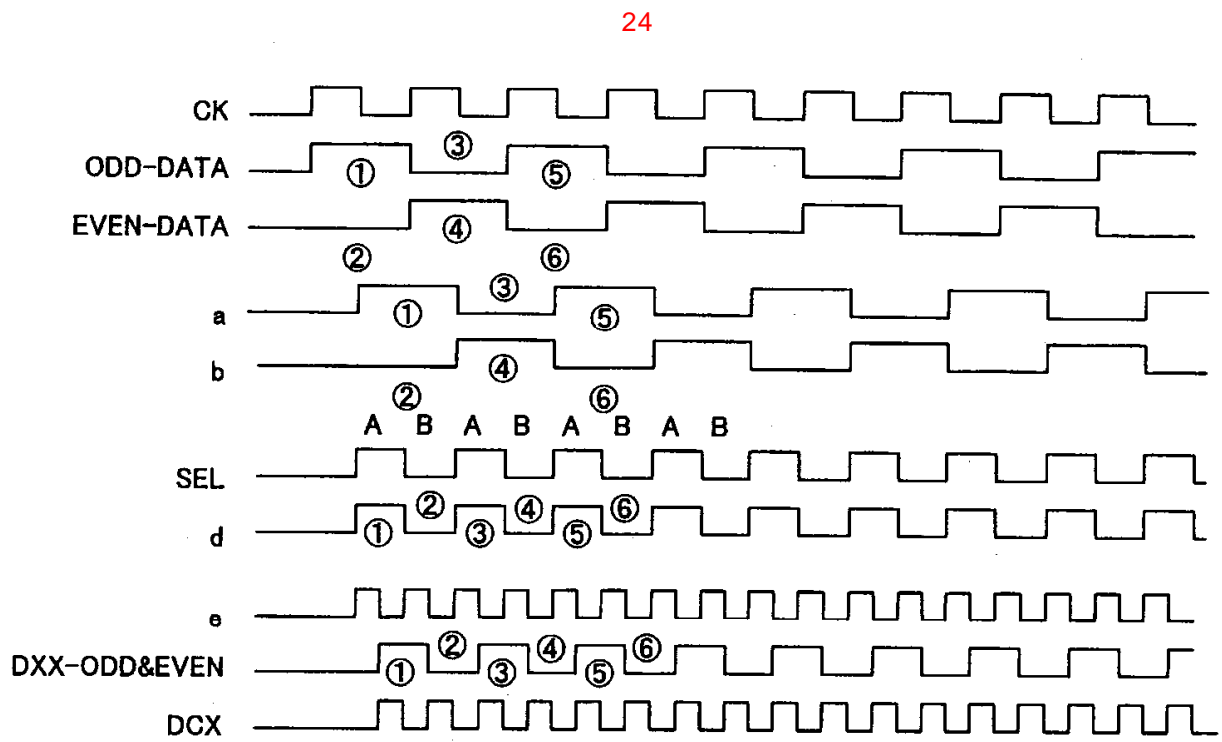
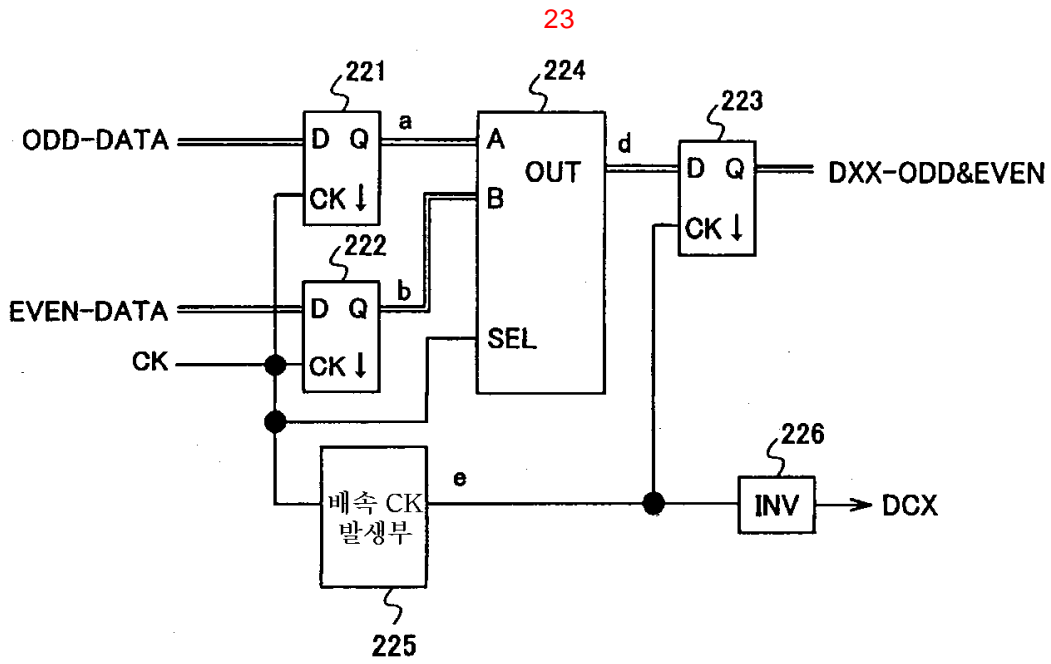


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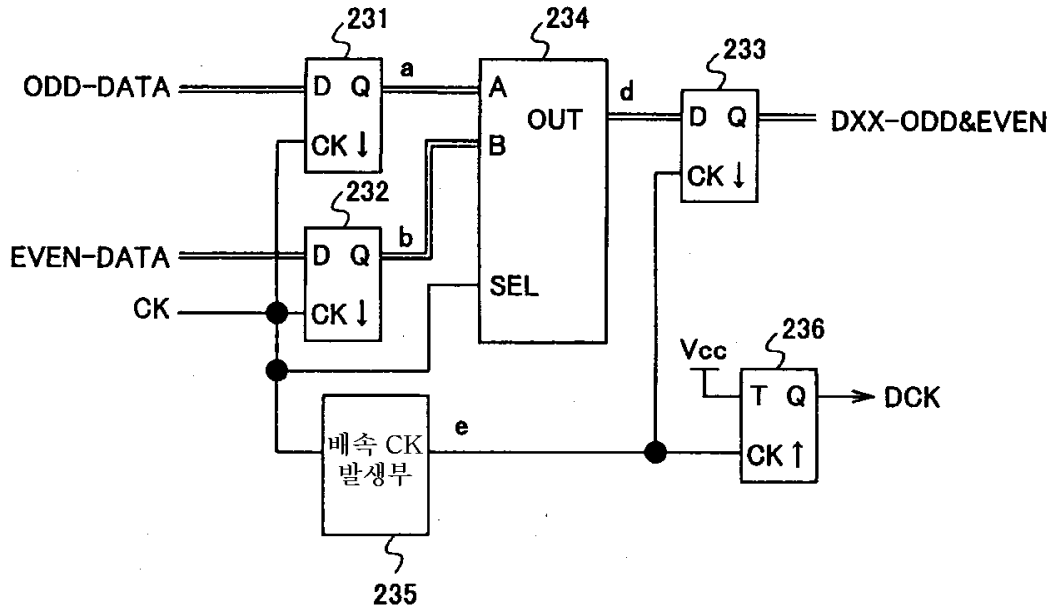


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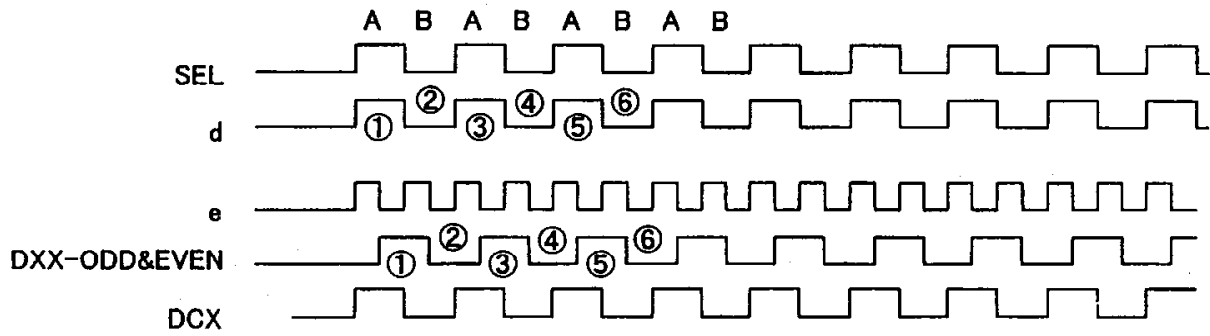




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专利名称(译)	液晶显示器		
公开(公告)号	<a href="#">KR1020030066362A</a>	公开(公告)日	2003-08-09
申请号	KR1020030005824	申请日	2003-01-29
[标]申请(专利权)人(译)	夏普株式会社		
申请(专利权)人(译)	夏普株式会社		
当前申请(专利权)人(译)	夏普株式会社		
[标]发明人	ITO TAKAE 이또다카에 NUKIYAMA KAZUHIRO 누끼야마가즈히로		
发明人	이또다카에 누끼야마가즈히로		
IPC分类号	G09F9/35 G09G5/00 G09G3/20 G02F1/133 G09G3/36		
CPC分类号	G09G3/3677 G09G3/3611 G09G3/3685 G09G3/3614		
代理人(译)	CHANG, SOO KIL CHU,晟敏		
优先权	2002025446 2002-02-01 JP		
其他公开文献	KR100821016B1		
外部链接	<a href="#">Espacenet</a>		

摘要(译)

本发明的目的是提供一种液晶显示器，它最小程度地控制控制信号的数量，同时它保持其输入到每个驱动器的现象的控制功能。液晶显示器包括具有晴天的控制器，并且是连接到数据驱动器 ( N-1 ) 的N的控制功能，控制用于驱动液晶面板的数据驱动器的驱动操作，包括数据线和数据线，以及用于驱动数据线输出到控制信号线的数据驱动器小于。级联，液晶面板，脉冲，信号线，数据驱动器，控制器。

