

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

(21) 10-2001-0049781 (65) 10-2002-0026802
(22) 2001 08 18 (43) 2002 04 12

(30) JP-P-2000-00248964 2000 08 18 (JP)

(72) 619-1127 가 4-14-3

(74)

(54)

1

1
2
3
4
5
6

가
가

가
가

TFT

7 ,
 8 4
 9 4
 10 5
 11 5
 12 TFT가 ON ,
 가
 13 가 TFT ON , 가
 14
 15
 16 IC
 17a 17b 1 IC
 18a 18b 2 IC
 19 가 가
 20 17a 17b 22 21
 21 3
 23 21
 24 22 , /
 25 23 , / ,
 26 2
 27 26
 28 26
 29 27 , / ,
 30 28 , / ,
 31 21 가 (current mirror)
 32 26
 33 31
 34 33
 35 33
 36 32
 37 36
 38 36
 39
 40
 41
 42 TFT

6 TFT 3801 TFT
 , 3802 IC 3803 ()
 (3804) , IC(3803) , IC(3802)
 IC(3803) (3804) (R, G, B)
) , (3804) (3804) IC(3802)
 , / , ,
 42 TFT 3901 가 3902 가 3903
 TFT () 가 , 3904 가 , 3905 가 , 3906
 가 (3904) ,
 (3905) ,
 가 가 ON TFT(3903) 가 ON
 03 01) (3904) (3901) TFT(3903) (3901) ON
 (3902) ,
 12 13 4001 4101
 , 4002 4102 4003
 4103 가 (12 13) , 4004 4104
 , 12 TFT(3903) 가 ON (3906)
 가 , TFT(3903) 가 OFF 가 (3901)
 , 13 TFT(3903) 가 ON (3906) (3901)
 FT(3903) 가 OFF 가 , 12 13
 가
 14 (3801)
 , 1 ()
 , IC(3802),
 ,
 15 , 4301
 , 4302 , 4303 (3906)
 15 ,
 06) 16 IC(3802)
 , (R,G,B) , (4403)
 , (4405) (4404)
 (4403)
 (4406) (CK) D/A (4407) (4405)
 1 () (4408)
 (4405)
 (fetch)
 17a 17b , (17a 17b) 16 IC
 4405, 4407 4408
 2 17a 17b , 4501
 (voltage follower) 가 4502
 가 , 4503, 4504, 4505
 가 , 4507 4506 /
 가 , 4509 4510
 가 , 4508 /
 가 , 4511 D/A
 가 , 4512 D/A

가	(4501)	4513 4515	(4502) (4502)	4514 4516	N P	MOS MOS
(4511) (4501)	(4503-4506)가 ,	I7a D/A (4511)	(4507) ,	(4509) , D/A (3801)		,
(4511) (4501)	(4503-4506)가 ,	17b D/A (4511)	(4508) ,	(4509) , D/A		,
(4503-4506)가 ,	(4512) 17a D/A (4512)	,	(4510) , D/A	(4511)		,
4502)	(4503-4506)가 ,	17b D/A (4512)	(4507) ,	(4510) , D/A		,
I7a I7b	(4503-4506)		.	.	I7a 17b (3801)	
I7a 17b		, 1				
S (4501)	가 (4513) 2 18a 18b	가 (2 18a 18b <td>가 MOS</td> <td>LSI 가 (4515) 가 가 IC 4405, 4407</td> <td>(enhance) , N 1 1</td> <td>MOS</td>	가 MOS	LSI 가 (4515) 가 가 IC 4405, 4407	(enhance) , N 1 1	MOS
606	2 18a 18b , 4602 P	4601 N MOS		가 가 4607	가 , 4603, 4604, 4605 /	4 가
S MOS	D/A , 4609 , 4612 18a 18b	4610 가 (a) (4601) (4602)	4608 가 (c) (a) (b) , (c)	/ 가 4611 /	D/A D/A (4607) (4608)	N P (4603, 4604)
	D/A ,	(4607) .	2 가 P 가 17a 17b	1 D/A (4608) .	18a 18b ,	2 1 ,
4601, 4602)가 19 가 , 2	18a 18b (18a), (4601)가 B 가 가 , 20	18a 18b (= (A - B) / 2)	1 가 가 19 17a 17b	1 가 .	(4601) (4602) .	(4601) (4602) .

32 26
 MOS
 32 , (1201,1202) P MOS
 () 가 , 1205
) 가 , 1206 1207
) 가 , 1210
 (1206-1209)
 32 ,
 27 ,
 , (1201)
 , (1204)
 2 (1204,1205),
 ,
 , 32 ,
 ,
 , (1201,1202)
 , (1206-1209)
 (1211),
 , (b)
 , (1210)
 가 ,
 , 가
 , (b)
 33 , 31
 33 , 1302
 , 1316 1317
 , 1318 P MOS
 가 , 1320
 가 (1301) 21
 33 , 1304 1305 3I
 5) , 34 35
 33 , (1314,1315) 31
 (1316,1317) 31
 33 , 1307 1309 31
 (1107) , 1310 1313 31
 (1109) , (1322) 31
 , (1304) 'L' ()
 , (1306,1307,1310,1311) ON (34).
) 가 , (1315)
 314) . (1310)
 (1318) 가
 (1315) (1317),
 (1316)
 , (1305) 'L'
 , (1304) 'H'
 , (1302) , (1308)
 , (1309) 가
 , (1312)
 7) , (1318)

. 32 P

가 , 1203
 N MOS
 가 , 1208 1209
) 가 , 1211
 가 , 1214
 , 26 (1204)
 , 28
 , (1204,1205),
 ,
 , 26
 ,
 , 2
 가 ,
 , 가
 , (a)
 (b)
 (1301),
 가 , 1314 1304 1305
 , 1315 N MOS
 가 , 1319 N MOS
 ,
 (1114) , (1304,1305)
 ,
 (1101,1102)
 , 1306 1308 31
 , 1311 1312 3I
 , (1305) 'H' (1302)
 (1307) 가
 (1311)
 (1314)
 (1308,1309,1312,1313) ON
 (1306,1307,1310,1311) OFF
 (1314)
 (1313)
 (1316,1317) 가
 , 35
 , (1318)
 , 35

[1]

SWP	REV		
		(- A)	(- B)
		(- B)	(- A)
		(- - A)	(- - B)
		(- - B)	(- - A)

가 (16) 가

(57)

1.

2.

1 2 ; 1 2 ;
1 2 ;
1 가 , 1 2 ;
1 가 , 1 2 ;

3.

$$2 \quad , \quad 1 \quad 2 \quad 1 \quad 1$$

4.

3 , (a) , 가 1 2 , (b) 1 2

5.

2
1 , 1 ;
1 1/2 ;
2 가 ;
가 , (b)
2 , (c) , (a)
1

1

6.

4
1 , 1
1 ;
1/2 ;
2 가 ;
2 , (a)
1 , (b)
2 , (c)

2

2
1 2

가

가

1 2

1

가

가

가

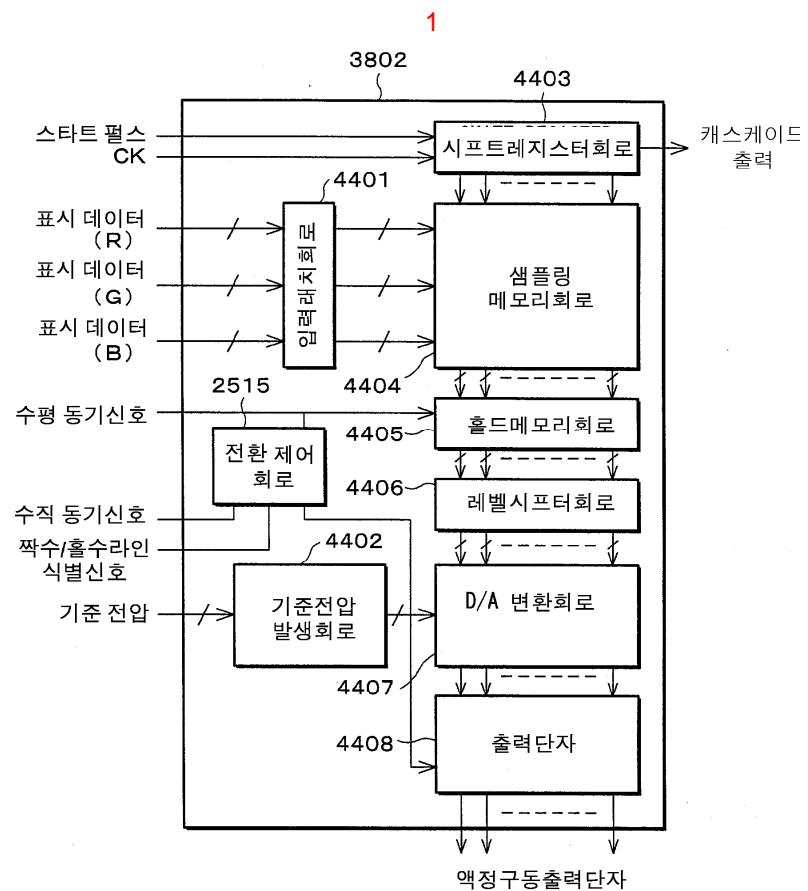
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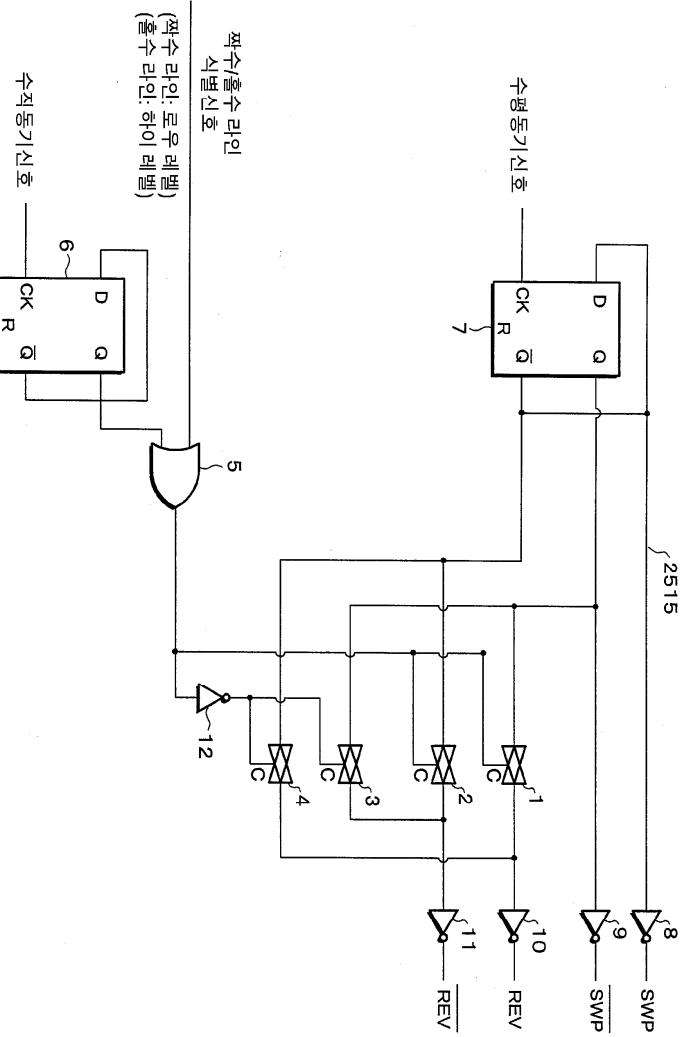
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가

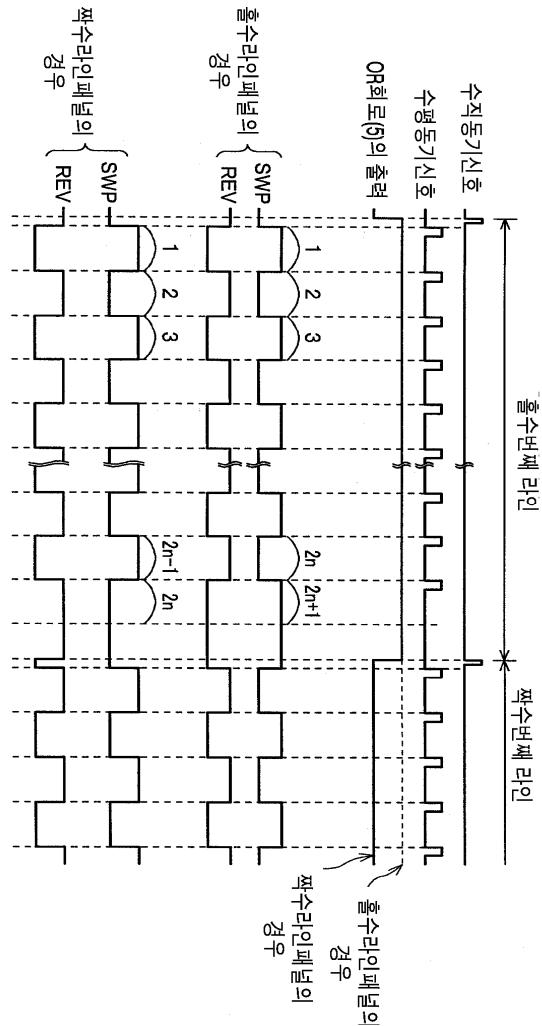
가



2



3



4

(짝수라인 패널)

프레임 ①

	①	②	③	④	⑤	⑥	⑦	⑧	REV	SWP
①	-A	-B	-A	-B	-A	-B	-A	-B	L	H
②	+B	+A	+B	+A	+B	+A	+B	+A	H	L
③	-A	-B	-A	-B	-A	-B	-A	-B	L	H
④	+B	+A	+B	+A	+B	+A	+B	+A	H	L
⑤	-A	-B	-A	-B	-A	-B	-A	-B	L	H
⑥	+B	+A	+B	+A	+B	+A	+B	+A	H	L
⑦	-A	-B	-A	-B	-A	-B	-A	-B	L	H
⑧	+B	+A	+B	+A	+B	+A	+B	+A	H	L

프레임 ②

	①	②	③	④	⑤	⑥	⑦	⑧		
①	-B	-A	-B	-A	-B	-A	-B	-A	H	H
②	+A	+B	+A	+B	+A	+B	+A	+B	L	L
③	-B	-A	-B	-A	-B	-A	-B	-A	H	H
④	+A	+B	+A	+B	+A	+B	+A	+B	L	L
⑤	-B	-A	-B	-A	-B	-A	-B	-A	H	H
⑥	+A	+B	+A	+B	+A	+B	+A	+B	L	L
⑦	-B	-A	-B	-A	-B	-A	-B	-A	H	H
⑧	+A	+B	+A	+B	+A	+B	+A	+B	L	L

A: 정극성 전압

B: 부극성 전압

+: 정측 오프셋

-: 부측 오프셋

5

(홀수 라인 패널)

프레임 ①

	①	②	③	④	⑤	⑥	⑦	⑧	REV	SWP
①	-A	-B	-A	-B	-A	-B	-A	-B	L	H
②	+B	+A	+B	+A	+B	+A	+B	+A	H	L
③	-A	-B	-A	-B	-A	-B	-A	-B	L	H
④	+B	+A	+B	+A	+B	+A	+B	+A	H	L
⑤	-A	-B	-A	-B	-A	-B	-A	-B	L	H
⑥	+B	+A	+B	+A	+B	+A	+B	+A	H	L
⑦	-A	-B	-A	-B	-A	-B	-A	-B	L	H

프레임 ②

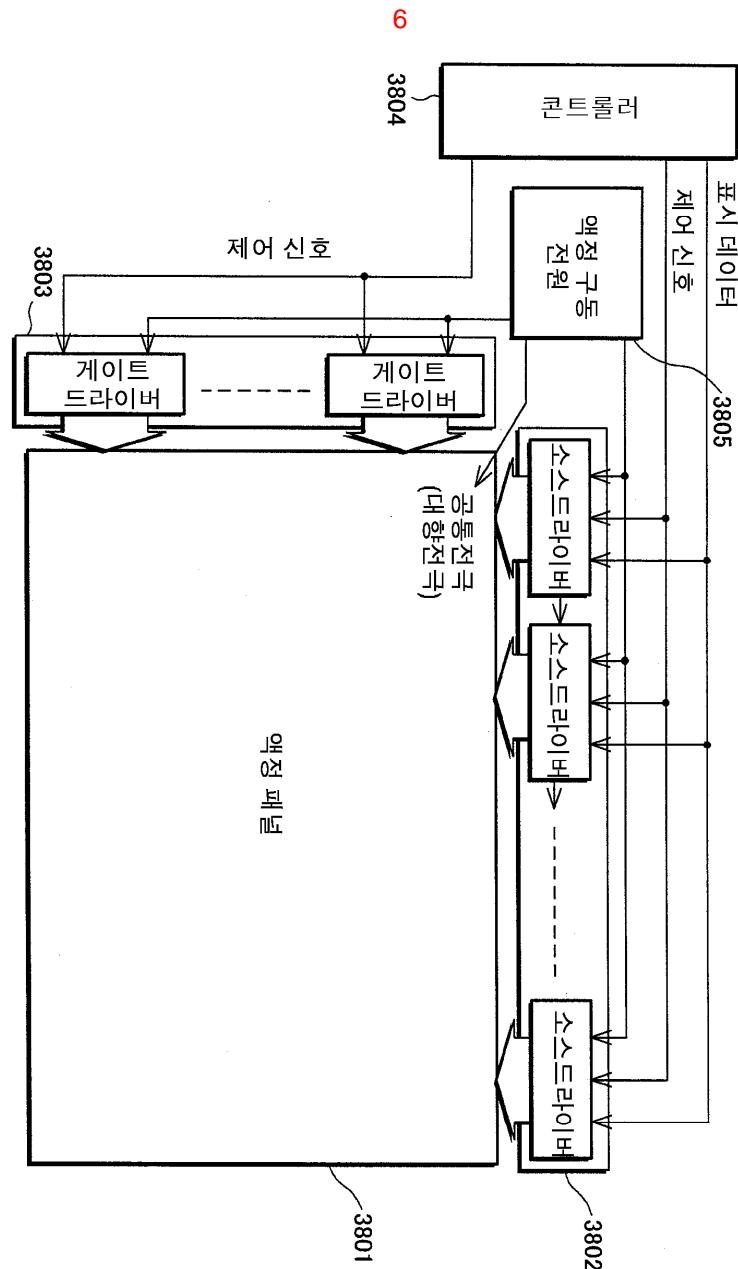
	①	②	③	④	⑤	⑥	⑦	⑧		
①	+B	+A	+B	+A	+B	+A	+B	+A	H	L
②	-A	-B	-A	-B	-A	-B	-A	-B	L	H
③	+B	+A	+B	+A	+B	+A	+B	+A	H	L
④	-A	-B	-A	-B	-A	-B	-A	-B	L	H
⑤	+B	+A	+B	+A	+B	+A	+B	+A	H	L
⑥	-A	-B	-A	-B	-A	-B	-A	-B	L	H
⑦	+B	+A	+B	+A	+B	+A	+B	+A	H	L

A: 정극성 전압

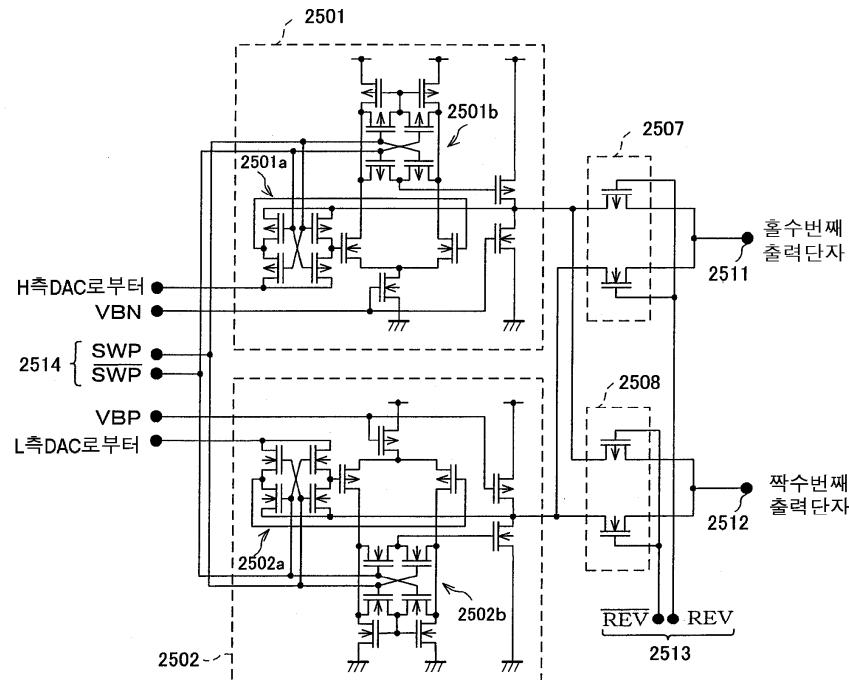
B: 부극성 전압

+: 정측 오프셋

-: 부측 오프셋



7



8

(짝수 라인 패널)

프레임 ① (정극성(A)만 추출)

	①	②	③	④	⑤	⑥	⑦	⑧	REV	SWP
①	-A		-A		-A		-A		L	H
②		+A		+A		+A		+A	H	L
③	-A		-A		-A		-A		L	H
④		+A		+A		+A		+A	H	L
⑤	-A		-A		-A		-A		L	H
⑥		+A		+A		+A		+A	H	L
⑦	-A		-A		-A		-A		L	H
⑧		+A		+A		+A		+A	H	L

프레임 ② (정극성(A)만 추출)

	①	②	③	④	⑤	⑥	⑦	⑧		
①		-A		-A		-A		-A	H	H
②	+A		+A		+A		+A		L	L
③	-A		-A		-A		-A		H	H
④	+A		+A		+A		+A		L	L
⑤	-A		-A		-A		-A		H	H
⑥	+A		+A		+A		+A		L	L
⑦	-A		-A		-A		-A		H	H
⑧	+A		+A		+A		+A		L	L

9

(짝수 라인 패널)

프레임① (부극성(B)만 추출)

	①	②	③	④	⑤	⑥	⑦	⑧	REV	SWP
①	-B	-B		-B		-B		-B	L	H
②	+B		+B		+B		+B		H	L
③		-B		-B		-B		-B	L	H
④	+B		+B		+B		+B		H	L
⑤		-B		-B		-B		-B	L	H
⑥	+B		+B		+B		+B		H	L
⑦		-B		-B		-B		-B	L	H
⑧	+B		+B		+B		+B		H	L

프레임② (부극성(B)만 추출)

	①	②	③	④	⑤	⑥	⑦	⑧		
①	-B	-B		-B		-B		-B	H	H
②	+B		+B		+B		+B		L	L
③	-B		-B		-B		-B		H	H
④	+B		+B		+B		+B		L	L
⑤	-B		-B		-B		-B		H	H
⑥	+B		+B		+B		+B		L	L
⑦	-B		-B		-B		-B		H	H
⑧	+B		+B		+B		+B		L	L

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(홀수 라인 패널)

프레임 ① (정극성(A)만 추출)

	①	②	③	④	⑤	⑥	⑦	⑧	REV	SWP
①	-A		-A		-A		-A		L	H
②	+A		+A		+A		+A		H	L
③	-A		-A		-A		-A		L	H
④	+A		+A		+A		+A		H	L
⑤	-A		-A		-A		-A		L	H
⑥	+A		+A		+A		+A		H	L
⑦	-A		-A		-A		-A		L	H

프레임 ② (정극성(A)만 추출)

	①	②	③	④	⑤	⑥	⑦	⑧		
①	+A		+A		+A		+A		H	L
②	-A		-A		-A		-A		L	H
③	+A		+A		+A		+A		H	L
④	-A		-A		-A		-A		L	H
⑤	+A		+A		+A		+A		H	L
⑥	-A		-A		-A		-A		L	H
⑦	+A		+A		+A		+A		H	L

11

(홀수 라인 패널)

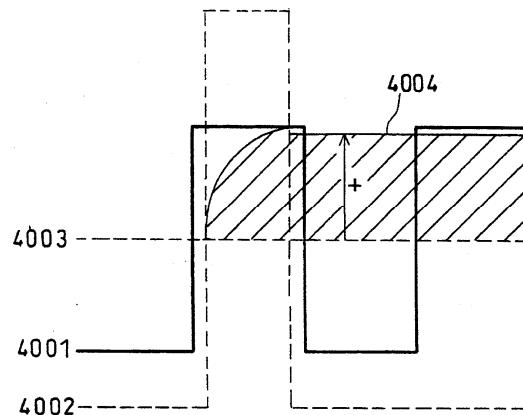
프레임① (부극성(B)만 추출)

	①	②	③	④	⑤	⑥	⑦	⑧	REV	SWP
①	-B		-B		-B		-B		L	H
②	+B		+B		+B		+B		H	L
③	-B		-B		-B		-B		L	H
④	+B		+B		+B		+B		H	L
⑤	-B		-B		-B		-B		L	H
⑥	+B		+B		+B		+B		H	L
⑦	-B		-B		-B		-B		L	H

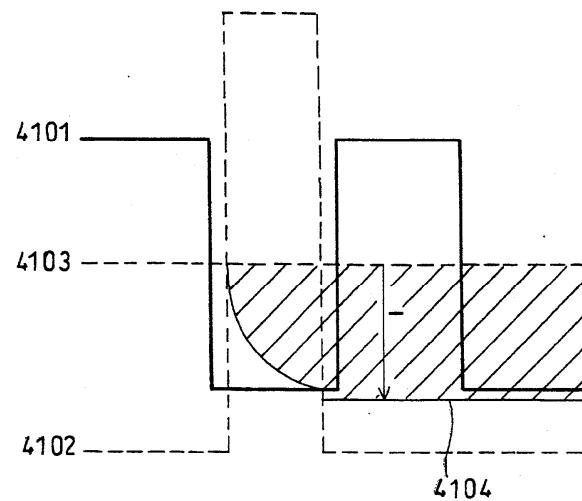
프레임② (부극성(B)만 추출)

	①	②	③	④	⑤	⑥	⑦	⑧		
①	+B		+B		+B		+B		H	L
②	-B		-B		-B		-B		L	H
③	+B		+B		+B		+B		H	L
④	-B		-B		-B		-B		L	H
⑤	+B		+B		+B		+B		H	L
⑥	-B		-B		-B		-B		L	H
⑦	+B		+B		+B		+B		H	L

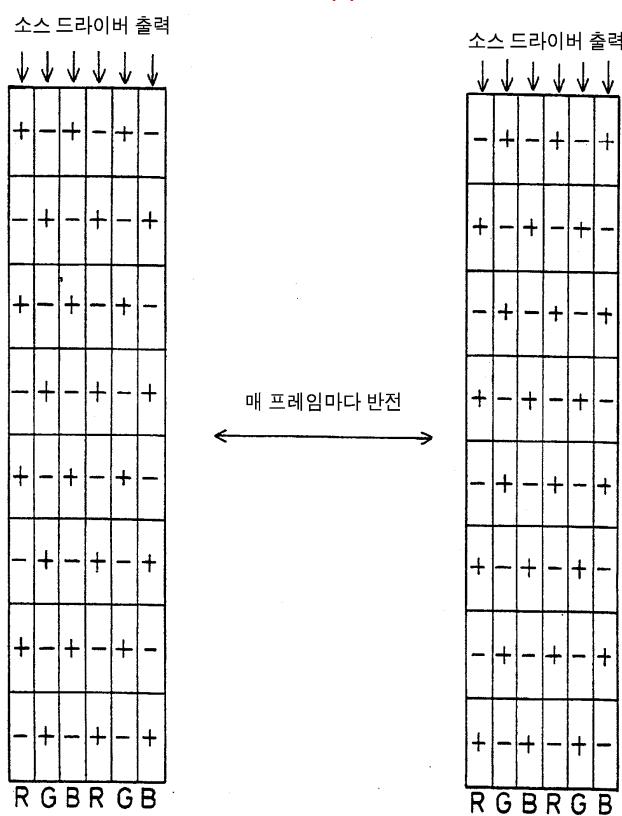
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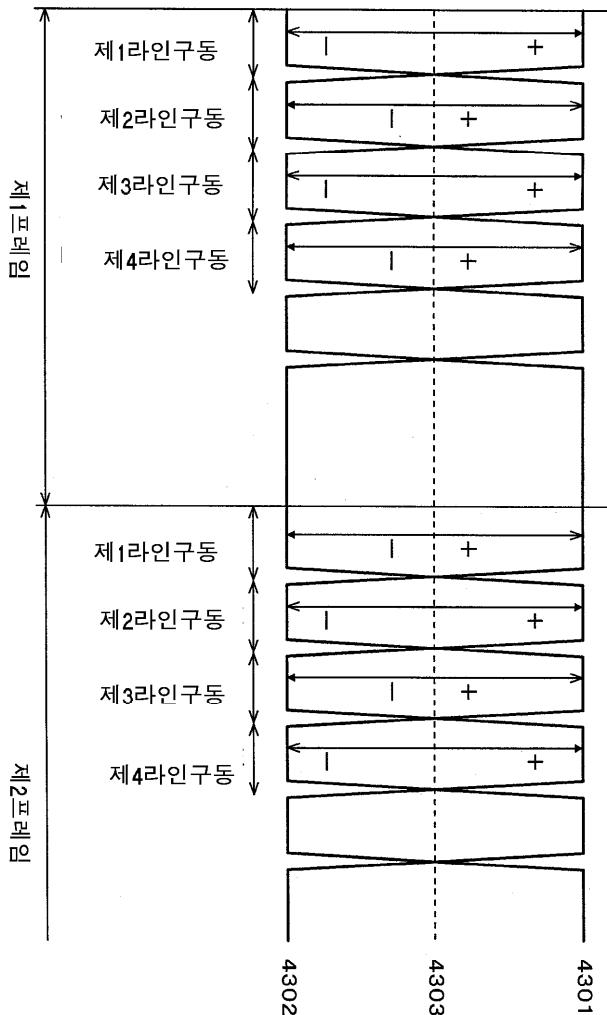
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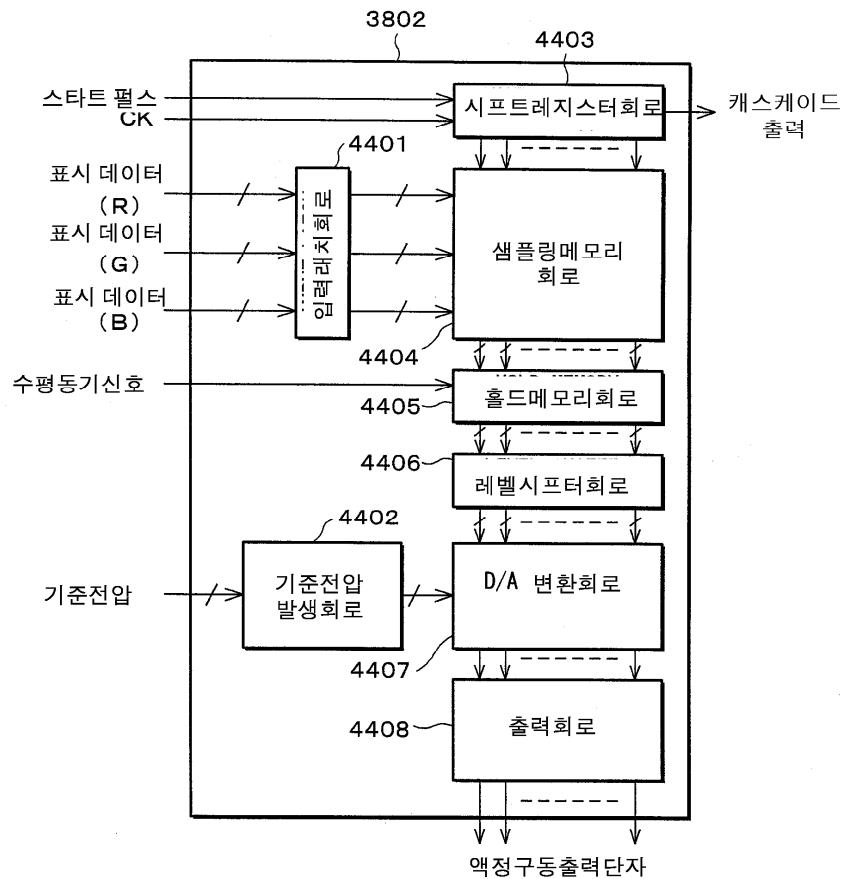
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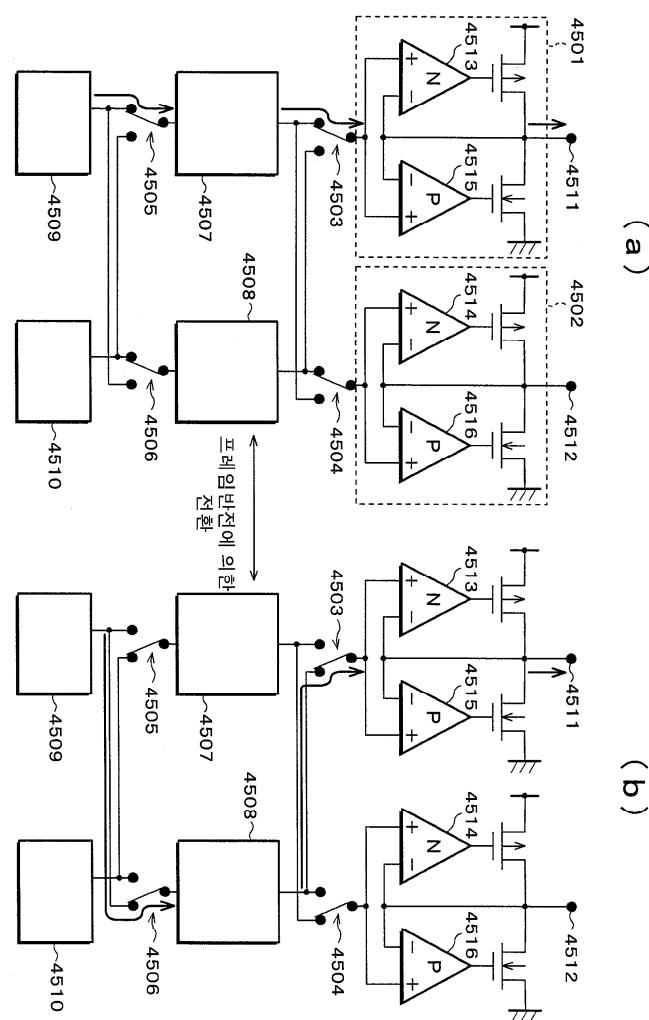
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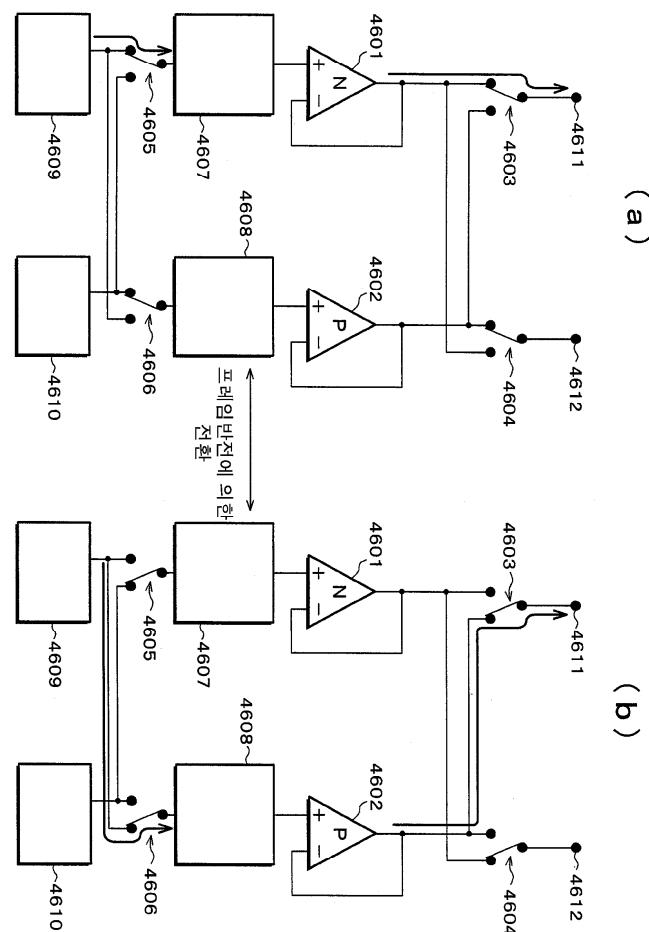
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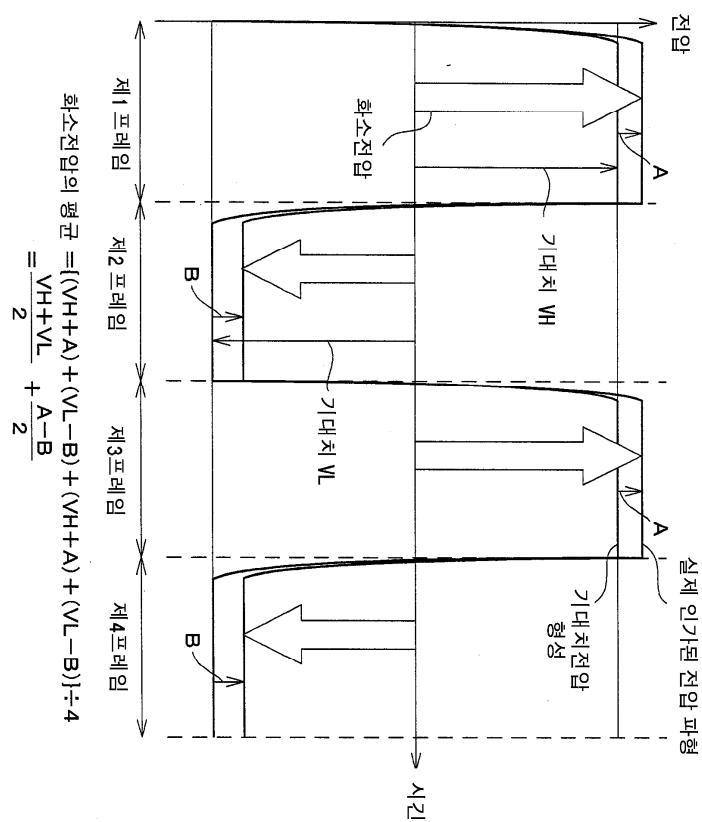
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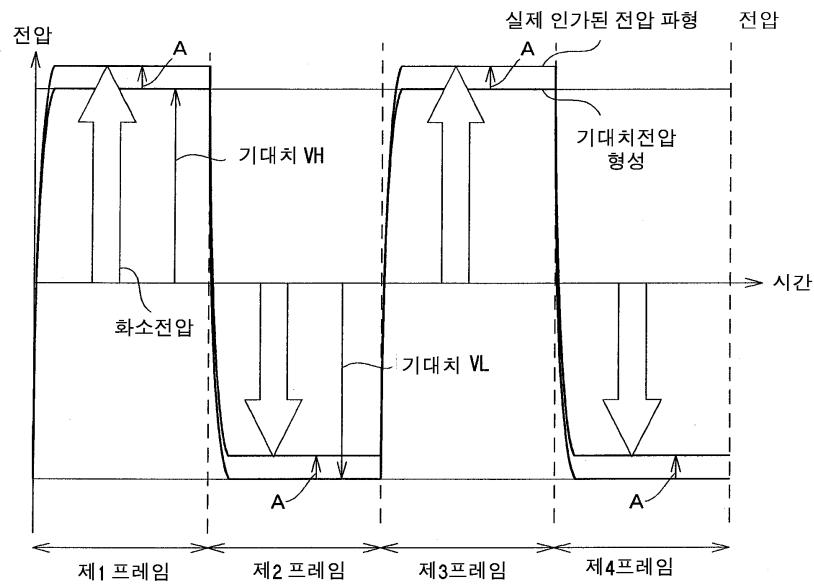
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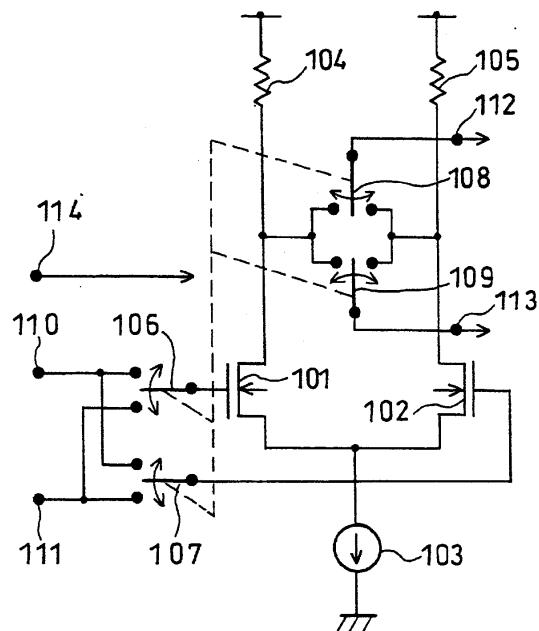
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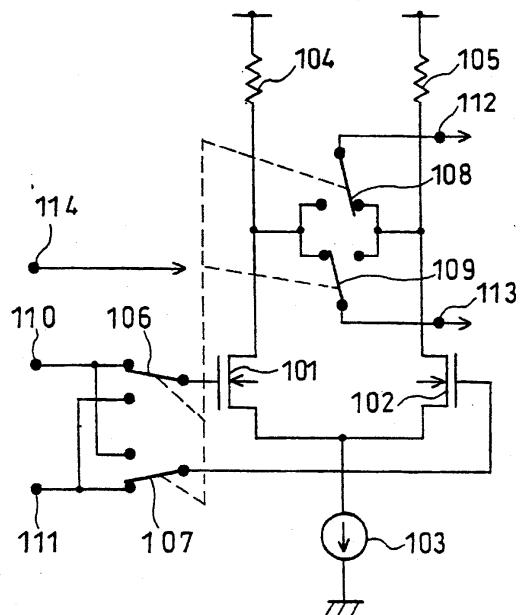
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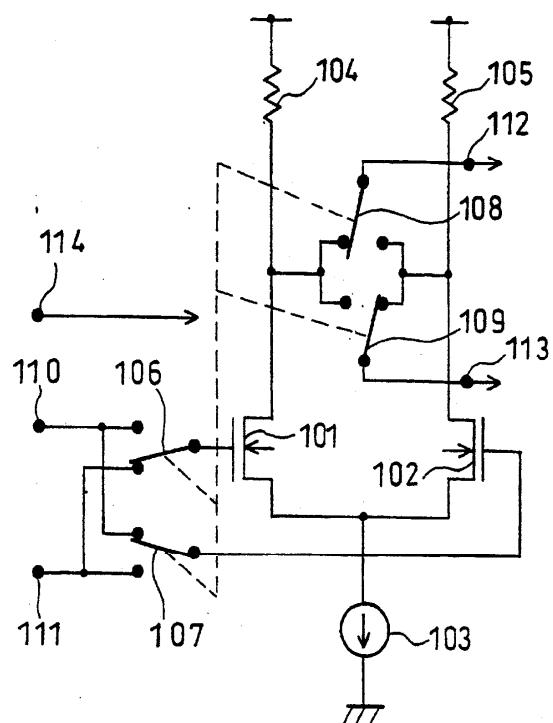
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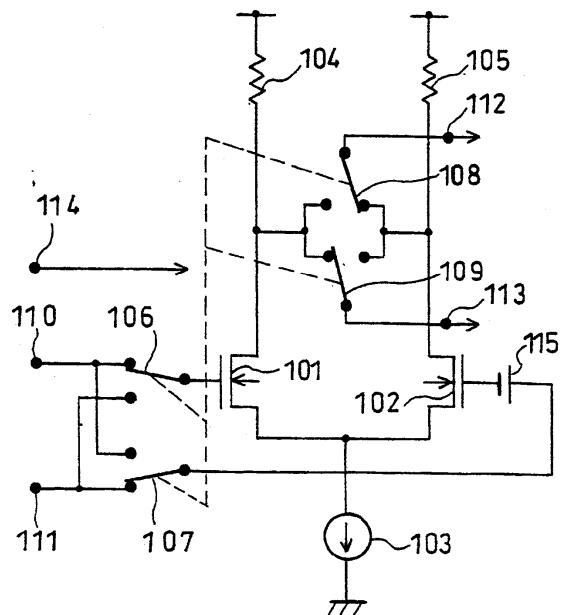
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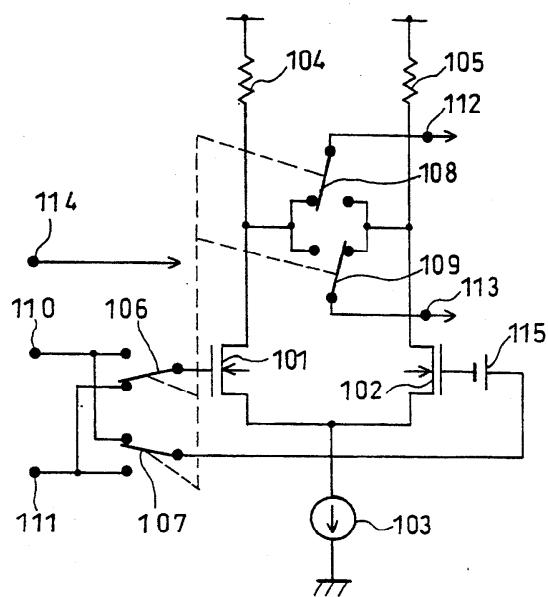
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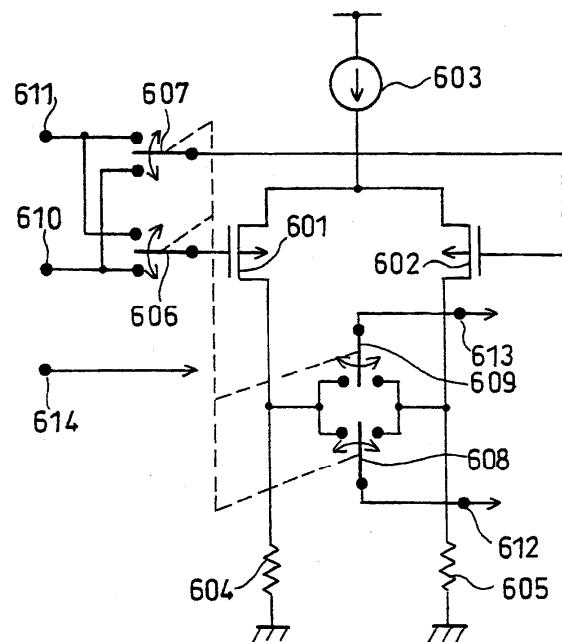
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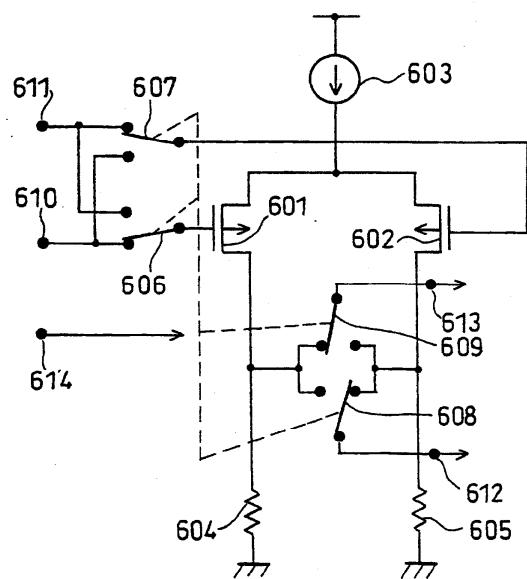
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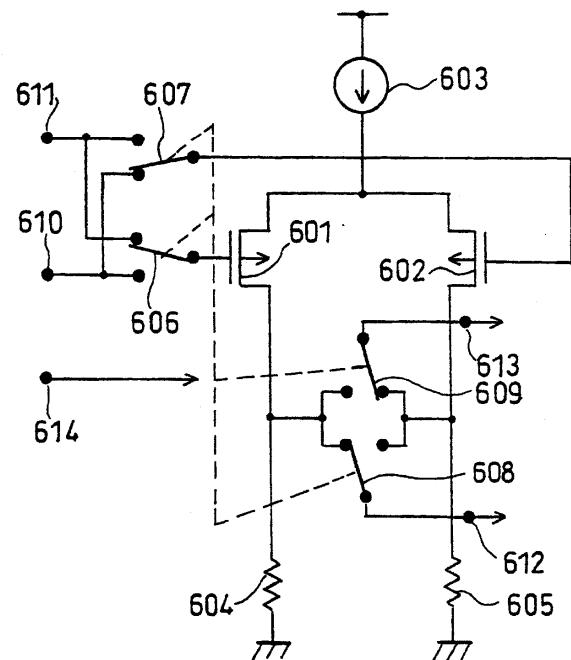
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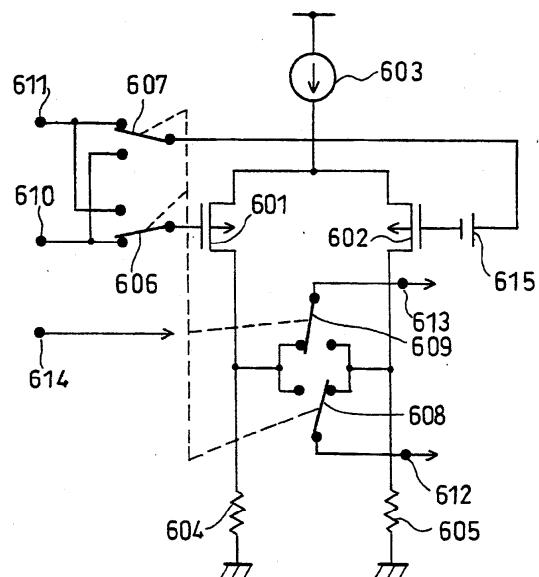
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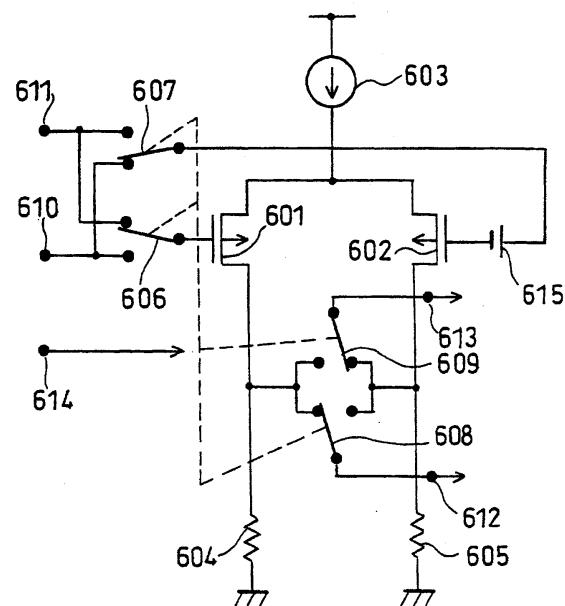
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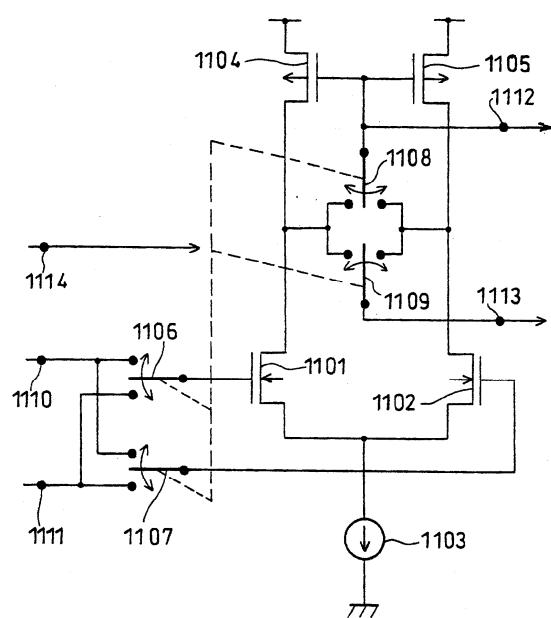
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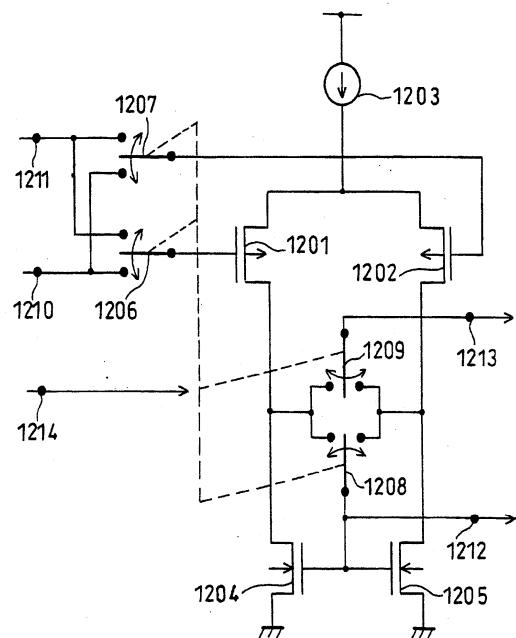
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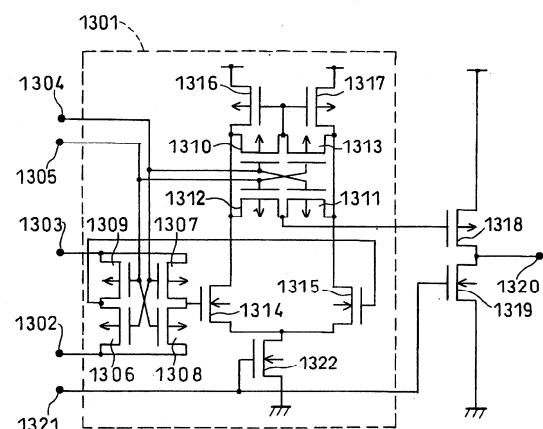
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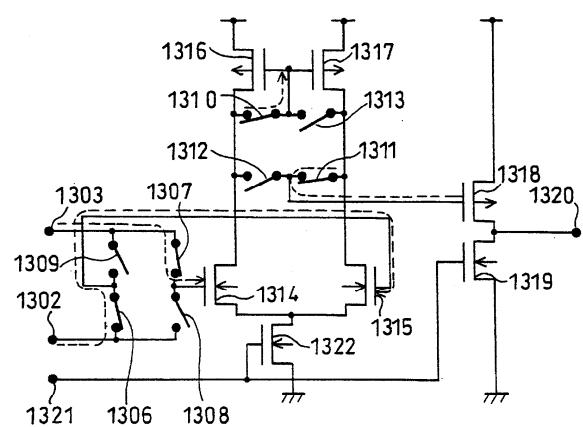
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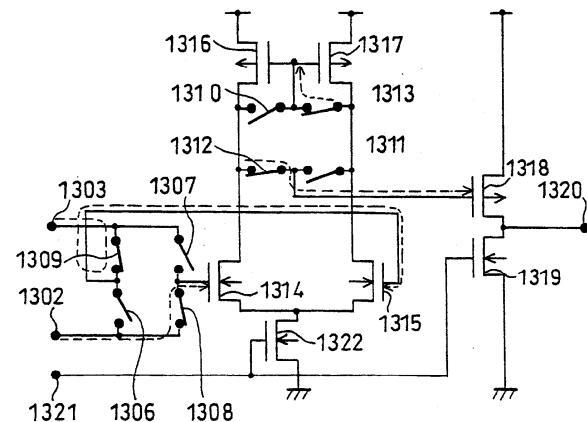
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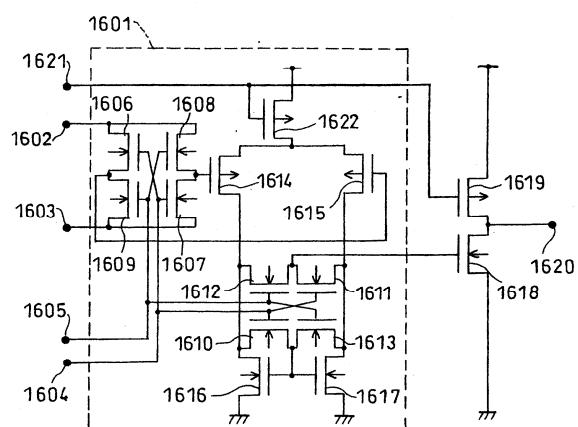
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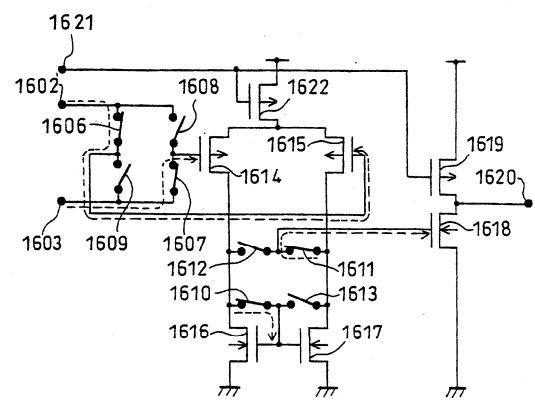
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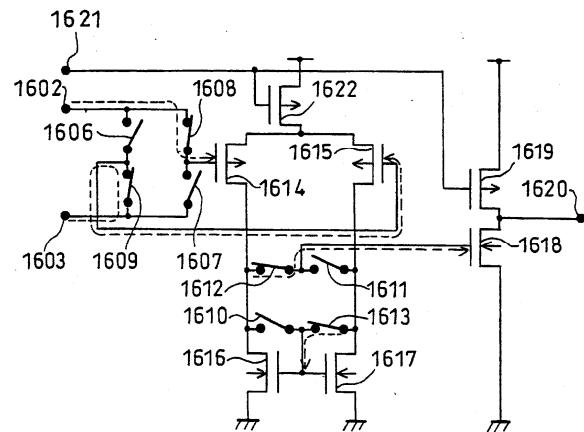
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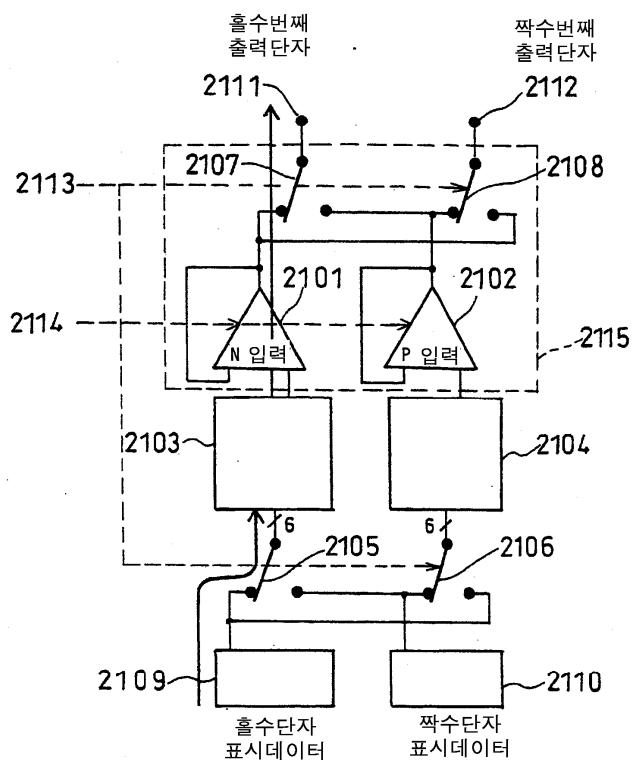
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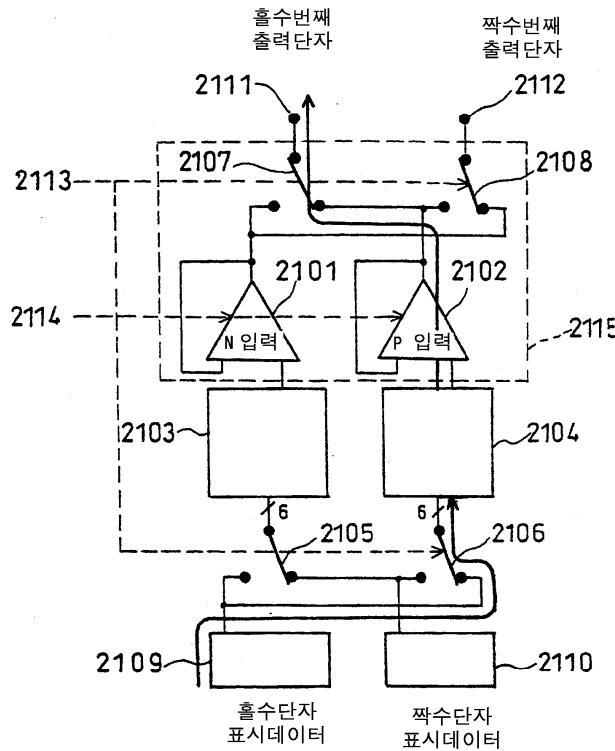
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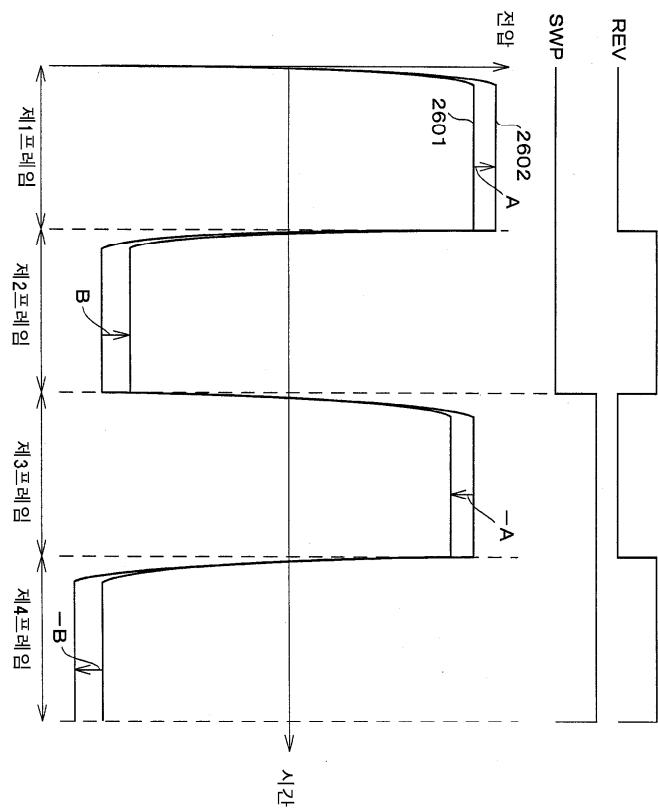
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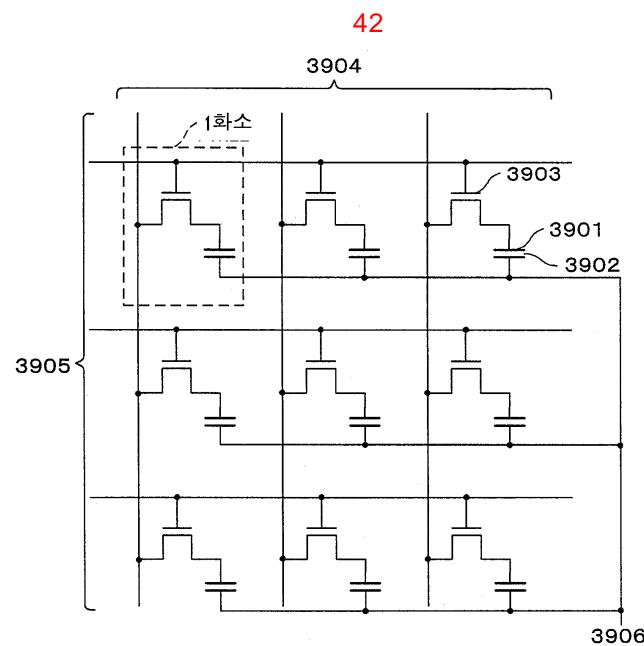


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专利名称(译)	液晶显示装置的驱动装置和驱动方法		
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[标]申请(专利权)人(译)	夏普株式会社		
申请(专利权)人(译)	夏普株式会社		
当前申请(专利权)人(译)	夏普株式会社		
[标]发明人	WATANABE TAKUYA		
发明人	WATANABE,TAKUYA		
IPC分类号	G09G3/20 G02F1/133 G09G3/36		
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代理人(译)	LEE , 金泰熙		
优先权	2000248964 2000-08-18 JP		
其他公开文献	KR1020020026802A		
外部链接	Espacenet		

摘要(译)

根据本发明的液晶显示装置的驱动装置和驱动方法的特征在于包括输出电路中的第一和第二放大电路，以及在非反相输入信号和反相输入信号之间切换，并且将切换的输出信号输出到以矩阵方式提供的像素。驱动装置和驱动方法可以包括切换控制电路，用于切换第一和第二放大电路的输出信号，使得施加到一个像素的偏移电压和施加到像素的周围像素的偏移电压彼此相反，另外它包括在内。因此，液晶显示装置的驱动装置和驱动方法不能通过消除一个像素中存在的偏移电压与像素的周边像素的偏移电压来区分显示不均匀性而不消除各个帧之间的偏移电压/RTI。

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