

2002 - 0095163  
2002 12 20

WO 2001/59750  
2001 08 16

- 1 -

가 가

Si TFT (115) 13  
 Si TFT가, MOS (115) 가 ( )  
 13 (Vin) (115) (Vout)  
 52, 153, 154), (152) (151) (負) (152) (151)  
 (154) (Vin)  
 13 (151) (115) (153, 154)가 (152)가  
 (152) (115) (153, 154)  
 (115) (151)  
 (115)

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( )

Si TFT Si TFT (153)가  
 14 Cm (151) 14 13  
 (A) (115) , Cp (115) (155)  
 gh) , G (115) , q1 q2 (153)가 (feed - throu

(151) (115) (153, 154)가  
 TFT (A)  
 (153) (q1) (A) (153, 154)  
 (154) (A) (153) (q2)  
 (153)

(A) (1) ( Vout)  
 (Vout)

$$V_{out} = -G/(G \cdot C_m + C_p + C_m) \cdot q_1 \quad (1)$$

(115) (G) , G (1)  
 , (- q1/Cm) ( Vout)

, ( Vout) , ,  
 .  
 , (151) (Cm)  
 , (153) (q1)  
 .  
 MOS , (Vth) 20mV 가  
 , Si TFT 가 ,  
 , Vth 100mV 1V가 가 , Si TFT  
 가 10cm 1m 가 , 가  
 .  
 (q1) (Cg · (Vg - Vth)) , Cg ,  
 , 가 ( Vout) 가 (q1)  
 .  
 Vth가 1V , Cm (153) 100 , (153) q1  
 가 , (115) (G) 가 5mV ( Vout)  
 ( Vout) 5mV , .  
 , (153) 가 가 ,  
 14 가 , 가  
 , 가 ,  
 가 ,  
 가 ,  
 MOS TFT TFT , , n TFT, p TFT, C  
 , 가 .  
 , , 가 ( )  
 .  
 , , 가 , , 1  
 , 1 2 , Si , 1  
 , 가 ,  
 , 2 , ,  
 , 1 , 1 2 , 2  
 1 , 1 2 , 2 가 2  
 .

1	1	Si	.	
2	1	Si		(16)
		가	.	
3	1	Si	.	
4	1	Si	.	
5	2	Si	.	
		(17)가	.	
6	3	Si	.	
7	3	Si	.	
8	4	Si	.	
9	4	Si	.	
10	5	Si	.	
11	6	Si	.	
12	7	(71)	.	
13		Si	.	
14		Si	.	
15	10 - 301539	Si TFT	LSI	
		.		
(		)		
(	1	)		

	1	Si	1 ~ 4	.	1	Si	TF
	.	가		(12)		TFT(11)	(7)
T(11)	(13)	,	(14)	,	TFT(11)		
		(16)	(17)	.	(16)	,	(
Si TFT	CMOD	.	(20)	(17)	가	,	
20)	(3)	.	(3)	(25)		,	
	(2)	,	D/A		.		
6bit	(1)	,	(2)	가 64	,		
		.	(2)	,	(18)		
	,		.	,	(25)	1	

(23) 2 (24) , 1 (23) (22)  
 (21) Si TFT (18) (19)

가 1 (23) (22)  
 (21) 가  
 (24) , 2 (24) 1 (23) 2  
 (25)  
 (2) (3) , (25) ,  
 (20) (17)

(17) , (16)  
 (20) ,  
 (16) (7)  
 0)가 (3) (20) (7) (2)  
 (20) (7)

가 , (17) , (16)  
 (3) (2) , (7) , (7)  
 가 , (20) ,

(14)가 (7) TFT 가 (13)  
 (12)

(20) , (15)  
 2 , (20) (16) (17)가  
 (20) , (15)  
 (51) (15) , (53) (15)  
 (54) (15) , 952) (

15)

3 (15) , p Si TFT(32, 33)  
 , n Si TFT(34, 35) , p Si TFT(31)  
 , p Si TFT(36, 37), n Si(38, 39)  
 가 . TFT 가 가  
 , n Si(40)

, p Si TFT (41) , n Si (42) . ,  
(follower) . n Si TFT (44, 45)  
(15) , Si TFT  
, .

4 , . / ,  
, .

, (14) (13) (3)가 .  
(20) , (53, 54)가  
(51) (15) (53), (54) 가 .  
, (54) . (52)  
가 , (51) (15) TFT  
Si TFT (16)가 , (7) (20) .

(15) (53) 가,  
7(a), 7(b) 2 , . 4 , H  
J, K , (7)  
(16)가 , (17)  
, (3) , (7(a), 7(b))  
(20) H (7(a), 7(b))  
( ) .

(13) , (3), (52), (17)가 ,  
, (12) 가 .

, 가 , Si .

, (17) (7) , (16)  
(7) Si TFT - CMOS , (17) Si TF  
T - CMOS , (16)  
(16) (17) .

, Si TFT (18)  
(19) (1) Si LSI 가 .  
, , Si  
가 .

가, TFT n, p, 6bit, 가 2<sup>n</sup> 가 64, 가 n-bit, 2 가, CMOS, TFT n TFT, 가, 가, 10 - 301539 (, )가, 15, Si TFT (110) LSI(111), 15, (101) (102) (103)가, (102) pMOS (104) (105) pMOS (104) Si (111) (105) (107) (106) (107) Si TFT (110) (107), (101) (102), A/D, (103) (106) (107) [(107) - V<sub>th</sub>] (105) (104), (107) V<sub>th</sub> (102) 가, pMOS 가 가, (105)가 V<sub>th</sub> 가, 가, 가, ( ) pMOS (104) (105), 2가, [(107) - V<sub>th</sub>] (107) (107)

가 1

Si TFT (105)가 가 LSI (102)가 (102) LSI Si TFT kΩ

20mm 20cm

( 2 )

2 Si 1 (16)

(17)가 (20a) 5 (15)

(20a) (15) (51a) (Vin) (20a) (54a) (Vin) (53a) (15) (52a) (20a) (15)

(15) TFT (51) (51a) (20a) (Vin) 가 (52, 53, 54) 가 52a, 53a, 54a

1 (15) (53a) (17) (Cp) 1 가 (15) 가 (15)가

( 3 )

3 Si 6, 7 6 Si 가  
 , 1 (20) , (15) 가  
 , 가 (15)  
 1 3  
 7 , /  
 , (14)  
 (13) (3)가 (16)가 (7)  
 (15)  
 , (15) 가  
 2 , 7(c), 7(d) , L M  
 7 , 7(c) L, 7(d) M  
 , 가  
 , (7) (16)가  
 , (17) (3) (7)  
 (c), 7(d)) , (15)  
 , (7(c), 7(d)) H가  
 (13) , (3), (17)가  
 , (12) 가  
 가 가 (15)  
 가 가 Si  
 ( 4 )  
 4 Si 8, 9 8 Si  
 (16)가 , (26)  
 , 3  
 , (16)가 가 (26) 9 ,  
 (26) , p Si TFT(32, 33) , n  
 Si TFT(34, 35) , p Si TFT(31)  
 , p Si TFT(36, 37), n Si(38, 39) 가  
 . TFT 가  
 , n Si(40) , p  
 Si(41) , n Si(42)  
 . n Si TFT(44, 45)가  
 TFT(44, 45) (55, 56)가  
 (16) 가 (55, 56)가 (26)  
 (7) , (55, 56)가 (26)  
 (16)가 가 , n Si TFT(44, 45)  
 , (55, 56)가 TFT가

3 , (7) , (16) ,  
 56) 가 , 가 . (55,  
 ( 5 )

5 Si 10 ,  
 (61) (62) (63) ,  
 1 (3) . (62) , (25) ,  
 (63) , (18)

, (7) (63) , (20)  
 , (7)  
 , (3) (2) 가 , (7) 1  
 (62) (63)

, (63) , (61)  
 (20) ,  
 , , 가 , (63)  
 2( ) , (63) 32 × 2( ) (2) 64 ×  
 ( 6 )

(7) 6 가 Si 11 ,  
 2 , 1 (66), (67)  
 , 11 A, B

, (7) , (66) (67) (7)  
 , (7) ,  
 , (20) 1 2

( 7 )

7 (71) 12 . (I/F) (73)  
 , 가 , I/F (73) (CPU)/  
 (74) (75) (75) Si (76)  
 (I/F) (77) (79) (78)  
 (80) (79) (78) (71) (82) (81)  
 . Si (76) , 1 가

/ (74) . CPU/ (74) I/F (73) , CPU  
 (74) , (71) , CPU/  
 I/F (77) , 1 , I/F (77) .  
 8) (79) (82) 2 가

(57)

1.

가 , ,

1

1

2

Si

가

2

1

1

1

2

2

가

2

2.

1

가

3.

2 ,

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6.

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가

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가

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가

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8.

7 ,

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9.

7 ,

2

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10.

1 ,

2 , 가 .

11.

10 , , .

12.

10 , 가 ,

13.

1 , 1 , 1 Si .

14.

13 , 2 Si 2 가 .

15.

14 , 1 2 , CMOS .

16.

14 , 1 , 2 .

17.

16 , 1 , 2 .

18.

16 ,

1 , 2 .

19.

14 ,

1 2 , , 3가 가 .

20.

1 ,

, Si .

21.

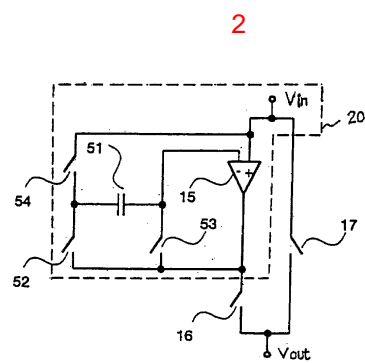
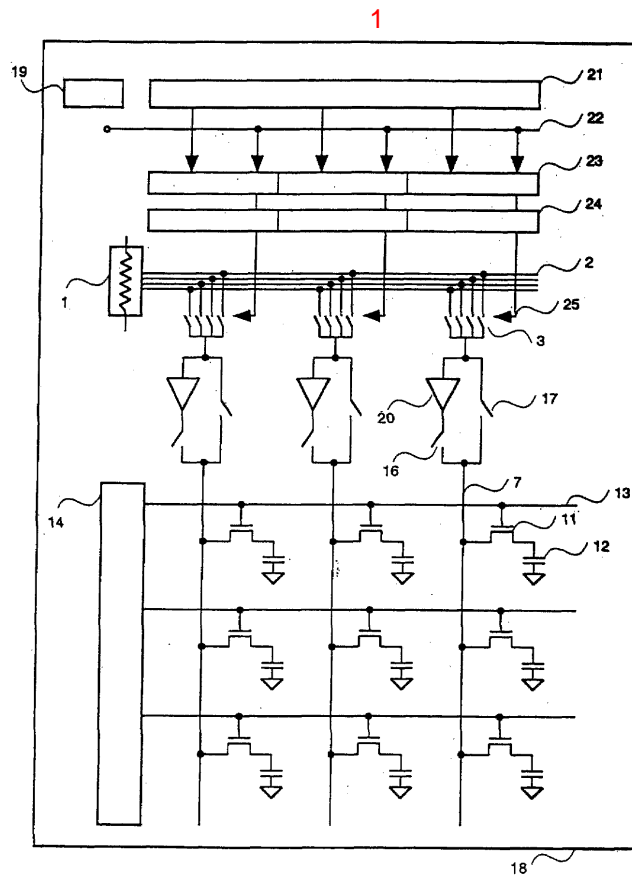
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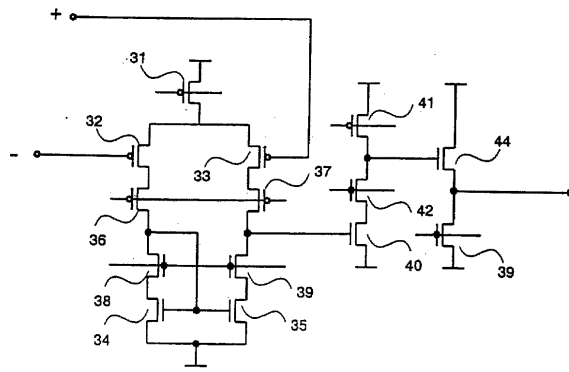
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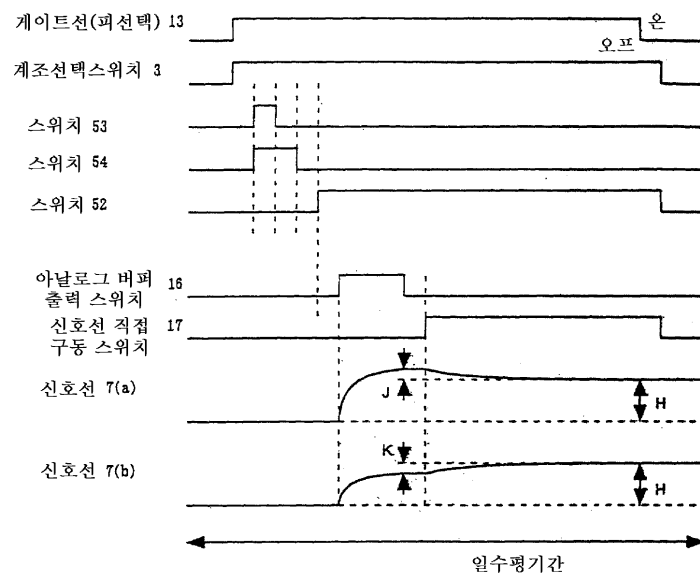
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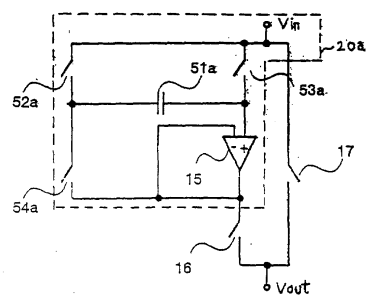
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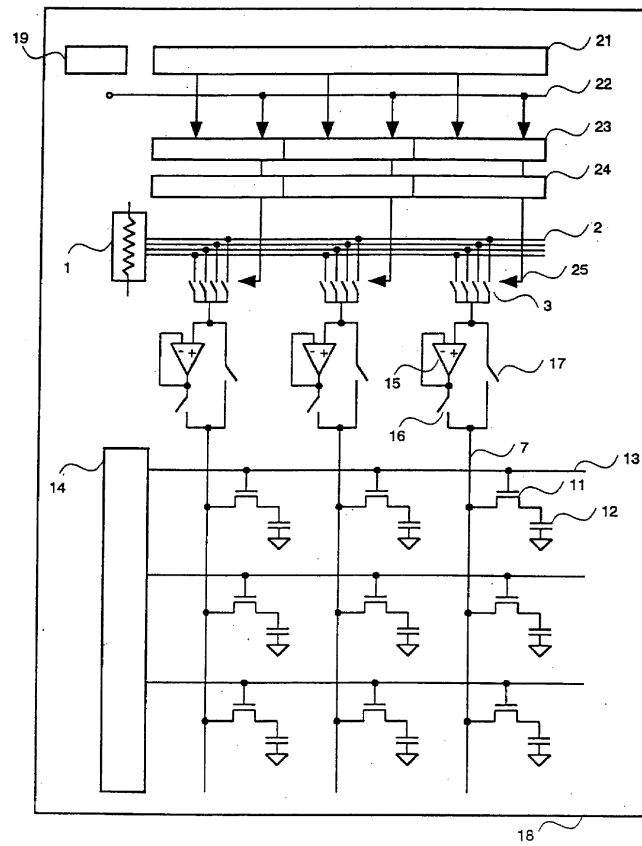
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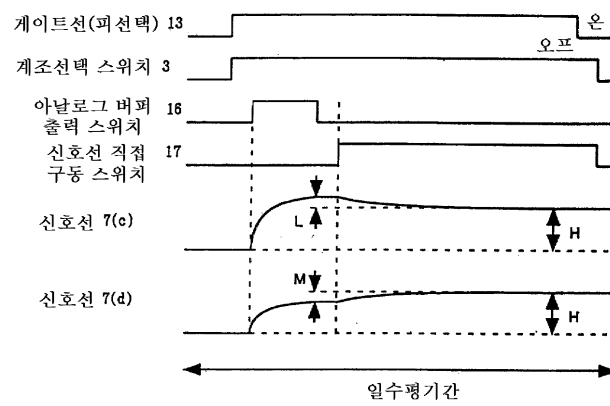
5



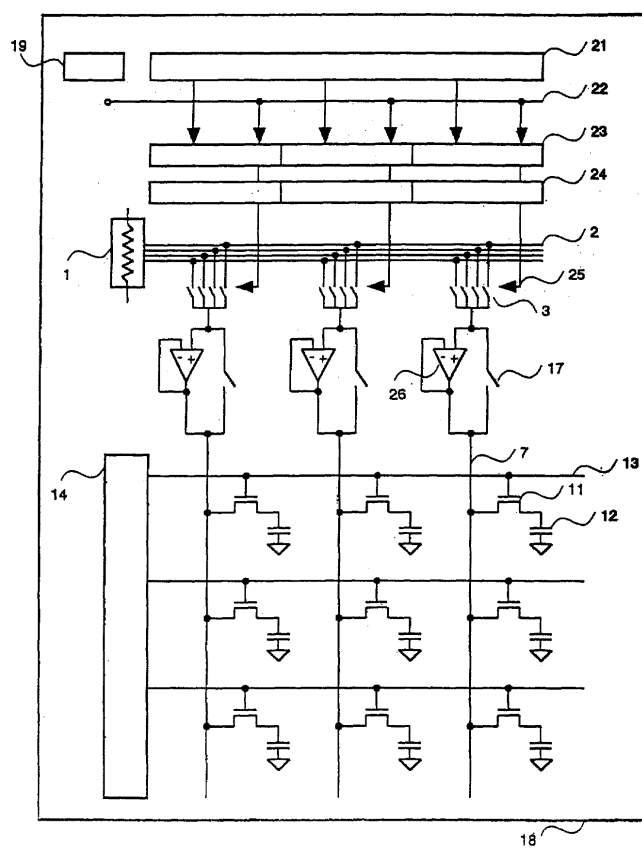
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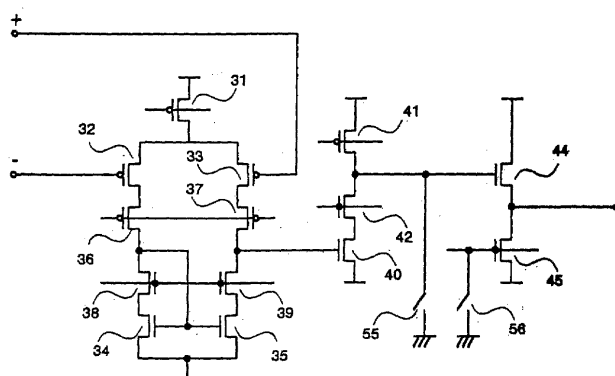
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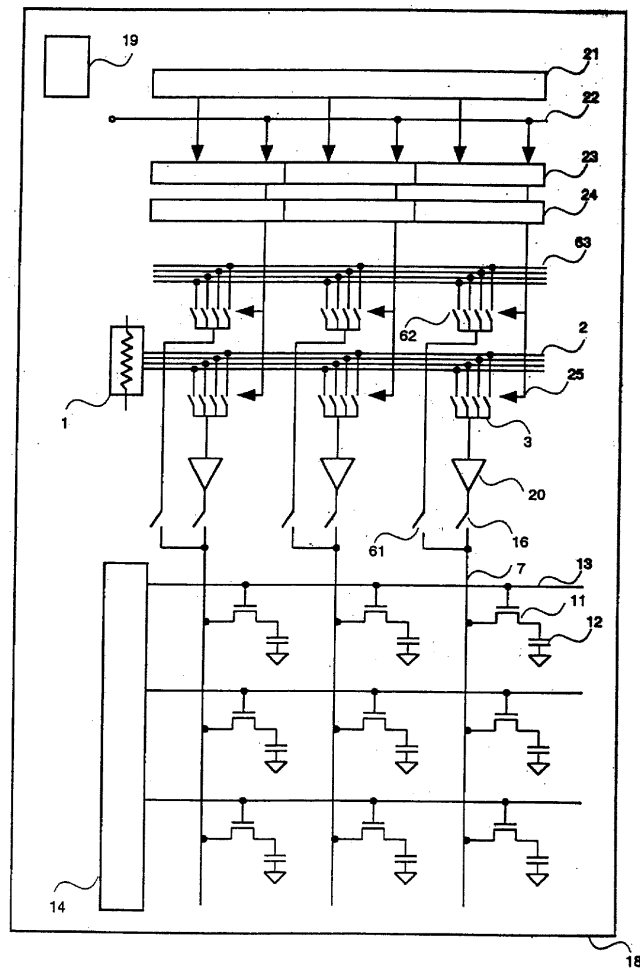
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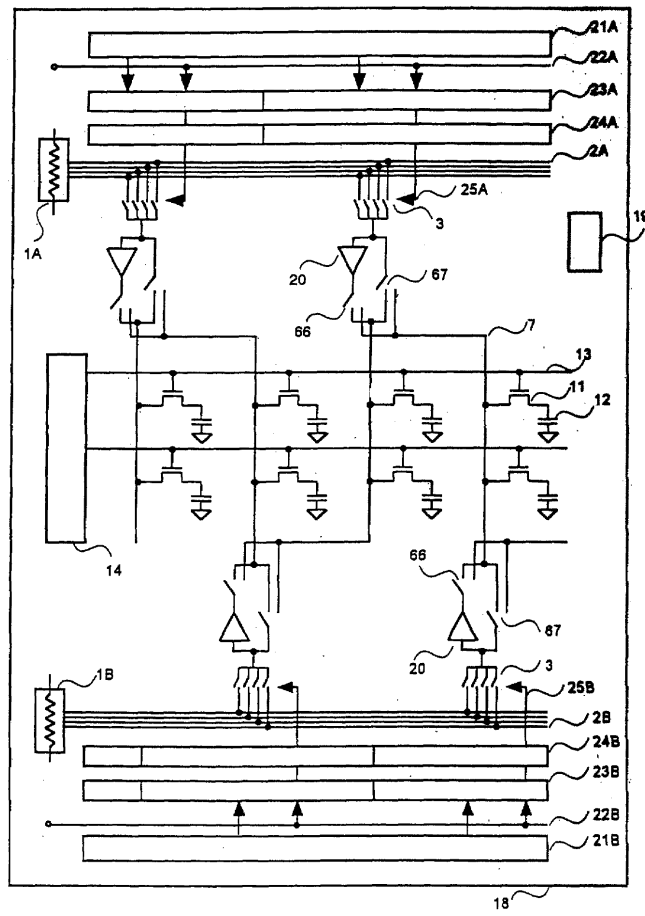
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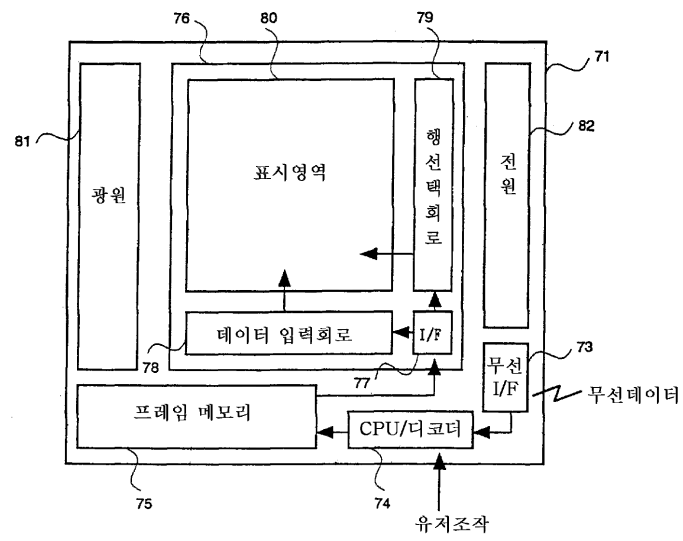
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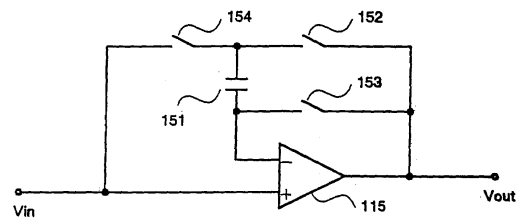
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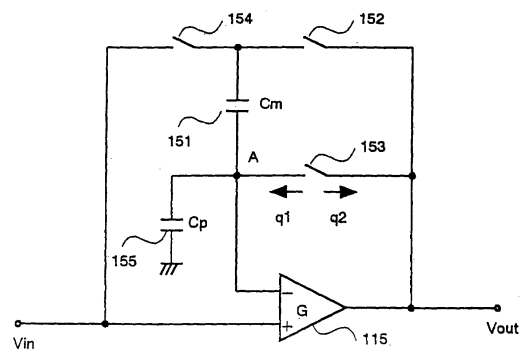
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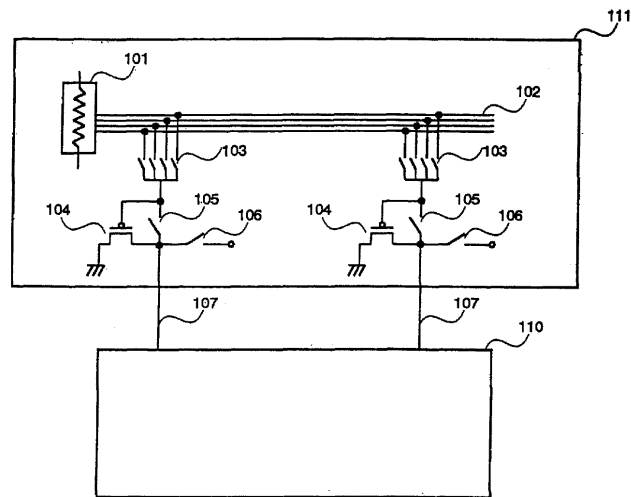
13



14



15



专利名称(译)	图像显示装置		
公开(公告)号	<a href="#">KR1020020095163A</a>	公开(公告)日	2002-12-20
申请号	KR1020027006263	申请日	2000-02-10
[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	AKIMOTO HAJIME 아키토하시메 MIKAMI YOSHIRO 미카미요시로		
发明人	아키토하시메 미카미요시로		
IPC分类号	G09G3/20 G09G3/36 G02F1/133		
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其他公开文献	KR100692289B1		
外部链接	<a href="#">Espacenet</a>		

## 摘要(译)

在多晶硅TFT用于缓冲液的液晶图像浸渍装置中。产生由柱形缓冲器处的偏移电压引起的亮度不均匀性。图像质量显着降低。通过连接其中基于开关的图像指示数据的图像信号电压，关闭缓冲器的输出和标识的信号线，解决了它。

