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(24)

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2004 04 21

(21) 10-1999-0006764
(22) 1999 03 02

(65) 10-2000-0059298
(43) 2000 10 05

(73) . 20

(72) 897-5 606-108
708-501

(74)
:

(54)

(Pixel Row)

1 . 1 2 1
가 ; 2 가 1 , 2
가 가 , 2 가 1 / 2 가
; 1 가 가 3 , 1 가 가 4 , 3 가 1
가 1 가 2 / 가 .

6

1 .
2 1

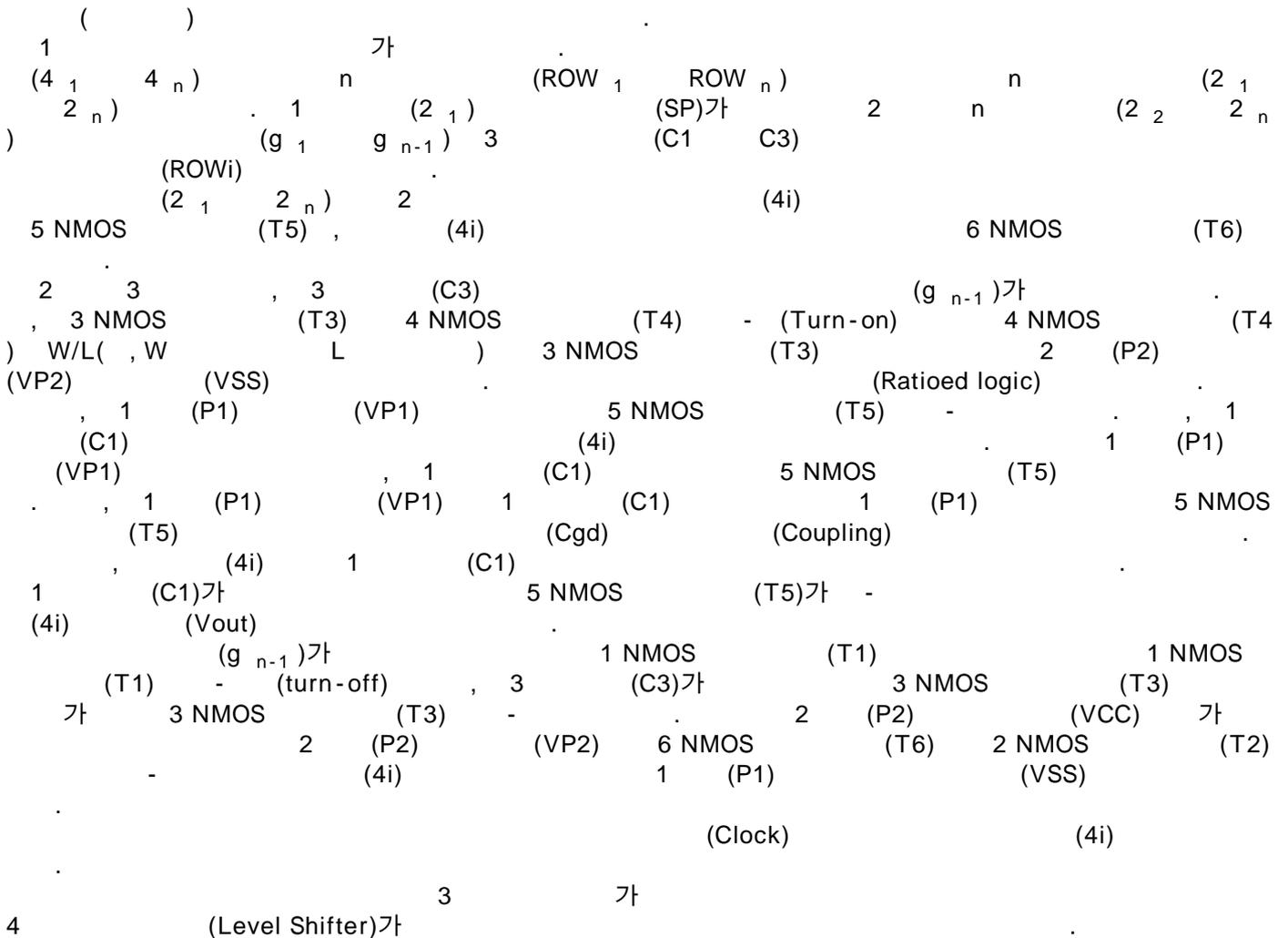
3 2 / .
 4 1 .
 5 4 / .
 6 4 .
 7 6 / .
 8 2 .
 9 8 / .
 10 .
 < S , 14i, 24i : > 61, 101 : 62, 102 : 63, 103 : T1 T8 : NMO
 2 1 2 n, 12 1 12 n, 22 1 22 n, 12i, 22i : 4 1 4 n, 14 1 14 n, 24 1 24 n

(Active Matrix Display Device)

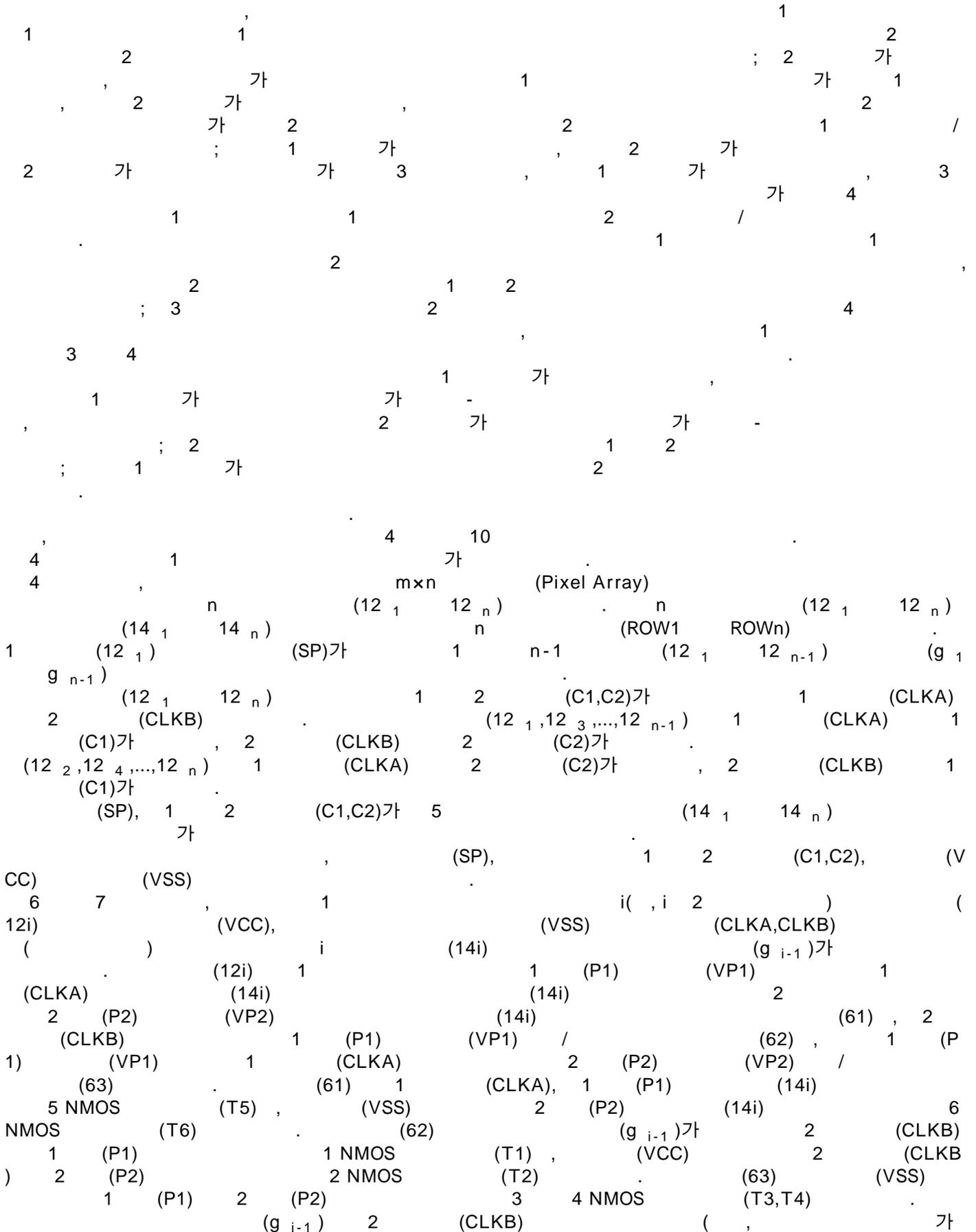
(Pixel Row)

(Television)

(Computer)



가 가



2 (CLKA) (, 2 가) 1 1 1
) (C2) 1 2 NMOS (T1,T2)가 -
 1 NMOS (T1)가 - 1 (P1) (VP1)
 4 5 NMOS (T4,T5) - (C1)
 2 NMOS (T2)가 - 6 NMOS (T6)가 (14i)
 3 NMOS (T3) (off)
 1 (P1) (VP1) (g_{i-1}) 2 (C2)가
 , 1 (C1) 5 NMOS ()
 T5) 3 NMOS (T3) (14i)
 3 NMOS (T3) - 1 (P1) (VP1) 1 (CLKA) 1 ()
 P1) 5 NMOS (T5) (Cgd) (Coupling)
 4 NMOS (T4) 1 (P1) (VP1) (on)
 3 NMOS (T3)가 - 2 (P2) (VP2) 3 4 NMOS
 (T3,T4) (VSS) , 6 NMOS (T6) - ,
 (14i) 1 (C1)가
 3 5 NMOS (T3 T5)가 (on) 6 NMOS (T6)가 (off)
 , 2 (C2)가
 2 (P1) (VP1) 1 NMOS (T1) 1 (P1) (VP1)
 (VCC) 2 (P2) (VP2) . 1 (P1) (VP1)
 4 5 NMOS (T4,T5) - 1 (C1)
 3 NMOS (T3) - 2 (P2) (VP2) 3 4 NMOS
 (T3,T4)가 - (VCC) . 2 (P2) (VP2)
) 6 NMOS (T6) - , (14i) (Vout) (VSS)
 8 2 가 .
 8 22_n) , n (22₁ 22_n) n (22₁ 24_n) (22₁ 22_n) (22₁ 24_n) (SP)가
 n (ROW1 ROWn) . 1 (22₁ 24_n)
 1 n-1 (22₁ 22_{n-1}) (g₁ g_{n-1})
 가 (22₁ 22_n) 1 3 (C1 C3)
 (22₁,22₄,...) 1 (CLKA) (CLKB) . 3k+1(, K 0)
 (C3)가 . 3k+2 (CLKA) 1 (C1)가 , 2 (CLKB)
 2)가 , 2 (CLKB) 1 (C1)가 1 (CLKA) 2 (C
 ,...) 1 (CLKA) 3 (C3)가 , 2 (CLKB) 2 (22₃,22₆ (C2)가
 1 (22₁ 22_n) 6 (22₁ 22_n) (SP),
 3 (C1 C3)가 9 (24₁ 24_n)
 (ROW1 ROWn)
 9 (VP1,VP2) 1 (22₁) 1 2 (P1,P2)
 3k+1 (22₁,22₄,...) (g_{i-1})가 2 (CLKB)
 6 9 (C3) , 1 (CLKA)
 T2)가 - 1 (C1) 3 (C3) 1 2 NMOS (T1,
 1 NMOS (T1)가 - 1 (P1) (VP1)
 4 5 NMOS (T4,T5) - , 1 (C1)
 (14i) 3 NMOS (T3) (off)
 1 (P1) (VP1) (g_{i-1}) 3 (C3)가
 1 (C1)가 1 (C1) (24i)
 3 NMOS (T3) - , 1 (P1) (VP1) 5 NMOS
 (T5) (Cgd) (Coupling)
 4 NMOS (T4) 1 (P1) (VP1) (on) 3 NMOS
 (T3)가 - 2 (P2) (VP2) 3 4 NMOS (T3,T4)
 (VSS) . 3 (C3) 1 2 NMOS (T1,T2)

3 (off) 5 NMOS (T3, T5)가 (on) (C1)가 1 2 NMOS (T1, T2)가
 , 1 (P1) 3 (VP1) (C3) 1 2 NMOS 3 (C3) (T1, T2)가
 , 2 (P2) (Vout) 5 NMOS 2 (T5)가 (VP2)
 1 (CLKA) (T1, T2)가 3 (C3)가 1 2 NMOS (T1, T2)가
 1 2 NMOS (C1)가 (P1) (VP1) 3 (C3) 1 2 NMOS (T1, T2)가
 T2)가 , 2 (P2) (VCC) (T1) (T1, T2)가
 , 3 (VP1) (Vout) 5 NMOS (T5)가
 (overlap) 3 (channel width) 5 NMOS (T5)가
) / 6 NMOS (T6) (12i, 22i) (14i, 24i)
 10 (VSS) 2 (CLKA, CLKB) (12i, 22i) (14i, 24i)
 10 (14i, 24i) (VP1) (g_{i-1})가 (12i, 22i) 1 (14i, 24i)
 1 (P1) (VP1) 1 (CLKA) 2 (P2) (VP2)
 (14i) (14i, 24i) 2 (101) , 2 (P1) (VP1) 1
 (P1) (VP1) / (102) , 1 (P1) (VP1) 1
 (CLKA) 2 (P2) (VP2) / (103) .
 (101) 1 (CLKA), 1 (P1) (14i, 24i) 7 NMOS (T8)
 T7) , (VSS) 2 (P2) (14i) 8 NMOS (T8)
 (102) (g_{i-1})가 2 (CLKB) 1 (P1)
 1 2 NMOS (T1, T2) , 2 (CLKB) 2 (P2) 3
 4 NMOS (T3, T4) (103) 1 (CLKA) 2 (P2)
 5 NMOS (T5) , (VSS) 1 (P1) 5 NMOS (T5)
 6 NMOS (T6) 6 (12i)
 1 (P1) / 2 (P2) (V_{th})
 . 7 7 10 , 가 2
 (g_{i-1}) 2 (CLKB) (, , 1 (CLKA)
 (, , 가) 1 ()
 1 2 NMOS (T1, T2)가 (C2) 1 4 NMOS (T1, T4)가
 6 7 NMOS (T6, T7) - 1 (P1) (VP1) 1 (C1)
 (14i) 5 NMOS (T5) (off)
 1 (P1) (VP1) (g_{i-1}) 2 (C2)가
 1 (C1)가 1 (C1) 5 NMOS (T5) 5 NM
 OS 3 NMOS (T3) , 1 (P1) (VP1) 7 NMOS (T7) 5 NM
 (T5) - (Coupling) 6 NMOS (T6)
 1 (P1) (VP1) (on) 5 NMOS (T5)가 -
 2 (P2) (VP2) 5 6 NMOS (T5, T6) (VSS)
 , 8 NMOS (T8) - 1 (P1) (VP1)
 5 7 NMOS (T5, T7)가 (on) 8 NMOS (T8)가 (off)
 (C1)가
 2 (C2)가 1 (C1)가
 2 (C2) 2 4 NMOS (T1, T4) -
 1 (P1) (VP1) 1 2 NMOS (T1, T2)
 1 (P1) (VP1) 6 7 NMOS (T6, T7)
 T7) - 1 (C1) 3 NMOS (T3) -
 2) 2 (P2) (VP2) 5 NMOS (T5) - 2 (P2) (VP2) 8 N

MOS (T8) - , (14i) (VSS)
(12i) 8 3

3 , 가 2 가 , 가 가
가

(57)

1.

가 ,
1 , 1 2 1
; 2 가 1 , 2 가 가 1
가 2 가 2 , 2 가 가 2
1 가 / ; 2 가 가 2 가
1 가 3 , 1 가 가 4 , 3 2 가
1 2 / 가 4 3 2 가 1

2.

1 1 2 , 가

3.

1 , 1 2

4.

1 , 1 가 가 , 1
가 - , 2

5.

6.

1 , 가 2

7.

8.

, 가

1 , 1 , 2 2 1 2
 3 2 , ; 4 1 2 3 4

9.
 8 , 가 1 2 가
 ; 1
 2 ;

10.
 8 , 가 1 가 2
 가 ; 가 4
 가 2 가

11.
 , 가 , 가 가
 1 가 , 1 가 가 2
 - 가 가 - ;
 2 1 가 1 2 2 ;

12.
 11 , 가 2 가 ;
 2

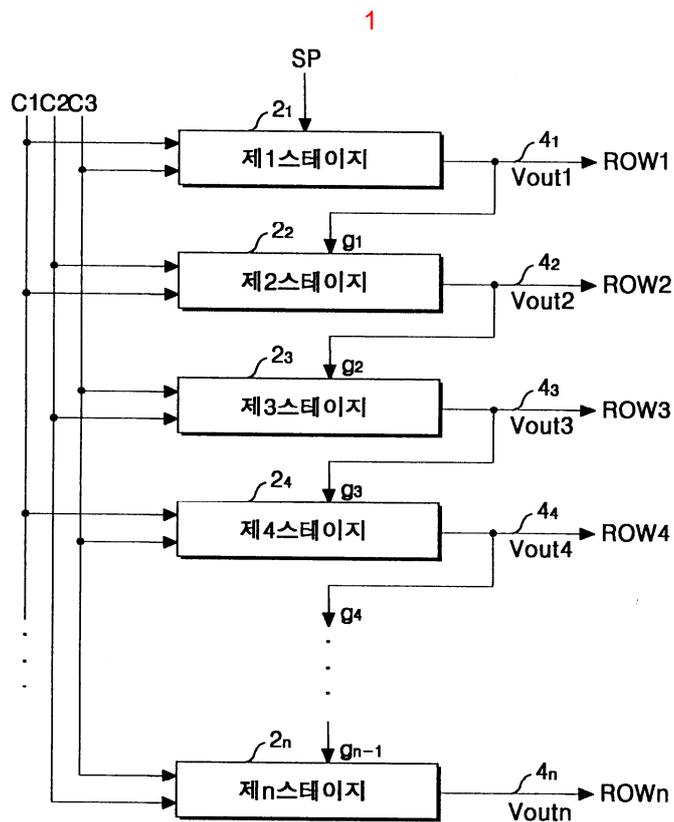
13.
 11 , 3 가 ;
 3

14.
 11 , 2
 1

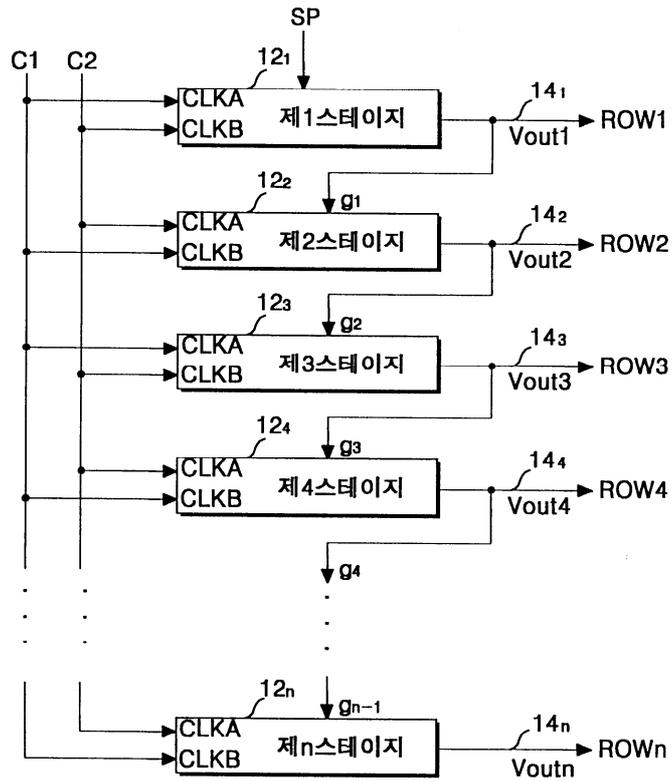
15.
 11 , 2 가 가 1 , 가 -
 2 가 가 2 ; 가 -
 가 2

16.
 11 , 2 가 가 2
 가 가 1 ; 가 2

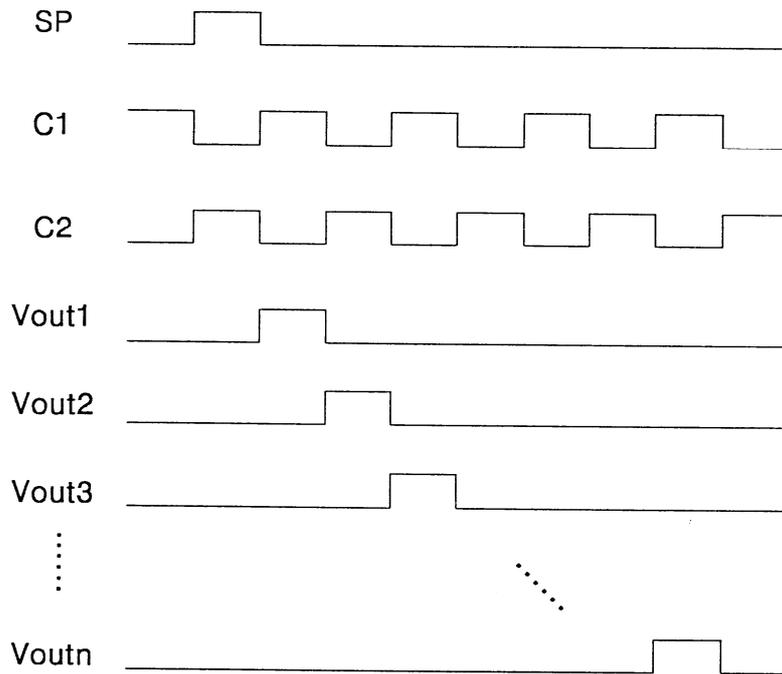
2 가 , 1 ; -
 2 가 ; 2 가 가
 3 2 ; 가 , 3 4 -
 .
 17.
 11 , 1 가 가 1 ; 2 가 2
 가 1 가 가 1 ;
 가 2 , 1
 18.
 11 , 1 가 1 가 1
 - 1 1 가 1 1
 1 1 가 1
 1



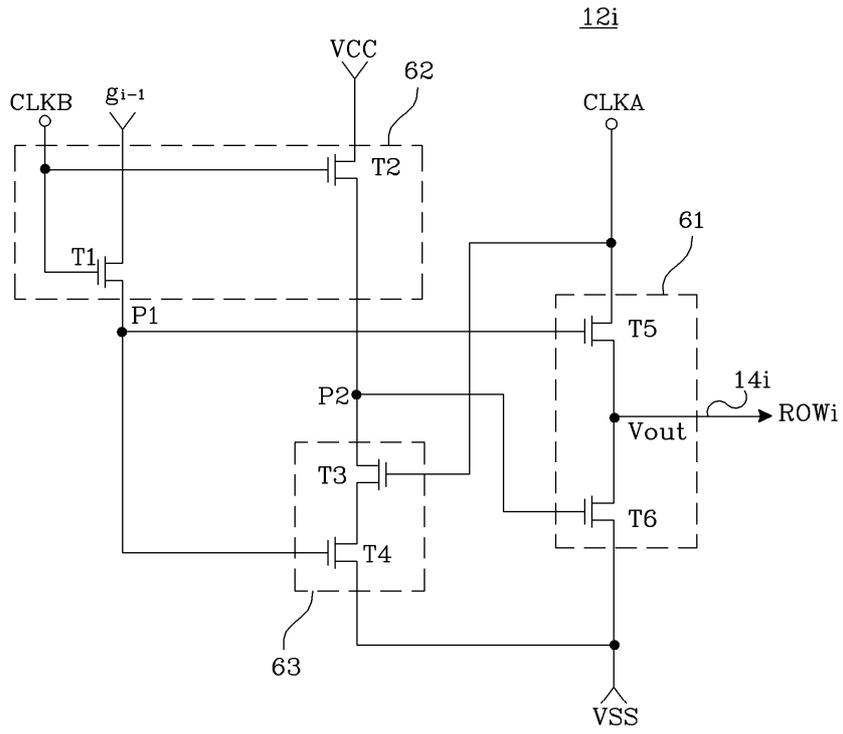
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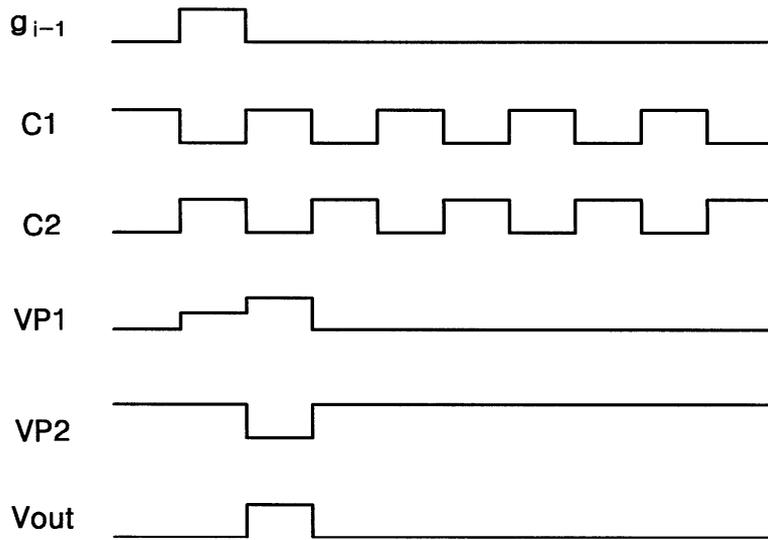
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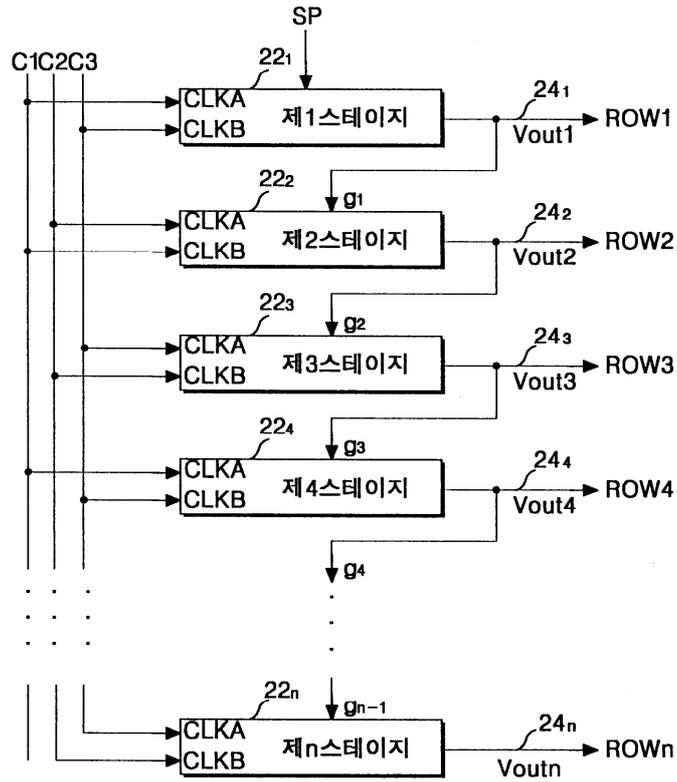
6



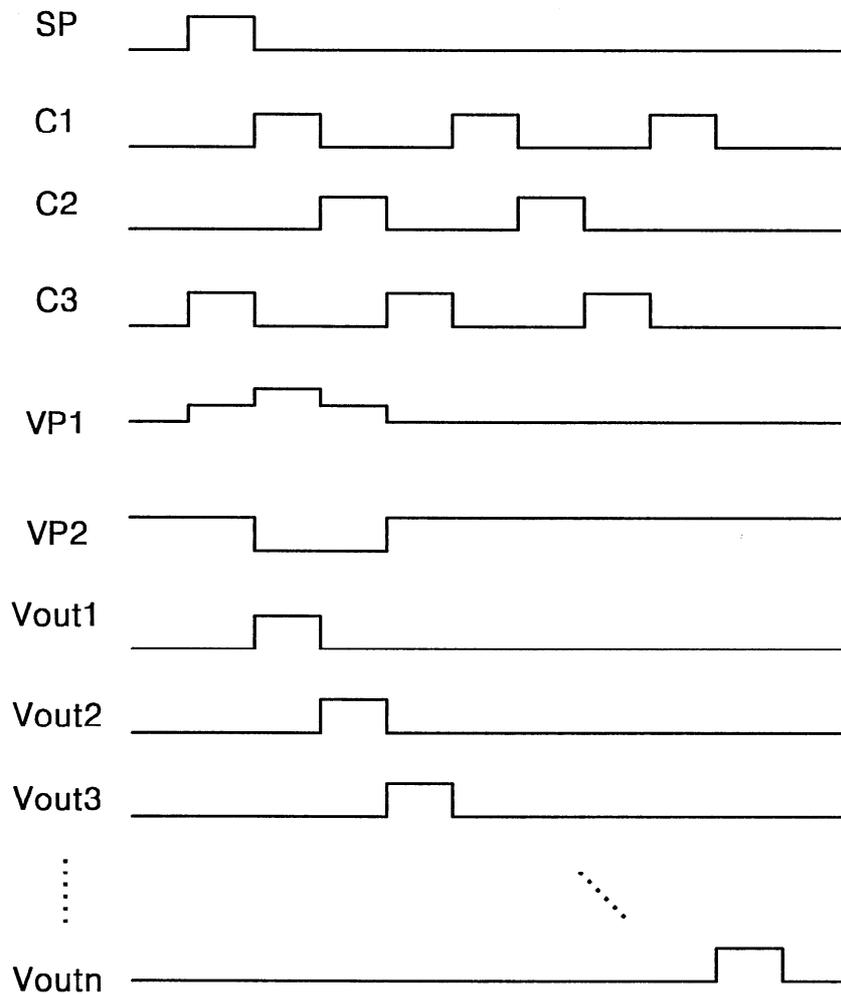
7



8



9



10

12i

