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(43) 2001 07 07

(73) 136 - 1

(72) 903 - 1001

(74)  
:

(54)

가 , 가 , 가 , 가

1  
2  
3  
4  
5

가

1

1 PMOS (P11) 1 (Q11) (XRST)  
 2 PMOS (P12) 1 (VPPX) 2 (Q12) (WL)  
 3 PMOS (P13) 1 (VPPX) (WL) 2  
 (Q12) 1 NMOS (N11) 1 (Q11) 2 (Q12)  
 (Q11) 가 2 NMOS (N12) 1  
 (XCOM) (XPREA) NMOS  
 3 NMOS (N13) 2 (VEEX) (WL) (

가

(Vcc) 1 (VPPX), 0V (XRST), 0V 2 (VEE  
 X), (Vcc) (XPREA) 0V (XCOM) 가 (WL)

(XRST) 1 PMOS (P11)가 (Vcc) 1 (Q11)  
 (XPREA) 2 NMOS (N12)가 (XCOM)  
 가 1 (Q11) (Vcc) 가 1 (Q11)  
 1) 1 (Q11) 2 (Q12) 1 NMOS (N1  
 3 PMOS (P13)가 (Vcc) (WL) 2 (Q12)  
 (Vcc) 2 PMOS (P12) (WL)가

(VEEX) , 1 (Q11)가 (WL) 3 NMOS (N13)가 3

(XRST) (XCOM) 1 (VPPX)

가 6 가 , ,

가 가 1 (VPPX)

가 가 가 가 1 , 2 ,

3

2 가

(global word line; GWL) , (lo

cal word line; LWL)

2 11 , (GWL) 1 (VPP

X) 2 (VEEX) , 1 PMOS

(P21) 1 (VPPX) , 1 NMOS (N2

1) 2 (VEEX) . 1 (VPPX)가 가 2 5 PMOS (P22

P25) 1 4 (VXPRE0 VXPRE3)가 (WL0 WL3)

가 , 2 (VEEX)가 가 1 4 (VXPRE0 VXPRE3)

가 (WL0 WL3) 가 , 1 4 (VXPREb0 VX

PREb3)가 3, 5, 7 9 NMOS (N23, N25, N27 N29) (W

L0 WL3) 가

6 8 NMOS (N22, N24, N26 N28) (GWLb) 가 2, 4,

(WL0 WL3)

(Vee)  
 (GWLb) 가 2, 4, 6 8 NMOS (N22, N24, N26 N28)  
 (WL0 WL3)

3

1 PMOS (P31) (XPREA) (WL) 1  
 (VPPX) 가 (XCOM) NMOS 1 NMOS  
 (N31) (Vcc) 2 (VEEX) (XCOM)  
 NMOS 2 NMOS (N32) (Vcc) 2 (VEEX)  
 (XPREAb) (XPREA) 1 (VPPX) (XCOM)

(GWL) (XCOM)가 가 , 1 PMOS (P31)  
 1 PMOS (P31) (Vcc) (XCO  
 (XPREA)가 가 (WL) (Vcc) (XCO  
 M)가 가 (N31) (XPREA)  
 (XPREAb) 가 2 NMOS (N32)  
 (WL) (Vcc) 가

(GWL) (XCOM)가 가 , 1 PMOS (P31)  
 1 PMOS (P31)가 (XPREA)가  
 (XCOM)가 가 1 NMOS (N31) (XPREAb)  
 (N31) (WL) 2 NMOS (N32) 1 NMOS  
 (VEEX) 가 (WL)

4

1 PMOS (P41) 1 (VPPX) 가 3 (SVP  
 X) 1 (Q41) 2 (Q42) 2 PMOS (P42)  
 3 (SVPX) 2 (Q42) 1 (Q41) NAND (41)  
 1, 2 3 (S1, S2 S3) 1 (I41) NAND  
 (41) 1 NMOS (N41) 1 (Q41) (Vss)  
 1 (I41) 2 NMOS (N42) 2 (Q42) 3  
 (Q43) 1 (I41) 2 (I42)  
 , 1 (S1) , 2 (S2) , 3

(S3) (XPREAb) , 2 (Q42) (XPREA) , 3 (Q43)

1, 2 3 (S1, S2 S3)가 NAND (41) 가 ,  
 NAND (41) 1 (I41)  
 1 (I41) 1 (I41) 1 NMOS (N41)가  
 2 (I42) 3 (Q43)  
 (N42) 3 (Q43) (XPREAb) 2 NMOS  
 1 NMOS (N41) 1 (Q41) 가  
 2 PMOS (P42) 2 PMOS (P42) 3 (SV  
 PX) 가 2 (Q42) , 2 (Q42) (Vcc) ,  
 가 (XPREA) 2 (Q42)가 1 PMOS  
 (P41) 3 (SVPX) 1 (Q41)

5

NAND (51) 1 2 (S11 S12) , 1 (S11)  
 , 2 (S12)  
 1 (S11) 가 , 1 (S11)  
 1 (I51) NAND (51) 1 PMOS (P51)  
 1 NMOS (N51) , 1 PMOS (P5)  
 1) 1 NMOS (N51) 2 (I52) , 1 PMOS (P51) 3 (S  
 VPX) , 1 NMOS (N51) 2 (VEEX)  
 (XCOM)

1 2 (S11 S12)가 NAND (51) , NAND (51)  
 NAND (51) 1 (I51) 1 PMOS (P51)  
 (P51) , 1 NMOS (N51) 1 NMOS (N51)  
 가 , 2 (VEEX) 가  
 가 (XCOM)

, 1 2 (S11 S12) 가 가 NAND  
 (51) 가 , NAND (51) 1  
 (I51) , 1 (I51) 1 PMOS (P51)  
 (P51) , 1 NMOS (N51) , 1 PMOS (P51)  
 3 (SVPX) , 가 (XCOM)

3

가

(57)

1.

2.

가

1

가

가

가

2

3

가

3.

2

1  
가

PMOS

4.

2

2

가

가

NMOS

가

5.

2

3

가

가

가

NMOS

6.

2

가

1

2

1

2

1

7.

6 , NAND .

8.

6 , 2 PMOS , 1

MOS 가 1 N

9.

2 , 가 ,

1 ,

1 1 1 ,

1 2 2 ,

2 1 2 ,

1 1 3 ,

1 1 4

10.

9 , NAND .

11.

9 , 1 NMOS 1 1

12.

9 , 2 NMOS 1 2

13.

9 1 , 3 PMOS 1 .

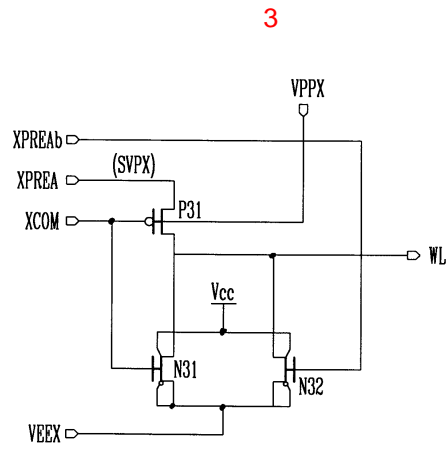
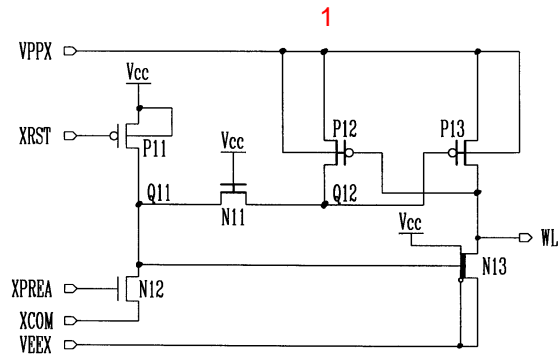
14.

9  
1

4

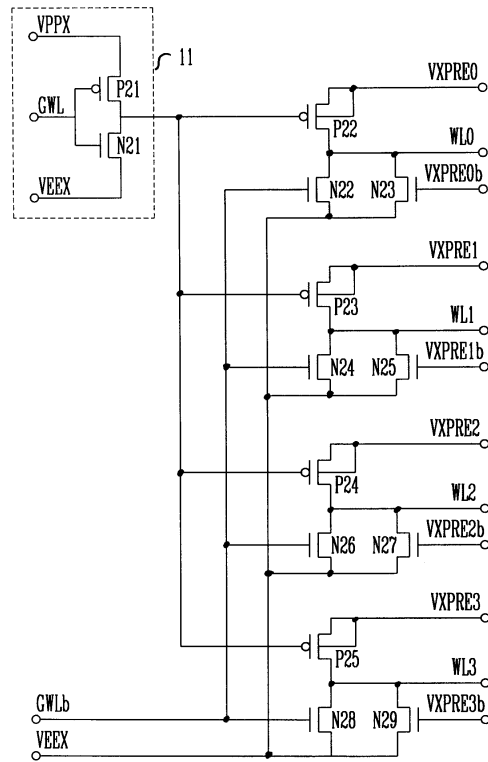
PMOS

1

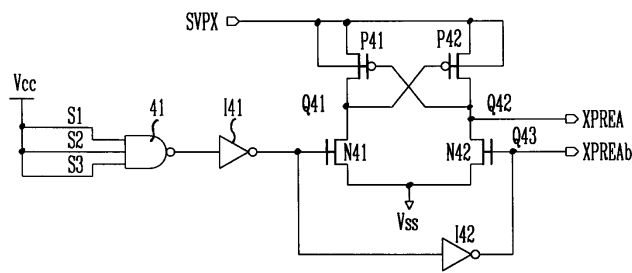




2



4



5

