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(12)

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(11)  
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(22) 1998 06 30

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(43) 2000 01 25

(73)

136 - 1

(72)

2 1048

(74)

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(54)

가 가

가

2

0V

1

1

2

3 2

4

5

6

7

\*

100 : 200 :

300 : 400 :

500 : 600 :

700 : 800 :

900 :

(ferroelectric memory device) , (fail) (normal)  
(redundancy) (repair)

가 , DRAM(dynamic random access memory)

M , FRAM(ferroelectric random access memory) DRA  
(fuse) , 가 ,  
(burn - in) (yield) (chip)



가 가 가 (800) (600) (600) (700) (400)( (200) 가 가 가 (100) (300)

(500) (/CE) (600) (600) (500) (700) (WRITE) (FAi) (800) (RAi)가 (400) (Ai) (600) (800) (500) (900) (WRITE) (FNj) (700) (RCONj) (100) (800) (RNj) (200) (Ai) 가 가 가 (300)

1, n=4, m=2 가, 3, 2, 3, 4 가가, 가4, 가, 가, 가3

2 (500) (/CE) (500) (600) "wl", "pcg", "plat", "sap", " (/CE)가 (800) 3 ( , ) "wl", "pcg", "plat", "sap", " read"

4 (600) 4 (data\_line) (ref\_l ine) (600) (630), (FAi) (WRITE) 가 (630) (610),

(630) (640, 650),  
 (620) (640) (640)  
 (650) .

E) (500) (600) (FAi) (WRIT  
 가 (pcg, plate, wl, sap, read)  
 (/CE)가 가 (pcg, plate, wl, sap, read)  
 가 (600) 가 (640) (650)

5 (700) (700) (40  
 0) n (A0, A1...A<sub>n-1</sub>) (600) n (RA0,  
 RA1...RA<sub>n-1</sub>) (EXOR) , n (RA0,  
 n (NOR) .

, (700) (400) n (Ai)  
 (600) n (RAi)가 가 , (EXOR)  
 " 0" (LOW), " 1" (HIGH) . (EXOR) n  
 (NOR) , " RCONj" RCONj (RAi)가 (  
 400) n (Ai) (600) n (RAi)가  
 " 1" (HIGH), " 0" (LOW) .

6 (800) (800)  
 (600) .

7 (900) , 7 m=2  
 . , 가 가 3 .

가 RNO가 " HIGH" 가 (400) Ai  
 (100) 가 (200) . 가 RN1 " HIGH" 가 ,  
 RCON1 " LOW" Ai가 (100) 가 , RCON1 " HIGH"  
 가 RN3가 " HIGH" 가 (700) 1 (RCELL1) . 가 ,  
 Ai (200) 가 , 가 " HIGH"  
 (300) . 가 " LOW"

가 가 . , 가

가 , DRAM , (fuse) ,  
 , (burn - in)  
 (chip) ,  
 가 , - 가 가 (yield)  
 가 .

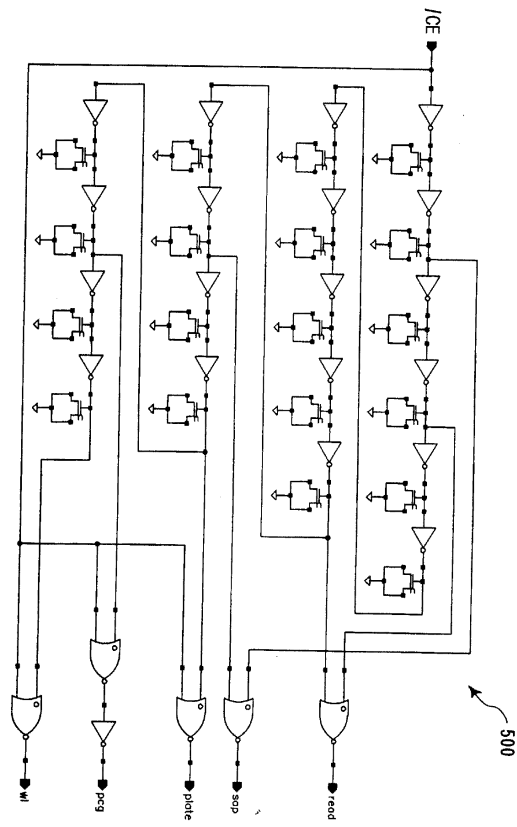
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1.

, , ,  
 , 2 , 1 2 1 ,  
 1 , 가 '0' ,  
 , 2 ,  
 ,  
 1 , 1 , 1 1 , 1 , 1  
 1 가 1 1 1 1 1 , 1  
 1 , 1 , 1 1 1 1 1 1  
 ,  
 2 , 2 2 , 2  
 2 가 2 2 2 , 2 ;  
 2 , 2 2 2 2 2 2 ,  
 , 1 ,

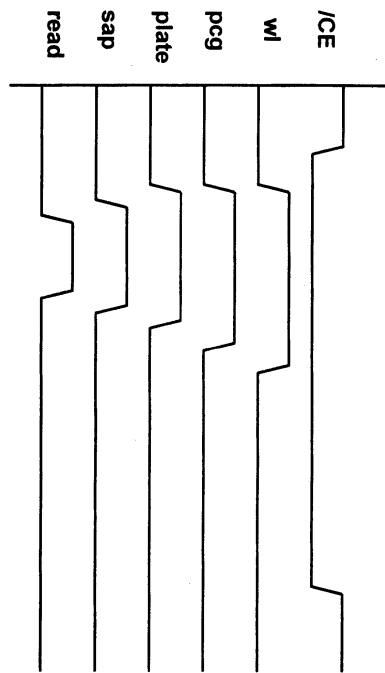


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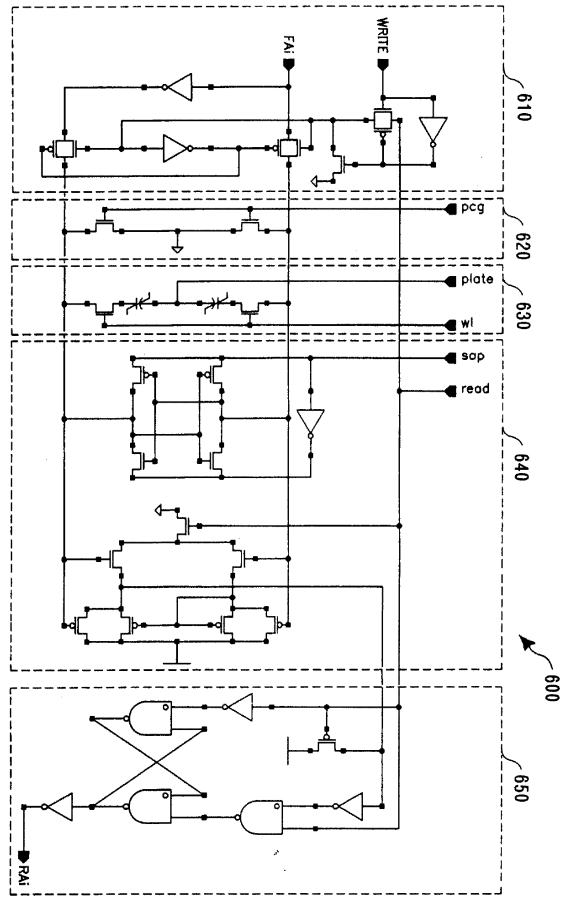




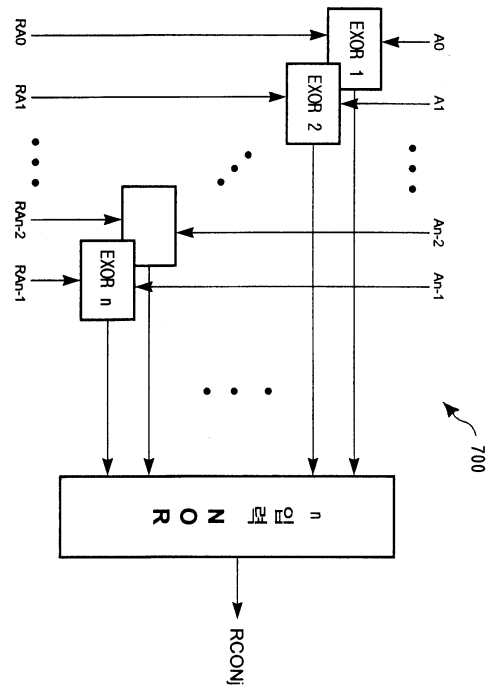
3



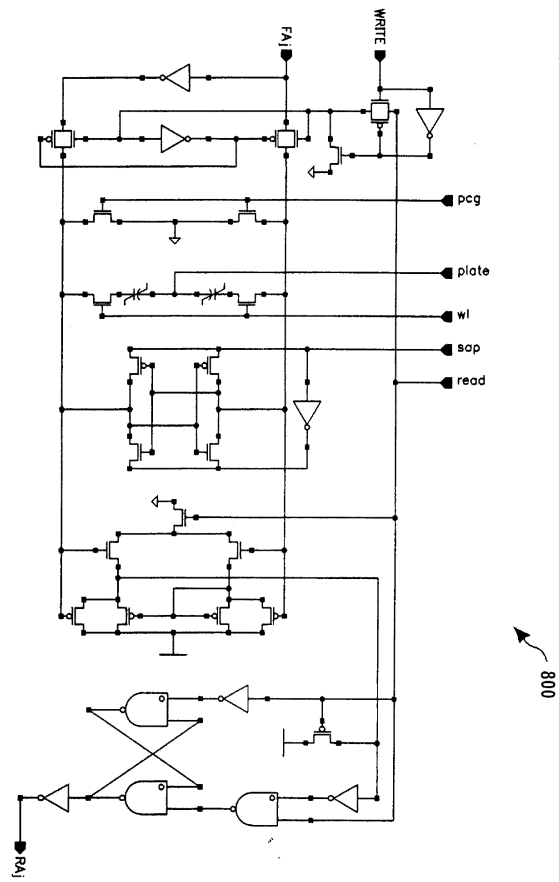
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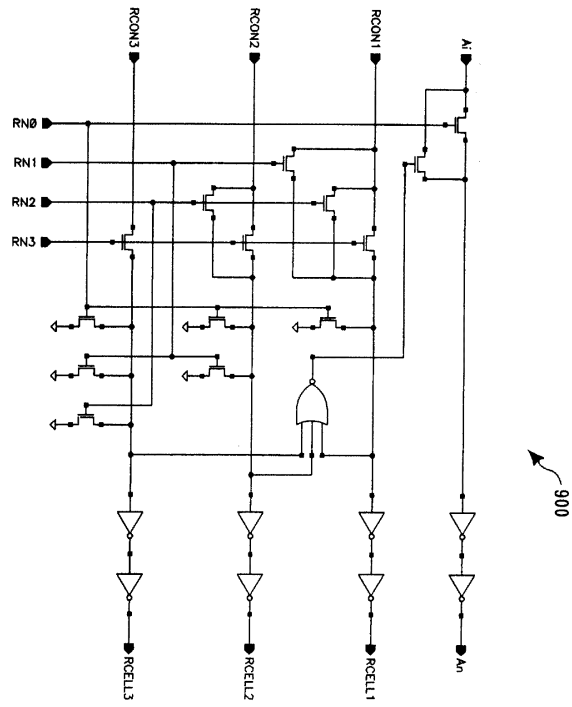


6



800

7



900