

(19)  
(12)

(KR)  
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(51) 。 Int. Cl. <sup>6</sup>  
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(45)  
(11)  
(24)

2002 06 20  
10 - 0333720  
2002 04 10

(21) 10 - 1998 - 0025295  
(22) 1998 06 30

(65) 2000 - 0003987  
(43) 2000 01 25

(73)

136 - 1

(72)

2 1048

(74)

:

(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

,

.

, , ,

, , , , ,

1 2  
가

가 '0'

, 1

2

1

1

1

, 1

1

가

1 1

1

1

, 1

1

, 1

1

1

2

2

1

, 2

2

2

가

2

2

, 2

2

; 2

, 2

2

2

2

2

, 2

, 2

1

,

가

.

0V

가

2

가 가

가

1

(100)

(200)

, 1

(200)

(300)가  $2^m - 1$  ( $m \geq 1$ )

$2^m - 1$

600),

(200)

(700),

(800)

(300),

(500),

(900)

(300)

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

(500) (/CE) (600) (800) (600) (500) (700) (WRITE) (400) (FAi) (Ai) (600) (RAi)가 (RCONj) (FNj) (800) (500) (900) (WRITE) (400) (Ai) (700) (RCONj) (800) (RNj) (200) 가 가 가 (100) (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 ( , ) "wl", "pcg", "plat", "sap", " read"

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

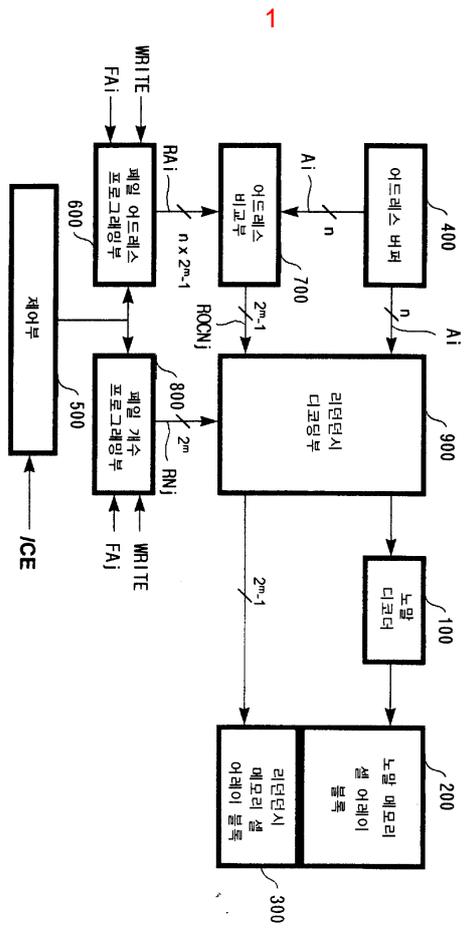
(630) (640, 650),  
 (620) (640) (640)  
 (650) .  
 E) (500) (600) (FAi) (WRIT  
 가 . (pcg, plate, wl, sap, read)  
 . (/CE)가 가 (pcg, plate, wl, sap, read)  
 (600) 가 (640) (650)  
 .  
 5 (700) (700) (40  
 0) n (A0, A1...A<sub>n-1</sub>) (600) n (RA0,  
 RA1...RA<sub>n-1</sub>) n (EXOR) , n (NOR)  
 , (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  
 가 가

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

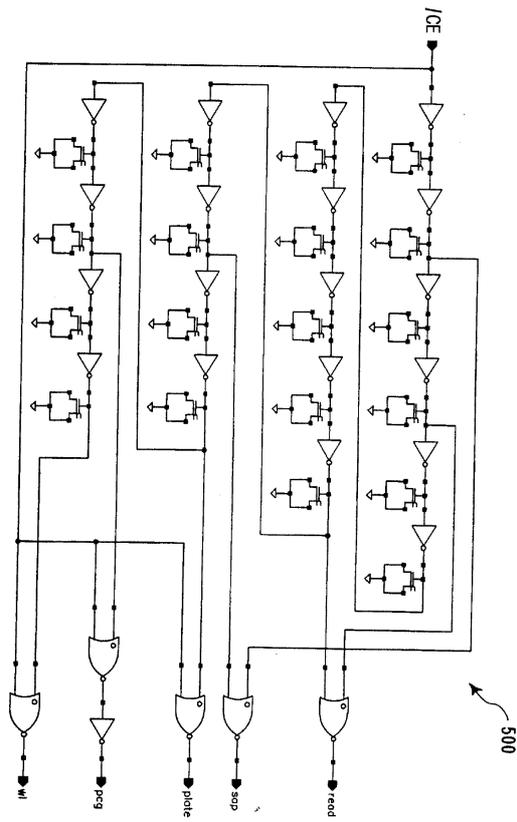
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1.

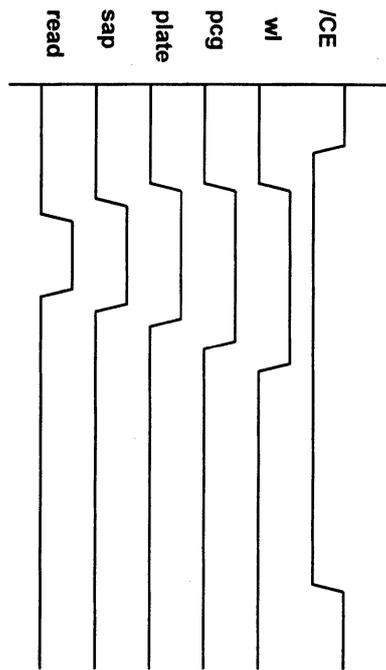
, , ,  
 , 2 , 1 2 1 ,  
 1 , 가 '0' , ,  
 , 2 ,  
 ,  
 1 , 1 , 1 1 , 1 , 1  
 1 가 1 1 1 1 1 , 1  
 1 , 1 , 1 1 1 1 1 1  
 ,  
 2 , 2 2 , 2  
 2 가 2 2 2 , 2 ;  
 2 , 2 2 2 2 2 2 ,  
 , 1 ,  
 .



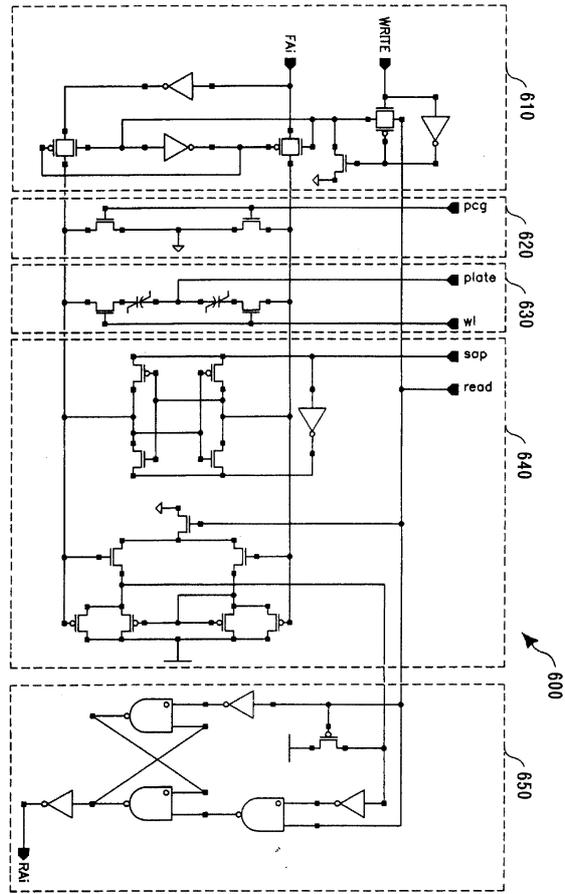
2



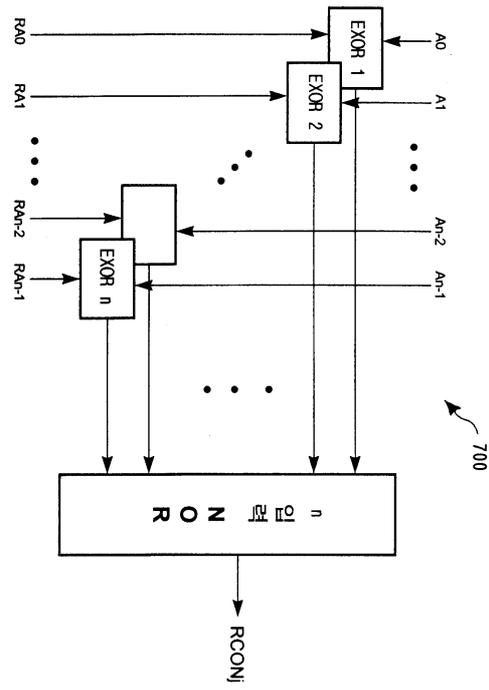
3



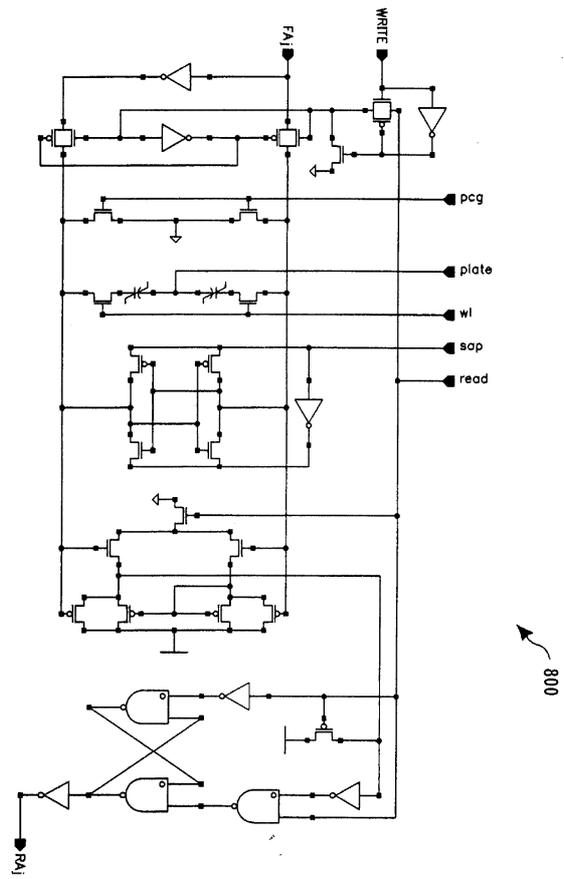
4



5



6



7

