

2a 2d

3 TEM

4

* *

11 : 12 :

13 : 14 :

15 : 16 :

100 :

가

가

AM

(Punch - Through)

256M DR
(Bird' Beak)

(Shallow Trench Isolation: , STI)

1a

(1)

(2)

(3)

(3)

(4)

(4)

가

DUV(deep ultra violet)

1b

(4)

(3),

(2)

(1)

(ST)

(ST)가

(1)

()

(si

de wall oxidation)

(5)

HDP) (5) (ST) (6), (3) (3) (2)

STI STI , HDP (Id) (Vg) (hump) (refresh) 가 가 STI (rounding) (Elec tric field crowding)

STI STI HDP STI 가 (slope) STI 가 (hump)

(side wall)

2a 2d TEM 4 3

(12) 2a (13) (11) (13) (14) (14) 가 DUV(deep ultra violet)

2b (11) (14) (ST) (13), (12) 2000 ~ 4500 (ST)

(ST) (11) () (ST)가 (side wall oxidation) (15)

(15) 가 60 () (15) 60

2c (15) (100) (moat) (100)

(15) (window) (slope)

2d (16), HDP (100) (ST) (13) (13) (12)

CMP (13) (12)

3 fl, md, r (STI) () TEM (moat)

가 r = 85 300 가

4 (a) (refresh)

(b)

(refresh) (hump) (r

(rounding) (Electric field crowding)

HDP (slope)

(57)

1.

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;

,

;

(side wall)

;

;

;

;

2.

1 ,

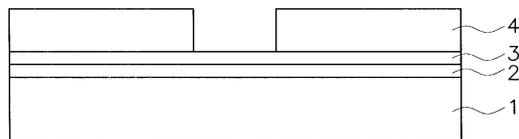
30 ~ 100

3.

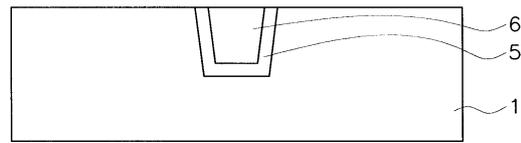
1 ,

30 ~ 100

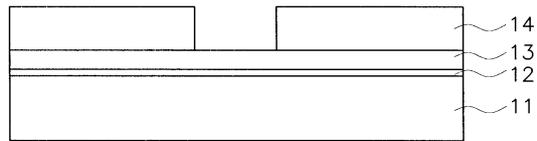
1a



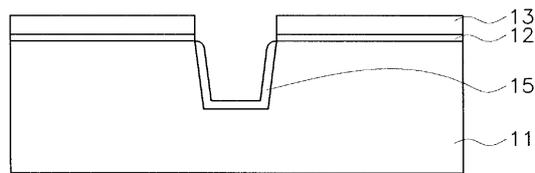
1b



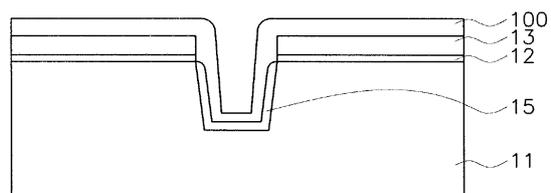
2a



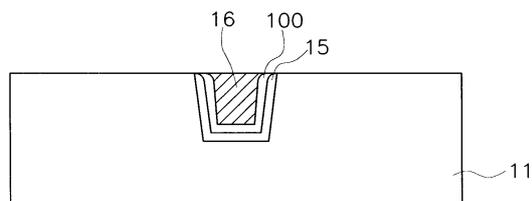
2b



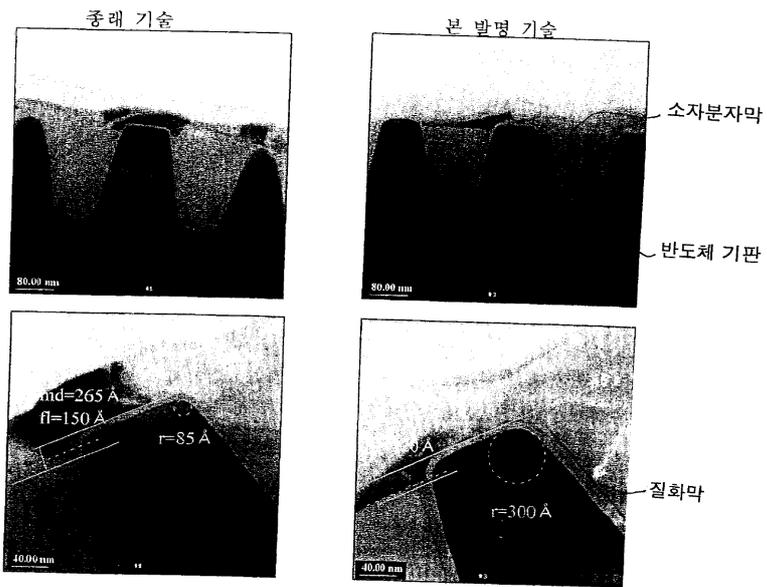
2c



2d



3



4

