

50: 60a:
 60b: 70:
 80: 90:
 100a: 100b:
 100c:

MOS MOS(metal oxide semiconductor)
 ()
 FET(insulated gate field effect transistor) (carrier)가
 (electron) N- (hole) P-
 MOS (majority carrier)
 (gate)가 (gate oxide)
 (2) (1) (3) (3) 1 (4)
 (4) (1)
 (5) (4) (4)
 / (7) (4) (6)
 (device) 가 가 (junction capacitance) 가 (junction leakage current)
 가, (isolation)
 1 ; 1
 ; ;
 ; ;
 ; 2 ; 2
 2a 2e ; 3
 (10) (oxide) 2a (Si) (D)
 (20)

(20) (30) (30) (40)
 (40) (10) 1 (45) (30) (20) (45)
) (20) (d)가 (defect source) 가
 (10) 2b 1 (45) (20)
 (30) (30) (20)
 1 (45) (50:epitaxial layer),
 (in situ) 2c (hard mask) (50)
 30) (30) (50) (30)
 (50) (47) 1 (45)
 (10) (30) (hot phosphoric etchant)
 (implantation)
 (47) (10) (60a)가
 (50) (60b) (47) (sacrificial oxide)
 2d (70) 가 (80) (4
 7) (70) (50) (70)
 (60a) (60b) 10¹⁵ (doping) (sacrificed oxidatio) 가
 5 (60a) (60b) (thermal oxide) (70)
 (Vt) (sacrificial oxide) PSG(phospho silicate glas
 s) BSG(boron silicate glass) (annealing) (annealing temperatur
 e) (annealing time) (Vt control) 가
 PSG BSG 가 1 (pre-c
 leaning) (thermal oxide loss) PSG BSG (C
 MP) 2e (90) (47) (90) 2
 2 (100a)(100b)(100c)
 (80) (100a) (100b) (60a)
 (100c), (60b) (100b)
 가 3 (100a)
 (100b)
 가 (80) (90) (80) (active region)
 (field region) (50)
 (10) 가

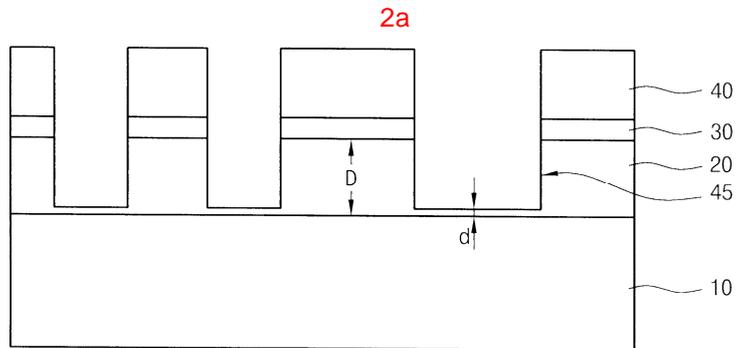
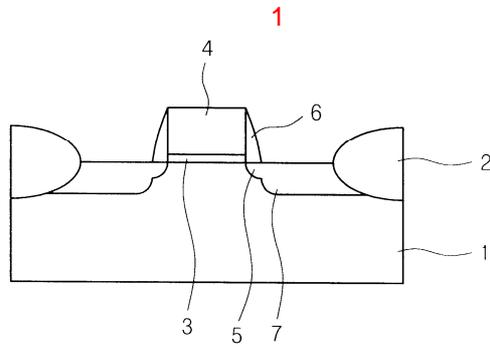
(57)

1.

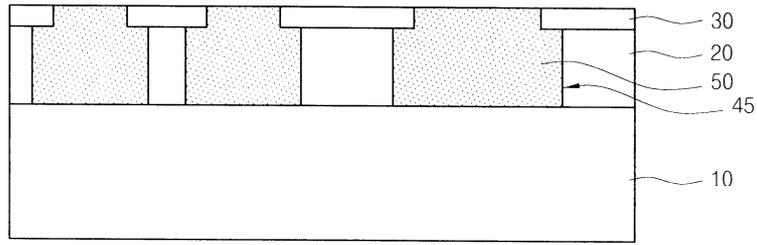
1 ; 1 ; 1

- 2
- 2
- 2.
- 1
- 3.
- 1
- 4.
- 3
- 1
- 5.
- 1
- 6.
- 1

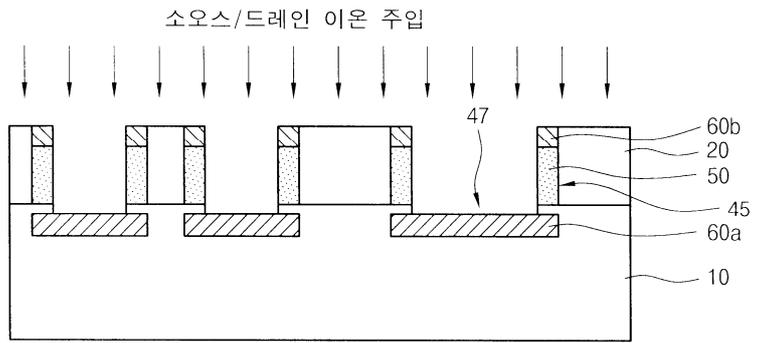
(in situ)



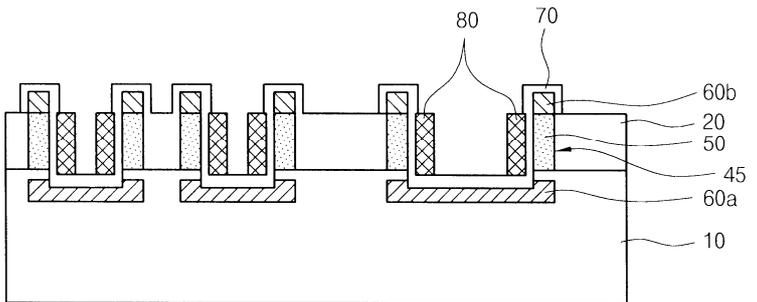
2b



2c



2d



2e

