

(19)
(12)

(KR)
(B1)

(51) 。 Int. Cl.⁶
H01L 27/108

(45)
(11)
(24)

2003 10 04
10-0386658
2003 05 23

(21) 10-1996-0053436
(22) 1996 11 12

(65) 1998-0035164
(43) 1998 08 05

(73) 136-1

(72) 가 199 가 3-803

(74)

:

(54)

(Self - Aligned Silicide)

3 2 3 2

2

1a 1d
2
3a 3g

31 : 32 :
33 : 1 34 : 1
35 : 1 37 : 1
38 : 39 : 1

40 : 2 41 : 2
 43 : 2 45 :
 46 : 3 47 : 3

(Self - Aligned Silicide)

가 (Sheet resistance) 가
 (Silicide)

1a 1d
 1a , p (11) 1 , 1 1 (14)
 , 1 (14) 가
 , 1 (14) , 1 ,
 (12), (13) 1 (14) . (13)
 (13) (11) n
 (15, 16)
 1b , 2 (17)
 1c , (Ti) (18) , 700
 (18) (15,16) (13)
 (19) (18)
 (19) , 가
 (19)
 1d , (18) , 가
 (19) (18) NH₄OH H₂O₂
 (19) C49-TiSi₂ (Phase)
 750 850 C54 TiSi₂
 , Ti TiSi₂ 가 C54 (Phase Transformation)
 , p (Ju
 nction Leakage Current)가 가
 , 가 750 (Climb-up)
 , 2 가

5) (Etching Stopper) 3 (46)
 3 (46) CVD 3000
 3 (47) (45) 3 (46) (Al), (Cu)
 (47) 3 (47) 750
 C54 TiSi₂
 (Barrier)

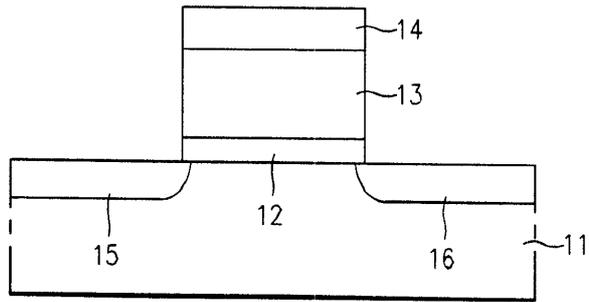
가

(57)

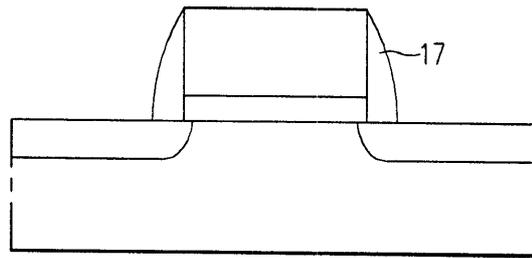
1.
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 2 ;
 2 ;
 3 ;
 3 ;
 2. ;
 1 ;
 LDD ;
 3. ;
 1 ;
 1 ;
 4. ;
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 1 ;
 2 ;
 2 ;
 2 ;
 2 ;
 ;
 ;
 3 ;
 5. ;
 4 ;
 2 2000 ;
 6. ;
 4 ;
 2 1000~5000 ;
 7. ;
 4 ;
 3000 ;
 8. ;
 4 ;
 ;
 1 ;
 1 ;

- 9. 8
1 100~1000
- 10. 4
1000~5000

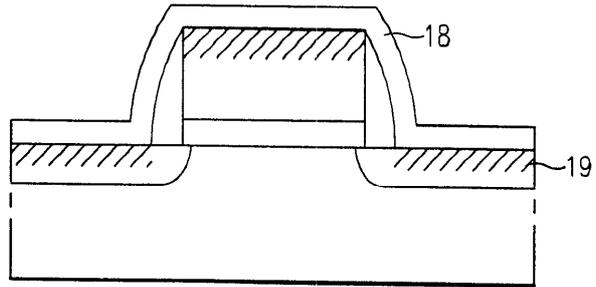
1a



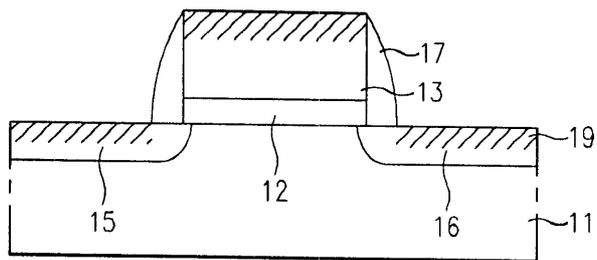
1b



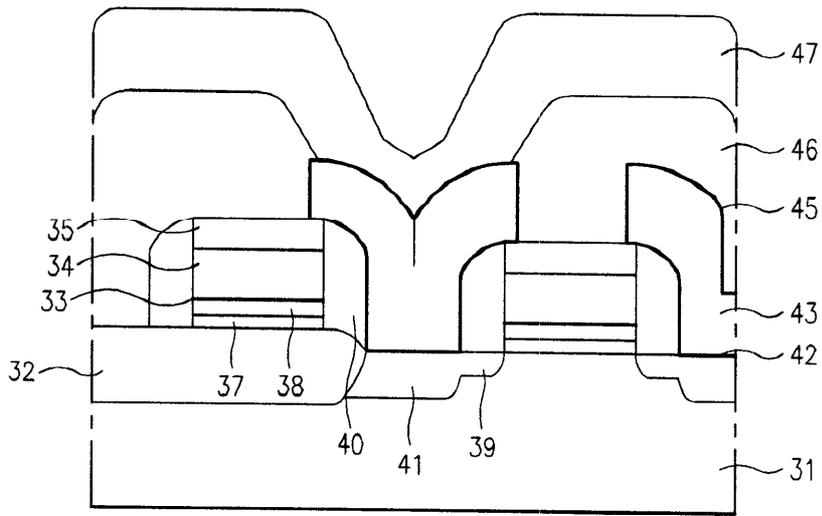
1c



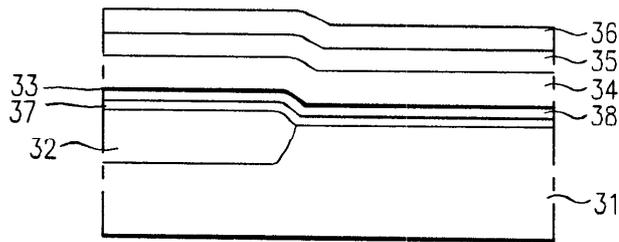
1d



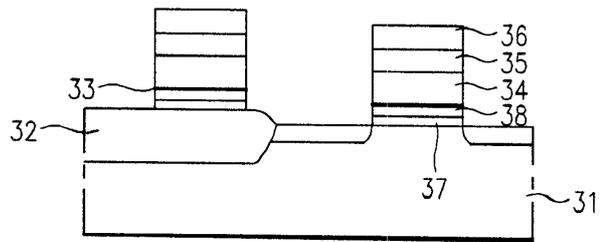
2



3a



3b



3c

