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(12) (B1)

(51) Int. Cl.⁷
H01L 29/78

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(24) 2004 03 04

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(22) 2001 06 28 (43) 2002 01 16

(30) 2000-202341 2000 07 04 (JP)

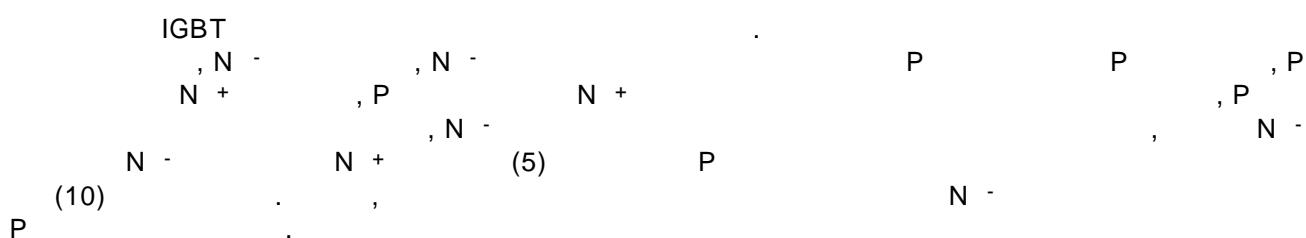
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(72) 가 가 가 가 1 가 가

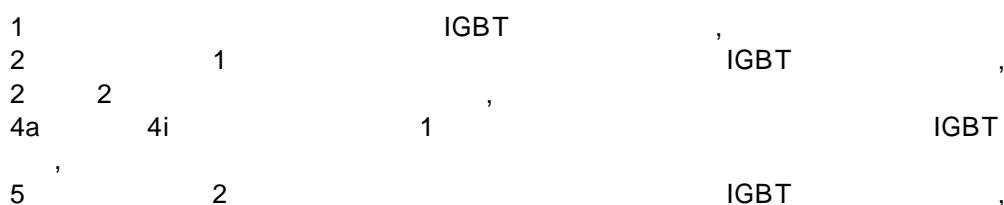
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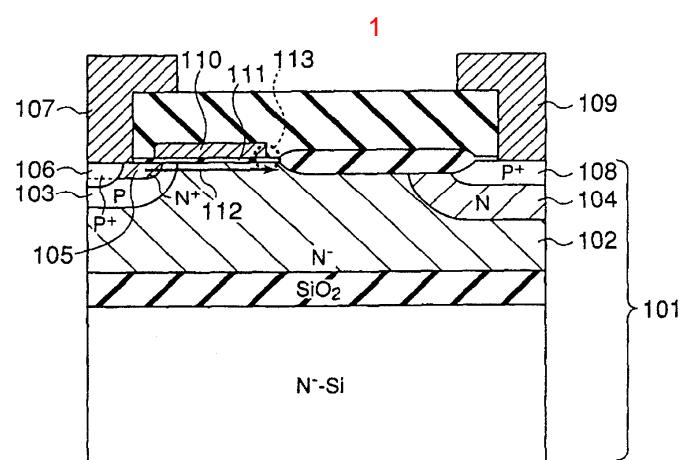
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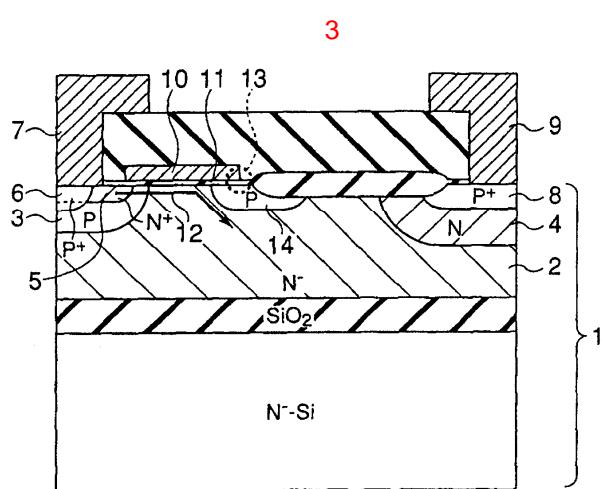
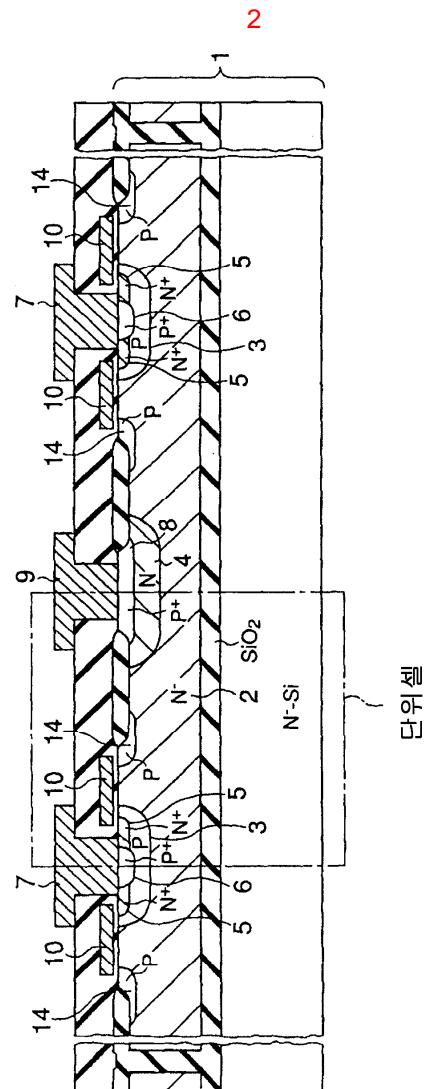


1 IGBT
 1 IGBT
 1 (102) P , (103), N , SOI (101) N - (102) P , N - (103)
 N + (105) , N + (104) (105) P , (103) P + (108) (108)
 P + (106) (106) P , N (104) P + (105) P + (108) MOS
 P , (107; (103) N - (102) N + (105) N - (102)
 P + (106) (104) (103) (108)
 P , (109) IGBT (107)
 " , (109) , (112) N + (105) (110) "HIGH
 " , 가 N - (102) , N (104) N + (102) , P +
 IGBT (108) , P (103) PNP
 , (110) "LOW" , 가 (111) , IGBT (102)
 N - (102) (113) , 가 (111) , (110)
 , IGBT (112) , 가 , 가 N - (102) (113)
 가 , (110) , (113) , 가 , , (破壞耐量)

; 2 1 1 2 ; 1 1 2 3 ; 1 1 2 ; 1 1 2 ; 1 1 3 ;
 ; , 2 , , ; 3 , , ; 1 , , ; 2 , , ; 1 , , ; 2 , , ; 1 , , ;
 2 4 , , , , 4 ; 2 , , ; 1 , , ; 2 , , ; 1 , , ; 2 , , ; 1 , , ;
 , 2 ; 1 , , ; 1 , , ; 2 , , ; 1 , , ; 2 , , ; 1 , , ; 2 , , ; 1 , , ;
 , 1 2 ; 1 , , ; 1 , , ; 2 , , ; 1 , , ; 2 , , ; 1 , , ; 2 , , ; 1 , , ;
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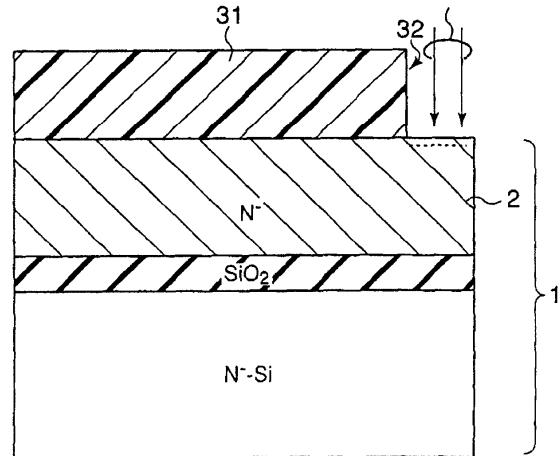
14. ,
15. ,
16. ,
17. , 1 , 2
11 MOSFET
18. , 1 , 2
12 MOSFET
19. , 1 , 2
13 MOSFET
20. , 1 , 2
14 MOSFET





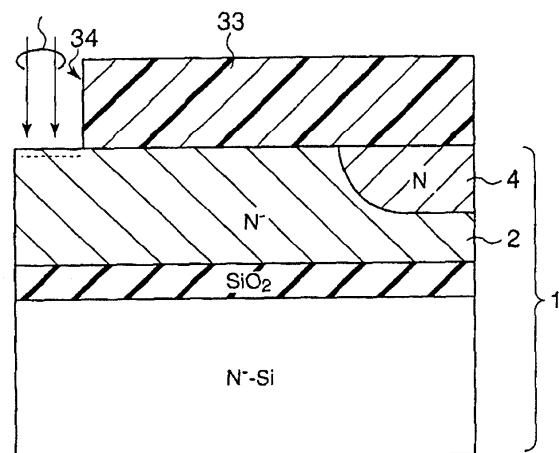
4a

N형 불순물

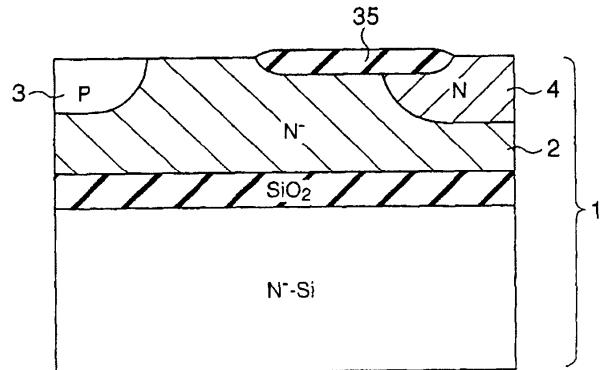


4b

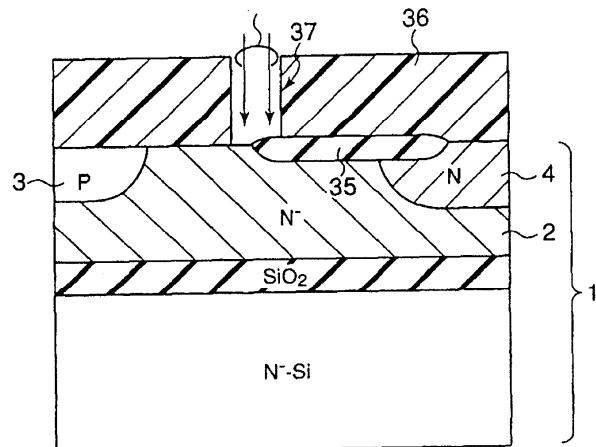
P형 불순물



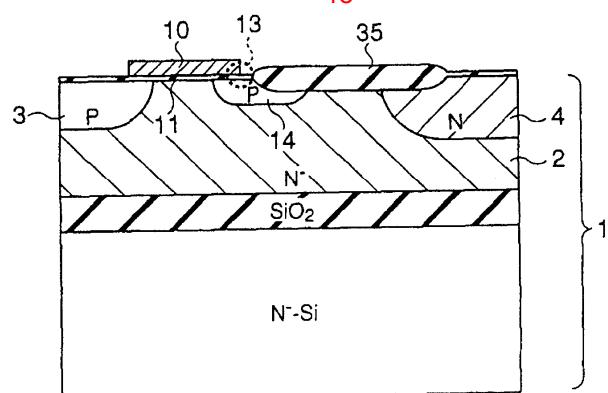
4c



4d
P형 불순물



4e



4f

