

(19) (KR)  
(12) (B1)

(51) Int. Cl.<sup>7</sup>  
H01L 21/334

(45) 2003 11 07  
(11) 10-0405015  
(24) 2003 10 29

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| (22) | 2000 09 08      | (43) | 2001 04 16   |

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(30) 1999-257699 1999 09 10 (JP)

(73) 가 가 1 1 1

(72) 가 가 8가 가

가 가 8가 가

가 가 8가 가

(74)

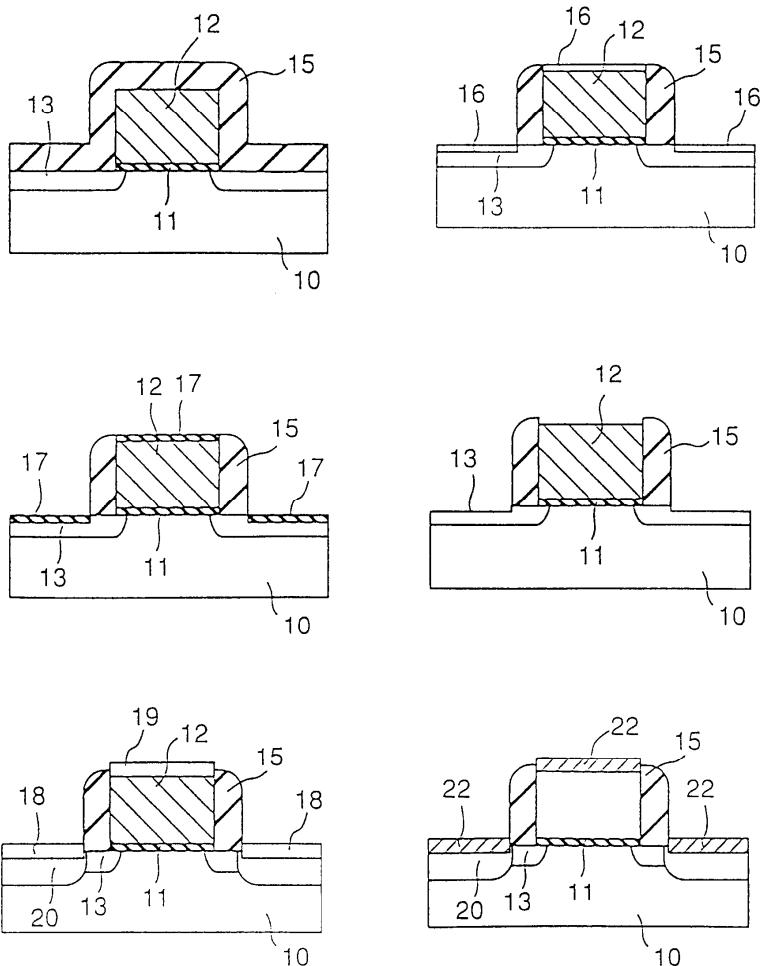
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(54)

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가 Si , , Si



1a 1f 1 / MOS  
 2 RF Si V<sub>dc</sub>  
 3 O<sub>2</sub> RIE ( ) .  
 4a 4e 2  
 5a 5e / MOS

<  
15:  
16:  
17:  
18:  
22: Co Si



2 , RF ,  $V_{dc}$  ,  
가 RF 100W , 1nm , RF

, Si 100eV  
 , 3 O<sub>2</sub> RIE 10nm ( ) ,  
 가 가 ,  
 , RF nm  
 , 1d , (17) , , (17)  
 SiO<sub>2</sub> Si , 100 , Si  
 (14) Si , Si (10) ,  
 (15) ,  
 ,  
 10nm  
 Cl<sub>2</sub> + HCl + H<sub>2</sub> 10Torr 800 3 Si(18, 19) , SiH<sub>2</sub>  
 (10) , , Si (10) Si(18) , n  
 n + / (20)

(57)

1

Si

Si

가

2.

1

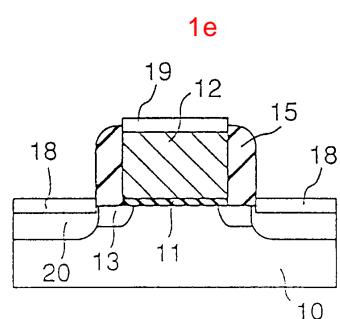
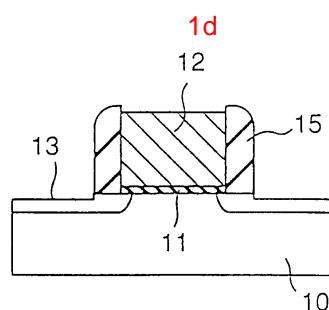
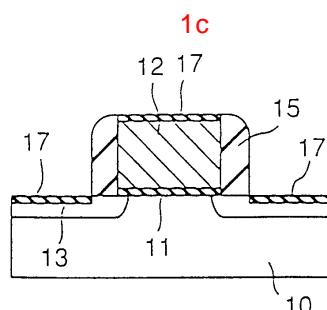
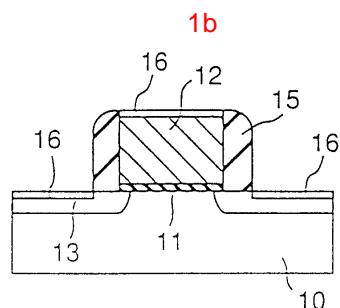
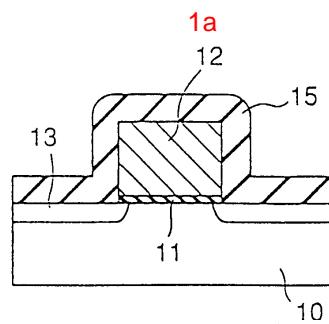
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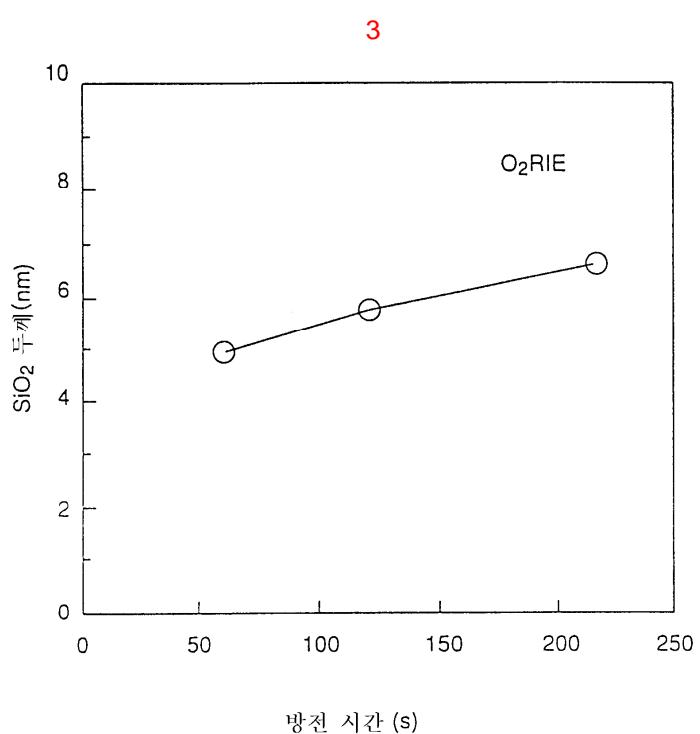
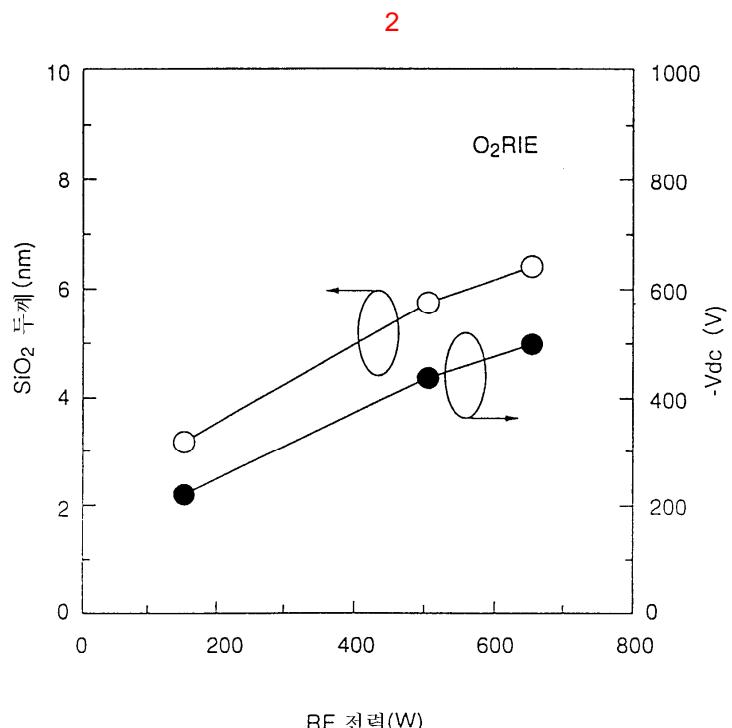
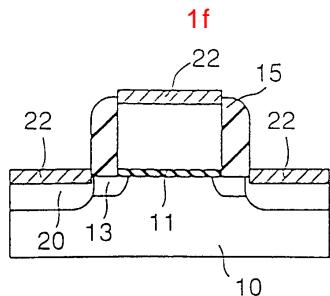
Si

Si

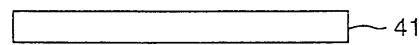
RIF

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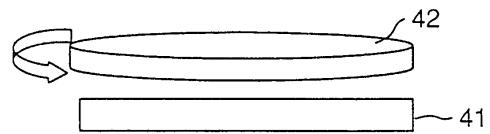




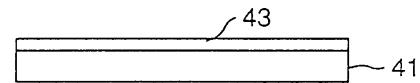
4a



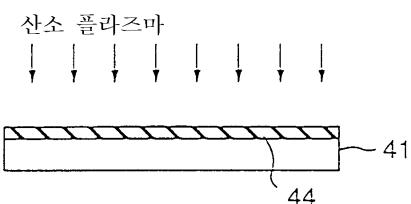
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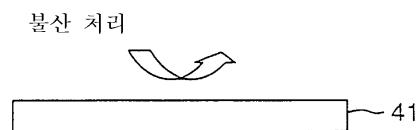
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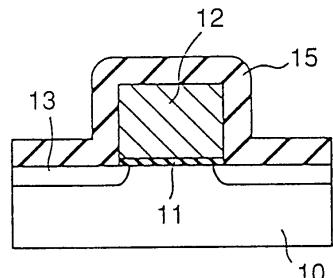
4d



4e



5a



5b

