



2  
 3 2 A  
 4 3 -  
 5 3 -  
 6 14 4  
 15 19 5

< >  
 100... 101...  
 102... 103...  
 104... 106...  
 108... 110...  
 112... 114...  
 116... 118...  
 120... 121... 1  
 122... 2 125... 가  
 130... 140...  
 142...

가  
 ( )  
 - (electro-thermal transducer, )  
 - (electro-mechanical transducer)  
 - (droplet) - (top-shooting),  
 - (side-shooting), - (back-shooting)  
 , 가 가 가  
 , (main droplet) (s)  
 atellite droplet) 가  
 , (cross talk) 가  
 가 (back flow)  
 , 가 가 가 가  
 , 가 가 가 가  
 1 6,019,457  
 (15) (10) (15)가  
 (16) (16)가 (15) (15)  
 (10) (13)  
 (20) (18) (11) (20) (15)  
 Vapor Deposition overcoat layer)(20b) (thermal insulation layer)(20a) CVD (Chemical  
 (20) (11) (12)가 (12) (20a)  
 (20b) (12) 가 ( )  
 , (16) (13) 가 (15)  
 ) (12) 가 (12) (20a) (12)  
 가 (B) (12) (B)



가

3

2 (103) 2 (102) (103) 가 (102) (101) (103)

2 (102) , 1 (103) 가 3 가 3 4

3 2 A , 4 3 -

3 4 (100) , (106) 가 (106)가 (102)가 (100)

(106) (102) (106) (102) (110)

(120) (120) (106) 1 (121) 1 (121) (100) (121)

1 (121) 2 (122) (106) 1 (121) (106) (106)

(106) (100) 1 (121) (100) (PECVD; Plasma En

hanced Chemical Vapor Deposition) 2 (122) 1 (121) (100) (110)

20) (100) (120) (102) (110) (110) (110) 3 4 (1

(120) 4 (110) (110) (106)

4) (100) (104) (114) , (106) (110) (11

(100) (100) (104) (108)가 (108) (108)

(114) (104) (108)가 (108) (108)

가 (112) (112) ( 2 101) (108) (112)

(108) (112) (116) (118) 가 (1

06) (102) (108) 가 (B') (110) (108) (114

) (108) 가 (B') (B') (106) (104)

(B') (B') (106) (104)

6) 가 가 (B') (106) (106) (106) (104)

가 가 (106) 가 (110) 가 (B') (10

(120) (110) (106)

5 가 (125)가 (104) 가 (106) 4

가 (125) (B') 가 (100)

6 14 4

6 (100) 가 500 $\mu$ m  
 (100) (100) (114)  
 6 (114) (108) (108) (114)  
 D) (P) 가 (low pressure chemical vapor deposition; LPCV) (108)  
 (sputtering) 0.7~1 $\mu$ m  
 0.1~0.3 $\mu$ m (108)  
 가 (114)  
 7 6 (116) 0.5 $\mu$ m (108)  
 (108) (116) (112) (108)  
 (112) 1 $\mu$ m  
 ( ) ( 2 101)  
 (100) TEOS(Tetraethylerthosilane) (118) (112) (100)  
 TEOS 1 $\mu$ m 가 (118)  
 400  
 8 7 (108) (108) (108)  
 (118), (116) (114) (104)  
 (100)  
 9 10 1 $\mu$ m  
 (100)  
 00) 가 (123) TMAH(Tetramethyl Ammonium Hydroxide) (123) (1  
 nt) 30~40  $\mu$ m가 (Inductively Coupled Plasma-React (etcha  
 ive Ion Etching; ICP-RIE) (100) (102)  
 (102) 8 (104) (100)  
 (102)가 (100)  
 11 10 (120) (120)  
 1 (121) 2 (100)  
 (106) 1 (121) 1 (121)  
 1 $\mu$ m  
 (106) 1 (121) 2  
 (122) 2 (122) 1 (121) 10 $\mu$ m  
 (120) (110) 1 (121)  
 12 (106) (106)  
 (104) (100) XeF<sub>2</sub> 가 가 (106) (10  
 0) 1 (121) (100)  
 12  
 (106)가  
 13 14 (120) (110) ( )  
 100) (120) (130) (spray coating)  
 1~2 $\mu$ m  
 (130) (110) (React  
 ive Ion Etching:RIE) (120) (110)  
 (110) 가  
 4 (110) (106)

가 가

15 19 5

5 가 가 가

4 가 가 가 11 5

가 가

15 (140) 11 (104) (100) TEOS

1μm (140) 16 (142) (100) (142), 17

(120) 가 (106)가 (125)가 (104) (100) 18

(106)가 19 13 (100) (110)

가 가 가

가 가

가 가

가 가

가 가

가 가

가 가

가 가

(57)

1. 가 가 ; 가 ; ; ; 가

2. 가 가

3. 가

4. 가

- 1 5. 3 , 1
- 5 6. ,
- 1 7. .
- 5 , 1 1 2
- 7 8. ,
- 2 9. .
- ;
- ;
- ;
- ;
- ;
- 9 10. , 1
- 10 11. , 1
- 10 12. , 1 1 2
- 12 13. , 1
- 10 14. 12 , 1
- 10 15. 12 , ;
- 1 ; 가
- 14 16. ,

XeF<sub>2</sub> 가 가

17.

9

18.

17

19.

9

17

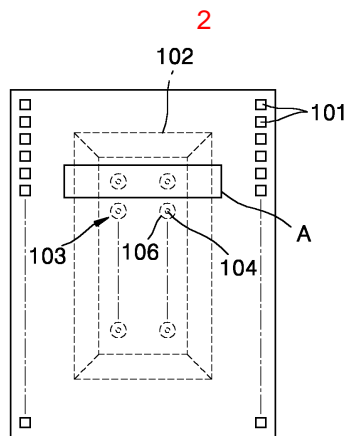
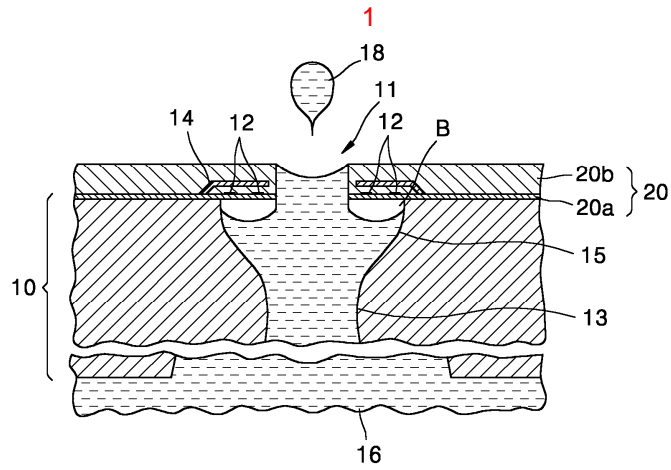
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17

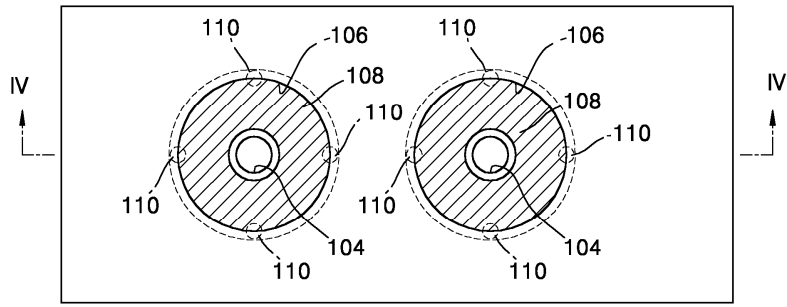
가

가

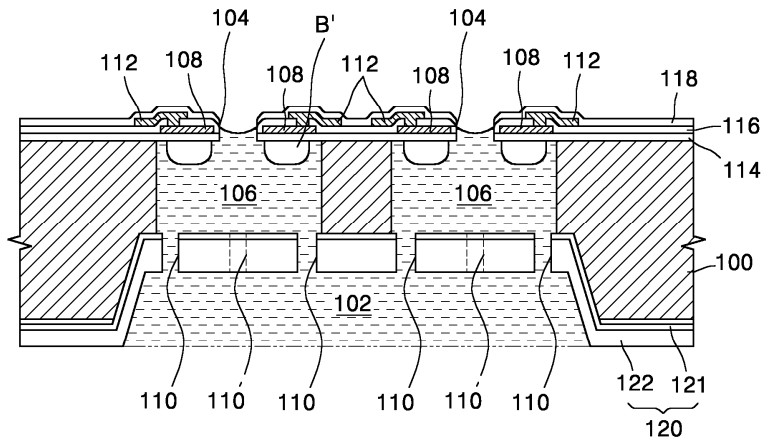




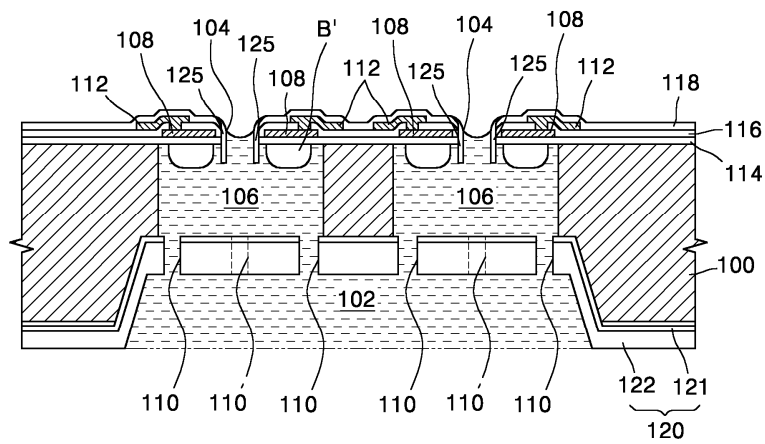
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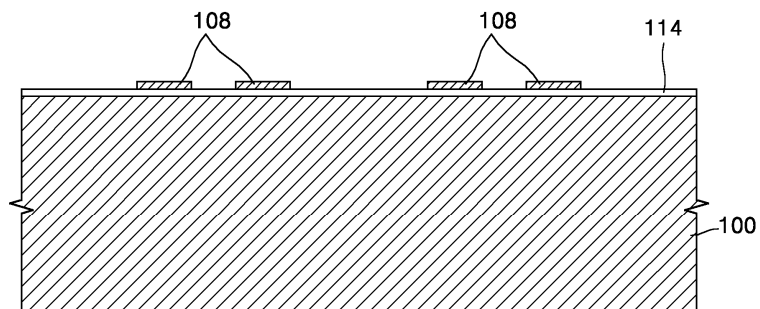
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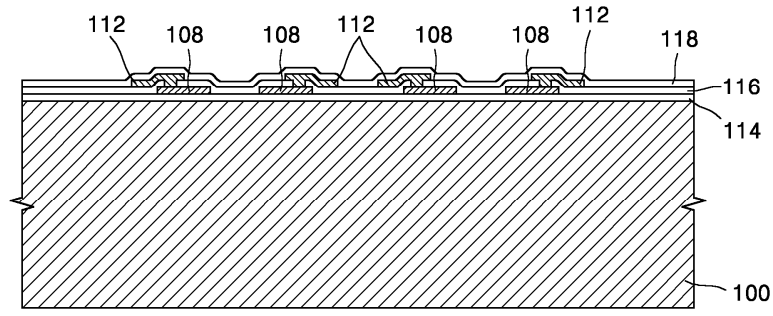
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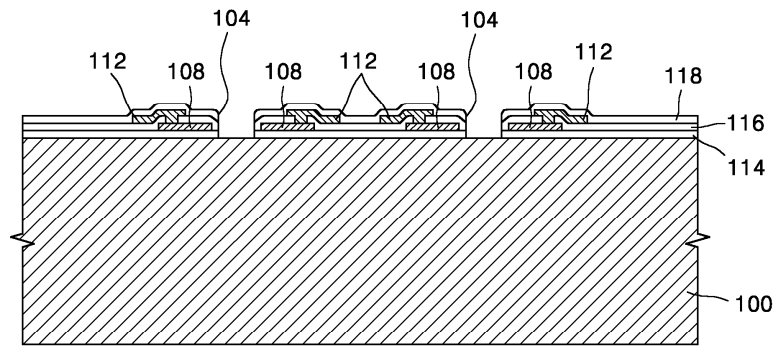
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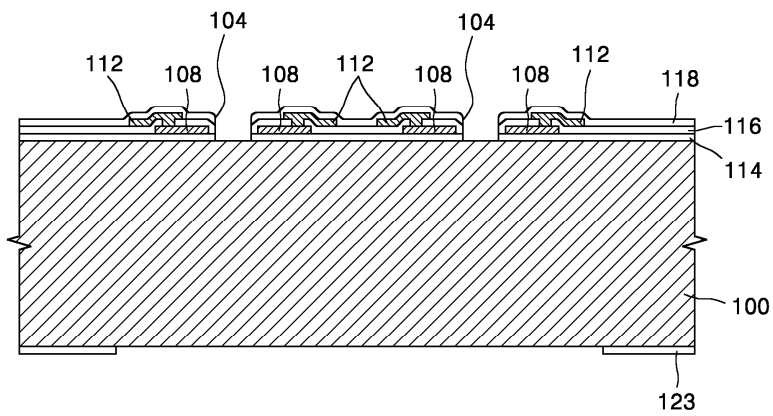
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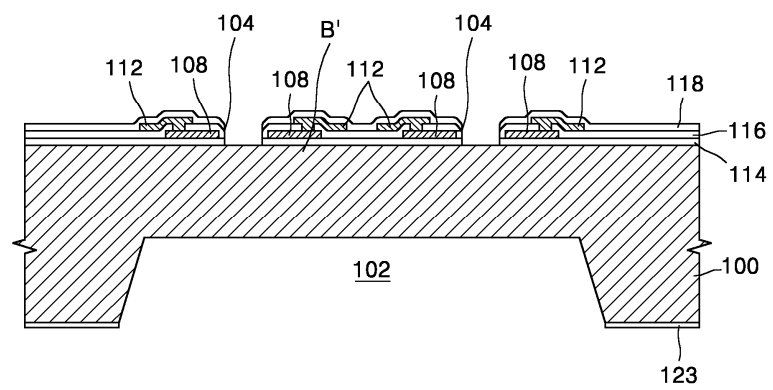
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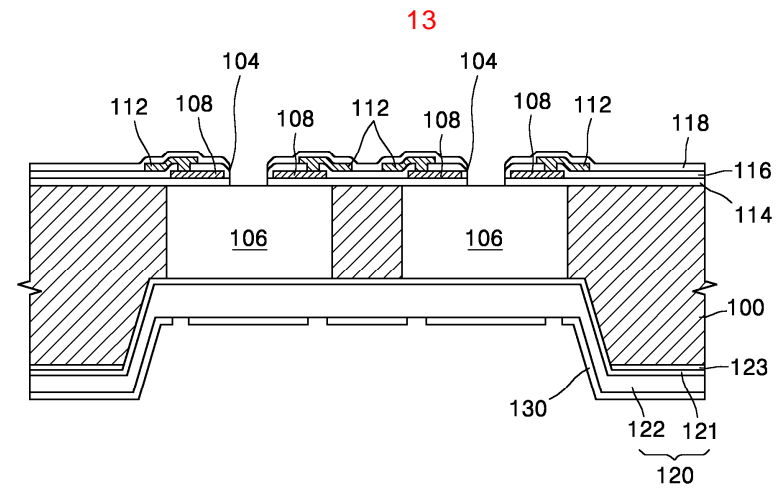
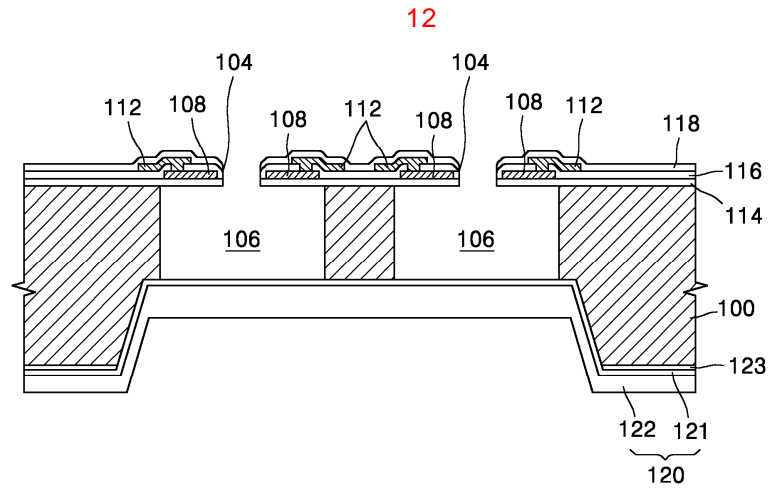
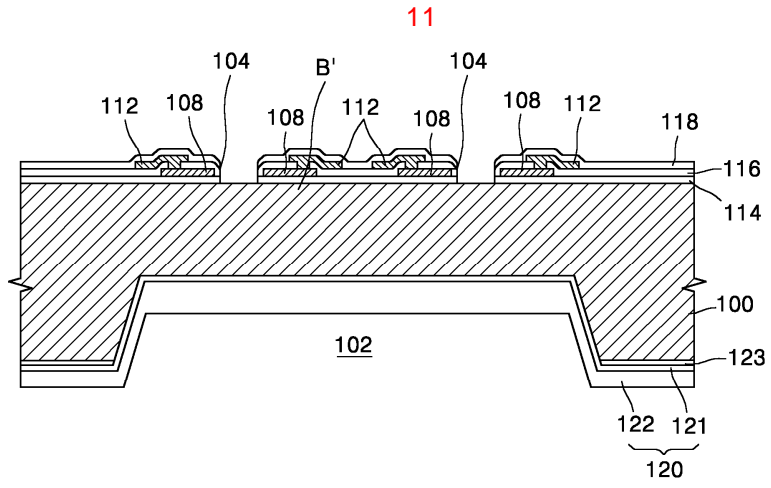


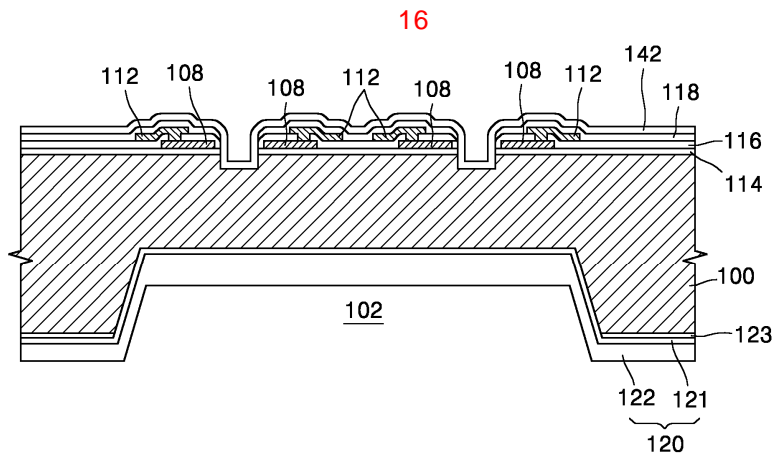
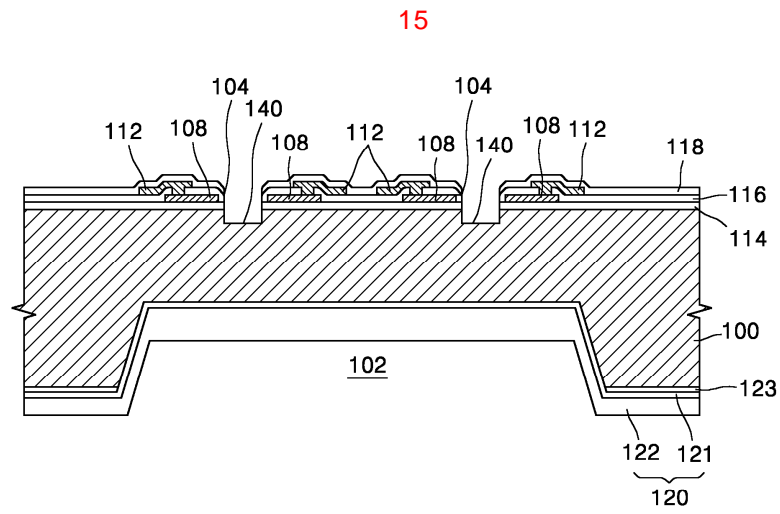
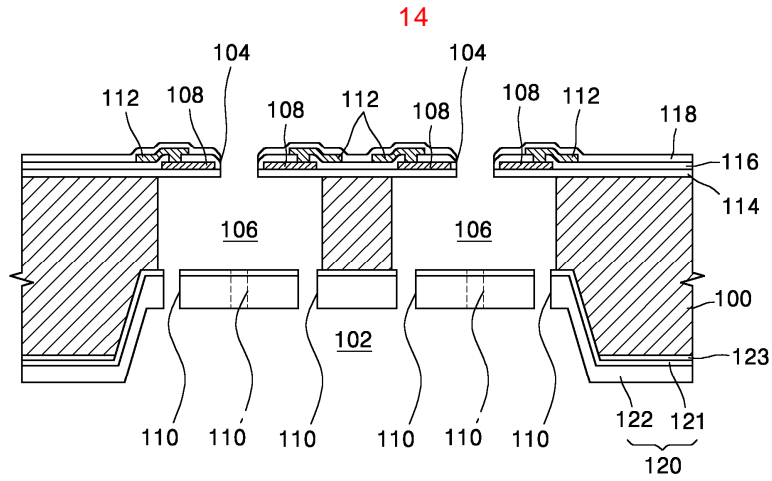
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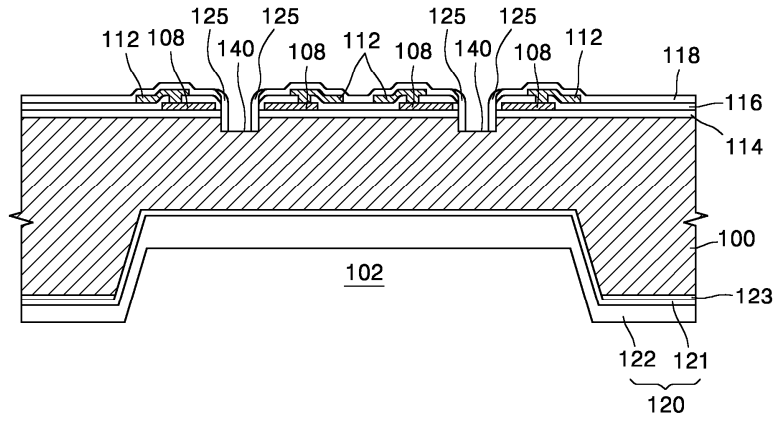
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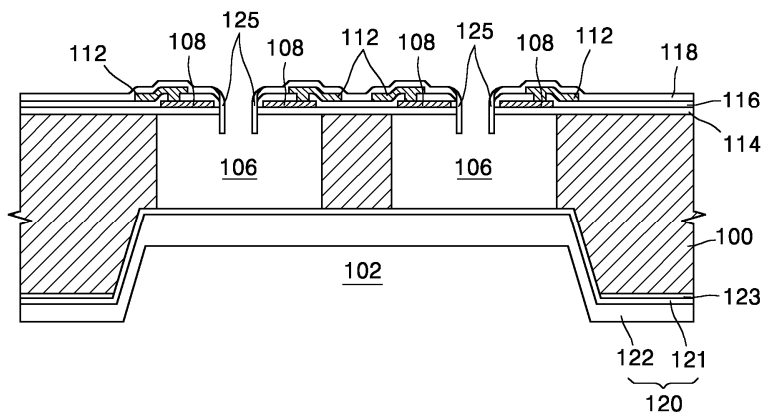




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