

(19)
(12)

(KR)
(B1)

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H01L 23/48

(45)
(11)
(24)

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10 - 0378285
2003 03 18

(21) 10 - 2001 - 0033946
(22) 2001 06 15

(65) 0000 - 0000000
(43) 0000 00 00

(73) 1 838

(72) 1 173 - 50

(74) : -

(54)

가

3c

1a 1f

,

2a 2c

,

3a 3c

,

4 (MCM)

,

5 (MCP)

.

<

100 : 102 :

104, 204 : 1 106, 206 :

108, 208 : 109 :

110 : 110b1, 110b2 :

112 : 2 200 :

212 : 302 :

304 : 306 :

, ()
()

가 ,

(, PCS, PDA)
가 ,

가 .

(MCP : multi chip package) . (MCM : multi chip module)

(MCM) 4 (400)

(402, 404, 406)

(406) (402) (404) 408 PGA , 410 BGA

(MCP) 2 5

(502) (504a, 504b) (508)

(504a, 504b) (506) 가 , 가,

(500) (epoxy molding compound : EMC)

가

가 (,)가 , EMC 가

가 , EMC (EMC) 가

가

1d (108) (108)
 (109)
 (110a) (110a) Cu, Ni+Cu, Cu+Ni+Au, Cu+Au
 2 10 μ m 가

1e (110a) (108)
 (109) (110) (106), (108)
 (110)

(110) (110b1, 110b2)
 (100) (110b2) \varnothing 0.1mm \varnothing 1mm 가
 (100) (110b2) 0.1mm x 0.1mm 1mm x 1mm 가
 (100) (110b1) \varnothing 0.3mm \varnothing 3mm 가
 (100) (110b1) 0.3mm x 0.3mm 3mm x 3mm
 가

(110b1, 110b2) 가
 (110) () (110b1, 110b2)
 (110) 2 (112)

2a 2c

2a 1a 1c (200)
 (202) (206) (208) (200)
 (210) (210)
 (208) (208)
 (206) (208) (100)

(Au)(212a) 2b (208)
 (212) 2c (208)
 08) (212)

3a 3c

3a (100) (200) (212) (100) (200)

(110b1) (110b2)

3b (100) (302) (100) (302)

(302) (304) (200) (100)

(110b1) (306) 3c 0.1mm 5mm

() ()

가

(57)

1.

;

가

;

;

;

2.

1 , :
;
;

3.

2 , , Ti/W, Cr+Ni, Ti/W+Ni Cr+Co+Ni

4.

3 , , 2000 5000

5.

2 , , Cu, Au, Cr Ni

6.

5 , 1 5 μ m

7.

2 , , Cu, Ni+Cu, Cu+Ni+Au Cu+Au

8.

7 , 2 10 μ m

9.

1 , ,

10.

9 , , \varnothing 0.1mm - \varnothing 1mm

11.

9 , , \varnothing 0.3mm - \varnothing 3mm

12.

1 , , .
13.

12 , , 0.1mm x 0.1mm 1mm x 1mm

14.

12 , , 0.3mm x 0.3mm 3mm x 3mm

15.

1 , , .
16.

1 , , .
17.

16 , , .
18.

1 , , .
19.

1 , , 0.1mm
5mm
20.

1 ;

2 ;

3

;

4 ;

5

21.

20 , 1 :

11 ;

12 ;

13 ;

14 ;

15 ;

16

22.

21 , , Ti/W, Cr+Ni, Ti/W+Ni Cr+Co+Ni

23.

22 , , 2000 5000

24.

21 , , Cu, Au, Cr Ni

25.

24 , 1 5 μ m

26.

21 , ,

27.

26 , ,

28.

21 , , Cu, Ni+Cu, Cu+Ni+Au Cu+Au

29.

28 , 2 10 μ m .

30.

21 , , .

31.

30 , , $\varnothing 0.1\text{mm} - \varnothing 1\text{mm}$

32.

30 , , $\varnothing 0.3\text{mm} - \varnothing 3\text{mm}$

33.

21 , , .

34.

33 , , 0.1mm \times 0.1mm 1mm \times 1mm

35.

33 , , 0.3mm \times 0.3mm 3mm \times 3mm

36.

20 , 2 : 21 ;

22 ;

23 ;

24

37.

36 , , Ti/W, Cr+Ni, Ti/W+Ni Cr+Co+Ni

38.

37 , , 2000 5000

39.

36 , , Cu, Au, Cr Ni

40.

39 , 1 5 μ m

41.

36 , ,

42.

20 , ,

43.

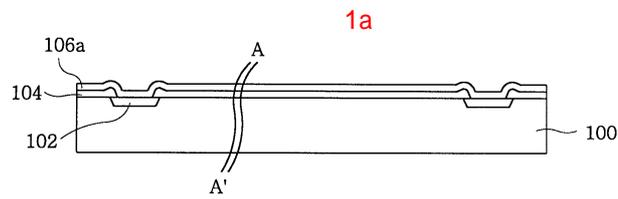
42 , ,

44.

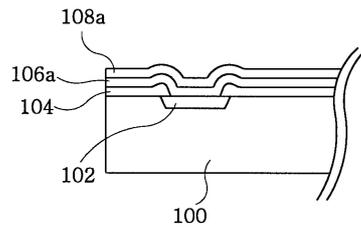
20 , ,

45.

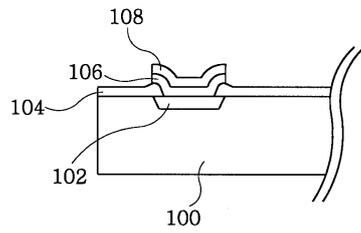
20 , , 0.1mm
5mm



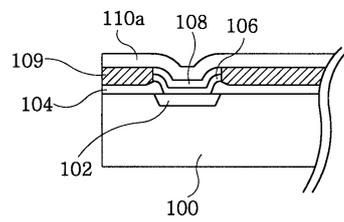
1b



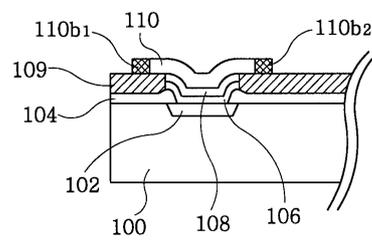
1c



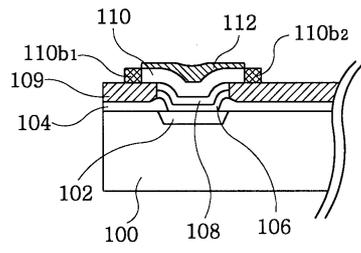
1d



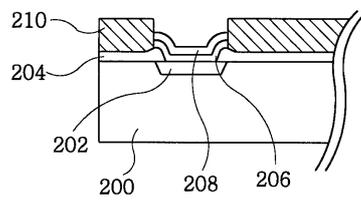
1e



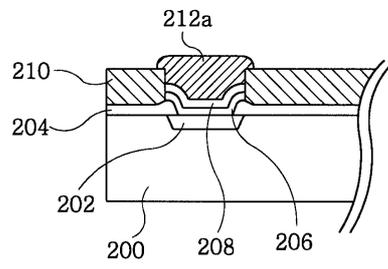
1f



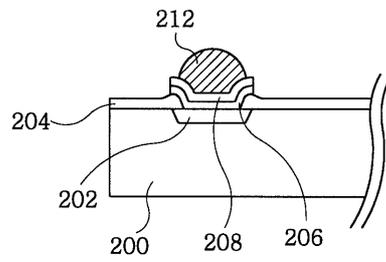
2a



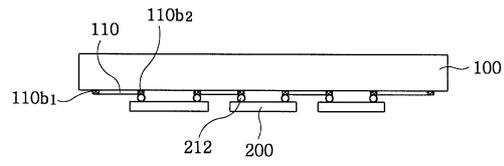
2b



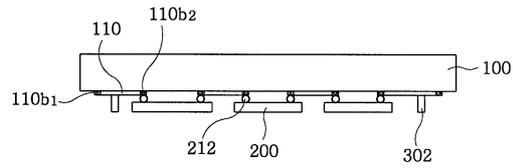
2c



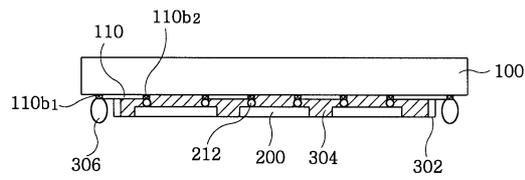
3a



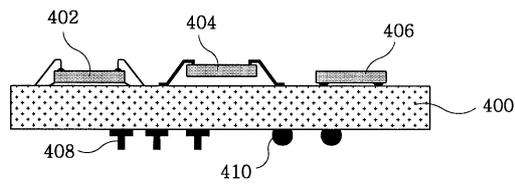
3b



3c



4



5

